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NEW Products

TECHNICAL SUPPORT



COPPER
FIBER COMMUNICATIONS WIRE & CABLE
COMPOSITES



COMMUNICATIONS



PERFORMANCE

QUALITY

SUPERIORESSEX.COM



Combining Value and Performance Like No One Else

With a heritage of more than 50 years as a telecommunications cable manufacturer, Superior Essex has grown to become the most trusted name in wire and cable in North America. Our portfolio of copper and fiber cable for both outside

plant and premises applications is the broadest in the industry and provides assurance of the highest quality and performance available.



Outside Plant Wire and Cable

Superior Essex has been a long-time leader in the OSP cable market. With over 4000 different copper and fiber cable and wire designs to choose from, our products serve virtually every application demanded for outside plant installations. Our strong market position was built from an endless pursuit of perfection in our products and in our service. It's a difference that has kept customers loyal for decades and has earned Superior Essex customer quality awards year after year.

QUALITY



Premises Cables

Superior Essex believes that its premises wire and cable products should provide a total user experience that is unequalled in the industry. That is why we tend to offer more useful features, better performance, higher quality and better overall value than our competition. For example, in many of our boxed premises products, you will find our unique QuickCount® marking system; hailed by customers as a major time and money saver as it counts down the remaining cable from 1000 to zero feet. You'll also find color-coded labels to let you know from a distance what color the jacket is inside the box. Many other subtle advantages make Superior Essex premises products the preferred choice.

PERFORMANCE

PERFORMANCE

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Defining Quality

Superior Essex has TL 9000 and ISO 9001:2001 certification in every Communications production facility, assuring a level of quality and consistency of the company's products and service. But there is much more to this commitment. Beyond quality assurance of our products is our dedication to bring value added elements and superior customer service to our products. At Superior Essex quality is simple – providing the customer what is expected every time.



Consistency Matters

Any cable manufacturer can design a high-performance cable, but very few have the ability or inclination to ensure that every cable produced is high-performance. Superior Essex does. Any manufacturer can claim to have high quality, but very few actually deliver on that promise every time. Superior Essex does.

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Product Performance

TECHNICAL SUPPORT

When it comes to product performance, Superior Essex has engineered some of the highest performance copper and fiber optic cable products available anywhere.

In independent tests, Superior Essex Category 5e and Category 6 cables regularly surpass the performance of competitors who claim performance to be their sole distinction. This same attention to engineering excellence is also extended to our fiber cable products and to our lower-bandwidth voice and data cables.

PERFORM



Flexibility

This cable and wire catalog is extensive, but we also receive requests for products with special requirements. Our technical team regularly quotes and manufactures custom designs for customers around the world. See what we can do for you.

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Superior Essex makes every effort to ensure the accuracy of the information contained in this catalogue at the time of publication. Specifications, packaging and part numbers detailed within are subject to change. For the most up to date information, please contact Superior Essex at 770.657.6000 or visit www.superioressex.com.
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10Gain® Category 6A CMR/CMP



Product Description

10Gain Augmented Category 6 (CAT 6A) cable brings UTP performance to a new level. This cable meets the internal and alien cross-talk performance requirements of TIA/EIA 568-B.2-10 and ISO/IEC 11801 Edition 2.1 as tested in a 6 around 1 configuration. With guaranteed performance out to 500 MHz and independently verified and monitored by UL, 10Gain CAT 6A cable demonstrates superior capability for 10 Gigabit Ethernet and all other bandwidth intensive and legacy applications.

Features

- UL Verified CAT 6A
- Exceptional PS-ACR, PSANEXT and PSAACRF (PSAELFEXT) performance

- QuickCount® marking system
- Color coded box labels
- ColorTip™ Circuit Identification System

Benefits

- Assures consistent, worry-free performance
- Performance assurance for 10 Gigabit Ethernet and multiple high-bandwidth applications
- Eliminates guess work of footage on reel
- Easily identifiable jacket colors
- Easily identifiable conductor mates even in low light environments

Applications

- 10GBASE-T and legacy applications 10BASE-T through 1000BASE-T Ethernet
- ATM and Token Ring
- Backward compatible to legacy protocols and applications

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	6A-272-2A	4	22 (0.63)	Blue	0.35 (8.9)	50 (75)	1000' Reel
	6A-272-3A	4	22 (0.63)	Gray	0.35 (8.9)	50 (75)	1000' Reel
	6A-272-4A	4	22 (0.63)	White	0.35 (8.9)	50 (75)	1000' Reel
	6A-272-5A	4	22 (0.63)	Green	0.35 (8.9)	50 (75)	1000' Reel
	6A-272-6A	4	22 (0.63)	Yellow	0.35 (8.9)	50 (75)	1000' Reel
	6A-272-7A	4	22 (0.63)	Purple	0.35 (8.9)	50 (75)	1000' Reel
	6A-272-9A	4	22 (0.63)	Red	0.35 (8.9)	50 (75)	1000' Reel
CMP	6A-272-2B	4	22 (0.63)	Blue	0.32 (8.1)	48 (72)	1000' Reel
	6A-272-3B	4	22 (0.63)	Gray	0.32 (8.1)	48 (72)	1000' Reel
	6A-272-4B	4	22 (0.63)	White	0.32 (8.1)	48 (72)	1000' Reel
	6A-272-5B	4	22 (0.63)	Green	0.32 (8.1)	48 (72)	1000' Reel
	6A-272-6B	4	22 (0.63)	Yellow	0.32 (8.1)	48 (72)	1000' Reel
	6A-272-7B	4	22 (0.63)	Purple	0.32 (8.1)	48 (72)	1000' Reel
	6A-272-9B	4	22 (0.63)	Red	0.32 (8.1)	48 (72)	1000' Reel

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA 568-B.2-10, ANSI/ICEA S-90-661-2002, RoHS 2002/95/EC Compliant.

Product Description CMR

• Conductor: 22 AWG (0.63 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Web Separator • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Product Description CMP

• Conductor: 22 AWG (0.63 mm) Solid Annealed Bare Copper • Insulation: FEP • Web Separator • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2-10	Superior Essex		TIA 568-B.2-10	Superior Essex		TIA 568-B.2-10	Superior Essex		TIA 568-B.2-10	Superior Essex	
	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical
1	2.1	2.0	1.7	74.3	75.3	92.4	72.3	74.3	90.7	72.3	74.3	90.3
4	3.8	3.6	3.4	65.3	66.3	82.2	61.5	63.5	78.9	63.3	65.3	80.5
8	5.3	5.1	4.7	60.8	61.8	78.0	55.4	57.4	73.3	58.8	60.8	76.4
10	5.9	5.7	5.3	59.3	60.3	76.5	53.4	55.4	71.2	57.3	59.3	74.8
16	7.5	7.2	6.7	56.2	57.2	73.8	48.8	50.8	67.2	54.2	56.2	72.0
20	8.4	8.1	7.6	54.8	55.8	71.1	46.4	48.4	63.6	52.8	54.8	69.7
25	9.4	9.1	8.5	53.3	54.3	68.9	44.0	46.0	60.5	51.3	53.3	67.4
31.25	10.5	10.2	9.5	51.9	52.9	68.3	41.4	43.4	58.9	49.9	51.9	67.0
62.5	15.0	14.5	13.6	47.4	48.4	64.3	32.4	34.4	50.8	45.4	47.4	62.3
100	19.1	18.5	17.4	44.3	45.3	61.2	25.2	27.2	44.0	42.3	44.3	59.2
155	24.1	23.4	21.9	41.4	42.4	57.3	17.4	19.4	35.7	39.4	41.4	55.9
200	27.6	26.8	25.1	39.8	40.8	57.1	12.2	14.2	32.4	37.8	39.8	54.9
250	31.1	30.2	28.2	38.3	39.3	55.9	7.3	9.3	27.6	36.3	38.3	53.3
300	34.3	33.3	31.1	37.1	38.1	53.7	2.9	4.9	22.8	35.1	37.1	51.5
350	37.2	36.3	33.8	36.1	37.1	52.7			19.1	34.1	36.1	50.1
400	40.1	39.0	36.3	35.3	37.3	52.4			15.3	33.3	36.3	49.3
450	42.7	41.6	38.7	34.5	36.5	50.2			11.6	32.5	35.5	47.8
500	45.3	44.1	41.0	33.8	35.8	48.7			7.7	31.8	34.8	46.2
550			43.2			45.6			2.3			43.7
600			45.3			44.0			-1.2			42.2
650			47.5			42.0			-5.3			40.2

Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (ACRF) (dB/100m) Minimum			PS-ELFEXT (PSACRF) (dB/100m) Minimum		
	TIA 568-B.2-10	Superior Essex		TIA 568-B.2-10	Superior Essex		TIA 568-B.2-10	Superior Essex		TIA 568-B.2-10	Superior Essex	
	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical
1	70.2	72.2	88.7	20.0	20.0	27.3	67.8	71.8	83.6	64.8	68.8	81.2
4	59.5	61.5	77.2	23.0	23.0	33.1	55.8	59.8	72.0	52.8	56.8	69.6
8	53.4	55.4	71.7	24.5	24.5	35.3	49.7	53.7	66.2	46.7	50.7	63.7
10	51.4	53.4	69.6	25.0	25.0	36.0	47.8	51.8	64.4	44.8	48.8	61.8
16	46.8	48.8	65.4	25.0	25.0	36.5	43.7	47.7	60.3	40.7	44.7	57.8
20	44.4	46.4	62.2	25.0	25.0	38.4	41.8	45.8	58.4	38.8	42.8	56.0
25	42.0	44.0	59.1	24.3	24.3	37.6	39.8	43.8	56.3	36.8	40.8	54.1
31.25	39.4	41.4	57.6	23.6	23.6	37.8	37.9	41.9	54.3	34.9	38.9	52.1
62.5	30.4	32.4	49.0	21.5	21.5	36.6	31.9	35.9	48.3	28.9	32.9	46.1
100	23.2	25.2	42.2	20.1	20.1	33.5	27.8	31.8	44.5	24.8	28.8	42.3
155	15.4	17.4	34.4	18.8	18.8	33.0	24.0	28.0	40.6	21.0	25.0	38.5
200	10.2	12.2	30.3	18.0	18.0	30.7	21.8	25.8	38.4	18.8	22.8	36.2
250	5.3	7.3	25.4	17.3	17.3	30.3	19.8	23.8	35.0	16.8	20.8	33.4
300	0.9	2.9	20.9	16.8	16.8	26.9	18.3	22.3	33.8	15.3	19.3	31.6
350			16.9	16.3	16.3	27.0	16.9	21.9	32.5	13.9	18.9	30.4
400			13.5	15.9	15.9	26.9	15.8	18.8	31.8	12.8	16.8	29.8
450			9.7	15.5	15.5	26.0	14.7	18.7	30.8	11.7	16.7	28.8
500			5.8	15.2	15.2	24.8	13.8	16.8	29.8	10.8	14.8	28.1
550			1.0			24.2			28.8			26.9
600			-2.5			22.7			28.6			26.4
650			-6.3			19.6			27.2			25.3

Nominal Impedance (Ohms)		Delay Skew (ns/100m) Maximum Typical		Velocity of Propagation (%) Plenum Riser		DC Resistance (Ohms/100m) Maximum Typical		Resistance Unbalance (%) Maximum Typical		Transverse Conversion Loss (dB) @ 500 MHZ Minimum	
100		45	27	68	65	9.38	7.0	4.0	1.0	23.0	

Category 6A STP Cable CMR/CMP (U/FTP)



Product Description

Superior Essex offers Shielded Twisted Pair (STP) Category 6A cables in both plenum and riser versions. The cable has guaranteed performance out to 600 MHz and meets all applicable TIA 568-B.2-1 requirements. In addition, the cable meets or exceeds TIA/EIA 568-B.2-10 Draft Specification for Augmented Category 6 (CAT 6A) cables required for 10GBASE-T applications. The cable consists of four (4) balanced 23 AWG copper pairs. Each pair is wrapped with a mylar-backed aluminum foil with the drain wire in the center of all four pairs. The wrapped pairs are then jacketed with a flexible PVC jacket appropriate for either plenum or riser applications.

Features

- Individually foil shielded pairs
- Exceeds Draft Specification TIA/EIA-568-B.2-10 for Augmented Cat 6 (Cat 6A) Cable Performance
- Exceeds both TIA 568-B.2-1 and ISO/IEC 11801 for Category 6
- Riser and plenum rated designs

Benefits

- Protects against EMI/RFI and provides exceptional NEXT, PSNEXT, ELFEXT, and Electrical Performance performance
- Meets 10GBASE-T Application Requirements for both Insertion Loss and Return Loss and Exceeds Requirements for Alien and Internal Crosstalk Performance
- Assures compliance for all current networking applications
- UL 1666 and NFPA 262 (UL 910) fire rating options help to reduce additional expensive materials required to meet building safety codes.

Applications

- 10GBASE-T and legacy applications 10BASE-T through 1000BASE-T Ethernet
- ATM and Token Ring

Part Numbers and Physical Characteristics

Part #	Listing	Pair Count	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
6S-220-XA	Riser	4	0.31 (7.9)	40 (60)	1,000 Reel
6S-220-XB	Plenum	4	0.29 (7.4)	46 (69)	1,000 Reel

Jacket Color Cross-Reference Table

Replace "X" with	Color
2	Blue
3	Gray
4	White
5	Green
6	Yellow
9	Red
D	Orange

Cable Construction

Configuration:	4 copper pairs each surrounded by Aluminum/Mylar foil with center drain wire and jacket
Conductor:	23 AWG Solid Copper
Insulation Material:	Riser – PE; Plenum – FEP
Insulation Colors:	Pair 1 – White/Blue; Pair 2 – White/Orange; Pair 3 – White/Green; Pair 4 – White/Brown
Drain Wire:	Tinned Copper
Jacket Material:	Plenum – Plenum Grade Low Smoke PVC; Riser – Riser Grade PVC
Jacket Color:	Blue, Gray, White, Yellow, Orange, Green, Red
Fire Listings:	Plenum – NFPA 262 UL CMP; FT6 Riser – UL 1666, UL CMR, c(UL) FT-4

Electrical

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2-10		Superior Essex	TIA 568-B.2-10		Superior Essex	TIA 568-B.2-10		Superior Essex	TIA 568-B.2-10		Superior Essex
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.1	2.1	2.1	74.2	74.2	74.2	72.2	72.2	72.2	72.2	72.2	72.2
4	3.8	3.8	3.7	65.2	65.2	74.2	61.4	61.4	70.5	63.2	63.2	72.2
8	5.3	5.3	5.2	60.7	60.7	74.2	55.4	55.4	69.0	58.7	58.7	72.2
10	5.9	5.9	5.8	59.2	59.2	74.2	53.3	53.3	68.4	57.2	57.2	72.2
16	7.4	7.4	7.4	56.2	56.2	74.2	48.7	48.7	66.8	54.2	54.2	71.2
20	8.3	8.3	8.2	54.7	54.7	72.7	46.4	46.4	64.4	52.7	52.7	69.7
25	9.3	9.3	9.2	53.3	53.3	71.3	43.9	43.9	62.0	51.3	51.3	68.3
31.25	10.5	10.5	10.4	51.8	51.8	69.8	41.3	41.3	59.4	49.8	49.8	66.8
62.5	14.9	14.9	14.8	47.3	47.3	65.3	32.3	32.3	50.5	45.3	45.3	62.3
100	19.1	19.1	18.9	44.2	44.2	62.2	25.1	25.1	43.3	42.2	42.2	59.2
200	27.5	27.5	27.3	39.7	39.7	57.7	12.2	12.2	30.4	37.7	37.7	54.7
250	31.1	31.1	30.7	38.3	38.3	56.3	7.2	7.2	25.5	36.3	36.3	53.3
300	34.2	34.2	33.9	37.1	37.1	55.1	2.8	2.8	21.2	35.1	35.1	52.1
350	37.2	37.2	36.8	36.1	36.1	54.1	-1.1	-1.1	17.2	34.1	34.1	51.1
400	40.1	40.1	39.6	35.2	35.2	53.2	-4.7	-4.7	13.6	33.2	33.2	50.2
500	45.2	45.2	44.8	33.8	33.8	51.8	-11.4	-11.4	7.0	31.8	31.8	48.8
600		50.1	49.5		32.6	50.6		-17.4	1.1		30.6	47.6

Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (ACRF) (dB/100m) Minimum			PS-ELFEXT (PSACRF) (dB/100m) Minimum		
	TIA 568-B.2-10		Superior Essex	TIA 568-B.2-10		Superior Essex	TIA 568-B.2-10		Superior Essex	TIA 568-B.2-10		Superior Essex
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	70.2	70.2	70.2	20.0	20.0	20.6	67.7	67.7	73.7	64.7	64.7	70.7
4	59.4	59.4	68.5	23.0	23.0	23.7	55.7	55.7	61.7	52.7	52.7	58.7
8	53.4	53.4	67.0	24.5	24.5	25.3	49.7	49.7	55.7	46.7	46.7	52.7
10	51.3	51.3	66.4	25.0	25.0	25.8	47.7	47.7	53.7	44.7	44.7	50.7
16	46.7	46.7	63.8	25.0	25.0	25.8	43.7	43.7	49.7	40.7	40.7	46.7
20	44.4	44.4	61.4	25.0	25.0	25.8	41.7	41.7	47.7	38.7	38.7	44.7
25	41.9	41.9	59.0	24.3	24.3	25.1	39.8	39.8	45.8	36.8	36.8	42.8
31.25	39.3	39.3	56.4	23.6	23.6	24.3	37.8	37.8	43.8	34.8	34.8	40.8
62.5	30.3	30.3	47.5	21.5	21.5	22.2	31.8	31.8	37.8	28.8	28.8	34.8
100	23.1	23.1	40.3	20.1	20.1	20.7	27.8	27.8	33.7	24.8	24.8	30.8
200	10.2	10.2	27.4	18.0	18.0	18.5	21.7	21.7	27.7	18.7	18.7	24.7
250	5.2	5.2	22.5	17.3	17.3	17.8	19.8	19.8	25.8	16.8	16.8	22.8
300	0.8	0.8	18.2	16.8	16.8	17.3	18.2	18.2	24.2	15.2	15.2	21.2
350	-3.1	-3.1	14.2	16.3	16.3	16.8	16.9	16.9	22.9	13.9	13.9	19.9
400	-6.7	-6.7	10.6	15.9	15.9	16.4	15.7	15.7	21.7	12.7	12.7	18.7
500	-13.4	-13.4	4.0		15.2	15.7	13.8	13.8	19.8	10.8	10.8	16.8
600		-19.4	-1.9			15.1		12.2	18.2		9.2	15.2

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m) Maximum	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum	Resistance Unbalance (%) Maximum
100+/-15 @ 1-100MHz 100+/-22 @ 100-300MHz 100+/-32 @ 350-600MHz	25	Plenum - 77 ; Riser - 74	9.38	3%

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA 568-B.2-10, RoHS Compliant.

NextGain® Category 6eX CMR/CMP

SUPERIOR ESSEX 4 TR 23 NEXTGAIN



Product Description

NextGain Category 6eX cable brings UTP performance to a new level. Guaranteed for 6 dB of margin (headroom) over base requirements of Category 6 NEXT standards, this cable maximizes bandwidth for today's leading edge applications and those of the future. With positive ACR verified beyond 300 MHz, NextGain CAT 6eX cable demonstrates superior capability for ATM, Gigabit Ethernet and other bandwidth intensive applications.

Features

- Guaranteed NEXT of 6 dB greater than Category 6 requirements
- Guaranteed ACR of 30 dB at 100 MHz and 11.7 dB at 250 MHz
- Exceptional PS NEXT, PS ELFEXT, ACR and PS ACR performance over and above Category 6 requirements
- QuickCount® marking system
- Color coded box labels
- Warranted with numerous connectivity manufacturers
- ColorTip™ Circuit Identification System

Benefits

- "Future-proofing" the cable installation
- Performance assurance for multiple high-bandwidth applications (e.g., Fast Ethernet, ATM, Gigabit Ethernet)
- Reduces BER, improving network efficiency
- Eliminates guess work of footage in box or reel
- Easily identifiable jacket colors
- Offers flexibility in selection of connectivity solutions
- Easily identifiable conductor mates even in low light environments

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring
- Supports legacy protocols and applications

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	54-246-2A	4	23 (0.57)	Blue	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-246-3A	4	23 (0.57)	Gray	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-246-4A	4	23 (0.57)	White	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-246-6A	4	23 (0.57)	Yellow	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-246-5A	4	23 (0.57)	Green	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-246-7A	4	23 (0.57)	Purple	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-246-9A	4	23 (0.57)	Red	0.23 (5.8)	24 (36)	1000' Reel-in-a-Box
	54-272-2A	4	23 (0.57)	Blue	0.23 (5.8)	24 (36)	1000' Reel
	54-272-3A	4	23 (0.57)	Gray	0.23 (5.8)	24 (36)	1000' Reel
	54-272-4A	4	23 (0.57)	White	0.23 (5.8)	24 (36)	1000' Reel
	54-272-6A	4	23 (0.57)	Yellow	0.23 (5.8)	24 (36)	1000' Reel
	54-272-5A	4	23 (0.57)	Green	0.23 (5.8)	24 (36)	1000' Reel
CMP	54-272-7A	4	23 (0.57)	Purple	0.23 (5.8)	24 (36)	1000' Reel
	54-272-9A	4	23 (0.57)	Red	0.23 (5.8)	24 (36)	1000' Reel
	54-246-2B	4	23 (0.57)	Blue	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-3B	4	23 (0.57)	Gray	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-4B	4	23 (0.57)	White	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-6B	4	23 (0.57)	Yellow	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-5B	4	23 (0.57)	Green	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-7B	4	23 (0.57)	Purple	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-9B	4	23 (0.57)	Red	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-246-FB	4	23 (0.57)	teal	0.23 (5.8)	27 (40)	1000' Reel-in-a-Box
	54-272-2B	4	23 (0.57)	Blue	0.23 (5.8)	27 (40)	1000' Reel
	54-272-3B	4	23 (0.57)	Gray	0.23 (5.8)	27 (40)	1000' Reel
	54-272-4B	4	23 (0.57)	White	0.23 (5.8)	27 (40)	1000' Reel
	54-272-6B	4	23 (0.57)	Yellow	0.23 (5.8)	27 (40)	1000' Reel
	54-272-5B	4	23 (0.57)	Green	0.23 (5.8)	27 (40)	1000' Reel
	54-272-7B	4	23 (0.57)	Purple	0.23 (5.8)	27 (40)	1000' Reel
	54-272-9B	4	23 (0.57)	Red	0.23 (5.8)	27 (40)	1000' Reel

Product Description CMR

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Web Separator • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Product Description CMP

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: FEP • Web Separator • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical												
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.0	2.0	1.7	74.3	80.3	92.7	72.3	78.3	90.9	72.3	78.3	90.4
4	3.8	3.8	3.4	65.3	71.3	83.5	61.5	67.5	80.1	63.3	69.3	81.4
10	6.0	5.9	5.4	59.3	65.3	76.9	53.3	59.3	71.6	57.3	63.3	74.9
16	7.6	7.5	6.9	56.3	62.3	74.2	48.6	54.7	67.3	54.3	60.3	72.0
20	8.5	8.4	7.7	54.8	60.8	72.7	46.3	52.3	64.9	52.8	58.8	70.6
25	9.5	9.4	8.7	53.3	59.3	71.2	43.8	49.8	62.5	51.3	57.3	69.1
31.25	10.7	10.6	9.8	51.9	57.9	69.1	41.2	47.2	59.3	49.9	54.9	67.2
62.5	15.4	15.3	14.1	47.4	53.4	64.6	32.0	37.9	50.6	45.4	51.4	62.6
100	19.8	19.7	18.1	44.3	50.3	62.4	24.5	30.4	44.3	42.3	48.3	60.3
200	29.0	28.8	26.3	39.8	45.8	57.1	10.8	16.6	30.9	37.8	43.8	55.0
250	32.8	32.6	29.8	38.3	44.3	56.0	5.5	11.7	26.0	36.3	42.3	53.8
300		36.2	33.0		40.2	54.5		4.6	21.5		38.2	52.3
350		39.5	35.9		39.2	53.1			17.1		37.2	50.8
400		43.2	38.5		38.3	50.9			12.2		36.3	48.6
450		46.3	41.3		37.5	48.3			7.0		35.5	46.3
500		49.2	44.0		36.8	48.80			4.9		34.8	46.8
550		51.4	46.6		36.2	48.1			1.6		34.2	46.0
650		54.2	51.1		35.1	45.0					33.5	43.1

Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (ACRF) (dB/100m) Minimum			PS-ELFEXT (PSACRF) (dB/100m) Minimum		
	TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	70.3	76.3	88.7	20.0	20.0	26.8	67.8	73.8	84.7	64.8	70.8	82.8
4	59.5	65.5	78.1	23.0	23.6	31.2	55.7	61.7	72.8	52.7	58.7	71.0
10	51.3	57.3	69.6	25.0	26.0	33.2	47.8	53.8	65.1	44.8	50.8	63.1
16	46.6	52.7	65.2	25.0	26.0	32.8	43.7	49.7	61.2	40.7	46.7	59.2
20	44.3	50.3	63.0	25.0	26.0	33.0	41.7	47.7	59.3	38.7	44.7	57.3
25	41.8	47.8	60.5	24.3	25.5	34.6	39.8	45.8	57.4	36.8	42.8	55.4
31.25	39.2	45.2	57.6	23.6	25.0	34.6	37.9	43.9	55.6	34.9	40.9	53.5
62.5	30.0	35.9	48.7	21.5	23.5	34.0	31.8	37.8	49.8	28.8	34.8	47.7
100	22.5	28.4	42.4	20.1	22.5	33.0	27.8	33.8	46.0	24.8	30.8	43.7
200	8.8	14.6	29.0	18.0	21.0	30.6	21.7	27.7	40.1	18.7	24.7	37.8
250	3.5	9.3	24.3	17.3	20.5	29.8	19.8	25.8	38.1	16.8	22.8	35.8
300		1.5	19.8		20.1	28.7		24.2	36.3		21.2	34.0
350		-2.8	15.3		19.8	27.3		22.9	35.0		19.9	32.7
400		-7.4	10.6		16.2	26.7		21.7	33.6		18.7	31.1
450		-11.3	5.5		15.5	25.8		20.5	32.4		17.1	30.1
500		-14.9	3.3		15.2	24.7		19.3	30.9		16.1	28.6
550		-17.7	0.0		14.9	23.1		18.1	29.5		15.4	27.2
650		-21.2			14.6	18.4		16.9	26.2		14.2	24.0

Input Impedance (Ohms)		Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
Guaranteed		Maximum	Typical	Nominal	Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	CMR	25	18	69	9.38	7.0	3.0	0.5
100+/-22 @ 100-250MHz		CMP	25	18	72	9.38	7.0	3.0
100+/-32 @ 250-650MHz								

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2-1, Verified to Category 6, RoHS 2002/95/EC Compliant.

DataGain® Category 6+ CMR/CMP

SUPERIOR ESSEX DATAGAIN CAT 6+



Product Description

DataGain cable provides the best value in Category 6 cables on the market today. The innovative design, which utilizes a flexible center rod filler, yields exceptional performance that exceeds TIA/EIA Category 6 specifications. DataGain easily surpasses the performance of other cost-competitive Category 6 cables.

Features

- Guaranteed NEXT, PS NEXT, ELFEXT, PS ELFEXT, ACR, PS ACR, and RL values greater than Category 6 requirements
- Guaranteed ACR of 27.6 dB at 100 MHz and 8.7 dB at 250 MHz
- QuickCount® marking system
- Color coded box labels
- Round Design with flexible center rod filler
- Warranted with numerous connectivity manufacturers
- ColorTip™ Circuit Identification System
- BrakeBox™ payout control system

Benefits

- Greater assurance of exceptional overall channel performance at a great value
- "Future-proofs" the cable installation
- Eliminates guess work of footage in box or reel
- Easily identifiable jacket colors
- Reduces installation time
- Offers flexibility in selection of connectivity solutions
- Easily identifiable conductor mates even in low light environments
- Adjustable tension control on reel prevents overspin and entangling of cable.

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	66-246-2A	4	23 (0.57)	Blue	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-246-3A	4	23 (0.57)	Gray	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-246-4A	4	23 (0.57)	White	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-246-6A	4	23 (0.57)	Yellow	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-246-5A	4	23 (0.57)	Green	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-246-7A	4	23 (0.57)	Purple	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-246-DA	4	23 (0.57)	Orange	0.22 (5.5)	23 (35)	1000' BrakeBox*
	66-272-2A	4	23 (0.57)	Blue	0.22 (5.5)	23 (35)	1000' Reel
	66-272-3A	4	23 (0.57)	Gray	0.22 (5.5)	23 (35)	1000' Reel
	66-272-4A	4	23 (0.57)	White	0.22 (5.5)	23 (35)	1000' Reel
	66-272-6A	4	23 (0.57)	Yellow	0.22 (5.5)	23 (35)	1000' Reel
	66-272-5A	4	23 (0.57)	Green	0.22 (5.5)	23 (35)	1000' Reel
	66-272-7A	4	23 (0.57)	Purple	0.22 (5.5)	23 (35)	1000' Reel
	66-240-2A	4	23 (0.57)	Blue	0.22 (5.5)	23 (35)	1000' POP™ Box
	66-240-3A	4	23 (0.57)	Gray	0.22 (5.5)	23 (35)	1000' POP™ Box
	66-240-4A	4	23 (0.57)	White	0.22 (5.5)	23 (35)	1000' POP™ Box
	66-240-5A	4	23 (0.57)	Green	0.22 (5.5)	23 (35)	1000' POP™ Box
	66-240-6A	4	23 (0.57)	Yellow	0.22 (5.5)	23 (35)	1000' POP™ Box
	66-240-7A	4	23 (0.57)	Purple	0.22 (5.5)	23 (35)	1000' POP™ Box
	66-240-DA	4	23 (0.57)	Orange	0.22 (5.5)	23 (35)	1000' POP™ Box
CMP	66-246-2B	4	23 (0.57)	Blue	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-246-3B	4	23 (0.57)	Gray	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-246-4B	4	23 (0.57)	White	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-246-6B	4	23 (0.57)	Yellow	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-246-5B	4	23 (0.57)	Green	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-246-7B	4	23 (0.57)	Purple	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-246-DB	4	23 (0.57)	Orange	0.22 (5.5)	24 (36)	1000' BrakeBox*
	66-272-2B	4	23 (0.57)	Blue	0.22 (5.5)	24 (36)	1000' Reel
	66-272-3B	4	23 (0.57)	Gray	0.22 (5.5)	24 (36)	1000' Reel
	66-272-4B	4	23 (0.57)	White	0.22 (5.5)	24 (36)	1000' Reel
	66-272-6B	4	23 (0.57)	Yellow	0.22 (5.5)	24 (36)	1000' Reel
	66-272-5B	4	23 (0.57)	Green	0.22 (5.5)	24 (36)	1000' Reel
	66-272-7B	4	23 (0.57)	Purple	0.22 (5.5)	24 (36)	1000' Reel
	66-240-2B	4	23 (0.57)	Blue	0.22 (5.5)	24 (36)	1000' POP™ Box
	66-240-3B	4	23 (0.57)	Gray	0.22 (5.5)	24 (36)	1000' POP™ Box
	66-240-4B	4	23 (0.57)	White	0.22 (5.5)	24 (36)	1000' POP™ Box
	66-240-5B	4	23 (0.57)	Green	0.22 (5.5)	24 (36)	1000' POP™ Box
	66-240-6B	4	23 (0.57)	Yellow	0.22 (5.5)	24 (36)	1000' POP™ Box
	66-240-7B	4	23 (0.57)	Purple	0.22 (5.5)	24 (36)	1000' POP™ Box
	66-240-DB	4	23 (0.57)	Orange	0.22 (5.5)	24 (36)	1000' POP™ Box

Other colors available: Red, Pink

* Reel-in-a-box with Dual Brake System, see page 236 for details.

Product Description CMR

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Flexible Rod Filler • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Product Description CMP

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: FEP • Flexible Rod Filler • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical												
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.0	2.0	1.7	74.3	77.3	87.6	72.3	75.3	85.9	72.3	75.3	85.2
4	3.8	3.8	3.4	65.3	68.3	77.9	61.5	64.5	74.5	63.3	66.3	75.6
10	6.0	5.9	5.4	59.3	62.3	71.4	53.3	56.4	66.0	57.3	60.3	69.1
16	7.6	7.5	6.9	56.3	59.2	68.4	48.6	51.7	61.5	54.2	57.2	66.1
20	8.5	8.4	7.8	54.8	57.8	67.1	46.3	49.4	59.4	52.8	55.8	64.8
25	9.5	9.4	8.7	53.3	56.3	65.4	43.8	46.9	56.7	51.3	54.3	63.1
31.25	10.7	10.6	9.8	51.9	54.9	64.2	41.2	44.3	54.3	49.9	52.9	61.8
62.5	15.4	15.3	14.1	47.4	50.4	59.5	32.0	35.1	45.4	45.4	48.4	57.3
100	19.8	19.7	18.1	44.3	47.3	56.7	24.5	27.6	38.5	42.3	45.3	54.3
200	29.0	28.8	26.4	39.8	42.8	51.5	10.8	14.0	25.3	37.8	40.8	49.3
250	32.8	32.6	29.8	38.3	41.3	50.5	5.5	8.7	20.5	36.3	39.3	47.8
300		36.2	33.0		37.1	48.2		0.7	15.2		35.1	45.7
400		42.7	38.9		35.3	45.2			6.2		33.3	42.6
500			44.2			42.4						40.0
550			47.2			41.0						39.1
Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (dB/100m) Minimum			PS-ELFEXT (dB/100m) Minimum		
	TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	70.3	73.3	83.6	20.0	20.2	27.5	67.8	70.7	80.6	64.8	68.3	78.6
4	59.5	62.5	72.3	23.0	23.2	32.8	55.8	58.7	68.7	52.8	56.3	66.8
10	51.3	54.5	63.7	25.0	25.5	35.1	47.8	50.7	60.9	44.8	48.3	58.9
16	46.6	49.7	59.3	25.0	25.5	35.2	43.7	46.6	56.9	40.7	44.2	54.9
20	44.3	47.4	57.2	25.0	25.5	34.9	41.8	44.7	55.0	38.8	42.3	52.9
25	41.8	44.9	54.5	24.3	24.8	35.0	39.8	42.7	53.2	36.8	40.3	51.0
31.25	39.2	42.3	52.2	23.6	24.1	34.7	37.9	40.8	51.3	34.9	38.4	49.1
62.5	30.0	33.1	43.3	21.5	22.0	32.2	31.9	34.8	45.5	28.9	32.4	43.2
100	22.5	25.6	36.5	20.1	20.6	31.2	27.8	30.7	41.6	24.8	28.3	39.3
200	8.8	12.0	23.2	18.0	18.5	29.2	21.8	24.7	35.7	18.8	22.3	33.4
250	3.5	6.7	18.4	17.3	17.8	29.1	19.8	22.7	33.7	16.8	20.3	31.4
300			13.1		16.8	27.4		18.3	32.0		15.3	29.7
400			4.2		15.9	26.0		15.8	29.2		12.8	26.8
500						24.5			26.2			23.9
550						23.6			24.6			22.5

Input Impedance (Ohms)		Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)		
Guaranteed		Maximum	Typical	Nominal	Maximum	Typical	Maximum	Typical	
100+/-15 @ 1-100MHz	CMR	25	16	68	9.38	7.0	3.0	0.5	
100+/-22 @ 100-250MHz		CMP	25	20	71	9.38	7.0	3.0	0.5
100+/-32 @ 250-550MHz									

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2-1, UL Verified to Category 6, RoHS Compliant.

Category 6 CMR/CMP

SUPERIOR ESSEX CAT 6 CMR



SUPERIOR ESSEX CAT 6 CMP



Product Description

Superior Essex Series 77 product line provides exceptional value for jobs which require standards compliance Category 6 cable at a cost-effective price.

Features

- Meets TIA/EIA 568-B.2-1 specification
- QuickCount® marking system
- Color coded box labels
- ColorTip™ Circuit Identification System
- BrakeBox™ payout control system

Benefits

- Provides cost effective solution
- Eliminates guess work of footage remaining in box or reel
- Easily identifiable jacket colors
- Easily identifiable conductor mates even in low light environments
- Adjustable tension control on reel prevents overspin and tangling of cable.

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	77-246-2A	4	23 (0.57)	Blue	0.22 (5.5)	23 (35)	1000' BrakeBox*
	77-246-3A	4	23 (0.57)	Gray	0.22 (5.5)	23 (35)	1000' BrakeBox*
	77-246-4A	4	23 (0.57)	White	0.22 (5.5)	23 (35)	1000' BrakeBox*
	77-246-6A	4	23 (0.57)	Yellow	0.22 (5.5)	23 (35)	1000' BrakeBox*
	77-246-5A	4	23 (0.57)	Green	0.22 (5.5)	23 (35)	1000' BrakeBox*
	77-246-EA	4	23 (0.57)	Black	0.22 (5.5)	23 (35)	1000' BrakeBox*
	77-272-2A	4	23 (0.57)	Blue	0.22 (5.5)	23 (35)	1000' Reel
	77-272-3A	4	23 (0.57)	Gray	0.22 (5.5)	23 (35)	1000' Reel
	77-272-4A	4	23 (0.57)	White	0.22 (5.5)	23 (35)	1000' Reel
	77-272-6A	4	23 (0.57)	Yellow	0.22 (5.5)	23 (35)	1000' Reel
	77-272-5A	4	23 (0.57)	Green	0.22 (5.5)	23 (35)	1000' Reel
	77-240-2A	4	23 (0.57)	Blue	0.22 (5.5)	23 (35)	1000' POP™ Box
	77-240-3A	4	23 (0.57)	Gray	0.22 (5.5)	23 (35)	1000' POP™ Box
	77-240-4A	4	23 (0.57)	White	0.22 (5.5)	23 (35)	1000' POP™ Box
	77-240-5A	4	23 (0.57)	Green	0.22 (5.5)	23 (35)	1000' POP™ Box
	77-240-6A	4	23 (0.57)	Yellow	0.22 (5.5)	23 (35)	1000' POP™ Box
CMP	77-246-2B	4	23 (0.57)	Blue	0.21 (5.4)	24 (36)	1000' BrakeBox*
	77-246-3B	4	23 (0.57)	Gray	0.21 (5.4)	24 (36)	1000' BrakeBox*
	77-246-4B	4	23 (0.57)	White	0.21 (5.4)	24 (36)	1000' BrakeBox*
	77-246-6B	4	23 (0.57)	Yellow	0.21 (5.4)	24 (36)	1000' BrakeBox*
	77-246-5B	4	23 (0.57)	Green	0.21 (5.4)	24 (36)	1000' BrakeBox*
	77-246-EB	4	23 (0.57)	Black	0.21 (5.4)	24 (36)	1000' BrakeBox*
	77-272-2B	4	23 (0.57)	Blue	0.21 (5.4)	24 (36)	1000' Reel
	77-272-3B	4	23 (0.57)	Gray	0.21 (5.4)	24 (36)	1000' Reel
	77-272-4B	4	23 (0.57)	White	0.21 (5.4)	24 (36)	1000' Reel
	77-272-6B	4	23 (0.57)	Yellow	0.21 (5.4)	24 (36)	1000' Reel
	77-272-5B	4	23 (0.57)	Green	0.21 (5.4)	24 (36)	1000' Reel
	77-240-2B	4	23 (0.57)	Blue	0.21 (5.4)	24 (36)	1000' POP™ Box
	77-240-3B	4	23 (0.57)	Gray	0.21 (5.4)	24 (36)	1000' POP™ Box
	77-240-4B	4	23 (0.57)	White	0.21 (5.4)	24 (36)	1000' POP™ Box
	77-240-5B	4	23 (0.57)	Green	0.21 (5.4)	24 (36)	1000' POP™ Box
	77-240-6B	4	23 (0.57)	Yellow	0.21 (5.4)	24 (36)	1000' POP™ Box

* Reel-in-a-box with Dual Brake System, see page 236 for details.

Category 6 CMR/CMP

Product Description CMR

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Flexible Rod Filler • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Product Description CMP

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical								
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2-1	Superior Essex	TIA 568-B.2-1	Superior Essex	TIA 568-B.2-1	Superior Essex	TIA 568-B.2-1	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.9	74.3	85.1	72.3	83.2	72.3	83.9
4	3.8	3.5	65.3	75.4	61.5	71.9	63.3	74.3
10	6.0	5.6	59.3	68.9	53.3	63.3	57.3	67.8
16	7.6	7.1	56.2	65.9	48.6	58.8	54.2	64.8
20	8.5	8.0	54.8	64.6	46.3	56.6	52.8	63.4
25	9.5	9.0	53.3	62.6	43.8	53.6	51.3	61.7
31.25	10.7	10.1	51.9	61.7	41.2	51.6	49.9	60.4
62.5	15.4	14.5	47.4	57.1	32.0	42.6	45.4	55.8
100	19.8	18.6	44.3	54.1	24.5	35.5	42.3	52.8
200	29.0	27.2	39.8	48.8	10.8	21.6	37.8	47.7
250	32.8	30.7	38.3	47.7	5.5	17.0	36.3	46.2
Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2-1	Superior Essex	TIA 568-B.2-1	Superior Essex	TIA 568-B.2-1	Superior Essex	TIA 568-B.2-1	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	70.3	82.0	20.0	23.8	67.8	74.2	64.8	71.7
4	59.5	70.8	23.0	27.9	55.8	62.3	52.8	59.8
10	51.3	62.2	25.0	30.1	47.8	54.4	44.8	51.8
16	46.6	57.7	25.0	30.1	43.7	50.3	40.7	47.8
20	44.3	55.4	25.0	30.0	41.8	48.4	38.8	45.9
25	41.8	52.7	24.3	29.7	39.8	46.5	36.8	43.9
31.25	39.2	50.3	23.6	29.2	37.9	44.6	34.9	42.0
62.5	30.0	41.3	21.5	26.9	31.9	38.7	28.9	36.0
100	22.5	34.2	20.1	25.7	27.8	34.7	24.8	32.1
200	8.8	20.5	18.0	23.6	21.8	28.8	18.8	26.0
250	3.5	15.5	17.3	23.2	19.8	26.7	16.8	24.1

Input Impedance (Ohms) Guaranteed		Delay Skew (ns/100m)		Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
		Maximum	Typical		Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	CMR	45	25	68	9.38	7.0	3.0	0.5
100+/-22 @ 100-250MHz	CMP	45	25	71	9.38	7.0	3.0	0.5

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2-1, UL Verified to Category 6, RoHS Compliant.

Cobra Category 5e+ CMR/CMP



Product Description

Cobra Category 5e+ cable is the performance leader in its class. With enough headroom to greatly exceed TIA/EIA 568-B.2 specifications, Cobra cable is ideal for installations that require true "future proofing" in channel performance. By design, Cobra cables are manufactured to the highest quality standards, design requirements and materials which ensure that every box provides significant margin over TIA/EIA 568-B.2 specifications for NEXT, Power Sum NEXT and Attenuation. Outstanding guaranteed and typical performance sets Cobra far apart from common CAT 5e cables.

Features

- Guaranteed NEXT of 3 dB greater than TIA/EIA 568-B.2 specification across frequency range
- Guaranteed ACR of 19.5 dB at 100MHz
- Exceptional PS NEXT, PS ELFEXT and PS ACR over Category 5e
- "WideMouth" POP® Box design
- ColorTip™ circuit identification
- QuickCount® marking system
- Color coded box labels

Benefits

- Greater assurance of exceptional overall channel performance
- Performance assurance for multiple high-bandwidth applications
- Reduces BER, improving network efficiency
- Reduces tension on wire to ensure proper electrical performance after installation
- Easily identifiable conductor mates even in low light environments
- Eliminates guess work of footage in box or reel
- Easily identifiable jacket colors

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	52-200-25	4	24 (0.5)	Blue	0.20 (5.1)	21 (31)	1000' Reel-in-a-Box
	52-200-35	4	24 (0.5)	Gray	0.20 (5.1)	21 (31)	1000' Reel-in-a-Box
	52-200-45	4	24 (0.5)	White	0.20 (5.1)	21 (31)	1000' Reel-in-a-Box
	52-200-65	4	24 (0.5)	Yellow	0.20 (5.1)	21 (31)	1000' Reel-in-a-Box
	52-200-55	4	24 (0.5)	Green	0.20 (5.1)	21 (31)	1000' Reel-in-a-Box
	52-240-25	4	24 (0.5)	Blue	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-35	4	24 (0.5)	Gray	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-45	4	24 (0.5)	White	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-65	4	24 (0.5)	Yellow	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-55	4	24 (0.5)	Green	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-75	4	24 (0.5)	Purple	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-95	4	24 (0.5)	Red	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-D5	4	24 (0.5)	Orange	0.20 (5.1)	21 (31)	1000' POP Box
	52-240-E5	4	24 (0.5)	black	0.20 (5.1)	21 (31)	1000' POP Box
CMP	52-200-28	4	24 (0.5)	Blue	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	52-200-38	4	24 (0.5)	Gray	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	52-200-48	4	24 (0.5)	White	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	52-200-68	4	24 (0.5)	Yellow	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	52-200-58	4	24 (0.5)	Green	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	52-241-28	4	24 (0.5)	Blue	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-38	4	24 (0.5)	Gray	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-48	4	24 (0.5)	White	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-68	4	24 (0.5)	Yellow	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-58	4	24 (0.5)	Green	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-78	4	24 (0.5)	Purple	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-98	4	24 (0.5)	Red	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-D8	4	24 (0.5)	Orange	0.21 (5.3)	23 (34)	1000' POP Box
	52-241-E8	4	24 (0.5)	black	0.21 (5.3)	23 (34)	1000' POP Box

Product Description CMR

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Product Description CMP

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical												
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.0	2.0	1.8	65.3	68.3	79.4	63.3	65.9	77.7	62.3	66.3	77.2
4	4.1	4.0	3.6	56.3	59.3	69.9	52.2	54.9	66.4	53.3	57.3	67.4
8	5.8	5.7	5.1	51.8	54.8	65.1	46.0	48.8	60.0	48.8	52.8	62.7
10	6.5	6.4	5.8	50.3	53.3	63.6	43.8	46.7	57.9	47.3	51.3	61.2
16	8.2	8.2	7.4	47.3	50.3	60.4	39.1	41.9	53.1	44.3	48.3	58.0
20	9.3	9.2	8.2	45.8	48.8	59.0	36.5	39.5	50.9	42.8	46.8	56.6
25	10.4	10.3	9.3	44.3	47.3	57.5	33.9	37.0	48.3	41.3	45.3	55.1
31.25	11.7	11.6	10.5	42.9	45.9	56.0	31.2	34.3	45.7	39.9	43.9	53.5
62.5	17.0	16.8	14.9	38.4	41.4	51.7	21.4	24.7	36.8	35.4	39.4	49.2
100	22.0	21.7	19.2	35.3	38.3	48.5	13.3	19.5	29.5	32.3	36.3	46.0
155		27.8	24.2		35.5	45.7		9.3	21.6		33.5	43.1
200		32.1	27.8		29.8	43.6		3.5	16.0		27.8	41.0
250		36.5	31.4		28.3	42.0			10.7		26.3	39.4
300		40.5	34.7		27.2	40.4			5.9		25.2	37.7
350		44.4	37.8		26.2	39.3			1.7		24.2	36.8

Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (dB/100m) Minimum			PS-ELFEXT (dB/100m) Minimum		
	TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	60.3	64.4	75.4	20.0	20.0	28.5	63.8	63.8	72.6	60.8	60.8	70.6
4	49.2	53.4	64.0	23.0	23.0	35.6	51.7	51.7	60.7	48.7	48.7	59.0
8	43.0	47.3	57.7	24.5	24.5	35.7	45.7	45.7	54.8	42.7	42.7	53.1
10	40.8	45.2	55.6	25.0	25.0	35.9	43.8	43.8	52.9	40.8	40.8	51.1
16	36.1	40.4	50.8	25.0	25.0	35.2	39.7	39.7	48.9	36.7	36.7	47.1
20	33.5	38.0	48.6	25.0	25.0	34.9	37.7	37.7	47.0	34.7	34.7	45.2
25	30.9	35.5	46.0	24.3	24.3	35.2	35.8	35.8	45.1	32.8	32.8	43.3
31.25	28.2	32.8	43.4	23.6	23.6	34.8	33.9	33.9	43.2	30.9	30.9	41.3
62.5	18.4	23.2	34.6	21.5	21.5	31.8	27.8	27.8	37.2	24.8	24.8	35.2
100	10.3	18.0	27.3	20.1	20.1	30.1	23.8	23.8	33.2	20.0	20.8	31.1
155		6.8	19.4		18.8	28.4		19.9	29.3		16.9	27.2
200		1.0	13.9		18.0	27.3		11.7	27.1		10.7	25.0
250			8.6		17.3	26.1		9.8	25.1		8.8	23.1
300			3.8		16.8	25.1		8.2	23.7		7.2	21.5
350					16.3	24.0		6.9	22.5		5.9	20.3

Input Impedance (Ohms)		Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
Guaranteed		Maximum	Typical	Nominal	Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	CMR	25	12	70	9.4	9.0	5.0	0.5
100+/-22 @ 100-350MHz	CMP	25	14	73	9.4	9.0	5.0	0.5

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, UL Verified to Category 5e, RoHS Compliant.

Category 5e+ ScTP CMR/CMP (F/UTP)



Product Description

Superior Essex offers Screen Twisted Pair (ScTP) Category 5e+ cables in both plenum and riser versions. The cable has guaranteed performance out to 350MHz and meets all applicable TIA 568-B.2 requirements. The cable consists of four (4) balanced 24 AWG copper pairs. The core is wrapped with an aluminum foil tape and has a tin coated drain wire. The tape wrapped core is jacketed with the appropriate flexible PVC jacket for plenum or riser applications.

Features

- Aluminum foil tape covers all four pairs
- Exceeds both TIA-568-B.2 and ISO/IEC 11801 for Category 5e cable performance
- Riser and plenum rated designs

Benefits

- Protects against EMI/RFI and provides greater security
- Assures compliance for all current networking applications (up to 1000 BASE-T)
- Suitable for all commercial building installations

Applications

- Exceeds TIA 568-B.2 and ISO/IEC 11801 Requirements for Cat 5e ScTP with Guaranteed Performance to 350 MHz
- ATM and Token Ring Configurations
- 10BASE-T through 1000BASE-T Ethernet
- Applications Requiring Secure Networks or Protection from EMI/RFI

Part Numbers and Physical Characteristics

Part #	Rating	Pair Count	AWG (mm)	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
5F-220-X5	Riser	4	24 (0.5)	0.25 (6.4)	32 (48)	1000' Reel
5F-220-X8	Plenum	4	24 (0.5)	0.23 (5.8)	33 (49)	1000' Reel

Jacket Color Cross-Reference Table

Replace "X" with	Color
2	Blue
3	Gray
4	White
5	Green
6	Yellow
9	Red
D	Orange

Cable Construction

Configuration:	4-pair copper core surrounded by aluminum foil tape with drain wire and jacket
Conductor:	24 AWG Solid Copper
Insulation Material:	Riser - Riser Rated Thermoplastic Plenum - Plenum Rated Thermoplastic
Insulation Colors:	Pair 1 - White/Blue, Blue Pair 2 - White/Orange, Orange Pair 3 - White/Green, Green Pair 4 - White/Brown, Brown
Shield:	Aluminum foil tape
Drain Wire:	24 AWG 7/32 Tinned Copper
Jacket Material:	Riser - Riser Grade PVC Plenum - Plenum Grade Low Smoke PVC
Compliance:	TIA 568-B.2 and ISO/IEC 11801
Fire Listings:	Riser - UL 1666, UL CMR, c(UL) CMR-FT-4 Plenum - NFPA 262 (UL910) UL CMP; c(UL) CMP-FT6

Electrical

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.5	2.5	2.0	65.3	68.3	79.5	62.8	66.3	77.6	62.3	66.3	78.0
4	4.3	4.3	3.6	56.3	59.3	69.7	52.0	55.2	66.2	53.3	57.3	68.5
8	5.9	5.9	5.1	51.8	54.8	61.7	45.8	49.0	56.7	48.8	52.8	60.9
10	6.6	6.6	5.7	50.3	53.3	61.0	43.7	46.8	55.5	47.3	51.3	60.0
16	8.4	8.4	7.3	47.2	50.2	57.4	38.9	42.1	50.3	44.2	48.2	56.4
20	9.4	9.4	8.2	45.8	48.8	57.3	36.4	39.5	49.4	42.8	46.8	55.8
25	10.5	10.5	9.1	44.3	47.3	55.7	33.8	36.9	46.8	41.3	45.3	54.1
31.25	11.8	11.8	10.2	42.9	45.9	55.9	31.1	34.2	45.8	39.9	43.9	54.3
62.5	17.1	17.1	14.4	38.4	41.4	51.1	21.3	24.4	36.9	35.4	39.4	49.4
100	22.0	22.0	18.3	35.3	38.3	43.7	13.3	16.3	26.0	32.3	36.3	42.7
155		28.1	22.8		35.4	40.7		7.4	18.8		33.4	38.4
200		32.5	26.2		33.8	35.4		1.4	10.0		31.8	34.8
250		36.9	29.9		32.3	37.0		-	8.0		30.3	33.2
300		41.0	32.7		31.1	37.7		-	5.9		29.1	31.8
350		44.9	35.3		30.1	36.3		-	2.1		28.1	30.0

Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (dB/100m) Minimum			PS-ELFEXT (dB/100m) Minimum		
	TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	59.8	64.3	76.1	20.0	20.0	26.5	63.8	63.8	79.7	60.8	60.8	78.1
4	49.0	53.2	65.0	23.0	23.0	32.6	51.8	51.8	67.3	48.8	48.8	66.2
8	42.8	47.0	56.0	24.5	24.5	34.3	45.7	45.7	61.2	42.7	42.7	60.2
10	40.7	44.8	54.5	25.0	25.0	35.7	43.8	43.8	59.7	40.8	40.8	58.2
16	35.9	40.1	49.4	25.0	25.0	34.7	39.7	39.7	55.7	36.7	36.7	54.4
20	33.4	37.5	47.9	25.0	25.0	37.3	37.8	37.8	53.4	34.8	34.8	52.2
25	30.8	34.9	45.3	24.3	24.3	35.2	35.8	35.8	51.5	32.8	32.8	50.0
31.25	28.1	32.2	44.4	23.6	23.6	32.8	33.9	33.9	49.6	30.9	30.9	48.4
62.5	18.3	22.4	35.4	21.5	21.5	29.7	27.9	27.9	42.7	24.9	24.9	42.1
100	10.3	14.3	25.0	20.1	20.1	27.0	23.8	23.8	39.2	20.8	20.8	38.5
155		5.4	17.2		18.8	23.5		20.0	35.6		17.0	34.8
200		-	9.5		18.0	22.0		17.8	32.7		14.8	31.8
250		-	7.1		17.3	19.3		15.8	31.0		12.8	30.0
300		-	4.9		16.8	18.6		14.3	29.6		11.3	28.5
350		-	1.0		16.3	17.1		12.9	28.9		9.9	27.7

Impedance (Ohms) Maximum	Delay Skew (ns/100m) Guaranteed	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m)		DCR Unbalance (%) Maximum	Capacitance Unbalance (pF/100m (1 pF/ft)) Maximum
			Maximum	Typical		
100+/-15 @ 1-100MHz 100+/-15 @ 101-200MHz 100+/-15 @ 201-350MHz	45	Riser - 69 Plenum - 72	9.38	7.00	5	330

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, CAT 5e Verified.

Marathon LAN® Category 5e CMR/CMP



Product Description

Marathon LAN Category 5e cable offers an exceptional value for jobs which require standards compliance at a cost-effective price. While Marathon LAN cable meets all of the TIA/EIA 568-B.2 specifications, it also offers other features that make it easier to use, save on installation time and expense and ensure product quality during the installation. From the QuickCount® feature, which marks the exact cable remaining in the box, to the WideMouth payout design, which reduces tension on the wire as it is pulled during installation, Marathon LAN cable provides more overall value than any other Category 5e product available today.

Features

- Meets TIA/EIA 568-B specification
- "WideMouth" POP® Box design
- QuickCount® marking system
- Color coded labels
- ColorTip™ circuit identification system

Benefits

- Provides cost-effective solution
- Reduces tension on wire to ensure proper electrical performance after installation
- Eliminates guesswork of footage in box and reduces scrap
- Reduces time with inventory management
- Easily identifiable conductor mates, even in low light environment

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	51-243-25	4	24 (0.5)	Blue	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-243-35	4	24 (0.5)	Gray	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-243-45	4	24 (0.5)	White	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-243-55	4	24 (0.5)	Green	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-243-65	4	24 (0.5)	Yellow	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-243-75	4	24 (0.5)	Purple	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-243-95	4	24 (0.5)	Red	0.20 (5.1)	19 (28)	1000' Reel-in-a-Box
	51-240-25	4	24 (0.5)	Blue	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-35	4	24 (0.5)	Gray	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-45	4	24 (0.5)	White	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-55	4	24 (0.5)	Green	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-65	4	24 (0.5)	Yellow	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-75	4	24 (0.5)	Purple	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-95	4	24 (0.5)	Red	0.20 (5.1)	19 (28)	1000' POP Box
	51-240-D5	4	24 (0.5)	Orange	0.20 (5.1)	19 (28)	1000' POP Box
CMP	51-240-E5	4	24 (0.5)	Black	0.20 (5.1)	19 (28)	1000' POP Box
	51-243-28	4	24 (0.5)	Blue	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-243-38	4	24 (0.5)	Gray	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-243-48	4	24 (0.5)	White	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-243-58	4	24 (0.5)	Green	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-243-68	4	24 (0.5)	Yellow	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-243-78	4	24 (0.5)	Purple	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-243-98	4	24 (0.5)	Red	0.21 (5.3)	23 (34)	1000' Reel-in-a-Box
	51-241-28	4	24 (0.5)	Blue	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-38	4	24 (0.5)	Gray	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-48	4	24 (0.5)	White	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-58	4	24 (0.5)	Green	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-68	4	24 (0.5)	Yellow	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-78	4	24 (0.5)	Purple	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-98	4	24 (0.5)	Red	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-C8	4	24 (0.5)	Orange	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-D8	4	24 (0.5)	Pink	0.21 (5.3)	23 (34)	1000' POP Box
	51-241-E8	4	24 (0.5)	Black	0.21 (5.3)	23 (34)	1000' POP Box

Note: For additional colors and packages, please contact your Superior Essex sales professional.

Product Description CMR

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Product Description CMP

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical								
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified Maximum	Typical	Calculated	Typical	Specified	Typical
1	2.0	2.0	65.3	78.6	63.3	76.7	62.3	76.2
4	4.1	3.9	56.3	68.6	52.2	64.8	53.3	66.2
8	5.8	5.5	51.8	63.8	46.0	58.4	48.8	61.4
10	6.5	6.2	50.3	62.4	43.8	56.3	47.3	60.0
16	8.2	7.8	47.3	59.3	39.1	51.5	44.3	56.8
20	9.3	8.8	45.8	57.8	36.5	49.0	42.8	55.4
25	10.4	9.8	44.3	56.3	33.9	46.4	41.3	53.8
31.25	11.7	11.1	42.9	54.7	31.2	43.8	39.9	52.3
62.5	17.0	15.8	38.4	50.6	21.4	34.7	35.4	48.0
100	22.0	20.2	35.3	47.3	13.3	27.2	32.3	44.8
155		25.5		44.8		19.2		42.0
200		29.3		43.4		13.8		40.5
250		33.3		41.4		8.4		39.0
300		36.9		40.6		3.9		38.1
350		39.9		39.0				36.6

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	74.3	20.0	28.6	63.8	72.3	60.8	70.7
4	49.2	62.4	23.0	34.8	51.7	60.5	48.7	58.9
8	43.0	56.0	24.5	33.9	45.7	54.6	42.7	53.0
10	40.8	53.9	25.0	34.4	43.8	52.7	40.8	51.1
16	36.1	49.1	25.0	34.7	39.7	48.7	36.7	47.1
20	33.5	46.7	25.0	34.9	37.7	46.8	34.7	45.2
25	30.9	44.2	24.3	33.7	35.8	44.9	32.8	43.3
31.25	28.2	41.5	23.6	32.8	33.9	43.0	30.9	41.3
62.5	18.4	32.5	21.5	29.5	27.8	37.1	24.8	35.3
100	10.3	25.0	20.1	27.5	23.8	33.0	20.8	31.2
155		17.0		24.8		29.1		27.4
200		11.7		23.0		26.8		25.1
250		6.2		21.4		24.8		23.1
300		1.7		20.2		23.3		21.6
350				19.2		22.1		20.3

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m)		Velocity of Propagation (%)		DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
	Maximum	Typical	Nominal		Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	CMR	45	11	71	9.38	9.00	5.0	0.7
100+/-22 @ 100-200MHz		45	12	74	9.38	9.00	5.0	0.8
100+/-32 @ 200-350MHz	CMP							

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, UL Verified to Category 5e, RoHS Compliant.

Category 5e CMR/CMX – Outdoor



Product Description

Superior Essex Category 5e CMR/CMX - Outdoor cable is designed for residential indoor/outdoor LAN applications. Category 5e compliance ensures this cable will support 1000BASE-T Gigabit Ethernet. This cable easily surpasses the Grade 2 requirements specified in the TIA/EIA 570-B Residential Telecommunications Standard. The Category 5e CMR/CMX-Outdoor cable is resistant to cracking after long-term UV exposure, making it ideal for installation runs that require the cable to be exposed to the elements. This cable has been tested and is listed as compliant to the 300 hour weatherometer test and -20°C cold bend test.

Features

- Tough, weather resistant PVC jacket
- Combined Indoor/Outdoor Rating
- Meets TIA/EIA 568-B.2 Specification
- QuickCount® marking system
- ColorTip™ circuit identification system

Benefits

- Increases life of cable by providing low temperature handling and sunlight resistance; cable jacket resists cracking over time
- Reduces inventory by eliminating multiple cable types
- Category 5e compliance supports GigaBit Ethernet for LAN applications
- Eliminates guesswork of footage in box and reduces scrap
- Easily identifiable conductor mates, even in low light environment

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
51-240-11	4	24 (0.5)	Beige	0.22 (5.6)	22 (33)	1000' POP® Box
51-240-21	4	24 (0.5)	Blue	0.22 (5.6)	22 (33)	1000' POP Box
51-240-31	4	24 (0.5)	Gray	0.22 (5.6)	22 (33)	1000' POP Box

Physical Description

- Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Polyolefin
- Jacket: Tough, Flame Retardant, Weather and Abrasion Resistant PVC (Polyvinyl Chloride)

Electrical								
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.3	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (ACRF) (dB/100m) Minimum		PS-ELFEXT (PSACRF) (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m) Maximum Typical		Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum Typical		Resistance Unbalance (%) Maximum Typical	
100+/-15 @ 1-100MHz	45	21	69	9.38	9.00	5.0	0.7

Standards Compliance:

UL 444, UL 1581, ANSI/TIA/EIA 568-B.2, ANSI/TIA/EIA 570-B Residential Telecommunications Cabling Standard, ANSI/ICEA S-90-661-2002, Listed as CMX (Outdoor) & UL 1666 (CMR).

Category 5e CM



Product Description

Superior Essex Category 5e CM cable is designed for residential LAN applications. Category 5e compliance ensures this cable will support 1000BASE-T Gigabit Ethernet. This cable easily surpasses the Grade 2 requirements specified in the TIA/EIA 570-B Residential Telecommunications Standard.

Features

- Meets TIA/EIA 568-B.2 Specification
- QuickCount® marking system
- ColorTip™ circuit identification system

Benefits

- Category 5e compliance supports GigaBit Ethernet for LAN applications
- Eliminates guesswork of footage in box and reduces scrap
- Easily identifiable conductor mates, even in low light environment

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
51-240-3G	4	24 (0.5)	Gray	0.19 (4.8)	17 (25)	1000' POP® Box
51-240-2G	4	24 (0.5)	Blue	0.19 (4.8)	17 (25)	1000' POP Box
51-240-4G	4	24 (0.5)	White	0.19 (4.8)	17 (25)	1000' POP Box

PREMISES COPPER

Physical Description

- Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Polyolefin
- Jacket: Tough, Abrasion Resistant PVC (Polyvinyl Chloride)

Electrical								
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.3	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m)		Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
	Maximum	Typical		Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	45	21	69	9.38	9.00	5.0	0.7

Standards Compliance:

UL 444, ANSI/TIA/EIA 568-B.2, ANSI/TIA/EIA 570-B Residential Telecommunications Cabling Standard, ANSI/ICEA S-90-661-2002, RoHS Compliant.

6 Pair Category 5e CMR



Product Description

6-pair UTP cable, with Category 5e (TIA/EIA 568-B.2) performance, is the solution to a growing number of special installation needs. More customers are demanding two additional pairs above the standard 4-pair cable for high-bandwidth applications. Two additional pairs provide the flexibility for utility metering and other telemetry needs without the expense of adding a separate cable and without additional space. The Superior Essex 6-pair Category 5e cable delivers the performance expected, while offering the many features and user advantages of all our high performance premises products.

Physical Description

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Polyolefin • Round Filler • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Features

- Two additional pairs in excess of the standard 4 pair construction
- TIA/EIA 568-B.2 compliance
- QuickCount® marking system
- Warranted with all leading connectivity manufacturers
- ColorTip™ circuit identification system

Benefits

- Eliminates expense of additional cable when 6 pairs are required, reduces cabling space requirements; speeds installation time
- Any of 6 pairs can be used for CAT 5e applications
- Eliminates guesswork of footage on reel and reduces scrap
- Offers flexibility in selection of connectivity solutions
- Easily identifiable conductor mates, even in low light environment

Applications • 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
51-347-25	6	24 (0.5)	Blue	0.26 (6.6)	31 (46)	1000' Reel-in-a-Box

Electrical

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.2	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Input Impedance (Ohms)	Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
Guaranteed	Maximum	Typical	Nominal	Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	45	21	69	9.38	9.0	5.0	0.7

Standards Compliance:

UL 444, UL 1666, ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, Listed as CMR, RoHS Compliant.

25-Pair Category 5e Power Sum – CMR/CMP



Product Description

25-Pair Power Sum Category 5e UTP cables are designed to provide support for both backbone and horizontal applications. These applications include inter-closet backbone links, equipment cabling between cross-connect and hub equipment and zone distribution horizontal cabling between wiring closets and multiple work area transition points. The cable is available in CMP and CMR ratings and is UL verified to meet all requirements of TIA/EIA 568-B.2.

Features

- Small outside diameter
- Vibrant insulation colors
- Flexible jacket material

Benefits

- Handles tight installations
- Easier identification of conductors
- Ease of use during installation

Applications • 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	51-478-25	25	24 (0.5)	Blue	0.55 (14)	144 (214)	1000' Reel
	51-478-35	25	24 (0.5)	Gray	0.55 (14)	144 (214)	1000' Reel
	51-478-45	25	24 (0.5)	White	0.55 (14)	144 (214)	1000' Reel
CMP	51-478-28	25	24 (0.5)	Blue	0.48 (12)	114 (170)	1000' Reel
	51-478-38	25	24 (0.5)	Gray	0.48 (12)	114 (170)	1000' Reel
	51-478-48	25	24 (0.5)	White	0.48 (12)	114 (170)	1000' Reel

Physical Description CMR • Conductor: 24 AWG (0.5 mm) Solid annealed Bare Copper • Insulation: Polyolefin • Jacket: Flame Retardant PVC (Polyvinyl Chloride) • Cylindrical separator

Physical Description CMP • Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: FEP • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride) • Cylindrical separator

Electrical

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.2	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Input Impedance (Ohms) Guaranteed		Delay Skew (ns/100m)		Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
		Maximum	Typical		Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	CMR	45	21	69	9.38	9.0	5.0	0.7
	CMP	45	21	72	9.38	9.0	5.0	0.7

Standards Compliance:

UL 444, NFPA 262, UL 1666, ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, Listed as CMP or CMR, Verified to Category 5e, RoHS Compliant.

Bundled UTP Cable Category 6



Product Description

Superior Essex Bundled UTP cables reduce the amount of cable pulls in an installation and simplify cable management. These bundled cables consist of multiple Category 6 compliant cables bundled together and bound by contra-helically applied binder yarns. The binder configuration allows for easy breakout and offers greater flexibility compared to an overjacket design. Contrasting jacket colors allow for easy identification.

Features

- Binding of multiple UTP cables.
- Multiple construction options (2 to 7 cable sub-units)
- Warranted with numerous connectivity manufacturers
- ColorTip™ circuit identification system
- Flexible, dual binder yarns, contra-helically applied

Benefits

- Reduces installation time
- Improves cable management
- Sizes available for small and large projects
- Easily identifiable conductor mates, even in low light environment
- Maintains maximum flexibility and allows for easy breakout

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Cable Sub-units	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Reel Dimensions F x T x D (in)
CMR	56-202-2A	2	BL, GY	0.45 (11)	48 (72)	2500 (762)	30 x 18 x 12
	56-202-3A	3	BL, GY, WH	0.49 (12)	72 (108)	2500 (762)	30 x 18 x 12
	56-202-4A	4	BL, GY, WH, YL	0.55 (13)	96 (144)	2500 (762)	36 x 18 x 14
	56-201-7A	7	BL, GY, WH, YL, GN, RD, PU	0.68 (17)	168 (252)	1000 (305)	30 x 18 x 12
CMP	56-202-2B	2	BL, GY	0.41 (10)	50 (76)	2500 (762)	30 x 18 x 12
	56-202-3B	3	BL, GY, WH	0.44 (11)	75 (111)	2500 (762)	30 x 18 x 12
	56-202-4B	4	BL, GY, WH, YL	0.49 (12)	100 (148)	2500 (762)	30 x 18 x 12
	56-201-7B	7	BL, GY, WH, YL, GN, RD, PU	0.62 (15)	175 (259)	1000 (305)	30 x 18 x 12

For additional colors, please contact your Superior Essex sales professional.

Bundled UTP Cable Category 6

Physical Description CMR

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Separator • Insulation: Thermoplastic • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Physical Description CMP

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Separator • Insulation: Thermoplastic • Jacket: Flame Retardant Low smoke PVC (Polyvinyl Chloride)

Electrical Performance of Individual Cables

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum	NEXT (dB/100m) Minimum	ACR (dB/100m) Minimum	PS-NEXT (dB/100m) Minimum
1	2.0	74.3	72.3	72.3
4	3.8	65.3	61.5	63.3
10	6.0	59.3	53.3	57.3
16	7.6	56.2	48.6	54.2
20	8.5	54.8	46.3	52.8
25	9.5	53.3	43.8	51.3
31.25	10.7	51.9	41.2	49.9
62.5	15.4	47.4	32.0	45.4
100	19.8	44.3	24.5	42.3
200	29.0	39.8	10.8	37.8
250	32.8	38.3	5.5	36.3

Frequency MHz	PS-ACR (dB/100m) Minimum	Return Loss (dB/100m) Minimum	ELFEXT (dB/100m) Minimum	PS-ELFEXT (dB/100m) Minimum
1	70.3	20.0	67.8	64.8
4	59.5	23.0	55.8	52.8
10	51.3	25.0	47.8	44.8
16	46.6	25.0	43.7	40.7
20	44.3	25.0	41.8	38.8
25	41.8	24.3	39.8	36.8
31.25	39.2	23.6	37.9	34.9
62.5	30.0	21.5	31.9	28.9
100	22.5	20.1	27.8	24.8
200	8.8	18.0	21.8	18.8
250	3.5	17.3	19.8	16.8

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m) Maximum	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum	Resistance Unbalance (%) Maximum
100+/-15 @ 1-100MHz	CMR	68	9.38	3.0
100+/-22 @ 100-200MHz				
100+/-25 @ 200-250MHz	CMP	71	9.38	3.0

Individual Cable Standards Compliance:

UL 444, NFPA 262, UL 1666, ANSI/TIA/EIA-568-B.2-1, Listed as CMP or CMR, Category 6, RoHS Compliant.

Bundled UTP Cable Category 5e



Product Description

Superior Essex Bundled UTP cables reduce the amount of cable pulls in an installation and simplify cable management. These bundled cables consist of multiple Category 5e compliant cables bundled together and bound by contra-helically applied binder yarns. The binder configuration allows for easy break-out and offers greater flexibility compared to a composite overjacket design. Contrasting jacket colors allow easy identification.

Features

- Binding of multiple UTP cables.
- Multiple construction options (2 to 7 cable sub-units)
- Warranted with numerous connectivity manufacturers
- Flexible wrap binder
- ColorTip™ circuit identification system

Benefits

- Reduces installation time
- Improves cable management
- Sizes available for small and large projects
- Maintains maximum flexibility and allows for easy breakout
- Easily identifiable conductor mates even in low light environments

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring

Part Numbers and Physical Characteristics

	Part #	Cable Sub-units	Jacket Color	Nom. Dia. inches (mm)	Approx.Weight lbs/kft (kg/km)	Standard Length ft (m)	Reel Dimensions F x T x D (in)
CMR	56-202-25	2	BL, GY	0.41 (10)	46 (88)	2500 (762)	30 x 18 x 12
	56-202-35	3	BL, GY, WH	0.43 (11)	65 (97)	2500 (762)	30 x 18 x 12
	56-202-45	4	BL, GY, WH, YL	0.48 (12)	86 (128)	2500 (762)	36 x 18 x 14
	56-201-75	7	BL, GY, WH, YL, GN, RD, PU	0.67 (17)	154 (229)	1000 (305)	30 x 18 x 12
CMP	56-202-28	2	BL, GY	0.41 (10)	46 (68)	2500 (762)	30 x 18 x 12
	56-202-38	3	BL, GY, WH	0.44 (11)	69 (103)	2500 (762)	30 x 18 x 12
	56-202-48	4	BL, GY, WH, YL	0.50 (13)	92 (137)	2500 (762)	30 x 18 x 12
	56-201-78	7	BL, GY, WH, YL, GN, RD, PU	0.62 (16)	160 (238)	1000 (305)	30 x 18 x 12

* For additional colors, please contact your Superior Essex sales professional.

* Bundled cables are also available with Category 6 Cables

Bundled UTP Cable Category 5e

Physical Description CMR

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Physical Description CMP

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic • Jacket: Flame Retardant, Low Smoke PVC (Polyvinyl Chloride)

Electrical Performance of Individual Cables

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum	NEXT (dB/100m) Minimum	ACR (dB/100m) Minimum	PS-NEXT (dB/100m) Minimum
1	2.0	65.3	63.3	62.3
4	4.1	56.3	52.2	53.3
8	5.8	51.8	46.0	48.8
10	6.5	50.3	43.8	47.3
16	8.2	47.3	39.1	44.3
20	9.3	45.8	36.5	42.8
25	10.4	44.3	33.9	41.3
31.25	11.7	42.9	31.2	39.9
62.5	17.0	38.4	21.4	35.4
100	22.0	35.3	13.3	32.3

Frequency MHz	PS-ACR (dB/100m) Minimum	Return Loss (dB/100m) Minimum	ELFEXT (dB/100m) Minimum	PS-ELFEXT (dB/100m) Minimum
1	60.3	20.0	63.8	60.8
4	49.2	23.0	51.7	48.7
8	43.0	24.5	45.7	42.7
10	40.8	25.0	43.8	40.8
16	36.1	25.0	39.7	36.7
20	33.5	25.0	37.7	34.7
25	30.9	24.3	35.8	32.8
31.25	28.2	23.6	33.9	30.9
62.5	18.4	21.5	27.8	24.8
100	10.3	20.1	23.8	20.8

Input Impedance (Ohms)		Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
Guaranteed		Maximum	Typical	Nominal	Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	CMR	45	21	69	9.38	9.0	5.0	0.7
	CMP	45	21	72	9.38	9.0	5.0	0.8

Individual Cable Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ISO/IEC 11801, ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, Category 5e, RoHS Compliant.



Product Description

Superior Essex offers multiple configurations of Residential Broadband riser-rated (CMR) composite cables to support the three common drop configurations used in residential structured wiring installations. These composite cables improve installation time and reduce the chance of violating minimum bend radius of the cable. The individual components support many technologies, including extended bandwidth satellite service, 1000BASE-T and 100BASE-TX Ethernet and high-definition TV signals. The use of TIA/EIA 568-B.2-1 compliant Category 6 UTP cables and Series 6 Quad Shield coaxial cables ensures these composite cables are designed to easily surpass the Grade 2 requirements specified in the TIA/EIA 570-B Residential Telecommunications Standard. This product is also available with a 62.5 µm duplex multimode fiber.

Features

- All-in-one cable design
- Series 6 Quad Shield coaxial cable with typical bandwidth that exceeds 2GHz, CAT 6 4-pair
- Multiple constructions available
- TeraGain® multimode fiber (optional)

Benefits

- Reduces installation time, provides additional protection to the individual cables
- "Future-Proofing" the installation. Supports extended bandwidth satellite service and high-definition TV signals
- Customized flexibility for the application
- Integrated fiber reduces the need to install separate cables for in home optical networks

Applications

- 10BASE-T through 1000BASE-T Ethernet • ATM • Token Ring • HDTV
- CATV • CCTV • DBS

Part Numbers and Physical Characteristics

Part #		Jacket Color	Nom. Dia. inches (mm)	Approx.Weight lbs/kft (kg/km)	Standard Length ft (m)
72-512-01	1 Series 6 Quad x 1 CAT 6	Orange	0.37 x 0.54 (9.27 x 13.59)	70 (104)	1000 (305)
72-621-03	2 Series 6 Quad x 2 CAT 6	Orange	0.62 x 0.54 (15.7 x 13.5)	130 (193)	500 (152)
7A-621-03	2 Series 6 Quad x 2 CAT 6 x 1 Duplex 62.5/125 MMF	Orange	0.62 x 0.54 (15.7 x 13.6)	144 (214)	500 (152)

Physical Description CMR

- UTP – Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Tape Separator • Insulation: Thermoplastic • Jacket: Flame Retardant PVC (Polyvinyl Chloride)
- Coax – Conductor: 18 AWG Copper Clad Steel • Insulation: Polyethylene • Inner Shield: 2.8-mil aluminum tape • 60% Inner Braid: 34 AWG aluminum outer shield 1.8-mil aluminum tape • 40% Outer Braid: 34 AWG aluminum • Jacket: PVC (Polyvinyl Chloride)
- Fiber – 62.5/125 µm Duplex, 5mm Round, 900 µm tight buffered design; orange jacket.
- Overall Jacket – PVC (Polyvinyl Chloride)

Optical - Fiber Component

Optical Specifications	TeraGain® Multimode
Wavelength (nm)	62.5/125
Max Attenuation (dB/km)	850/1300
Min Bandwidth (MHz•km)	3.5/1.5
Gigabit Ethernet Min Distance (m)	220/600
	300/550

See complete fiber specifications on page 230.

Electrical - UTP Component

Frequency MHz	Attenuation (dB/100m) @ 20°C Specified Maximum	NEXT (dB/100m) Specified Minimum	ACR (dB/100m) Calculated Minimum	PS-NEXT (dB/100m) Specified Minimum
1	2.0	74.3	72.3	72.3
4	3.8	65.3	61.5	63.3
10	6.0	59.3	53.3	57.3
16	7.6	56.2	48.6	54.2
20	8.5	54.8	46.3	52.8
25	9.5	53.3	43.8	51.3
31.25	10.7	51.9	41.2	49.9
62.5	15.4	47.4	32.0	45.4
100	19.8	44.3	24.5	42.3
200	29.0	39.8	10.8	37.8
250	32.8	38.3	5.5	36.3

Electrical - UTP Component (Continued)

Frequency MHz	PS-ACR (dB/100m) Calculated Minimum	Return Loss (dB/100m) Specified Minimum	ELFEXT (dB/100m) Specified Minimum	PS-ELFEXT (dB/100m) Specified Minimum
1	70.3	20.0	67.8	64.8
4	59.5	23.0	55.8	52.8
10	51.3	25.0	47.8	44.8
16	46.6	25.0	43.7	40.7
20	44.3	25.0	41.8	38.8
25	41.8	24.3	39.8	36.8
31.25	39.2	23.6	37.9	34.9
62.5	30.0	21.5	31.9	28.9
100	22.5	20.1	27.8	24.8
200	8.8	18.0	21.8	18.8
250	3.5	17.3	19.8	16.8

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m) Maximum	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum	Resistance Unbalance (%) Maximum
100+/-15 @ 1-100MHz 100+/-22 @ 100-200MHz 100+/-25 @ 200-250MHz	25	68	9.38	5.0

Electrical - Coax Component

Frequency MHz	Attenuation, Guaranteed Maximum dB/100m	Attenuation, Typical dB/100m	SRL, Typical dB
5	2.7	1.6	20
55	5.3	4.8	20
211	10.1	9.0	20
270	11.5	10.3	20
300	12.1	11.0	20
330	12.8	11.7	20
400	14.1	13.1	20
450	15.0	13.6	20
550	16.7	15.3	20
750	19.7	17.1	20
870	21.3	19.7	20
1000	23.0	21.2	20
1200		23.7	18
1450		26.1	18
1800		29.0	18
2200		32.1	18

Standards Compliance:

UL 444, Listed as CMR (UL 1666), ANSI/TIA/EIA-570-B, TIA/EIA 568-B.2-1, Category 6, Telcordia GR-2881-CORE, RoHS Compliant.



Product Description

Superior Essex offers multiple configurations of Residential Broadband riser-rated (CMR) composite cables to support the three common drop configurations used in residential structured wiring installations. These composite cables improve installation time and reduce the chance of violating minimum bend radius of the cable. The individual components support many technologies, including extended bandwidth satellite service, 1000BASE-T and 100BASE-TX Ethernet and high-definition TV signals. The use of TIA/EIA 568-B.2 compliant UTP cables and Series 6 Quad Shield coaxial cables ensures these composite cables are designed to easily surpass the Grade 2 requirements specified in the TIA/EIA 570-B Residential Telecommunications Standard. This product is also available with a 62.5 µm duplex multimode fiber.

Features

- All-in-one cable design
- Series 6 Quad Shield coaxial cable with typical bandwidth that exceeds 2GHz
- Multiple constructions available
- TeraGain® multimode fiber (optional)
- Category 5e, 4-pair

Benefits

- Reduces installation time provides additional protection to the individual cables
- "Future-Proofing" the installation. Supports extended bandwidth satellite service and high-definition TV signals
- Customized flexibility for the application
- Integrated fiber reduces the need to install separate cables for in home optical networks
- For high bandwidth applications

Applications • 10BASE-T through 1000BASE-T Ethernet • ATM • Token Ring HDTV, CATV • CCTV • DBS

Part Numbers and Physical Characteristics

Part #	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
72-312-01 1 Series 6 Quad x 1 CAT 5e	Orange	0.365 x 0.535 (9.27 x 13.59)	70 (104)	1000 (305)
72-421-03 2 Series 6 Quad x 2 CAT 5e	Orange	0.620 x 0.535 (15.75 x 13.59)	130 (193)	500 (152)
7A-421-03 2 Series 6 Quad x 2 CAT 5e x 1 Duplex 62.5/125 MMF	Orange	0.622 x 0.537 (15.79 x 13.64)	144 (214)	500 (152)

Physical Description

- UTP – Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Polyolefin • Jacket: Flame Retardant PVC (Polyvinyl Chloride)
- Coax – Conductor: 18 AWG Copper Clad Steel • Insulation: Polyethylene • Inner Shield: 2.8-mil aluminum tape • 60% Inner Braid: 34 AWG aluminum
- Outer Shield 1.8-mil aluminum tape • 40% Outer Braid: 34 AWG aluminum • Jacket: PVC (Polyvinyl Chloride)
- Fiber – 62.5/125 µm Duplex, 5mm Round, 900 µm tight buffered design; orange jacket.
- Overall Jacket – PVC (Polyvinyl Chloride)

Optical - Fiber Component

	TeraGain® Multimode
Optical Specifications	62.5/125
Wavelength (nm)	850/1300
Max Attenuation (dB/km)	3.5/1.5
Min Bandwidth (MHz•km)	220/600
Gigabit Ethernet Min Distance (m)	300/550

See complete fiber specifications on page 230.

Electrical - UTP Component

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.3	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Electrical - UTP Component (Continued)

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Impedance (Ohms) Guaranteed	Delay Skew (ns/100m) Maximum	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum	Resistance Unbalance (%) Maximum
100+/-15 @ 1-100MHz	45	69	9.4	5.0

Electrical - Coax Component

Frequency MHz	Attenuation, Guaranteed Maximum dB/100m	Attenuation, Typical dB/100m	SRL Typical dB
5	2.7	1.6	20
55	5.3	4.8	20
211	10.1	9.0	20
270	11.5	10.3	20
300	12.1	11.0	20
330	12.8	11.7	20
400	14.1	13.1	20
450	15.0	13.6	20
550	16.7	15.3	20
750	19.7	17.1	20
870	21.3	19.7	20
1000	23.0	21.2	20
1200		23.7	18
1450		26.1	18
1800		29.0	18
2200		32.1	18

Standards Compliance:

UL 444, Listed as CMR (UL 1666), ANSI/TIA/EIA-570-B Residential Telecommunications Cabling Standard, ANSI/ICEA S-90-661-2002, TIA/EIA 568-B.2, Category 5e, Telcordia GR-2881-CORE, RoHS Complaint.

Coax Series 6 Quad Shield CM/CMR/ Aluminum Interlock CMR



Product Description

Superior Essex Series 6 quad shield coaxial cables are designed to support technologies such as extended bandwidth satellite service, high definition TV signals, CATV and two-way cable modems. Superior Essex maintains tight tolerances to cable diameter requirements of leading connector manufacturers. Also available as interlock armored coax.

Features

- Series 6 Quad Shield Coaxial cable with bandwidth that exceeds 3 GHz
- Tight foamed polyethylene insulating skin bonds around center conductor
- Black and White jacket colors available
- Interlock armored version

Benefits

- Future-proofing™ the installation. Supports extended bandwidth satellite service and high-definition TV signals
- Exhibits better transmission characteristics
- Helps differentiate incoming service versus internal cabling infrastructure
- Provides additional mechanical and fire safety protection

Applications

- High Definition Television (HDTV)
- Cable Television (CATV)
- Extended bandwidth satellite service
- Two-way cable modems
- Closed circuit television (CCTV)

Part Numbers and Physical Characteristics

	Part #	Color	Nom. Dia. inches (mm)	Approx.Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
CM/CATV	78-147-91	White	0.3 (7.6)	30 (45)	1000 (305)	Reel
	79-147-91	Black	0.3 (7.6)	30 (45)	1000 (305)	Reel
	78-147-9P	White	0.3 (7.6)	30 (45)	1000 (305)	POP™ Box
	79-147-9P	Black	0.3 (7.6)	30 (45)	1000 (305)	POP™ Box
CMR/CATVR	78-148-91	White	0.3 (7.6)	32 (48)	1000 (305)	Reel
	79-148-91	Black	0.3 (7.6)	32 (48)	1000 (305)	Reel
Aluminum Interlock Armored	KC-919-45	White	0.53 (13.5)	73 (109)	1000 (305)	Reel
CMR (no outer jacket)	KC-919-E5	Black	0.53 (13.5)	73 (109)	1000 (305)	Reel

Physical Description

- Conductor: 18 AWG Copper Clad Steel + Insulation: Polyethylene + Inner Shield: 2.8-mil aluminum foil + 60% Inner Braid: 34 AWG aluminum
Outer Shield: 1.8-mil aluminum foil + 40% Outer Braid: 34 AWG aluminum + Jacket: PVC (Polyvinyl Chloride)

Electrical Performance			
Frequency MHz	Attenuation (dB/100m) Maximum		SRL, Typical (dB)
	GR-2881, Specification	Typical	
5	2.7	1.6	20
55	5.3	4.8	20
211	10.1	9.0	20
270	11.5	10.3	20
300	12.1	11.0	20
330	12.8	11.7	20
400	14.1	13.1	20
450	15.0	13.6	20
550	16.7	15.3	20
750	19.7	17.1	20
870	21.3	19.7	20
1000	23.0	21.2	20
1200		23.7	18
1450		26.1	18
1800		29.0	18
2200		32.1	18
2600		35.2	15
3000		38.3	15

Typical Electrical Performance	
Nominal Impedance	75 Ohms
Nominal Velocity of Propagation	85%

Physical Characteristics	
	inches (mm)
Nominal Center Conductor Diameter	0.04 (1.0)
Nominal Diameter Over Shield	0.19 (4.7)
Nominal Diameter Over Jacket	0.30 (7.6)
Nominal Jacket Wall Thickness	0.03 (0.7)
Nominal Diameter over Dielectric	0.18 (4.57)

Standards Compliance:

UL 444, Listed as CM (UL 1581) / CMR (UL 1666), RoHS Compliant

Coax Series 6 60% Shield CM



Product Description

Superior Essex Series 6 60% shield coaxial cables are designed to surpass the basic product requirements specified in the TIA/EIA 570-B Residential Telecommunications Standard. This Series 6 coaxial cable will support analog, digital and high-bandwidth technologies. Superior Essex maintains tight tolerances to cable diameter requirements of leading connector manufacturers.

Physical Description

- Conductor: 18 AWG Copper Clad Steel • Insulation: Polyethylene • Inner Shield: 2.8-mil aluminum foil • 60% Inner Braid: 34 AWG aluminum
- Jacket: PVC (Polyvinyl Chloride)

Features

- Series 6 60% Shield Coaxial cable with bandwidth that exceeds 2 GHz
- Tight foamed polyethylene insulating skin bonds around center conductor
- Black and White jacket colors available

Benefits

- "Future-proofing" the installation.
- Exhibits better transmission characteristics
- Helps differentiate incoming service versus internal cabling infrastructure

Applications

- High Definition Television (HDTV)
- Cable Television (CATV)
- Extended bandwidth satellite service
- Two-way cable modems
- Closed Circuit Television (CCTV)



Part Numbers and Physical Characteristics

Part #	AWG	Color	Nom. Dia. inches (mm)	Approx.Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
78-107-9P	18	White	0.27 (6.9)	32 (14)	1000 (305)	1000' POP® Box
79-107-9P	18	Black	0.27 (6.9)	32 (14)	1000 (305)	1000' POP Box
78-107-91	18	White	0.27 (6.9)	32 (14)	1000 (305)	1000' Reel
79-107-91	18	Black	0.27 (6.9)	32 (14)	1000 (305)	1000' Reel

Electrical Performance

Frequency, MHz	Attenuation Maximum GR-2881, Specification	SRL Typical (dB)
55	5.2	20
211	10.1	20
270	11.4	20
330	12.7	20
350	14.1	20
450	15.0	20
500	15.8	20
550	16.7	20
600	17.5	20
750	19.6	20
870	21.3	20
1000	22.9	20
1200		15
1450		15

Typical Electrical Performance

Nominal Impedance	75 Ohms
Nominal Velocity of Propagation	85%

Physical Characteristics

	inches (mm)
Nominal Center Conductor Diameter	0.04 (1.02)
Nominal Diameter Over Shield	0.18 (4.57)
Nominal Diameter Over Jacket	0.27 (6.9)

Standards Compliance:

UL 444, UL 1655, Listed as CM (UL 1581), RoHS Compliant

Coax Series 6 Tri-Shield 70% CM/CMR



Product Description

Superior Essex Series 6 Tri-Shield 70% braided coaxial cables exceed the requirements specified in ANSI/SCTE 74-2003. The shielding consists of an inner aluminum/polyester foil bonded to the insulation, an aluminum 34 AWG braid, and an outer aluminum/polyester foil. This Series 6 Tri-Shield will support such technologies as extended bandwidth satellite service, high definition TV signals, CATV and two-way cable modems.

Features

- Series 6 (18 AWG copper clad steel center conductor)
- Available in CM (60 degree C rated jacket) or CMR (75 degree rated jacket)
- Tri-Shield consists of inner aluminum/polyester foil, aluminum braid, outer aluminum/polyester foil
- Bonded inner foil
- 100% coverage over the 70% (34 AWG aluminum) braiding.
- Available in water resistant Reel-in-a-Box package
- UL 444 listed
- Outer jacket black (UV rated for exterior use) or White PVC jacket

Part Numbers and Physical Characteristics

Part #	Description	Color	Rating	Std. Length (ft)	Qty. on Pallet	Nominal O.D. inches	Weight (Lbs/Kft)	Package Type
79-117-9R	Series 6 Tri-shield	Black	CM	1000	27	0.278	31	Reel in Box
78-117-9R	Series 6 Tri-shield	White	CM	1000	27	0.278	31	Reel in Box
79-118-9R	Series 6 Tri-shield	Black	CMR	1000	27	0.278	36	Reel in Box

Typical Test Data Dimension

Copper clad steel conductor diameter (inches)	.0403
Tri-shield Braid coverage	70%
Tri-shield Foil coverage	100%
Final outside diameter (inches)	.277

Typical Electrical Properties Impedance 75.4 Ohms

Attenuation @20°C

Frequency MHz	Attenuation dB/100 M
55	4.8
211	7.2
250	9.7
270	10.3
330	10.8
350	11.7
450	13.3
500	14.1
550	14.8
600	15.8
750	17.8
870	18.8
1000	20.3

Standards Compliance:

UL 444, CM and CMR rated; ANSI/SCTE 74-2003; Appropriate ASTM standards; RoHS Compliant

OSP Broadband Category 6



Product Description

BBD6 is Superior Essex's Outside Plant unshielded Broadband Category 6 cable. The cable has guaranteed transmission performance out to 250 MHz. The cable consists of a core of four (4) balanced twisted pairs held in place by a cross web separator and surrounded by a filling compound to prevent water ingress. The core is jacketed with a sunlight and abrasion resistant black polyethylene outer jacket. All designs are suitable for buried applications.

Features

- Fully filled core
- Category 6 transmission performance characterized to 650MHz
- Black polyethylene outer jacket

BBD6

- Unshielded
- Small, robust design for unshielded applications

BBDN6

- Aluminum Tape Shield
- Protection against EMI/RFI

BBDG6

- Copper-clad armor shield
- Protection against EMI/RFI and provides rodent resistance

Benefits

- Prevents water ingress that can affect electrical performance
- Outside Plant rated cable provides connections for work area and extension of the LAN
- Sunlight and weather resistant

Applications

- 10BASE-T through 1000BASE-T Ethernet
- ATM and Token Ring

Part Numbers and Physical Characteristics

Name	Part #	Shield	Pair Count	AWG (mm)	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
BBD6	04-001-68	None	4	23 (0.57)	0.30 (7.6)	36 (58)	1000' Reel
	04-002-68	None	4	23 (0.57)	0.30 (7.6)	36 (58)	2500' Reel
	04-003-68	None	4	23 (0.57)	0.30 (7.6)	36 (58)	5000' Reel
	04-601-68	None	4	23 (0.57)	0.30 (7.6)	36 (58)	Cut to Length
BBDN6	04-001-64	Coated Aluminum	4	23 (0.57)	0.37 (9.4)	59 (88)	1000' Reel
	04-002-64	Coated Aluminum	4	23 (0.57)	0.37 (9.4)	59 (88)	2500' Reel
	04-003-64	Coated Aluminum	4	23 (0.57)	0.37 (9.4)	59 (88)	5000' Reel
	04-601-64	Coated Aluminum	4	23 (0.57)	0.37 (9.4)	59 (88)	Cut to Length
BBDG6	04-001-65	Copper Clad	4	23 (0.57)	0.38 (9.7)	75 (112)	1000' Reel
	04-002-65	Copper Clad	4	23 (0.57)	0.38 (9.7)	75 (112)	2500' Reel
	04-003-65	Copper Clad	4	23 (0.57)	0.38 (9.7)	75 (112)	5000' Reel
	04-601-65	Copper Clad	4	23 (0.57)	0.38 (9.7)	75 (112)	Cut to Length

Physical Description

- Conductor/Cable Core: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: Solid Polyolefin • Core Filling Compound: 80°C ETPR (extended thermoplastic rubber)
- BBD6: No shield • Black polyethylene outer jacket
- BBDN6: Inner polyethylene jacket • Electrically continuous 0.008 in (0.2 mm) polymer coated smooth aluminum tape, applied with an overlap, black polyethylene outer jacket
- BBDG6: Inner polyethylene jacket • Electrically continuous 0.005 in (0.13 mm) corrugated copper-clad armor, applied with an overlap shield flooded with a flooding compound • Black polyethylene outer jacket

Electrical Performance

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.7	74.3	87.6	72.3	86.2	72.3	84.8
4	3.8	3.3	65.3	79.9	61.5	76.7	63.3	78.0
8	5.3	4.7	60.8	78.0	55.4	73.2	58.8	75.9
10	6.0	5.2	59.3	74.3	53.3	69.2	57.3	72.8
16	7.6	6.7	56.2	70.9	48.7	64.6	54.2	69.2
20	8.5	7.5	54.8	71.1	46.3	62.8	52.8	68.9
25	9.5	8.4	53.3	71.0	43.8	62.8	51.3	69.2
31.25	10.7	9.4	51.9	68.6	41.2	58.5	49.9	66.1
62.5	15.4	13.5	47.4	60.9	32.0	48.1	45.4	60.8
100	19.8	17.2	44.3	61.4	24.5	44.4	42.3	59.9
155	25.2	21.7	41.4	58.0	16.3	38.1	39.4	57.5
200	29.0	24.8	39.8	58.1	10.8	32.3	37.8	55.0
250	32.8	28.0	38.3	56.4	5.5	28.9	36.3	54.2
300		30.8		52.3		22.3		51.6
350		33.6		53.6		20.8		51.9
400		36.1		52.4		16.3		49.9
450		38.4		51.3		13.5		49.1
500		40.6		51.1		11.7		49.0
550		42.9		50.2		9.2		48.4
600		45.1		49.2		4.7		46.6
650		47.7		45.0		-2.0		43.0

Electrical Performance (Continued)

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	70.3	83.2	20.0	27.8	67.8	77.8	64.8	76.2
4	59.5	74.8	23.0	30.3	55.8	66.6	52.8	64.9
8	53.4	71.3	24.5	36.8	49.7	60.7	46.7	59.0
10	51.3	67.7	25.0	30.4	47.8	58.8	44.8	57.1
16	46.7	62.8	25.0	35.0	43.7	55.2	40.7	53.1
20	44.3	61.6	25.0	33.1	41.8	53.4	38.8	51.2
25	41.8	60.9	24.3	29.8	39.8	51.4	36.8	49.2
31.25	39.2	56.7	23.6	34.0	37.9	49.3	34.9	47.2
62.5	30.0	47.6	21.5	33.2	31.9	45.4	28.9	43.3
100	22.5	43.1	20.1	32.3	27.8	43.1	24.8	41.0
155	14.3	36.1	18.8	29.4	24.0	39.9	21.0	38.5
200	8.8	30.5	18.0	26.8	21.8	35.0	18.8	32.9
250	3.5	27.3	17.3	26.0	19.8	33.0	16.8	31.8
300		21.3		24.4		31.9		30.4
350		19.2		23.2		33.2		30.8
400		14.3		22.2		28.8		27.1
450		11.5		21.1		25.5		24.4
500		8.6		20.7		25.6		23.6
550		6.0		18.9		23.2		21.5
600		2.0		18.7		22.3		20.6
650		-3.8		17.6		21.0		19.1

Input Impedance (Ohms) Maximum	Delay Skew (ns/100m) Maximum	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum	DC Resistance Unbalance (%) Maximum
100+/-15 @ 1-100MHz 100+/-22 @ 100-250MHz	45	57	9.38	3

Applicable Standards

ANSI/TIA/EIA-B.2-1, ANSI/ICEA/S-86-634, RoHS 2002/95/EC Compliant

OSP Broadband Category 5e



Product Description

BBD Category 5e OSP cables are designed to provide extension of the LAN beyond the premises. A variety of constructions are available to suit multiple environmental needs. All designs are suitable for buried applications.

Features

- Category 5e Transmission performance characterized to 350MHz
- Metallic shield tapes (Aluminum for BBDNE and Copper-clad armor for BBDGE)
- Fully filled constructions
- UV/Sunlight resistant black jacket

BBDE

- Unshielded
- Small, robust design for unshielded applications

BBDNE

- Aluminum Tape Shield
- Protection against EMI/RFI

BBDGE

- Copper-clad armor shield
- Protection against EMI/RFI and provides rodent resistance

Benefits

- OSP rated cable connections for work area and backbone LAN
- Provides additional protection against EMI/RFI and rodents.
- Prevents intrusion of moisture that can degrade transmission quality
- Confidence that cable will last even with long-term exposure to direct sunlight

Applications

- 10BASE-T through 1000BASE-T Ethernet
- ATM and Token Ring

Part Numbers and Physical Characteristics

Name	Part #	Pair Count	AWG (mm)	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
BBDE	04-001-58	4	24 (0.5)	0.25 (6.6)	28 (42)	1000' Reel
	04-002-58	4	24 (0.5)	0.25 (6.6)	28 (42)	2500' Reel
	04-003-58	4	24 (0.5)	0.25 (6.6)	28 (42)	5000' Reel
	04-601-58	4	24 (0.5)	0.25 (6.6)	28 (42)	Cut to length
BBDNE	04-001-54	4	24 (0.5)	0.33 (8.4)	48 (71)	1000' Reel
	04-002-54	4	24 (0.5)	0.33 (8.4)	48 (71)	2500' Reel
	04-003-54	4	24 (0.5)	0.33 (8.4)	48 (71)	5000' Reel
	04-601-54	4	24 (0.5)	0.33 (8.4)	48 (71)	Cut to length
BBDGE	04-001-55	4	24 (0.5)	0.33 (8.4)	62 (92)	1000' Reel
	04-002-55	4	24 (0.5)	0.33 (8.4)	62 (92)	2500' Reel
	04-003-55	4	24 (0.5)	0.33 (8.4)	62 (92)	5000' Reel
	04-601-55	4	24 (0.5)	0.33 (8.4)	62 (92)	Cut to length

Physical Description

- Conductor/Cable Core: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Solid Polyolefin • Core Filling Compound: 80°C ETPR (extended thermoplastic rubber)
- BBDE: No shield • Black polyethylene outer jacket
- BBDNE: Inner polyethylene jacket • Electrically continuous 0.008 in (0.2 mm) polymer coated smooth aluminum tape, applied with an overlap black polyethylene outer jacket
- BBDGE: Inner polyethylene jacket • Electrically continuous 0.005 in (0.13 mm) corrugated copper-clad armor, applied with an overlap shield flooded with a flooding compound • Black polyethylene outer jacket

Electrical Performance								
Frequency MHz	Attenuation (dB/100m) @ 20°C		NEXT (dB/100m)		ACR (dB/100m)		PS-NEXT (dB/100m)	
	Maximum		Minimum		Minimum		Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	2.0	65.3	82.7	63.3	80.5	62.3	80.3
4	4.1	3.8	56.3	71.8	52.2	68.0	53.3	69.9
8	5.8	5.3	51.8	66.6	46.0	61.3	48.8	64.7
10	6.5	5.9	50.3	65.6	43.8	59.7	47.3	63.9
16	8.2	7.5	47.3	62.3	39.1	55.0	44.3	60.5
20	9.3	8.4	45.8	60.7	36.5	52.3	42.8	58.8
25	10.4	9.4	44.3	59.0	33.9	49.6	41.3	57.2
31.25	11.7	10.5	42.9	57.3	31.2	46.6	39.9	55.5
62.5	17.0	15.0	38.4	53.7	21.4	38.5	35.4	51.8
100	22.0	19.2	35.3	51.0	13.3	31.8	32.3	49.0
155		24.1		49.2		25.1		46.9
200		27.5		47.6		20.2		45.6
250		30.9		46.0		15.5		43.8
300		34.0		45.5		11.1		42.6
350		36.9		42.6		6.5		40.7

Electrical Performance (Continued)								
Frequency MHz	PS-ACR (dB/100m)		Return Loss (dB/100m)		ELFEXT (dB/100m)		PS-ELFEXT (dB/100m)	
	Minimum		Minimum		Minimum		Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	78.4	20.0	28.0	63.8	73.5	60.8	72.1
4	49.2	66.2	23.0	33.5	51.7	61.7	48.7	60.3
8	43.0	59.5	24.5	35.1	45.7	55.8	42.7	54.4
10	40.8	58.1	25.0	35.6	43.8	54.1	40.8	52.6
16	36.1	53.1	25.0	35.6	39.7	49.8	36.7	48.3
20	33.5	50.5	25.0	36.5	37.7	48.0	34.7	46.5
25	30.9	47.9	24.3	35.5	35.8	46.2	32.8	44.6
31.25	28.2	45.2	23.6	34.6	33.9	44.3	30.9	42.7
62.5	18.4	37.0	21.5	30.7	27.8	38.5	24.8	36.9
100	10.3	30.2	20.1	26.3	23.8	34.4	20.8	32.7
155		23.2		23.2		30.5		28.7
200		18.4		21.3		28.1		26.4
250		13.4		19.6		26.4		24.7
300		9.1		18.4		24.6		22.8
350		4.4		17.7		23.5		21.7

Input Impedance (Ohms) Maximum	Delay Skew (ns/100m) Maximum	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum
100+/-15 @ 1-100MHz	48	62	9.38

Standards Compliance:

ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-86-634, ANSI/ICEA S-90-661-2002, ANSI/ICEA S-99-689-1997, ANSI/ICEA S-99-689-2006, RoHS Compliant.

MEGAPIC™ OSP Broadband Backbone Category 5



Product Description

MEGAPIC Category 5 cables provide an extension of the LAN beyond the premises. These cables are ideal for direct burial, underground and lashed aerial applications.

Features

- Transmission performance characterized to 100MHz
- Metallic shield tapes
- Fully filled constructions

Benefits

- Extends the LAN to the entire campus
- Facilitates grounding according to NEC requirements
- Helps prevent intrusion of moisture

Applications

- 10BASE-T
- ATM and Token Ring
- **MEGAPIC-NF:** Higher pair count shielded distribution cable for use in aerial, direct burial and duct installations
- **MEGAPIC-GF:** Higher pair count shielded distribution cable for use in lashed aerial, direct burial and installations in high risk areas where additional mechanical protection is required.

Part Numbers and Physical Characteristics

Part #	Name	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
04-097-31	MEGAPIC -NF	25	24 (0.5)	black	0.63 (16)	190 (283)	5000' Reel
04-104-31	MEGAPIC -NF	100	24 (0.5)	black	1.20 (30)	631 (941)	1000' Reel
04-097-37	MEGAPIC -GF	25	24 (0.5)	black	0.67 (17)	242 (360)	5000' Reel
04-104-37	MEGAPIC -GF	100	24 (0.5)	black	1.29 (33)	778 (1158)	1000' Reel

Physical Description

- Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper, Insulation: Solid Polyolefin, Filling Compound: 80°C ETPR (extended thermoplastic rubber)
- MEGAPIC-NF: Core Covering: non-hygroscopic dielectric tape, electrically continuous 0.008 in (0.2 mm) polymer coated corrugated aluminum tape, applied with an overlap, the shield interface is flooded, black polyethylene outer jacket.
- MEGAPIC-GF: Core Covering: non-hygroscopic dielectric tape, ASP sheath consisting of an inner electrically continuous 0.008 in (0.2 mm) polymer coated corrugated aluminum tape, applied with gap, over which an outer electrically continuous 0.006 in (0.15 mm) polymer coated corrugated steel tape is applied with an overlap, the interfaces of the tapes are covered with a flooding compound. Black polyethylene outer jacket.

Electrical		
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum	PS-NEXT (dB/100m) Minimum
1	2.0	62.3
4	4.1	53.3
8	5.8	48.8
10	6.5	47.3
16	8.2	44.2
20	9.3	42.8
25	10.4	41.3
31.25	11.7	39.9
62.5	17.0	35.4
100	22.0	32.3

Frequency MHz	PS-ACR (dB/100m) Calculated	SLR (dB/100m) Minimum
1	60.3	23.0
4	49.2	23.0
8	43.0	23.0
10	40.8	23.0
16	36.0	23.0
20	33.5	23.0
25	30.9	22.0
31.25	28.2	21.1
62.5	18.4	18.0
100	10.3	16.0

Input Impedance (Ohms) Maximum	Delay Skew (ns/100m) Guaranteed	Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m) Maximum
100+/-15 @ 1-100MHz	48	62	9.38

Standards Compliance:

TIA/EIA 568-B.2, ANSI/ICEA/S-86-634, RoHS Compliant.

Category 3 CMR/CMP (2-Pair – 400-Pair)



Product Description

The ideal choice for LAN transmission with specified bandwidth up to 16 MHz. These cables are used for voice and data communications and can handle application bandwidths up to 16 MHz. Other uses for these cables include indoor use on customer premises for the interconnection of telephone key systems, PBX and intercom systems. Product is offered for both Plenum (CMP) and Riser (CMR) applications.

Features

- CMR and CMP constructions use extremely flexible, FR-PVC jacket
- Jacket color options
- Bandmarked insulated conductors

Benefits

- Easier and less time-consuming installations, no kinking of outer jacket
- Improves backbone sub-system identification, reduces labor and mistakes
- Reduces termination time and improves circuit identification

Applications

- 4 Mbps Token Ring™ (IEEE 802.5)
- Analog Voice
- 10 Mbps 10 BASE-T Ethernet (IEEE 802.3)
- Telecommunications Closet Wiring

Physical Description CMR

- Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper
- Insulation: Polyolefin or PVC (Polyvinyl Chloride)
- Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Physical Description CMP

- Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper
- Insulation: Low Smoke FR-PVC (Polyvinyl Chloride)
- Jacket: Low Smoke FR-PVC (Polyvinyl Chloride)

Electrical CMR/CMP – Horizontal 2-4 Pair

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum Guaranteed	NEXT (dB/100m) Minimum Guaranteed	SRL (dB/100m) Guaranteed Minimum
0.772	2.2	43	12
1	2.6	41	12
4	5.6	32	12
8	8.5	28	12
10	9.7	26	12
16	13.1	23	10

Electrical CMR/CMP – Category 3 Backbone 6 Pair and Larger

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum Guaranteed	PS-NEXT (dB/100m) Minimum Guaranteed	SRL (dB/100m) Guaranteed Minimum
0.772	2.2	43	12
1	2.6	41	12
4	5.6	32	12
8	8.5	28	12
10	9.7	26	12
16	13.1	23	10

Characteristic Impedance (Ohms)	Delay Skew (ns/100m) Maximum	DC Resistance (Ohms/100m) Maximum	Resistance Unbalance (%) Maximum
100+/-15	45	9.38	5

Category 3 CMR/CMP (2-Pair – 400-Pair)

Part Numbers and Physical Characteristics							
	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
CMR	18-042-13	2	24 (0.5)	beige	0.12 (3.0)	8.7 (12)	1000' POP® Box
	18-042-33	2	24 (0.5)	Gray	0.12 (3.0)	8.7 (12)	1000' POP Box
	18-141-13	3	24 (0.5)	beige	0.14 (3.6)	12 (18)	1000' POP Box
	18-141-33	3	24 (0.5)	Gray	0.14 (3.6)	12 (18)	1000' POP Box
	18-241-13	4	24 (0.5)	beige	0.16 (4.1)	16 (24)	1000' POP Box
	18-241-23	4	24 (0.5)	Blue	0.16 (4.1)	16 (24)	1000' POP Box
	18-241-33	4	24 (0.5)	Gray	0.16 (4.1)	16 (24)	1000' POP Box
	18-241-43	4	24 (0.5)	White	0.16 (4.1)	16 (24)	1000' POP Box
	18-341-13	6	24 (0.5)	beige	0.18 (4.6)	22 (33)	1000' POP Box
	18-341-33	6	24 (0.5)	Gray	0.18 (4.6)	22 (33)	1000' POP Box
	18-872-13	12	24 (0.5)	beige	0.27 (6.9)	47 (70)	1000' Reel
	18-872-33	12	24 (0.5)	Gray	0.27 (6.9)	47 (70)	1000' Reel
	18-475-13	25	24 (0.5)	beige	0.38 (9.7)	92 (137)	1000' Reel
	18-499-13	25	24 (0.5)	beige	0.38 (9.7)	92 (137)	Cut to length
	18-475-33	25	24 (0.5)	Gray	0.38 (9.7)	92 (137)	1000' Reel
	18-499-33	25	24 (0.5)	Gray	0.38 (9.7)	92 (137)	Cut to length
	18-579-13	50	24 (0.5)	beige	0.56 (14)	187 (278)	1000' Reel
	18-599-13	50	24 (0.5)	beige	0.56 (14)	187 (278)	Cut to length
	18-579-33	50	24 (0.5)	Gray	0.56 (14)	187 (278)	1000' Reel
	18-599-33	50	24 (0.5)	Gray	0.56 (14)	187 (278)	Cut to length
	18-789-13	100	24 (0.5)	beige	0.74 (19)	361 (537)	Cut to Length
	18-789-33	100	24 (0.5)	Gray	0.74 (19)	361 (537)	Cut to Length
	18-D99-33	150	24 (0.5)	Gray	0.92 (23)	541 (805)	Cut to length
	18-A99-33	200	24 (0.5)	Gray	1.05 (27)	711 (1058)	Cut to length
	18-B99-33	300	24 (0.5)	Gray	1.27 (32)	1049 (1561)	Cut to length
	18-C99-33	400	24 (0.5)	Gray	1.47 (37)	1403 (2088)	Cut to length
CMP	18-041-36	2	24 (0.5)	Gray	0.13 (3.3)	10 (15)	1000' POP Box
	18-141-36	3	24 (0.5)	Gray	0.15 (3.8)	14 (21)	1000' POP Box
	18-241-26	4	24 (0.5)	Blue	0.17 (4.3)	18 (27)	1000' POP Box
	18-241-36	4	24 (0.5)	Gray	0.17 (4.3)	18 (27)	1000' POP Box
	18-241-46	4	24 (0.5)	White	0.17 (4.3)	18 (27)	1000' POP Box
	18-241-56	4	24 (0.5)	Green	0.17 (4.3)	18 (27)	1000' POP Box
	18-341-36	6	24 (0.5)	Gray	0.20 (5.1)	26 (39)	1000' POP Box
	18-341-46	6	24 (0.5)	White	0.20 (5.1)	26 (39)	1000' POP Box
	18-872-46	12	24 (0.5)	White	0.29 (7.4)	54 (80)	1000' Reel
	18-475-36	25	24 (0.5)	Gray	0.42 (11.0)	113 (168)	1000' Reel
	18-499-36	25	24 (0.5)	Gray	0.42 (11.0)	113 (168)	Cut to length
	18-475-46	25	24 (0.5)	White	0.42 (11.0)	113 (168)	1000' Reel
	18-499-46	25	24 (0.5)	White	0.42 (11.0)	113 (168)	Cut to length
	18-579-36	50	24 (0.5)	Gray	0.59 (15.0)	224 (333)	1000' Reel
	18-599-36	50	24 (0.5)	Gray	0.59 (15.0)	224 (333)	Cut to length
	18-799-36	100	24 (0.5)	Gray	0.82 (21.0)	437 (650)	Cut to Length
	18-A99-36	200	24 (0.5)	Gray	1.15 (29.0)	852 (1268)	Cut to length
	18-B99-36	300	24 (0.5)	Gray	1.39 (35.0)	1236 (1839)	Cut to length
	18-C99-36	400	24 (0.5)	Gray	1.62 (41.1)	1681 (2504)	Cut to length

Standards Compliance:

UL 444, UL Listed CMP (NFPA 262), UL Listed CMR (UL 1666), ANSI/TIA/EIA 568-B.2, Category 3, RoHS Compliant.

AR Series Riser Cable - ARAM/ARMM



Product Description

The AR series riser cables are intended for vertical and horizontal distribution in commercial buildings and meet Category 3 electrical specifications. This includes all applications except those in plenums. These cables have a fire-retardant PVC jacket and have been listed as CMR rated in accordance with the National Electrical Code. AR cables are color coded to match standard outside plant cable designs. The cable consists of solid soft bare copper insulated with foam polyethylene and a skin of PVC. Cores through 900 pair are color coded to match the standard PIC color code. Cables 1200 pair and larger have a "Mirror Image" color code. Spare pairs are offered in cables of 1200 pair and larger. An ALVYN sheath is applied overall. The ALVYN sheath consists of a 8-mil aluminum tape applied longitudinally and bonded to a Gray PVC outer jacket.

Applications

- Riser shafts without using conduits
- 4 Mbps Token Ring™
- Analog Voice
- 10 BASE-T Ethernet

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
ARAM	02-062-03	25	22 (0.6)	Gray	0.61 (16)	205 (305)	Cut to Length
	02-065-03	50	22 (0.6)	Gray	0.78 (20)	350 (521)	Cut to Length
	02-069-03	100	22 (0.6)	Gray	1.05 (27)	648 (964)	Cut to Length
	02-073-03	200	22 (0.6)	Gray	1.41 (36)	1183 (1761)	Cut to Length
	02-075-03	300	22 (0.6)	Gray	1.68 (43)	1704 (2536)	Cut to Length
	02-077-03	400	22 (0.6)	Gray	1.93 (49)	2189 (3258)	Cut to Length
	02-081-03	600	22 (0.6)	Gray	2.31 (59)	3207 (4773)	Cut to Length
ARMM	02-097-03	25	24 (0.5)	Gray	0.52 (13)	149 (222)	Cut to Length
	02-100-03	50	24 (0.5)	Gray	0.65 (17)	245 (365)	Cut to Length
	02-104-03	100	24 (0.5)	Gray	0.84 (21)	424 (631)	Cut to Length
	02-106-03	150	24 (0.5)	Gray	1.03 (26)	624 (929)	Cut to Length
	02-108-03	200	24 (0.5)	Gray	1.15 (29)	796 (1185)	Cut to Length
	02-110-03	300	24 (0.5)	Gray	1.37 (35)	1137 (1692)	Cut to Length
	02-112-03	400	24 (0.5)	Gray	1.53 (39)	1418 (2110)	Cut to Length
	02-116-03	600	24 (0.5)	Gray	1.87 (48)	2121 (3157)	Cut to Length
	02-118-03	900	24 (0.5)	Gray	2.22 (56)	3080 (4584)	Cut to Length
	02-120-03	1200	24 (0.5)	Gray	2.52 (64)	4036 (6006)	Cut to Length
	02-121-03	1500	24 (0.5)	Gray	2.82 (72)	5046 (7510)	Cut to Length
	02-124-03	1800	24 (0.5)	Gray	3.07 (78)	5995 (8922)	Cut to Length
	02-125-03	2100	24 (0.5)	Gray	3.33 (85)	6952 (10346)	Cut to Length
	02-126-03	2400	24 (0.5)	Gray	3.55 (90)	7852 (11709)	Cut to Length

Physical Description

- Conductor: 22 or 24 AWG (0.64 mm, 0.5 mm) Solid Annealed Bare Copper
- Insulation: Foam-Skin Polyolefin, PVC (Polyvinyl Chloride)
- Shield: Corrugated 8 mil Aluminum Tape
- Jacket: Tough, Flame Retardant, weather and abrasion resistant PVC (Polyvinyl Chloride)

ANSI/TIA/EIA 568-B.2 Electrical Performance

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum	PS-NEXT (dB/100m) Minimum		SRL (dB/100m) Minimum	
0.772	2.2	43		12	
1	2.6	41		12	
4	5.6	32		12	
8	8.5	28		12	
10	9.7	26		12	
16	13.1	23		10	
Characteristic Impedance (Ohms) Guaranteed		Delay Skew (ns/100m) Maximum	Nominal Velocity of Propagation (%)		Resistance Unbalance (%) Maximum Average
100+/-15		45	60		5

TELCORDIA GR-111 Electrical Performance (Standard Riser Cable)

Frequency MHz	PS-ELFEXT-Mean (dB/kft) Minimum	PS-ELFEXT-Worst Pair (dB/kft) Minimum	PS NEXT-Mean (dB/kft) Minimum	PS NEXT-Worst Pair (dB/kft) Minimum
0.15	63	57	58	53
0.772	49	43	47	42
1.6	43	37	43	38
3.15	37	31	38	33
6.3	31	25	34	29

Mutual Capacitance, nF/mile (nF/km)

Average	83 ± 4, (52 ± 2)
Max Individual	92 (57)

Capacitance Unbalance, pF/kft (pF/km)

Maximum RMS	25 (45)
Maximum Individual	80 (145)

Insulation Resistance, Gigohm-mile (Gigohm-km)

Minimum Individual	1.0 (1.6)
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High Voltage Test, DC Voltage

Conductor to Conductor	1500
Conductor to Shield	5000

DC Conductor Resistance @ 20°C, Ohms/mile (Ohms/km)

Maximum Individual (22 AWG)	91.0 (56.5)
Maximum Individual (24 AWG)	144.0 (89.5)

Attenuation @ 20°C, dB/kft (dB/km) @ 772 kHz

Maximum Worst Pair (22 AWG)	5.1 (16.7)
Maximum Worst Pair (24 AWG)	6.3 (20.7)

Standards Compliance:

UL 444, UL Listed CMR (UL 1666), TIA 568-B.2 Category 3, Telcordia GR-111, RoHS Compliant.

Category 3 Station Wire CMR/CMX Outdoor

Product Description

Station Wire Category 3 CMR/CMX Outdoor Wires are small, light-weight, twisted pair cables designed for use in protected outdoor locations, indoor areas or combined. Two levels of Outdoor Protection are available CMR/CMX Outdoor and Extreme CMR/CMX Outdoor. The Extreme Series meets the -40°C anvil test.

Physical Description

- Conductor: 22 or 24 AWG (0.64 mm or 0.5 mm) Solid Annealed Bare Copper
- Insulation: Polyolefin
- Jacket: Tough, Flame Retardant, weather and abrasion resistant PVC (Polyvinyl Chloride)
- CMR/CMX Outdoor
- Extreme CMR/CMX Outdoor

Part Numbers and Physical Characteristics

CMR/CMX Outdoor

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-202-37	2	22 (0.64)	Beige	0.16 (4.1)	16 (24)	1000' POP™ Box
12-203-37	3	22 (0.64)	Beige	0.18 (4.6)	21 (31)	1000' POP™ Box
12-204-37	4	22 (0.64)	Beige	0.19 (4.8)	26 (39)	1000' POP™ Box
12-214-37	4	22 (0.64)	Gray	0.19 (4.8)	26 (39)	1000' POP™ Box
12-402-37	2	24 (0.50)	Beige	0.18 (4.6)	13 (19)	1000' POP™ Box
12-403-37	3	24 (0.50)	Beige	0.18 (4.6)	16 (24)	1000' POP™ Box
12-404-37	4	24 (0.50)	Beige	0.21 (5.3)	21 (31)	1000' POP™ Box

The above products use the following color code: Blue/White, Orange/White, Green/White, Brown/White, tubed jacket design.

12-212-32	2	22 (0.64)	Beige	0.16 (4.1)	16 (24)	1000' POP™ Box
12-213-32	3	22 (0.64)	Beige	0.18 (4.6)	21 (31)	1000' POP™ Box
12-206-32	4	22 (0.64)	Beige	0.19 (4.8)	26 (39)	500' POP™ Box
12-412-32	2	24 (0.50)	Beige	0.18 (4.6)	13 (19)	1000' POP™ Box
12-413-32	3	24 (0.50)	Beige	0.18 (4.6)	16 (24)	1000' POP™ Box
12-414-32	4	24 (0.50)	Beige	0.21 (5.3)	21 (31)	1000' POP™ Box

The above products use the following color code: Red/Green, Yellow/black, Blue/White, Orange/Brown, tubed jacket design

Extreme CMR/CMX Outdoor

11-002-89	2	22 (0.64)	Gray	0.17 (4.3)	19 (28)	125' Coil Pack
11-002-88	2	22 (0.64)	Ivory	0.17 (4.3)	19 (28)	125' Coil Pack
11-002-87	2	22 (0.64)	Ivory	0.17 (4.3)	19 (28)	1000' POP™ Box
11-003-12	2	24 (0.50)	Ivory	0.15 (3.8)	12 (18)	1000' POP™ Box
11-003-13	2	24 (0.50)	Gray	0.15 (3.8)	12 (18)	1000' POP™ Box
12-303-62	6	24 (0.50)	Gray	0.20 (5.1)	25 (37)	1000' POP™ Box
12-325-62	6	24 (0.50)	Ivory	0.20 (5.1)	25 (37)	1000' Reel
12-805-62	12	24 (0.50)	Gray	0.29 (7.4)	53 (79)	1000' Reel
12-825-62	12	24 (0.50)	Ivory	0.29 (7.4)	53 (79)	1000' Reel

The above products use the following color code:
Blue/White, Orange/White, 2 pair 22 AWG is jacket pressure extruded design, 6/12 pair 24 AWG is a tube jacket design

12-414-52	3	22 (0.64)	Beige	0.22 (5.6)	24 (36)	1000' POP™ Box
12-415-52	2	24 (0.50)	Beige	0.17 (4.3)	11 (16)	1000' POP™ Box
12-416-52	3	24 (0.50)	Beige	0.17 (4.3)	16 (24)	1000' POP™ Box
12-417-52	4	24 (0.50)	Beige	0.20 (5.1)	20 (30)	1000' POP™ Box

The above products use the following color code: Red/Green, Yellow/black, Blue/White, Orange/Brown, tubed jacket design.

Standards Compliance:

CMR/CMX Outdoor UL 444, ANSI/ICEA-S-100-685, 1997 TIA/EIA 568-B.2, Category 3, Extreme CMR/CMX Outdoor Includes ICEA -40°C Anvil Test. RoHS 2002/95/EC Compliant

**ColorTip = Easy Tip/Ring Pairing****Band marking = Difficult Tip/Ring Pairing**

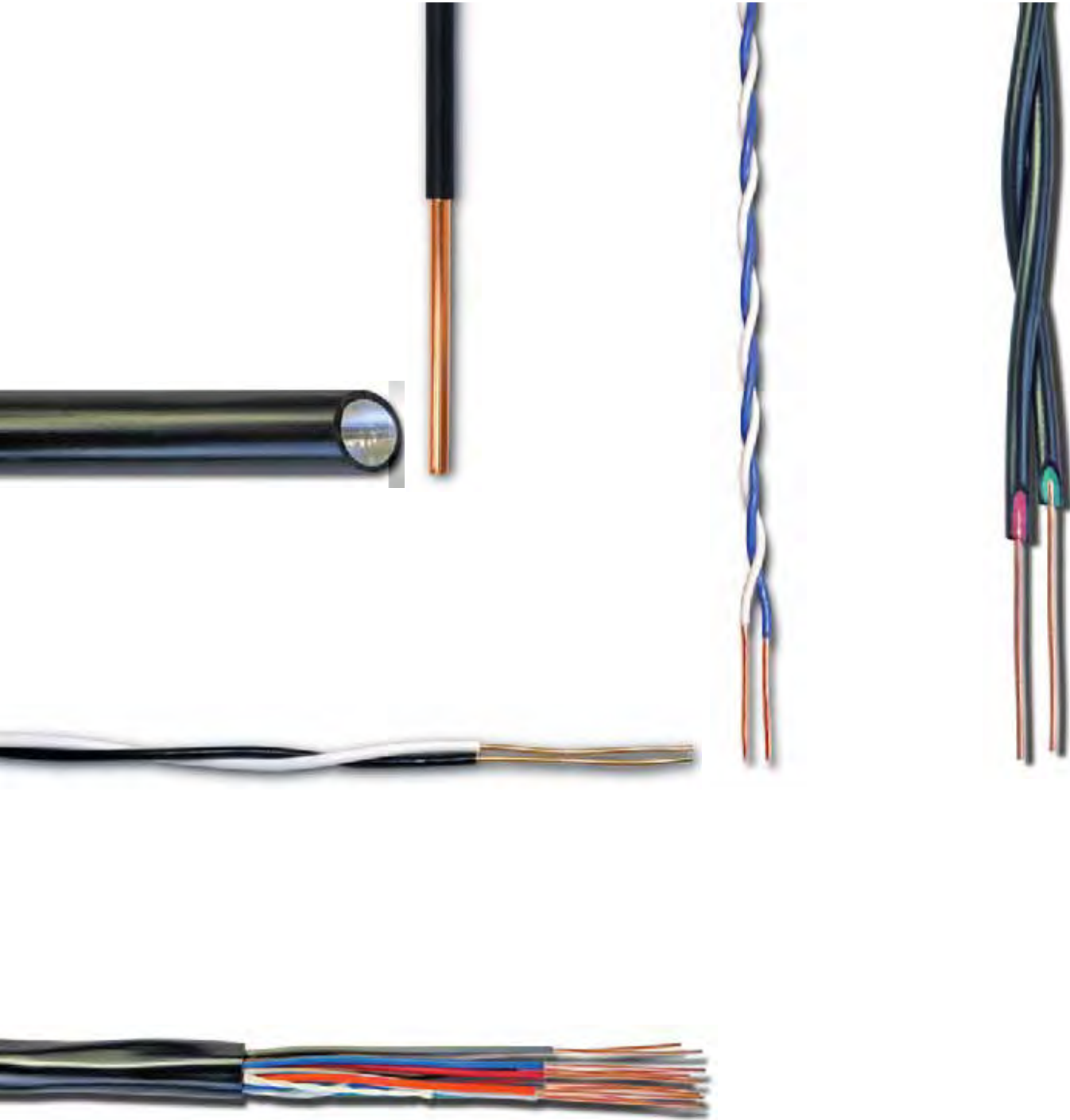
Positive Identification of conductors in premises cable now lives up to its name! The system of marking a conductor with the color of its mate has been upgraded by Superior Essex. The ColorTip system tints the entire conductor, instead of the industry practice of indistinct, inked-on, widely spaced band marks. Band marks only appear every inch or more, suffer from poor color quality, and can be rubbed off during installation. In contrast, ColorTip is an integral part of the insulating layer. 100% of the conductor is easily identified. Truly an industry best practice, ColorTip conductors offer the ultimate in ease of determining tip and ring mates, saving time during installation and test certification, and insuring correct terminations each and every time. ColorTip is another notable improvement in premises cables from Superior Essex.

FEATURES

- ColorTip circumferentially colors 100% of the conductor
- ColorTip is integral part of insulating layer
- ColorTip reduces termination time and errors
- ColorTip has easily distinguishable colors
- ColorTip is environmentally friendly

BENEFITS

- Easily identifiable conductor mates
- Permanent; won't rub or wear off
- Saves installation time and money
- Eliminates doubt between all conductors, primarily orange and brown
- Eliminates hazardous disposal of ink material at cabling plants



MISCELLANEOUS COPPER WIRE



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Cross-Connect Category 5 Wire (XWC)



Product Description

Cross-Connect Cat 5 Wire is designed with a tighter twist to support higher data speeds
Cross-Connect Cat 5 Wire is intended for connections in cross connect cabinets

Physical Description

- CONDUCTORS: Solid bare copper conductors in 24 AWG (0.5 mm)
- INSULATION: Flame Retardant PVC. Each insulated conductor is identified by a solid insulation color.

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG	Wire Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
02-011-23	1	24	W/BL	0.08 (2.0)	5 (7)	1000' Spool
02-010-23	1	24	W/G	0.08 (2.0)	5 (7)	1000' Spool
02-031-23	1	24	Y/R	0.08 (2.0)	5 (7)	1000' Spool
02-032-23	1	24	V/BL	0.08 (2.0)	5 (7)	1000' Spool
02-111-23	1	24	W/BL	0.08 (2.0)	5 (7)	6000' Spool
02-131-23	1	24	Y/R	0.08 (2.0)	5 (7)	6000' Spool
02-050-23	1	24	W/O	0.08 (2.0)	5 (7)	1000' Spool
02-006-23	1	24	W/R	0.08(2.0)	5 (7)	1000' Spool
02-020-23	2	24	W/BL, W/O	0.12 (3.0)	5 (7)	1000' Spool
02-021-23	2	24	R/BL, R/O	0.12 (3.0)	5 (7)	1000' Spool
02-022-23	2	24	W/O, W/G	0.12 (3.0)	5 (7)	1000' Spool
02-024-23	2	24	V/BL, V/O	0.12 (3.0)	5 (7)	1000' Spool

Standards Compliance:
UL 444, listed as CM, RoHS Compliant

Bridle Wire



Product Description

Bridle Wire is used to extend the telephone circuit from aerial distribution cable terminals to building entrance protectors or network interface units on subscriber premises. This wire has a black PVC jacket with a ripcord for easy access to conductors

Physical Description

- CONDUCTORS: Solid annealed bare copper 22 AWG
- INSULATION: Color coded, solid, polyolefin tip conductors are striped with mating color for positive identification.
- JACKET: A black, PVC jacket provides a tough flexible protective covering that withstands exposure to sunlight and stresses encountered in standard installations.

Part Numbers and Physical Characteristics

Part #	Pair Count	Nom.Dia inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-262-01	2	0.23 (5.7)	600 (183)	600' POP® Box
12-642-01	6	0.31 (7.9)	450(137)	450' Coil
12-842-01	12	0.38 (9.6)	250 (76)	250' Coil

Standards Compliance:
TR-NWT-00122, as applicable, RoHS Compliant

Temporary Drop Wire (TDW)



Product Description

Safety orange colored Temporary non-shielded Drop Wire intended to temporarily extend or replace service

Physical Description

- CONDUCTOR: Solid annealed bare copper 22 or 24 AWG
- INSULATION: Polyolefin
- JACKET: Bright Orange Color PVC

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG	Wire Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-311-36	2	22	R/G - BK/Y	0.14 (3.6)	13 (19)	1000' POP® Box
12-322-36	1	24	R/G	0.13 (3.3)	7 (10)	2000' POP Box

MISCELLANEOUS COPPER

Standards Compliance:
RoHS Compliant

E-Block Wire



Product Description

- E-Block Wire is used for “ring wiring” of buildings and is also used as a fusible link for aerial distribution. E-Block Wire is available in twisted pair and quad forms. It consists of copper clad steel conductors. Each conductor is dual insulated with a color coded inner layer of PVC and a black outer layer of PVC.

Physical Description

- CONDUCTORS: Copper covered steel in 20 AWG (0.13mm)
- DUAL INSULATION: Color-coded inner layer of PVC and a black outer layer of PVC

Part Numbers and Physical Characteristics					
Part #	Style	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
12-140-03	Pair	0.20 (5.1)	14 (20)	400 (122)	Coil
12-220-03	Quad	0.24 (6.1)	32 (47)	250 (76)	Coil

MISCELLANEOUS COPPER

Standards Compliance:
TR-TSY-000127, UL 83, VW1, RoHS Compliant



Product Description

Ground Wire is used specifically to ground electrical devices and to maintain shield continuity at cable splices

Physical Description

- CONDUCTOR: Solid Annealed Bare Copper 6 AWG (4.1 mm), 10 AWG (2.6 mm), 12 AWG (2.0 mm) • INSULATION: Weather-resistant PVC (Polyvinyl Chloride) as applicable

Part Numbers and Physical Characteristics

Part #	AWG	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-001-04	6	Black	0.22 (5.6)	91 (135)	500 ft Spool
12-101-04	6	Gray	0.22 (5.6)	91 (135)	200 ft Boxed Coil
12-102-04	6	Gray	0.22 (5.6)	91 (135)	200 ft Coil
12-105-04	6	Gray	0.22 (5.6)	91 (135)	500 ft Coil
12-106-04	6	Gray	0.22 (5.6)	91 (135)	500 ft Box Coil
12-107-04	6	Gray	0.22 (5.6)	91 (135)	600 ft Coil
12-104-04	6	Gray	0.22 (5.6)	91 (135)	4000 ft Reel
12-018-04	6	Green	0.22 (5.6)	91 (135)	500 ft Reel
12-905-04	6	Bare	0.16 (4.1)	79 (118)	600 ft Plastic Spool
12-901-04	6	Bare	0.16 (4.1)	79 (118)	200 ft Boxed Coil
12-902-04	6	Bare	0.16 (4.1)	79 (118)	2500 ft Plywood Spool
12-903-04	6	Bare	0.16 (4.1)	79 (118)	300 ft Plastic Spool
12-904-04	6	Bare	0.16 (4.1)	79 (118)	4000 ft Reel
12-907-04	6	Bare	0.16 (4.1)	79 (118)	500 ft Coil
12-111-04	10	Gray	0.14 (3.6)	37 (55)	200 ft Boxed Coil
12-112-04	10	Gray	0.14 (3.6)	37 (55)	500 ft Boxed Coil
12-011-04	10	Black	0.14 (3.6)	37 (55)	500 ft Plastic Spool
12-015-04	10	Green	0.14 (3.6)	37 (55)	500 ft Plastic Spool
12-121-04	12	Gray	0.12 (3.0)	25 (37)	200 ft Boxed Coil
12-122-04	12	Gray	0.12 (3.0)	25 (37)	300 ft Boxed Coil
12-123-04	12	Gray	0.12 (3.0)	25 (37)	500 ft Plywood Spool

Standards Compliance:
RoHS Compliant, UL Listed.

Air Pipe



Product Description

Air Pipe is used for supplying air pressure to underground pressurized cable systems. Air pressure is distributed off the air pipe at regular intervals and applied to pressurized cables to supplement and boost air pressure along the cable route. It is normally placed in ducts. The laminated aluminum and polyethylene construction assures water vapor will not penetrate to the pipe interior.

Physical Description

- **SHIELD:** 4 mil aluminum tape is formed longitudinally with bonded overlap.
- **JACKET:** Black Medium Density Polyethylene jacket is extruded over and laminated to the aluminum shield.
- **PRESSURIZATION:** Air Pipe is factory pressurized and shipped with a positive dry air pressure.

Part Numbers and Physical Characteristics

Part #	Nom. O.D. inches (mm)	Nom. I.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
85-019-25	0.71 (18)	0.59 (15)	56 (83)	6500 (1980)	Reel
85-018-25	0.71 (18)	0.59 (15)	56 (83)	6500 (1980)	Reel

Indoor/Outdoor Cross-Connect Wire (xcw)



Product Description

Indoor/Outdoor Cross-Connect Wire is intended for cross-connecting points in building entrance enclosures at subscriber's premises and/or in OSP enclosures.

Physical Description

- Solid bare copper conductors in 24 AWG (0.5mm) that have an individual nominal 0.036 inch O.D. or 22 AWG (0.64mm) that have an individual nominal O.D. of 0.0355 inch with semi-rigid polyvinyl chloride (PVC).
- Each insulated conductor is identified by a combination of solid insulation color, except as noted.

Part Numbers and Physical Characteristics						
Part #	Pair Count	AWG inches (mm)	Wire Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package Spool ft (m)
02-111-13	1	22 (0.64)	W/BL	0.07 (1.8)	4 (9)	1000 (305)
02-102-13	1	22 (0.64)	Y/BL	0.07 (1.8)	4 (9)	1000 (305)
02-E02-13	1	22 (0.64)	Y/BL	0.07 (1.8)	4 (9)	3000 (915)
02-113-13	1	22 (0.64)	W/R	0.07 (1.8)	4 (9)	1000 (305)
02-114-13	1	22 (0.64)	W/BK	0.07 (1.8)	4 (9)	1000 (305)
02-513-13*	1	22 (0.64)	W/R	0.07 (1.8)	4 (9)	1000 (305)
02-514-13*	1	22 (0.64)	W/BK	0.07 (1.8)	4 (9)	1000 (305)
02-120-13	2	22 (0.64)	W/BL, W/O	0.11 (2.8)	9 (20)	1000 (305)
03-h12-13	1	22 (0.64)	W/V	0.07 (1.8)	3 (7)	400 (122)
02-706-13*	1	24 (0.50)	W/R	0.07 (1.8)	3 (7)	1000 (305)
02-001-13	1	24 (0.50)	W/BL	0.07 (1.8)	3 (7)	1000 (305)
02-050-13	1	24 (0.50)	W/O	0.07 (1.8)	3 (7)	1000 (305)
02-006-13	1	24 (0.50)	W/R	0.07 (1.8)	3 (7)	1000 (305)
02-D06-13	1	24 (0.50)	W/R	0.07 (1.8)	3 (7)	600 (183)
02-053-13	1	24 (0.50)	R/BL	0.07 (1.8)	3 (7)	1000 (305)
02-004-13	1	24 (0.50)	R/G	0.07 (1.8)	3 (7)	1000 (305)
02-005-13	1	24 (0.50)	R/S	0.07 (1.8)	3 (7)	1000 (305)
02-054-13	1	24 (0.50)	R/BK	0.07 (1.8)	3 (7)	1000 (305)
02-702-13*	1	24 (0.50)	R/BK	0.07 (1.8)	3 (7)	1000 (305)
02-002-13	1	24 (0.50)	Y/BL	0.07 (1.8)	3 (7)	1000 (305)
02-409-13	1	24 (0.50)	BL/BK	0.07 (1.8)	3 (7)	3000 (915)
02-401-13	1	24 (0.50)	W/BL	0.07 (1.8)	3 (7)	3000 (915)
02-450-13	1	24 (0.50)	W/O	0.07 (1.8)	3 (7)	3000 (915)
02-051-13	1	24 (0.50)	W/G	0.07 (1.8)	3 (7)	1000 (305)
02-052-13	1	24 (0.50)	W/BK	0.07 (1.8)	3 (7)	1000 (305)
02-006-13	1	24 (0.50)	W/R	0.07 (1.8)	3 (7)	1000 (305)
02-D02-13	1	24 (0.50)	Y/BL	0.07 (1.8)	3 (7)	1000 (305)
11-001-02	1	24 (0.50)	W/BL	0.07 (1.8)	3 (7)	1000 (305)
11-001-03	1	24 (0.50)	W/G	0.07 (1.8)	3 (7)	2000 (610)
02-222-13	2	24 (0.50)	W/BL, W/O	0.10 (2.5)	6 (13)	1000 (305)
02-221-13	2	24 (0.50)	R/BL, R/O	0.10 (2.5)	6 (13)	1000 (305)
02-224-13	2	24 (0.50)	Y/BL, Y/O	0.10 (2.5)	6 (13)	1000 (305)
02-223-13	2	24 (0.50)	W/O W/G	0.10 (2.5)	6 (13)	1000 (305)
02-032-13	3	24 (0.50)	W/BL, W/O, W/G	0.12 (3.0)	9 (20)	1000 (305)
02-D30-13	3	24 (0.50)	W/BL, W/O, W/G	0.12 (3.0)	9 (20)	600 (183)
02-041-13	4	24 (0.50)	W/BL, W/O, W/G, W/BR	0.15 (3.8)	13 (29)	1000 (305)

* Solid Color – Not Bandmarked

Standards Compliance:

UL 444, listed as CM. RoHS Compliant



CENTRAL OFFICE COPPER



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ABAM (600B) & ABMM Series Central Office Cable



Product Description

The ABAM (600B), ABMM cable series is designed for use between switching and transmission equipment in central offices for distances up to 650 ft. The ABAM (600B) cable series offers low attenuation by using 22 AWG conductors. Both ABAM (600B) and ABMM series (24 AWG) are manufactured with a dark Gray smooth PVC jacket and a 0.008 inch corrugated aluminum shield for additional EMI reduction.

Features

- 22 and 24 AWG tinned copper conductors
- 100 Ohm nominal Impedance
- 0.008 inch corrugated aluminum shield
- CMR listed
- Category 3 compliant
- Bandmarked conductors
- Rip Cord

Benefits

- Low attenuation, enabling longer run length; Tinned copper conductors minimize change in wire-wrap joint resistance
- Impedance mismatch with outside plant cables is minimized
- Higher EMI isolation over foil shields; great mechanical strength
- Suitable for horizontal and vertical installations
- Suitable for network applications
- Easy identification of conductor ring mates
- Added ease of jacket removal

Applications

- T1/DS1
- T1C/DS1C
- DS2
- 4 Mbps Token Ring™ (IEEE 802.5)
- 10Mbps 10 BASE-T Ethernet (IEEE 802.3)

Part Numbers and Physical Characteristics

	Part #	Product Code	Pair Count	AWG	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
ABAM	55-399-25	606B	6	22	0.42 (11)	87 (129)	10000 (3050)	Reel
	55-499-25	607B	12	22	0.50 (13)	131 (195)	7000 (2135)	Reel
	55-599-25	608B	16	22	0.55 (14)	159 (237)	7000 (2135)	Reel
	55-799-25	609B	25	22	0.66 (17)	227 (338)	5000 (1525)	Reel
	55-899-25	616B	28	22	0.68 (17)	247 (368)	7500 (2285)	Reel
	55-999-25	613B	30	22	0.70 (18)	260 (387)	5000 (1525)	Reel
	55-A99-25	615B	32	22	0.72 (18)	273 (406)	5000 (1525)	Reel
	55-B99-25	610B	50	22	0.85 (22)	386 (574)	7500 (2285)	Reel
	55-C99-25	618B	56	22	0.88 (22)	423 (630)	3000 (915)	Reel
	55-D99-25	612B	75	22	1.03 (26)	565 (841)	3000 (915)	Reel
	55-E99-25	611B	100	22	1.15 (29)	715 (1064)	7500 (2285)	Reel
ABMM	55-799-24		25	24	0.57 (15)	163 (243)	10000 (3050)	Reel
	55-B99-24		50	24	0.74 (19)	280 (417)	10000 (3050)	Reel
	55-E99-24		100	24	1.00 (25)	509 (758)	10000 (3050)	Reel
	55-V99-24		600	24	2.10 (53)	2389 (3555)	1000 (305)	Reel
	55-W99-24		900	24	2.52 (64)	3469 (5163)	1000 (305)	Reel

Physical Description

- The ABAM (600B) & ABMM Series products consist of 22 or 24 AWG tinned copper insulated with a polyolefin.
- A corrugated 8 mil aluminum shield is bonded to the outer PVC jacket.

Electrical Performance			
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum Guaranteed	PS NEXT (dB/100m) Minimum Guaranteed	Min SRL (dB/100m)
0.772	2.2	43	12
1	2.6	41	12
4	5.6	32	12
8	8.5	27	12
10	9.7	26	12
16	13.1	23	10

Characteristic Impedance (Ohms)	Delay Skew (ns/100m) Maximum	DC Resistance (Ohms/100m) Maximum	Resistance Unbalance (%) Maximum
100+/-15	45	9.38	5%

Standards Compliance:

Telcordia GR-137 (select sections) and GR-111; ANSI/TIA/EIA 568-B.2, Category 3; UL 444 CMR, RoHS Compliant

1249C Series Central Office Cable



Product Description

The 1249C Cable Series is designed for use between switching and transmission equipment in central offices for distances up to 450 ft. With short twist lays, 1249C Cable Series offers superior crosstalk performance over standard telephone cable. It is manufactured with a dual foil shield for additional EMI reduction and is double jacketed for protection of the twisted pairs. The 1249C cable series meets or exceeds all applicable requirements of Telcordia GR-137 specifications.

Features

- 26 AWG tinned copper conductors
- Solid Polyolefin insulation
- 100 Ohm nominal impedance
- Short pair lays/tight twists
- Dual Aluminum foil shields
- Tinned copper drain wire
- CMR listed
- Rip Cord
- Solid Color Insulation

Benefits

- Small diameter and light weight result in smaller cable bundles and easier handling; Tinned copper conductors minimize change in wire-wrap joint resistance
- Greater crush resistance and improved transmission characteristics
- Impedance mismatch with outside plant cables is minimized
- Improved crosstalk performance and pair identification
- Higher EMI isolation over a single foil shield
- Easier termination and superior grounding
- Suitable for horizontal and riser installations
- Added ease of jacket removal
- Easy identification of conductor ring mates

Applications

- T1/DS1
- T1C/DS1C
- DS2

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-299-20	4	26	0.25 (6.4)	29 (43)	10,000 (3,048)	Reel
55-399-20	6	26	0.28 (7.1)	36 (54)	10,000 (3,048)	Reel
55-499-20	12	26	0.35 (8.9)	55 (82)	7,000 (2,133)	Reel
55-599-20	16	26	0.39 (9.9)	70 (104)	7,000 (2,133)	Reel
55-699-20	20	26	0.42 (11)	81 (121)	5,000 (1,524)	Reel
55-799-20	25	26	0.45 (11)	94 (140)	5,000 (1,524)	Reel
55-899-20	28	26	0.44 (11)	100 (149)	5,000 (1,524)	Reel
55-999-20	30	26	0.49 (12)	112 (167)	4,000 (1,219)	Reel
55-A99-20	32	26	0.50 (13)	117 (174)	4,000 (1,219)	Reel
55-B99-20	50	26	0.60 (15)	171 (254)	3,000 (914)	Reel
55-E99-20	100	26	0.76 (20)	294 (438)	3,000 (914)	Reel

Physical Description

- The 1249C Cable Series products consist of 26 AWG tinned copper conductors, insulated and twisted with tight lays.
- The pairs are stranded together and an inner jacket of PVC is extruded over the core.
- A dual foil shields are then applied with the aluminum foils facing together.
- A tinned copper drain wire is placed between the shields.
- An outer PVC jacket is applied.

Electrical Performance PSELFEXT								
Frequency	MEAN				WORST PAIR			
	Minimum		Typical		Minimum		Typical	
	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100 m
0.15	68	73	75	80	62	67	69	74
0.772	54	59	62	67	48	53	56	61
1.6	47	52	56	61	42	47	50	55
3.15	42	47	50	55	36	41	44	49
6.3	36	41	43	48	30	35	37	42

PSNEXT				
Frequency	MEAN		WORST PAIR	
	Minimum	Typical	Minimum	Typical
	dB	dB	dB	dB
0.15	68	78	63	73
0.772	57	67	52	62
1.6	53	61	48	57
3.15	48	58	43	53
6.3	44	53	39	48

ATTENUATION @ 68°F (@ 20°C)					
Bit Rate	Frequency	Maximum	Average	Typical	
Mb/s	MHz	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100m
1.544	0.772	6.8	2.2	6.4	2.1

Conductor Size		Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz
AWG	mm	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms
26	0.4	44.2	145	16	52	100 ± 15

Standards Compliance:

Telcordia GR-137-CORE; Telcordia GR-499-CORE (Pulse shape compliance at 450 ft.); TIA/EIA 464-B, UL 444 CMR, RoHS 2002/95/EC Compliant

1161A Series Category 3 Central Office Cable



Product Description

The 1161A Cable Series is designed for use between switching and transmission equipment in central offices, spanning distances up to 565 ft. With short twist lays, 1161A Cable Series offers superior crosstalk performance over standard telephone cable. It is manufactured with a foil shield for EMI reduction. The 1161A cable series meets or exceeds all applicable requirements of Telcordia GR-137 specifications.

Features

- 24 AWG tinned copper conductors
- Solid Color Polyolefin insulation
- 100 Ohm nominal Impedance
- Short pair lays/tight twists
- Aluminum foil shield
- Tinned copper drain wire
- CMR listed
- 75° C temperature rating
- Rip Cord

Benefits

- Smaller overall diameter results in smaller bundles of cables and improved flexibility (compared with 600 series cables);
- Tinned copper conductors minimize change in wire-wrap joint resistance
- Greater crush resistance and improved transmission characteristics
- Impedance mismatch with outside plant cables is minimized
- Improved crosstalk performance and pair identification
- EMI isolation
- Easier termination and superior grounding
- Suitable for horizontal and riser installations
- Wider operating temperature range
- Added ease of jacket removal

Applications

- T1/DS1
- T1C/DS1C
- DS2

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-299-21	4	24	0.26 (6.6)	28 (42)	10,000 (3,048)	Reel
55-399-21	6	24	0.27 (6.9)	35 (52)	10,000 (3,048)	Reel
55-499-21	12	24	0.35 (8.9)	58 (86)	7,000 (2,133)	Reel
55-599-21	16	24	0.41 (10)	78 (116)	7,000 (2,133)	Reel
55-699-21	20	24	0.44 (11)	93 (139)	20,000 (6096)	Reel
55-799-21*	25	24	0.48 (12)	112 (167)	5,000 (1,524)	Reel
55-899-21	28	24	0.51 (13)	124 (185)	5,000 (1,524)	Reel
55-999-21	30	24	0.53 (14)	136 (202)	5,000 (1,524)	Reel
55-A99-21	32	24	0.55 (14)	144 (214)	4,000 (1,219)	Reel
55-B99-21	50	24	0.66 (17)	211 (314)	3,000 (914)	Reel
55-E99-21	100	24	0.89 (23)	390 (580)	1,000 (305)	Reel

Physical Description

- The 1161A Series products consist of 24 AWG tinned copper insulated and twisted with tight lays.
- The pairs are stranded together to form a core.
- A single foil shield tape and a tinned copper drain wire are then applied.
- A Gray outer PVC jacket is applied.

Electrical Performance PSELFEXT								
Frequency MHz	MEAN				WORST PAIR			
	Minimum		Typical		Minimum		Typical	
	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100 m
0.15	68	73	81	96	60	65	75	80
0.772	54	59	69	74	46	51	63	68
1.6	47	52	63	68	40	45	57	62
3.15	42	47	57	62	34	39	51	56
6.3	36	41	50	55	28	33	44	49

PSNEXT				
Frequency MHz	MEAN		WORST PAIR	
	Minimum	Typical	Minimum	Typical
	dB	dB	dB	dB
0.15	68	81	61	74
0.772	57	68	50	62
1.6	53	62	46	57
3.15	48	58	41	53
6.3	44	54	37	48

ATTENUATION @ 68°F (@ 20°C)					
Bit Rate	Frequency	Maximum	Average	Typical	
Mb/s	MHz	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100m
1.544	0.772	6.0	2.0	5.4	1.8

Conductor Size		Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz
AWG	mm	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms
24	0.5	28.6	93.8	16	52	100 ± 15

Standards Compliance:

Telcordia GR-137-CORE; Telcordia GR-499-CORE (Pulse shape compliance at 565 ft.); TIA/EIA 464-B, UL 444 CMR, RoHS 2002/95/EC Compliant: CAT3 TIA 568-B.2*

600C Series Central Office Cable



Product Description

The 600C Cable Series is designed for use between switching and transmission equipment in central offices for distances up to 650 ft. This cable series offers the lowest attenuation of all Central Office Cable products by using 22 AWG conductors. It is manufactured with a dual foil shield for additional EMI reduction. The 600C cable series meets or exceeds all applicable requirements of Telcordia GR-137 specifications.

Features

- 22 AWG tinned copper conductors
- Solid Polyolefin insulation
- 100 Ohm nominal Impedance
- Dual Aluminum foil shield
- Tinned copper drain wire
- CMR listed
- Rip Cord
- Bandmarked

Benefits

- Low attenuation, enabling longer run length; Tinned copper conductors minimize change in wire-wrap joint resistance
- Greater crush resistance and improved transmission characteristics; smaller cable over dual insulated type
- Impedance mismatch with outside plant cables is minimized
- Higher EMI isolation over a single foil shield; Smaller cable diameter than 600B Series cables
- Easier termination and superior grounding
- Suitable for horizontal and riser installations
- Added ease of jacket removal
- Easy identification of conductor ring mates

Applications

- T1/DS1
- T1C/DS1C
- DS2

Part Numbers and Physical Characteristics

Part #	Product Code	Pair Count	AWG	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-299-38	605C	4	22	0.28 (7.0)	39 (58)	10,000 (3,048)	Reel
55-399-38	606C	6	22	0.32 (8.1)	50 (75)	10,000 (3,048)	Reel
55-499-38	607C	12	22	0.41 (10)	85 (125)	7,000 (2,133)	Reel
55-599-38	608C	16	22	0.47 (12)	115 (170)	7,000 (2,133)	Reel
55-699-38	617C	20	22	0.50 (13)	135 (200)	5,000 (1,524)	Reel
55-799-38	609C	25	22	0.55 (14)	165 (245)	5,000 (1,524)	Reel
55-899-38	616C	28	22	0.58 (15)	180 (270)	5,000 (1,524)	Reel
55-999-38	613C	30	22	0.60 (15)	195 (290)	5,000 (1,524)	Reel
55-A99-38	615C	32	22	0.61 (16)	205 (305)	5,000 (1,524)	Reel
55-B99-38	610C	50	22	0.74 (19)	310 (460)	3,000 (914)	Reel
55-C99-38	618C	56	22	0.78 (20)	345 (515)	3,000 (914)	Reel

Physical Description

- The 600C Series products consist of 22 AWG tinned copper insulated and twisted.
- The pairs are stranded together.
- A dual shield foil tape is then applied with the aluminum foils facing together.
- A tinned copper drain wire is placed between the shields.
- An outer PVC jacket is applied.

PSNEXT				
Frequency	MEAN		WORST PAIR	
	Minimum	Typical	Minimum	Typical
MHz	dB	dB	dB	dB
0.15	58	66	53	60
0.772	47	53	42	48
1.6	43	47	38	43
3.15	38	42	33	37
6.3	34	38	29	32

ATTENUATION @ 68°F (@ 20°C)					
Bit Rate	Frequency	Maximum	Average	Typical	
Mb/s	MHz	dB/1000 ft	dB/100 m	dB/1000 ft	dB/100m
1.544	0.772	4.6	1.5	4.0	1.3

Conductor Size		Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz
AWG	mm	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms
22	0.64	18	59.1	16	52	100 ± 15

Standards Compliance:

Telcordia GR-137-CORE; GR-499-CORE (Pulse shape compliance at 650 ft.); TIA/EIA 464-B DS1; UL 444 CMR, RoHS 2002/95/EC Compliant

Switchboard 100 Central Office Cable



Product Description

Switchboard 100 is designed for indoor use in central office exchanges, or in premises telephone rooms. It is used for interconnection of distribution frames and digital switching and transmission equipment systems. Switchboard 100 provides 100-ohm characteristic impedance. The product line consists of 24 and 26 AWG tinned insulated copper wires that are twisted into pairs. The pairs are stranded together utilizing a standard color code scheme. The outer jacket is PVC.

Features

- 100 ohm nominal Impedance
- Tinned copper conductors
- CMR listed
- Rip Cord
- Bandmarked

Benefits

- Impedance mismatch with outside plant cables is minimized
- Minimize change in wire-wrap joint resistance
- Suitable for horizontal and riser installations
- Added ease of jacket removal
- Easy identification of conductor ring mates

Applications

- T1/DS1
- T1C/DS1C
- DS2
- 4 Mbps Token Ring™ (IEEE 802.5)
- 10Mbps 10 BASE-T Ethernet (IEEE 802.3)

Part Numbers and Physical Characteristics

Part #	Product Code	Pair Count	AWG	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-041-23	TIW 2/24	2	24	0.15 (4)	10 (15)	1,000 (305)	POP® Box
55-141-23	TIW 3/24	3	24	0.17 (4)	15 (22)	1,000 (305)	POP Box
55-241-23	TIW 4/24 or 286A	4	24	0.19 (5)	18 (27)	1,000 (305)	POP Box
55-341-23	TIW 6/24 or 252A	6	24	0.22 (6)	25 (37)	1,000 (305)	POP Box
55-F31-23	294A	8	24	0.24 (7)	35 (52)	1,000 (305)	Reel
55-G99-23	TIW 10/24 or 253A	10	24	0.25 (7)	40 (60)	7,000 (2133)	Reel
55-499-23	TIW 12/24 or 265A	12	24	0.28 (7)	50 (75)	7,000 (2133)	Reel
55-599-23	TIW 16/24	16	24	0.32 (8)	65 (97)	7,000 (2133)	Reel
55-699-23	255A	20	24	0.35 (9)	80 (119)	5,000 (1524)	Reel
55-N99-23	266A	24	24	0.38 (10)	95 (141)	5,000 (1524)	Reel
55-799-23	TIW 25/24	25	24	0.39 (10)	95 (141)	5,000 (1524)	Reel
55-899-23	TIW 28/24	28	24	0.41 (10)	110 (164)	5,000 (1524)	Reel
55-A99-23	TIW 32/24	32	24	0.43 (11)	120 (179)	5,000 (1524)	Reel
55-P99-23	269A	36	24	0.46 (12)	135 (201)	5,000 (1524)	Reel
55-Q99-23	257A	40	24	0.48 (12)	150 (223)	5,000 (1524)	Reel
55-B99-23	TIW 50/24 or 270A	50	24	0.53 (13)	185 (276)	3,000 (914)	Reel
11-003-55*		50	24	0.53 (13)	185 (276)	3,000 (914)	Reel
55-S99-23	267A	72	24	0.65 (17)	275 (410)	3,000 (914)	Reel
55-D99-23	TIW 75/24	75	24	0.67 (17)	285 (425)	2,000 (609)	Reel
55-E99-23	TIW 100/24 or 262A	100	24	0.77 (20)	375 (559)	1,000 (305)	Reel
11-003-47*		100	24	0.77 (20)	375 (559)	1,000 (305)	Reel
55-U99-23	287A	120	24	0.83 (21)	445 (663)	1,000 (305)	Reel
55-M99-23	TIW 125/24	125	24	0.85 (22)	465 (693)	1,000 (305)	Reel

* 25 pair unit design

Physical Description

- Switchboard 100 products consist of 24 and 26 AWG tinned copper insulated with PVC and twisted into pairs.
- The pairs are stranded together and an outer PVC jacket is applied.

Part Numbers and Physical Characteristics (cont.)							
Part #	Product Code	Pair Count	AWG	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-299-26	812A	4	26	0.16 (4)	15 (22)	5,000 (1524)	Reel
55-399-26	816A	6	26	0.18 (5)	20 (30)	5,000 (1524)	Reel
55-F99-26	811A	8	26	0.20 (5)	25 (37)	5,000 (1524)	Reel
55-G99-26	820A	10	26	0.21 (6)	30 (45)	5,000 (1524)	Reel
55-599-26	807A	16	26	0.26 (7)	45 (67)	5,000 (1524)	Reel
55-699-26	800A	20	26	0.29 (7)	55 (82)	5,000 (1524)	Reel
55-799-26	824A	25	26	0.32 (8)	70 (104)	5,000 (1524)	Reel
55-A99-26	808A	32	26	0.36 (9)	85 (127)	5,000 (1524)	Reel
55-Q99-26	803A	40	26	0.40 (10)	105 (157)	5,000 (1524)	Reel
55-P99-26	822A	48	26	0.43 (11)	120 (179)	5,000 (1524)	Reel
55-B99-26	813A	50	26	0.44 (11)	125 (186)	5,000 (1524)	Reel
55-R99-26	809A	64	26	0.49 (12)	160 (239)	5,000 (1524)	Reel
55-K99-26	823A	96	26	0.62 (16)	250 (373)	5,000 (1524)	Reel
55-E99-26	806A	100	26	0.63 (16)	260 (388)	5,000 (1524)	Reel
55-H99-26	810A	128	26	0.71 (18)	325 (485)	5,000 (1524)	Reel
55-L99-26	814A	144	26	0.75 (19)	365 (544)	5,000 (1524)	Reel

Note: Standard USA Color Code Scheme

Conductor Size		Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz	Attenuation Nominal @ 0.772 MHz @ 68°F (@ 20°C)	
AWG	mm	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms	dB/kft	dB/km
24	0.5	28.6	93.8	20	66	100 ± 15	6.3	20
26	0.4	44.2	145	20	66	100 ± 15	7.8	25

Standards Compliance:

Telcordia GR-137-CORE (select sections) ; UL 444 CMR, RoHS Compliant

Switchboard 100 Ohm Central Office Cable

200A/800A series (Canadian Color Code)



Product Description

200A and 800A series Central Office cables are designed for indoor use in central offices, or in premise telephone rooms and are utilized between a distribution frame and digital switching/transmission equipment. This series offers 24 and 26 AWG tinned copper at 100-Ohm characteristic impedance levels. Used primarily in Canada, this color code and lay-up scheme has distinctively colored insulation in combination with single dots and double dots or dashes of colored ink. Each wire within a unit is readily distinguishable from all other wires within the same unit. Cables may contain pairs or a combination of pairs and singles. The pairs and singles are assembled together to form a core. The core may consist of either a single unit or pairs and singles. Some cables contain "spare pairs". The core is covered by a Gray PVC jacket. 200A and 800A series cables meet or exceed all applicable requirements of Telcordia GR-137.

Features

- 24 and 26 AWG tinned copper conductors
- Solid PVC insulation
- 100 Ohm Nominal impedance
- Standard Pair Lays
- CMR listed
- Non-Shielded design

Benefits

- Small diameter and light weight result in smaller cable bundles and easier handling; Tinned copper conductors minimize change in wire-wrap joint resistance
- Greater crush resistance and improved transmission characteristics
- Impedance mismatch with outside plant cables is minimized
- Improved crosstalk performance and pair identification
- Suitable for horizontal and riser installations

Applications

- T1/DS1
- T1C/DS1C

Part Numbers and Physical Characteristics

Part #	Product Code	AWG	No. of Pairs	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-399-46	252A	24	6	0.26 (6.6)	34 (51)	3000 (915)	Reel
55-699-46	255A	24	20	0.38 (9.7)	87 (129)	3000 (915)	Reel
55-E99-46	262A	24	101.5	0.86 (22)	410 (610)	400 (120)	Reel
55-G99-46	253A	24	10	0.33 (8.5)	52 (77)	3000 (915)	Reel
55-N99-46	266A	24	24	0.45 (11)	105 (156)	1200 (365)	Reel
55-P99-46	269A	24	36	0.47 (12)	145 (216)	1000 (305)	Reel
55-599-47	807A	26	17	0.29 (7.4)	53 (79)	3000 (915)	Reel
55-A99-47	808A	26	33	0.39 (9.9)	95 (141)	2000 (610)	Reel
55-E12-47	850A	26	100	0.65 (16.4)	265 (395)	2000 (610)	Reel
55-R99-47	809A	26	66	0.53 (14)	176 (262)	1325 (405)	Reel
55-H99-47	810A	26	132	0.67 (17)	330 (491)	700 (215)	Reel
55-Y99-47	821A	26	52	0.48 (12)	142 (211)	1100 (335)	Reel
55-N99-47	824A	26	25	0.35 (8.9)	75 (112)	2400 (730)	Reel
55-E99-47	806A	26	103	0.65 (16.4)	265 (394)	1000 (305)	Reel

Note: Standard Canadian Color Scheme

Conductor Size	Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz	Attenuation Nominal @ 0.772 MHz @ 68°F (@ 20°C)	
AWG	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms	dB/kft	dB/km
24	28.6	93.8	20	66	100 ± 15	6.8	22.3
26	46.9	153.9	20	66	100 ± 15	7.4	24.3

Standards Compliance:

Telcordia GR-137-CORE (select sections) ; UL 444; CMR, RoHS Compliant

T100 Series Central Office Cable



Product Description

The T100 Cable Series is designed for use between switching and transmission equipment in central offices for distances up to 450 ft. It is manufactured with a longitudinal aluminum-polyester foil shield with aluminum facing the jacket for additional EMI reduction. The pairs are stranded together utilizing distinctive colored insulation in combination with markings of colored ink. The outer jacket is a Gray flame retardant PVC. T100 Cable meets or exceeds all applicable requirements of Telcordia GR-137 specifications.

Features

- 24 AWG tinned copper conductors
- CMR Listed
- Solid PVC insulation
- 100 Ohm nominal impedance
- Standard pair lays
- Longitudinal aluminum-polyester foil shield with aluminum facing the jacket
- 24 AWG Tinned copper drain wire
- Ripcord under jacket
- Bandmarked

Benefits

- Small diameter and light weight result in smaller cable bundles and easier handling; Tinned copper conductors minimize change in wire-wrap joint resistance
- Greater crush resistance and improved transmission characteristics
- Impedance mismatch with outside plant cables is minimized
- Improved crosstalk performance and pair identification
- EMI isolation
- Easier termination and superior grounding
- Easy entry
- Easy pair identification

Applications

- T1/DS1
- T1C/DS1C

Part Numbers and Physical Characteristics

Part #	Product Code	AWG	No. of Pairs	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-399-43	T106	24	6	0.29 (7.3)	37 (55)	6644 (2025)	Reel
55-F99-43	T108	24	8	0.31 (7.9)	45 (67)	5578 (1700)	Reel
55-499-43	T112	24	12	0.35 (8.8)	59 (88)	6644 (2025)	Reel
55-599-43	T116	24	16	0.38 (9.6)	77 (115)	6644 (2025)	Reel
55-699-43	T120	24	20	0.41 (10)	91 (135)	5315 (1620)	Reel
55-799-43	T125	24	25	0.45 (11)	111 (165)	5315 (1620)	Reel
55-899-43	T128	24	28	0.46 (11)	120 (179)	5000 (1524)	Reel
55-999-43	T130	24	30	0.47 (11)	129 (192)	4429 (1350)	Reel
55-A99-43	T132	24	32	0.49 (12)	135 (201)	3937 (1200)	Reel

Conductor Size		Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz	Attenuation Nominal @ 0.772 MHz @ 68°F (@ 20°C)	
AWG	mm	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms	dB/kft	dB/km
24	0.5	28.6	93.8	20	66	100 ± 15	7.2	23.6

Standards Compliance:

Telcordia GR-137-CORE (select sections); UL 444; CMR (pulse shape compliance at 450 ft), RoHS Compliant

Switchboard 85 and Shielded Switchboard 85 Cable



Product Description

Switchboard Cables are designed for indoor use in central exchanges, the interconnection of distribution frames and for switching and transmission equipment systems. Available in both shielded and unshielded designs.

Physical Description

- Conductor 24 AWG (0.5 mm) solid tinned copper
- Insulation: PVC
- Shield (if applicable): Aluminum/Polyester
- Jacket: PVC - Gray

Shielded Switchboard (SSWBD)

Features

- Aluminum foil shield
- Tinned copper drain wire
- Tinned copper conductors
- CMR listed
- Rip Cord
- Bandmarked

Benefits

- EMI isolation
- Easier termination and superior grounding
- Minimize change in wire-wrap joint resistance
- Suitable for horizontal and riser installations
- Added ease of jacket removal
- Easy identification of conductor ring mates

Unshielded Switchboard (SWBD)

Features

- Tinned copper conductors
- CMR listed
- Rip Cord
- Bandmarked

Benefits

- Minimize change in wire-wrap joint resistance
- Suitable for horizontal and riser installations
- Added ease of jacket removal
- Easy identification of conductor ring mates

Part Numbers and Physical Characteristics

	Part #	Pair Count	AWG	Jacket Color	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
SSWBD	02-201-61	25	24	Gray	0.38 (9.7)	95 (140)	1,000 (305)	Reel
	02-097-61	25	24	Gray	0.38 (9.7)	95 (140)	5,000 (1524)	Reel
	02-203-61	25	24	grey	0.38 (9.7)	95 (140)	2,000 (610)	Reel
	02-098-61	32	24	Gray	0.41 (10)	120 (180)	5000 (1524)	Reel
	02-100-61	50	24	Gray	0.48 (12)	170 (255)	5,000 (1524)	Reel
	02-104-61	100	24	Gray	0.64 (16)	320 (475)	5,000 (1524)	Reel
SWBD	02-840-10	6	24	Gray	0.18 (4.6)	20 (30)	1,000 (305)	Reel
	02-810-10	6	24	Gray	0.18 (4.6)	20 (30)	5,000 (1524)	Reel
	02-841-10	12	24	Gray	0.24 (6.1)	40 (60)	1,000 (305)	Reel
	02-811-10	12	24	Gray	0.24 (6.1)	40 (60)	5,000 (1524)	Reel
	02-431-10	25	24	Gray	0.31 (7.9)	80 (120)	1,000 (305)	Reel
	02-815-10	25	24	Gray	0.31 (7.9)	80 (120)	5,000 (1524)	Reel
	02-832-10	32	24	Gray	0.35 (8.9)	100 (150)	5,000 (1524)	Reel
	02-813-10	50	24	Gray	0.44 (11)	155 (230)	5,000 (1524)	Reel
	02-820-10	100	24	Gray	0.60 (15)	300 (445)	5,000 (1524)	Reel

Conductor Size			Conductor DC Resistance @ 20°C Max Individual		Mutual Capacitance Nominal		Characteristic Impedance @ 1MHz	Attenuation Nominal @ 1 MHz @ 68°F (@ 20°C)	
	AWG	mm	Ohms/kft	Ohms/km	pF/ft	pF/m	Ohms	dB/kft	dB/km
SSWBD	24	0.5	28.6	93.8	20	66	85 ± 15	11	36
SWBD	24	0.5	28.6	93.8	20	66	85 ± 15	11	36

Standards Compliance:

UL 444, Listed as CMR, RoHS Compliant

Tight Twist Distribution Frame Wire (DFW)



Product Description

Tight Twist Distribution Frame Wire is necessary for the deployment of both xDSL and HI-CAP (T-1/HDSL) circuits within the distribution frames of central offices. This higher capacity frame wire is manufactured with a tight twist in order to minimize the impacts of electromagnetic interferences within this indoor environment. The Tight Twist Distribution Frame Wire is available in both 22 and 24 gauge sizes with a heavy duty "Tuff" flame retardant PVC insulation. Heavy duty in this application means a higher level of abrasion resistance, higher cut through and a higher temperature rating. Collectively these features qualify this Tight Twist Distribution Frame Wire to replace the cross-link PVC material from years past. The 22 gauge product is intended for use on main distribution frames (conventional type), while the 24 gauge is intended for use on COSMIC (Modular) distributing frames. The product is available on spools and coils. Coils are normally selected when the GMP terminal reel dispenser or similar device is used for paying out wire.

Features

- 22 or 24 solid tinned annealed copper
- Flame Retardant PVC insulation
- Robust "Tuff" heavy duty high temperature insulation
- Twisting sufficient to meet xDSL requirements
- Standard lengths continuous without splices
- Available in coil and spool packages

Applications

- xDSL
- HI-CAP
- T-1/HDSL

Part Numbers and Physical Characteristics

Part #	# of conductors	AWG (mm)	Color	Nom. Dia inches (mm)	Standard Length ft (m)	Package
12-212-T5	2	22 (0.64)	White/Green	0.08 (2.0)	3000 (915)	Spool
12-213-T5	2	24 (0.50)	Violet/Red	0.07 (1.8)	3000 (915)	Spool
12-214-T5	2	24 (0.50)	Violet/Red	0.07 (1.8)	1000 (305)	Spool

Standards Compliance:

UL 444, Listed as CM, Applicable GR-136 Core requirement for high stress applications. RoHS Compliant

Heavy Duty – Distribution Frame Wire (HD-DFW)



Product Description

Heavy Duty Distribution Frame Wire consists of 22 AWG tinned copper conductors, with a heavy duty abrasion resistant, flame retardant PVC insulation. HD-DFW is available in 2, 3 and 4 conductors and is used for making an interconnection between the incoming cable (tip termination) terminals and the equipment on the main distribution frame in the central office. HD-DFW is suitable for use with either a solderless wrap or soldered terminals.

Physical Description

- Solid tinned copper conductors in 22 AWG (0.64 mm) are insulated with polyvinyl chloride (PVC).
- Each insulated conductor is identified by a solid insulation color.
- Insulated conductors are twisted into pairs.

Applications

- DSL, Voice, T-1

Part Numbers and Physical Characteristics

Part #	# of Conductors	AWG (mm)	Wire Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-201-15	2	22 (0.64)	W/BL	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-205-15	2	22 (0.64)	W/O	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-206-15	2	22 (0.64)	W/R	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-207-15	2	22 (0.64)	Y/BK	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-203-15	2	22 (0.64)	BL/W	0.08 (2.0)	5 (7)	1000 (m) Parallel Cone
12-210-15	2	22 (0.64)	BK/O	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-204-15	2	22 (0.64)	W/G	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-208-15	2	22 (0.64)	Y/G	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-202-15	2	22 (0.64)	W/BL	0.08 (2.0)	5 (7)	175 (m) Parallel Cone
12-211-15	2	22 (0.64)	O/BL	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-209-15	2	22 (0.64)	Y/O	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-216-15	2	22 (0.64)	BK/GR	0.08 (2.0)	5 (7)	914 (m) Parallel Cone
12-301-15	3	22 (0.64)	W/BL/R	0.12 (3.0)	7 (10)	665 (m) Parallel Cone
12-401-15	4	22 (0.64)	W/BL/R/G	0.12 (3.0)	9 (13)	457 (m) Parallel Cone
12-402-15	4	22 (0.64)	Y/BL/R/G	0.12 (3.0)	9 (13)	457 (m) Parallel Cone
12-403-15	4	22 (0.64)	Y/BL/R/G	0.12 (3.0)	9 (13)	100 (m) Parallel Cone

Standards Compliance:

UL 444, listed as CM, GR-136-CORE (Heavy Duty Use), Applicable GR-136 Core requirements for high stress applications. RoHS Compliant



Product Description

- Distribution Frame Wire is designed for cross-connection of equipment in telephone switch and equipment rooms requiring point-to-point hook ups.

Physical Description

- Solid tinned copper conductors in 22 AWG (0.64 mm) or 24 AWG (0.5 mm) are insulated with semi-rigid polyvinyl chloride (PVC).
- Each insulated conductor is identified by a *solid insulation color*.

Part Numbers and Physical Characteristics						
Part #	# of Conductors	AWG	Wire Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-001-11	1	22	R	0.04 (1.0)	2 (3)	750m Spool
12-002-11	1	22	W	0.04 (1.0)	2 (3)	750m Spool
12-003-11	1	22	G	0.04 (1.0)	2 (3)	750m Spool
12-004-11	1	22	BK	0.04 (1.0)	2 (3)	750m Spool
12-303-13	1	22	G	0.04 (1.0)	2 (3)	1000m Spool
12-001-12	2	22	R/G	0.08 (2.0)	5 (7)	500m Spool
12-003-12	2	22	BL/W	0.08 (2.0)	5 (7)	500m Spool
12-004-12	2	22	BR/BL	0.08 (2.0)	5 (7)	500m Spool
12-005-12	2	22	BK/W	0.08 (2.0)	5 (7)	500m Spool
12-001-13	2	22	R/W	0.08 (2.0)	5 (7)	305m Spool
12-003-13	2	22	BL/W	0.08 (2.0)	5 (7)	1000' Spool
12-005-13	2	22	BK/W	0.08 (2.0)	5 (7)	1000' Spool
12-203-13	2	22	BL/W	0.08 (2.0)	5 (7)	1000' Spool
12-406-13	2	22	Y/V	0.08 (2.0)	5 (7)	3000' Spool
12-101-13	2	24	R/W	0.08 (2.0)	4 (6)	1000' Spool
12-102-13	2	24	R/Y	0.08 (2.0)	4 (6)	1000' Spool
12-103-13	2	24	W/BL	0.08 (2.0)	4 (6)	1000' Spool
12-104-13	2	24	V/BL	0.08 (2.0)	4 (6)	305m Spool
12-105-13	2	24	BK/W	0.08 (2.0)	4 (6)	1000' Spool
12-106-13	2	24	R/W	0.08 (2.0)	4 (6)	6000' Spool
12-107-13	2	24	BK/W	0.08 (2.0)	4 (6)	6000' Spool
12-108-13	2	24	W/BL	0.08 (2.0)	4 (6)	6000' Spool
12-109-13	2	24	Y/BL	0.08 (2.0)	4 (6)	6000' Spool
12-326-11	1	22	BR	0.04 (1.0)	2 (3)	3000' Spool
12-311-13	2	22	R/G	0.08 (2.0)	5 (7)	3000' Spool
12-313-13	2	22	BL/W	0.08 (2.0)	5 (7)	3000' Spool
12-305-13	2	22	BK/W	0.08 (2.0)	5 (7)	1000m Tapered Cone
12-031-12	4	22	BL/W R/G	0.12 (3.0)	9 (13)	1640' Tapered Cone
12-032-13	4	22	BK/W BK/W	0.12 (3.0)	9 (13)	1640' Tapered Cone
12-033-13	4	22	Y/BL O/BR	0.12 (3.0)	9 (13)	1640' Tapered Cone
12-034-13	5	22	Y/BL O/BR G	0.17 (4.3)	13 (20)	500m Tapered Cone
12-035-13	5	22	BK/W BK/W G	0.17 (4.3)	13 (20)	500m Tapered Cone
12-304-13	2	22	BR/BL	0.08 (2.0)	5 (7)	1000m Tapered Cone

Standards Compliance:
UL 444, listed as CM, GR 136 CORE (Normal Use), RoHS Compliant



RDUP/RUS OSP COPPER CABLE



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Product Description

SEALPIC cables are designed primarily for aerial use. In this application, the cable must be attached to a support strand. If the cable is to be placed in a duct, the cable must be pressurized.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772 kHz @ 68° F (20° C)		km	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km		Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.9	28.0	1.5	5.0	5,000	10,000
22	0.64	1.0	1.6	4.6	15.3	56.5	1.5	5.0	4,000	10,000
24	0.50	1.0	1.6	5.7	19.4	89.5	1.5	5.0	3,000	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz
P.S.WUNEXT mean (dB)	58		47
P.S.WUNEXT worst pair (dB)	53		42
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. OD inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
19 AWG (0.90 mm)	01-026-40	6	0.48 (12)	105 (155)	5000 (1524)	635 (285)	44 x 18 x 20
	01-028-40	12	0.57 (15)	170 (255)	5000 (1524)	1015 (460)	46 x 25 x 20
	01-031-40	25	0.76 (19)	310 (460)	5000 (1524)	1755 (795)	52 x 25 x 20
	01-034-40	50	1.00 (25)	575 (855)	5000 (1524)	3165 (1435)	62 x 30 x 24
	01-038-40	100	1.34 (34)	1075 (1600)	5000 (1524)	6075 (2755)	78 x 40 x 39
22 AWG (0.64 mm)	01-057-40	6	0.39 (9.9)	65 (95)	5000 (1524)	390 (175)	36 x 18 x 14
	01-059-40	12	0.46 (12)	100 (150)	5000 (1524)	610 (275)	44 x 18 x 20
	01-062-40	25	0.60 (15)	180 (270)	5000 (1524)	1065 (485)	46 x 25 x 20
	01-065-40	50	0.77 (20)	315 (470)	5000 (1524)	1780 (805)	52 x 25 x 20
	01-069-40	100	1.02 (26)	580 (865)	5000 (1524)	3190 (1445)	62 x 30 x 24
	01-073-40	200	1.38 (35)	1095 (1630)	5000 (1524)	6175 (2800)	78 x 40 x 39
	01-075-40	300	1.66 (42)	1605 (2390)	2500 (762)	4625 (2100)	72 x 35 x 36
	01-077-40	400	1.89 (48)	2115 (3150)	2500 (762)	5985 (2715)	78 x 40 x 39
	01-081-40	600	2.28 (58)	3125 (4650)	1250 (381)	4520 (2050)	72 x 35 x 36
	01-083-40	900	2.76 (70)	4635 (6900)	1250 (381)	6590 (2990)	84 x 40 x 42
	01-085-40	1200	3.15 (80)	6125 (9115)	1000 (305)	6920 (3140)	84 x 40 x 42
	01-092-40	6	0.35 (8.9)	50 (75)	5000 (1524)	295 (135)	30 x 18 x 12
	01-094-40	12	0.41 (10)	75 (110)	5000 (1524)	440 (200)	36 x 18 x 14
24 AWG (0.50 mm)	01-097-40	25	0.51 (13)	125 (185)	5000 (1524)	735 (330)	44 x 18 x 20
	01-100-40	50	0.64 (16)	215 (320)	5000 (1524)	1240 (560)	46 x 25 x 20
	01-104-40	100	0.83 (21)	385 (575)	5000 (1524)	2170 (985)	58 x 25 x 20
	01-108-40	200	1.12 (28)	715 (1065)	5000 (1524)	4190 (1900)	72 x 35 x 36
	01-110-40	300	1.33 (34)	1040 (1550)	5000 (1524)	5900 (2675)	78 x 40 x 39
	01-112-40	400	1.52 (39)	1360 (2025)	2500 (762)	4015 (1820)	72 x 35 x 36
	01-116-40	600	1.82 (46)	2005 (2985)	2500 (762)	5710 (2590)	78 x 40 x 39
	01-118-40	900	2.19 (56)	2960 (4405)	1250 (381)	4315 (1955)	72 x 35 x 36
	01-120-40	1200	2.49 (63)	3895 (5795)	1250 (381)	5570 (2525)	78 x 40 x 39
	01-121-40	1500	2.79 (71)	4845 (7210)	1250 (381)	6855 (3110)	84 x 40 x 42
	01-124-40	1800	3.04 (77)	5785 (8610)	1000 (305)	6485 (2940)	78 x 40 x 39
	01-125-40	2100	3.31 (84)	6735 (10025)	1000 (305)	7530 (3415)	84 x 40 x 42
	01-126-40	2400	3.49 (89)	7650 (11385)	750 (229)	6915 (3135)	96 x 40 x 48

Standards Compliance:

ANSI/ICEA S-85-625-2002; Formerly manufactured to RDUP Specification PE-22 (PE-22 was deactivated by RDUP and is superseded by ANSI/ICEA specifications), RoHS complaint.



Product Description

SEALPIC-84 cables are designed for aerial installations. The core and support member (messenger) lay parallel to each other forming a cross-sectional "figure 8". The messenger is an integral part of the cable sheath, yet readily available for gripping, pulling and tensioning. Installation is fast and easy using standard methods and hardware.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG
- **INSULATION:** Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap.
- **SUPPORT MEMBER:** A 1/4 inch, 7-strand Extra High Strength (EHS) galvanized steel messenger serves as the support member and is an integral part of the sheath. The messenger is flooded to inhibit corrosion.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		km	Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km		Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.9	28.0	1.5	5.0	5,000	10,000
22	0.64	1.0	1.6	4.6	15.3	56.5	1.5	5.0	4,000	10,000
24	0.50	1.0	1.6	5.7	19.4	89.5	1.5	5.0	3,000	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz	772 kHz	
P.S.WUNEXT mean (dB)	58	47	
P.S.WUNEXT worst pair (dB)	53	42	
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	80	145	-	-
more than 12	80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	800	2625	-	-
more than 12	800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. OD (Cable Only) inches (mm)	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxDxD (in)
19 AWG (0.90 mm)	01-026-38	6	0.47 (12)	0.96 (24)	240 (355)	5000 (1530)	1850 (839)	72 x 36 x 36
	01-028-38	12	0.56 (14)	1.05 (27)	305 (455)	5000 (1530)	1795 (814)	58 x 25 x 20
	01-031-38	25	0.74 (19)	1.24 (31)	445 (660)	5000 (1530)	2975 (1349)	78 x 40 x 39
	01-034-38	50	1.01 (26)	1.48 (38)	715 (1065)	5000 (1530)	4395 (1993)	84 x 40 x 42
	01-038-38	100	1.36 (35)	1.82 (46)	1235 (1840)	2500 (760)	3685 (1671)	72 x 36 x 36
22 AWG (0.64 mm)	01-057-38	6	0.38 (9.7)	0.87 (22)	200 (300)	5000 (1530)	1270 (576)	58 x 25 x 20
	01-059-38	12	0.45 (11)	0.94 (24)	235 (350)	5000 (1530)	1515 (687)	62 x 30 x 24
	01-062-38	25	0.59 (15)	1.08 (27)	315 (470)	5000 (1530)	2225 (1009)	72 x 36 x 36
	01-065-38	50	0.75 (19)	1.25 (32)	450 (670)	5000 (1530)	3000 (1361)	78 x 40 x 39
	01-069-38	100	1.03 (26)	1.50 (38)	725 (1080)	2500 (760)	2100 (952)	62 x 30 x 24
	01-073-38	200	1.40 (36)	1.86 (47)	1255 (1870)	2500 (760)	3725 (1689)	72 x 36 x 36
24 AWG (0.50 mm)	01-092-38	6	0.34 (8.6)	0.83 (21)	185 (275)	5000 (1530)	1115 (506)	46 x 25 x 20
	01-094-38	12	0.40 (10)	0.89 (23)	210 (315)	5000 (1530)	1280 (580)	52 x 25 x 20
	01-097-38	25	0.50 (13)	0.99 (25)	260 (385)	5000 (1530)	1595 (723)	58 x 25 x 20
	01-100-38	50	0.63 (16)	1.12 (28)	350 (520)	5000 (1530)	2065 (937)	62 x 30 x 24
	01-104-38	100	0.81 (21)	1.31 (33)	515 (765)	5000 (1530)	3275 (1485)	72 x 36 x 36
	01-108-38	200	1.14 (29)	1.60 (41)	875 (1300)	2500 (760)	2440 (1107)	62 x 30 x 24
	01-110-38	300	1.36 (35)	1.81 (46)	1200 (1785)	2500 (760)	3585 (1626)	72 x 36 x 36

TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

ANSI/ICEA S-85-625-2002; Formerly manufactured to RDUP Specification PE-38,

PE-38 was deactivated by RDUP in 1993 and is superseded by the ANSI/ICEA specifications, RoHS compliant



Product Description

SEALPIC-FSF-84 cables are designed for aerial applications where a filled cable design is preferred. The core and support member (messenger) lay parallel to each other forming a cross-sectional "figure 8". The messenger is an integral part of the cable sheath, yet readily available for gripping, pulling and tensioning. Installation is fast and easy using standard methods and hardware.

Physical Description

- **CONDUCTORS:** Solid annealed bare copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs and less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap. The shield interfaces are flooded.
- **SUPPORT MEMBER:** A 1/4 inch, 7-strand Extra High Strength (EHS) galvanized steel messenger serves as the support member and is an integral part of the sheath. The messenger is flooded to inhibit corrosion.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information including the manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.2	10.5	45.0	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.5	14.8	91.0	56.6	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	144.0	89.5	1.5	5.0	3,000	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz
P.S.WUNEXT mean (dB)	58		47
P.S.WUNEXT worst pair (dB)	53		42
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. OD (Cable Only) inches (mm)	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxD (in)
19 AWG (0.90 mm)	09-034-05	50	1.04 (26)	1.51 (38)	800 (1190)	2500 (760)	2270 (1030)	60 x 30 x 30
22 AWG (0.64 mm)	09-057-05	6	0.37 (9.4)	0.84 (22)	205 (305)	5000 (1530)	1255 (569)	52 x 25 x 20
	09-059-05	12	0.46 (12)	0.93 (24)	250 (370)	5000 (1530)	1513 (687)	52 x 25 x 20
	09-062-05	25	0.59 (15)	1.06 (27)	330 (490)	5000 (1530)	1945 (882)	58 x 25 x 20
	09-065-05	50	0.75 (19)	1.22 (31)	485 (720)	5000 (1530)	2765 (1254)	62 x 30 x 24
24 AWG (0.50 mm)	09-092-05	6	0.34 (8.6)	0.83 (21)	185 (275)	5000 (1530)	1115 (506)	46 x 25 x 20
	09-094-05	12	0.40 (10)	0.89 (23)	210 (315)	5000 (1530)	1280 (580)	52 x 25 x 20
	09-097-05	25	0.50 (13)	0.99 (25)	260 (385)	5000 (1530)	1595 (723)	58 x 25 x 20
	09-100-05	50	0.63 (16)	1.12 (28)	350 (520)	5000 (1530)	2065 (937)	62 x 30 x 24
	09-104-05	100	0.81 (21)	1.31 (33)	515 (765)	5000 (1530)	3275 (1485)	72 x 36 x 36
	09-108-05	200	1.14 (29)	1.60 (41)	875 (1300)	2500 (760)	2440 (1107)	62 x 30 x 24
	09-110-05	300	1.36 (35)	1.81 (46)	1200 (1785)	2500 (760)	3585 (1626)	72 x 36 x 36

TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

SEALPIC®-FSF-84 cables meet the physical and electrical requirements of RDUP specification 7 CFR 1755.890 (PE-89), latest issue except that the figure-8 sheath shall meet the requirements of ANSI/ICEA S-85-625-2002, Option A, RoHS compliant

SEALPIC®-FSF (RDUP PE-89)



Product Description

SEALPIC-FSF cables are designed for direct burial or duct applications where protection from moisture is required and aluminum shielding is desired. SEALPIC-FSF may be used aerially, but must be attached to a support strand.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs		nF/mile	nF/km
12 or less		83 ± 7	52 ± 4
Over 12		83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.2	10.5	45.0	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.5	14.8	91.0	56.6	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	144.0	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.0	23.3	232.0	144.0	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz		Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
P.S.WUNEXT mean (dB)		58		47		Pairs		pF/kft	pF/km	pF/kft	pF/km
P.S.WUNEXT worst pair (dB)		53		42		12 or less		80	145	-	-
P.S.WUNEXT worst pair (dB)		53		42		more than 12		80	145	25	45
Minimum Far End Crosstalk at 150 kHz		150 kHz		772 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Conductor size (AWG)		19	22	24	26	Pairs		pF/kft	pF/km	pF/kft	pF/km
P.S. ELFEXT mean (dB/kft)		65	63	63	61	12 or less		800	2625	-	-
P.S. ELFEXT worst pair (dB/kft)		59	57	57	57	more than 12		800	2625	175	574
Minimum Far End Crosstalk at 772 kHz		150 kHz		772 kHz							
Conductor size (AWG)		19	22	24	26						
P.S. ELFEXT mean (dB/kft)		51	49	49	47						
P.S. ELFEXT worst pair (dB/kft)		45	43	43	43						

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
19 AWG (0.90 mm)	09-026-02	6	0.49 (12)	120 (180)	5000 (1524)	710 (320)	44 x 18 x 20
	09-028-02	12	0.59 (15)	190 (285)	5000 (1524)	1115 (505)	46 x 25 x 20
	09-031-02	25	0.78 (20)	355 (530)	5000 (1524)	1980 (895)	52 x 25 x 20
	09-034-02	50	1.03 (26)	655 (975)	5000 (1524)	3565 (1615)	62 x 30 x 24
	09-038-02	100	1.37 (35)	1225 (1825)	2500 (762)	3430 (1555)	65 x 30 x 32
22 AWG (0.64 mm)	09-057-02	6	0.39 (9.9)	70 (105)	5000 (1524)	415 (190)	36 x 18 x 14
	09-059-02	12	0.47 (12)	115 (170)	5000 (1524)	685 (310)	44 x 18 x 20
	09-062-02	25	0.60 (15)	200 (300)	5000 (1524)	1165 (530)	46 x 25 x 20
	09-065-02	50	0.77 (20)	350 (520)	5000 (1524)	1955 (885)	52 x 25 x 20
	09-069-02	100	1.02 (26)	650 (965)	5000 (1524)	3540 (1605)	62 x 30 x 24
	09-073-02	200	1.38 (35)	1225 (1825)	2500 (762)	3350 (1520)	62 x 30 x 24
	09-075-02	300	1.65 (42)	1800 (2680)	1250 (381)	2495 (1130)	58 x 25 x 20
	09-077-02	400	1.88 (48)	2365 (3520)	1250 (381)	3245 (1470)	62 x 30 x 24
	09-081-02	600	2.28 (58)	3505 (5215)	1250 (381)	4995 (2265)	72 x 35 x 36
	09-083-02	900	2.76 (70)	5195 (7730)	1250 (381)	7290 (3305)	84 x 40 x 42
	09-085-02	1200	3.14 (80)	6845 (10185)	1250 (381)	9730 (4415)	96 x 40 x 48
	09-087-02	1500	3.51 (89)	8520 (12680)	1000 (305)	9695 (4400)	96 x 40 x 48
24 AWG (0.50 mm)	09-092-02	6	0.36 (9.1)	55 (80)	5000 (1524)	320 (145)	36 x 18 x 14
	09-094-02	12	0.42 (11)	85 (125)	5000 (1524)	490 (220)	36 x 18 x 14
	09-097-02	25	0.52 (13)	140 (210)	5000 (1524)	810 (365)	44 x 18 x 20
	09-100-02	50	0.66 (17)	240 (355)	5000 (1524)	1365 (620)	46 x 25 x 20
	09-104-02	100	0.85 (22)	430 (640)	5000 (1524)	2395 (1085)	58 x 25 x 20
	09-108-02	200	1.14 (29)	810 (1205)	5000 (1524)	4665 (2115)	72 x 35 x 36
	09-110-02	300	1.37 (35)	1180 (1755)	2500 (762)	3320 (1505)	65 x 30 x 32
	09-112-02	400	1.55 (39)	1545 (2300)	2500 (762)	4475 (2030)	72 x 35 x 36
	09-116-02	600	1.88 (48)	2285 (3400)	1250 (381)	3145 (1425)	62 x 30 x 24
	09-118-02	900	2.25 (57)	3350 (4985)	1250 (381)	4800 (2180)	72 x 35 x 36
	09-120-02	1200	2.57 (65)	4420 (6580)	1250 (381)	6225 (2825)	78 x 40 x 39
	09-121-02	1500	2.86 (73)	5490 (8170)	1000 (305)	6190 (2805)	78 x 40 x 39
	09-124-02	1800	3.12 (79)	6560 (9765)	1000 (305)	7355 (3335)	84 x 40 x 42
	09-125-02	2100	3.40 (86)	7690 (11445)	1000 (305)	8865 (4020)	96 x 40 x 48
	09-126-02	2400	3.59 (91)	8695 (12940)	1000 (305)	9870 (4475)	96 x 40 x 48
26 AWG (0.40 mm)	09-132-02	25	0.44 (11)	100 (150)	5000 (1524)	565 (255)	36 x 18 x 14
	09-135-02	50	0.55 (14)	165 (245)	5000 (1524)	990 (450)	46 x 25 x 20
	09-139-02	100	0.71 (18)	290 (430)	5000 (1524)	1655 (750)	52 x 25 x 20
	09-143-02	200	0.94 (24)	535 (795)	5000 (1524)	2965 (1345)	62 x 30 x 24
	09-145-02	300	1.09 (28)	755 (1125)	5000 (1524)	4390 (1990)	72 x 35 x 36
	09-147-02	400	1.25 (32)	995 (1480)	2500 (762)	2735 (1240)	58 x 25 x 20
	09-151-02	600	1.49 (38)	1455 (2165)	2500 (762)	4250 (1930)	72 x 35 x 36
	09-153-02	900	1.78 (45)	2120 (3155)	1250 (381)	3020 (1370)	65 x 30 x 32
	09-155-02	1200	2.03 (52)	2785 (4145)	1250 (381)	4095 (1860)	72 x 35 x 36
	09-156-02	1500	2.28 (58)	3480 (5180)	1250 (381)	4965 (2250)	72 x 35 x 36
	09-157-02	1800	2.48 (63)	4150 (6175)	1250 (381)	5885 (2670)	78 x 40 x 39
	09-159-02	2400	2.86 (73)	5515 (8210)	1250 (381)	8070 (3660)	96 x 40 x 48
	09-164-02	3600	3.45 (88)	8165 (12150)	1000 (305)	9340 (4235)	96 x 40 x 48

Standards Compliance:

ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.890 (PE-89), RoHS compliant



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CASPIC®-FSF (RDUP PE-89)



Product Description

CASPIC-FSF cables are designed for direct burial or duct applications where protection from moisture is required. CASPIC-FSF cables are recommended for use in high-risk areas where additional mechanical or rodent protection is required. CASPIC-FSF may be used aerially, but must be attached to a support strand.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standard.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** The dual shielding system consists of two metal tapes.
 - **Inner:** A corrugated, copolymer coated, 8-mil aluminum tape is applied directly over the core wrap. The aluminum tape does not butt or overlap at any point along the length of the cable.
 - **Outer:** A corrugated, copolymer coated, 6-mil steel tape is applied directly over the aluminum and overlaps. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information, such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		km	Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km		Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.2	10.5	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.5	14.8	56.6	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	89.5	1.5	5.0	3,000	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz
P.S.WUNEXT mean (dB)	58	47	
P.S.WUNEXT worst pair (dB)	53	42	
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. Overall O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
19 AWG (0.90 mm)	09-026-92	6	0.52 (13)	155 (230)	5000 (1524)	885 (400)	44 x 18 x 20
	09-028-92	12	0.62 (16)	235 (350)	5000 (1524)	1340 (610)	46 x 25 x 20
	09-031-92	25	0.81 (21)	415 (620)	5000 (1524)	2320 (1050)	58 x 25 x 20
	09-034-92	50	1.07 (27)	740 (1100)	5000 (1524)	4315 (1955)	72 x 35 x 36
	09-038-92	100	1.41 (36)	1345 (2000)	5000 (1524)	7425 (3370)	78 x 40 x 39
22 AWG (0.64 mm)	09-057-92	6	0.42 (11)	95 (140)	5000 (1524)	540 (245)	36 x 18 x 14
	09-059-92	12	0.50 (13)	150 (225)	5000 (1524)	860 (390)	44 x 18 x 20
	09-062-92	25	0.63 (16)	245 (365)	5000 (1524)	1390 (630)	46 x 25 x 20
	09-065-92	50	0.80 (20)	410 (610)	5000 (1524)	2295 (1040)	58 x 25 x 20
	09-069-92	100	1.05 (27)	730 (1085)	5000 (1524)	4265 (1935)	72 x 35 x 36
	09-073-92	200	1.42 (36)	1345 (2000)	2500 (762)	3650 (1655)	62 x 30 x 24
	09-075-92	300	1.70 (43)	1945 (2895)	1250 (381)	2720 (1235)	62 x 30 x 24
	09-077-92	400	1.92 (49)	2535 (3775)	1250 (381)	3455 (1570)	62 x 30 x 24
	09-081-92	600	2.32 (59)	3710 (5520)	1250 (381)	5250 (2380)	72 x 35 x 36
	09-083-92	900	2.81 (71)	5455 (8120)	1250 (381)	7615 (3455)	84 x 40 x 42
	09-085-92	1200	3.19 (81)	7140 (10625)	1250 (381)	10100 (4580)	96 x 40 x 48
24 AWG (0.50 mm)	09-092-92	6	0.39 (9.9)	80 (120)	5000 (1524)	465 (210)	36 x 18 x 14
	09-094-92	12	0.45 (11)	110 (165)	5000 (1524)	615 (280)	36 x 18 x 14
	09-097-92	25	0.55 (14)	180 (270)	5000 (1524)	1065 (485)	46 x 25 x 20
	09-100-92	50	0.69 (18)	290 (430)	5000 (1524)	1615 (735)	46 x 25 x 20
	09-104-92	100	0.88 (22)	500 (745)	5000 (1524)	2745 (1245)	58 x 25 x 20
	09-108-92	200	1.18 (30)	905 (1345)	2500 (762)	2510 (1135)	58 x 25 x 20
	09-110-92	300	1.41 (36)	1300 (1935)	2500 (762)	3540 (1605)	62 x 30 x 24
	09-112-92	400	1.59 (40)	1680 (2500)	2500 (762)	4815 (2185)	72 x 35 x 36
	09-116-92	600	1.92 (49)	2450 (3645)	1250 (381)	3350 (1520)	62 x 30 x 24
	09-118-92	900	2.29 (58)	3555 (5290)	1250 (381)	5060 (2295)	72 x 35 x 36
	09-120-92	1200	2.62 (67)	4660 (6935)	1250 (381)	6525 (2960)	78 x 40 x 39
	09-121-92	1500	2.91 (74)	5755 (8565)	1000 (305)	6455 (2930)	78 x 40 x 39
	09-124-92	1800	3.17 (81)	6855 (10200)	1000 (305)	7650 (3470)	84 x 40 x 42
	09-125-92	2100	3.45 (88)	8015 (11930)	1000 (305)	9190 (4170)	96 x 40 x 48
	09-126-92	2400	3.64 (93)	9035 (13445)	750 (229)	7950 (3605)	96 x 40 x 48

Standards Compliance:

ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.890 (PE-89), RoHS compliant

SEALPIC®-F (RDUP PE-39)



Product Description

SEALPIC-F cables are designed for direct burial or duct applications where protection from moisture is required and aluminum shielding is desired. SEALPIC-F may be used aerially, but must be attached to a support strand.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information, such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs		nF/mile	nF/km
12 or less		83 ± 7	52 ± 4
Over 12		83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)			Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	2.8	9.2	28.0	1.5	5.0	7,000	15,000
22	0.64	1.0	1.6	4.0	13.1	56.6	1.5	5.0	5,000	15,000
24	0.50	1.0	1.6	5.0	16.4	89.5	1.5	5.0	4,000	15,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz	
P.S.WUNEXT mean (dB)		58		47	
P.S.WUNEXT worst pair (dB)		53		42	
Minimum Far End Crosstalk at 150 kHz					
Conductor size (AWG)		19	22	24	
P.S. ELFEXT mean (dB/kft)		65	63	63	
P.S. ELFEXT worst pair (dB/kft)		59	57	57	
Minimum Far End Crosstalk at 772 kHz					
Conductor size (AWG)		19	22	24	
P.S. ELFEXT mean (dB/kft)		51	49	49	
P.S. ELFEXT worst pair (dB/kft)		45	43	43	

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

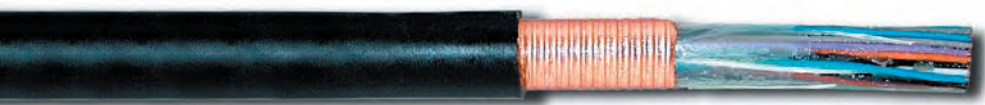
Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
19 AWG (0.90 mm)	04-026-21	6	0.54 (14)	140 (210)	5000 (1524)	810 (365)	44 x 18 x 20
	04-028-21	12	0.69 (18)	235 (350)	5000 (1524)	1340 (610)	46 x 25 x 20
	04-031-21	25	0.92 (23)	440 (655)	5000 (1524)	2570 (1165)	65 x 30 x 32
	04-034-21	50	1.22 (31)	810 (1205)	5000 (1524)	4750 (2155)	78 x 40 x 39
	04-038-21	100	1.69 (43)	1565 (2330)	2500 (762)	4525 (2055)	72 x 35 x 36
22 AWG (0.64 mm)	04-057-21	6	0.43 (11)	85 (125)	5000 (1524)	490 (220)	36 x 18 x 14
	04-059-21	12	0.53 (14)	135 (200)	5000 (1524)	785 (355)	44 x 18 x 20
	04-062-21	25	0.68 (17)	240 (355)	5000 (1524)	1365 (620)	46 x 25 x 20
	04-065-21	50	0.89 (23)	425 (630)	5000 (1524)	2370 (1075)	58 x 25 x 20
	04-069-21	100	1.19 (30)	780 (1160)	5000 (1524)	4515 (2050)	72 x 35 x 36
	04-073-21	200	1.63 (41)	1500 (2230)	2500 (762)	4365 (1980)	72 x 35 x 36
	04-075-21	300	1.96 (50)	2205 (3280)	2500 (762)	6210 (2820)	78 x 40 x 39
	04-077-21	400	2.23 (57)	2890 (4300)	1250 (381)	4225 (1915)	72 x 35 x 36
	04-081-21	600	2.72 (69)	4295 (6390)	1250 (381)	6165 (2795)	84 x 40 x 42
	04-083-21	900	3.30 (84)	6380 (9495)	1250 (381)	7975 (3615)	96 x 40 x 48
24 AWG (0.50 mm)	04-092-21	6	0.38 (9.7)	60 (90)	5000 (1524)	365 (165)	36 x 18 x 14
	04-094-21	12	0.46 (12)	95 (140)	5000 (1524)	585 (265)	44 x 18 x 20
	04-097-21	25	0.58 (15)	165 (245)	5000 (1524)	990 (450)	46 x 25 x 20
	04-100-21	50	0.74 (19)	285 (425)	5000 (1524)	1630 (740)	52 x 25 x 20
	04-104-21	100	0.98 (25)	520 (775)	5000 (1524)	2970 (1345)	65 x 30 x 32
	04-108-21	200	1.32 (34)	975 (1450)	5000 (1524)	5575 (2530)	78 x 40 x 39
	04-110-21	300	1.58 (40)	1420 (2115)	2500 (762)	4165 (1890)	72 x 35 x 36
	04-112-21	400	1.79 (46)	1850 (2755)	2500 (762)	5325 (2415)	78 x 40 x 39
	04-116-21	600	2.18 (55)	2745 (4085)	1250 (381)	4045 (1835)	72 x 35 x 36
	04-118-21	900	2.63 (67)	4050 (6025)	1250 (381)	5760 (2615)	78 x 40 x 39
	04-120-21	1200	3.00 (76)	5325 (7925)	1000 (305)	6025 (2730)	78 x 40 x 39
	04-121-21	1500	3.35 (85)	6625 (9860)	1000 (305)	7800 (3540)	96 x 40 x 48
	04-124-21	1800	3.63 (92)	7870 (11710)	1000 (305)	9045 (4105)	96 x 40 x 48

Standards Compliance:

ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.390 (PE-39), RoHS compliant

CUPIC®-F (RDUP PE-39)



Product Description

CUPIC-F cables are designed for use in duct or direct burial applications where protection from moisture is required and copper shielding is desired. CUPIC-F may be used aerially, but must be attached to a support strand.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pair and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, 5-mil copper tape is applied longitudinally with an overlap. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information, such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs		nF/mile	nF/km
12 or less		83 ± 7	52 ± 4
Over 12		83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	2.8	9.2	45.0	28.0	1.5	5.0	7,000	15,000
22	0.64	1.0	1.6	4.0	13.1	91.0	56.6	1.5	5.0	5,000	15,000
24	0.50	1.0	1.6	5.0	16.4	144.0	89.5	1.5	5.0	4,000	15,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz
P.S.WUNEXT mean (dB)	58		47
P.S.WUNEXT worst pair (dB)	53		42
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	80	145	-	-
more than 12	80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	800	2625	-	-
more than 12	800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
19 AWG (0.90 mm)	04-026-04	6	0.54 (14)	150 (225)	5000 (1524)	860 (390)	44 x 18 x 20
	04-028-04	12	0.69 (18)	255 (380)	5000 (1524)	1440 (655)	46 x 25 x 20
	04-031-04	25	0.92 (23)	470 (700)	5000 (1524)	2720 (1235)	65 x 30 x 32
	04-034-04	50	1.22 (31)	845 (1260)	5000 (1524)	4925 (2235)	78 x 40 x 39
	04-038-04	100	1.69 (43)	1620 (2410)	2500 (762)	4750 (2155)	78 x 40 x 39
22 AWG (0.64 mm)	04-057-04	6	0.43 (11)	95 (140)	5000 (1524)	540 (245)	36 x 18 x 14
	04-059-04	12	0.53 (14)	145 (215)	5000 (1524)	835 (380)	44 x 18 x 20
	04-062-04	25	0.68 (17)	255 (380)	5000 (1524)	1440 (655)	46 x 25 x 20
	04-065-04	50	0.89 (23)	450 (670)	5000 (1524)	2495 (1130)	58 x 25 x 20
	04-069-04	100	1.19 (30)	815 (1215)	5000 (1524)	4690 (2125)	72 x 35 x 36
	04-073-04	200	1.63 (41)	1550 (2305)	2500 (762)	4490 (2035)	72 x 35 x 36
	04-075-04	300	1.97 (50)	2270 (3380)	2500 (762)	6375 (2890)	78 x 40 x 39
	04-077-04	400	2.23 (57)	2960 (4405)	1250 (381)	4315 (1955)	72 x 35 x 36
	04-081-04	600	2.72 (69)	4385 (6525)	1250 (381)	6280 (2850)	84 x 40 x 42
	04-083-04	900	3.30 (84)	6490 (9660)	1250 (381)	9290 (4215)	96 x 40 x 48
24 AWG (0.50 mm)	04-092-04	6	0.38 (9.7)	70 (105)	5000 (1524)	415 (190)	36 x 18 x 14
	04-094-04	12	0.46 (12)	110 (165)	5000 (1524)	660 (300)	44 x 18 x 20
	04-097-04	25	0.58 (15)	180 (270)	5000 (1524)	1065 (485)	46 x 25 x 20
	04-100-04	50	0.74 (19)	305 (455)	5000 (1524)	1730 (785)	52 x 25 x 20
	04-104-04	100	0.98 (25)	550 (820)	5000 (1524)	3120 (1415)	65 x 30 x 32
	04-108-04	200	1.32 (34)	1015 (1510)	5000 (1524)	5775 (2620)	78 x 40 x 39
	04-110-04	300	1.59 (40)	1470 (2190)	2500 (762)	4290 (1945)	72 x 35 x 36
	04-112-04	400	1.79 (46)	1905 (2835)	2500 (762)	5460 (2475)	78 x 40 x 39
	04-116-04	600	2.18 (55)	2815 (4190)	1250 (381)	4135 (1875)	72 x 35 x 36
	04-118-04	900	2.63 (67)	4135 (6155)	1250 (381)	5870 (2660)	78 x 40 x 39
	04-120-04	1200	3.00 (76)	5420 (8065)	1000 (305)	6120 (2775)	78 x 40 x 39
	04-121-04	1500	3.35 (85)	6730 (10015)	1000 (305)	7905 (3585)	96 x 40 x 48
	04-124-04	1800	3.63 (92)	7990 (11890)	1000 (305)	9165 (4155)	96 x 40 x 48

Standards Compliance:

ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.390 (PE-39), RoHS compliant

GOPIC®-F (RDUP PE-39)



Product Description

GOPIC-F cables are designed for use in duct or direct burial applications where protection from moisture is required. GOPIC-F may be used aerially, but must be attached to a support strand. GOPIC-F cables are recommended for use in high-risk areas where additional mechanical or rodent protection is required.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, gopher resistant, copper alloy or copper clad steel tape is applied longitudinally with an overlap. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information, such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs		nF/mile	nF/km
12 or less		83 ± 7	52 ± 4
Over 12		83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	2.8	9.2	45.0	28.0	1.5	5.0	7,000	15,000
22	0.64	1.0	1.6	4.0	13.1	91.0	56.6	1.5	5.0	5,000	15,000
24	0.50	1.0	1.6	5.0	16.4	144.0	89.5	1.5	5.0	4,000	15,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz
P.S.WUNEXT mean (dB)	58		47
P.S.WUNEXT worst pair (dB)	53		42
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxDxD (in)
19 AWG (0.90 mm)	04-026-27	6	0.54 (14)	155 (230)	5000 (1524)	885 (400)	44 x 18 x 20
	04-028-27	12	0.69 (18)	255 (380)	5000 (1524)	1440 (655)	46 x 25 x 20
	04-031-27	25	0.92 (23)	470 (700)	5000 (1524)	2720 (1235)	65 x 30 x 32
	04-034-27	50	1.22 (31)	850 (1265)	5000 (1524)	4950 (2245)	78 x 40 x 39
	04-038-27	100	1.69 (43)	1620 (2410)	2500 (762)	4665 (2115)	72 x 35 x 36
22 AWG (0.64 mm)	04-057-27	6	0.43 (11)	95 (140)	5000 (1524)	540 (245)	36 x 18 x 14
	04-059-27	12	0.53 (14)	150 (225)	5000 (1524)	860 (390)	44 x 18 x 20
	04-062-27	25	0.68 (17)	260 (385)	5000 (1524)	1465 (665)	46 x 25 x 20
	04-065-27	50	0.89 (23)	450 (670)	5000 (1524)	2495 (1130)	58 x 25 x 20
	04-069-27	100	1.19 (30)	820 (1220)	5000 (1524)	4715 (2140)	72 x 35 x 36
	04-073-27	200	1.63 (41)	1555 (2315)	2500 (762)	4500 (2040)	72 x 35 x 36
	04-075-27	300	1.96 (50)	2275 (3385)	2500 (762)	6385 (2895)	78 x 40 x 39
	04-077-27	400	2.23 (57)	2965 (4415)	1250 (381)	4320 (1960)	72 x 35 x 36
	04-081-27	600	2.72 (69)	4395 (6540)	1250 (381)	6290 (2855)	84 x 40 x 42
	04-083-27	900	3.30 (84)	6505 (9680)	1250 (381)	8130 (3690)	96 x 40 x 48
24 AWG (0.50 mm)	04-092-27	6	0.38 (9.7)	70 (105)	5000 (1524)	415 (190)	36 x 18 x 14
	04-094-27	12	0.46 (12)	110 (165)	5000 (1524)	660 (300)	44 x 18 x 20
	04-097-27	25	0.58 (15)	180 (270)	5000 (1524)	1065 (485)	46 x 25 x 20
	04-100-27	50	0.74 (19)	310 (460)	5000 (1524)	1755 (795)	52 x 25 x 20
	04-104-27	100	0.98 (25)	550 (820)	5000 (1524)	3120 (1415)	65 x 30 x 32
	04-108-27	200	1.32 (34)	1020 (1520)	5000 (1524)	5800 (2630)	78 x 40 x 39
	04-110-27	300	1.58 (40)	1475 (2195)	2500 (762)	4300 (1950)	72 x 35 x 36
	04-112-27	400	1.79 (46)	1910 (2845)	2500 (762)	5475 (2485)	78 x 40 x 39
	04-116-27	600	2.18 (55)	2825 (4205)	1250 (381)	4145 (1880)	72 x 35 x 36
	04-118-27	900	2.63 (67)	4145 (6170)	1250 (381)	5880 (2665)	78 x 40 x 39
	04-120-27	1200	3.00 (76)	5435 (8090)	1000 (305)	6135 (2780)	78 x 40 x 39
	04-121-27	1500	3.35 (85)	6745 (10040)	1000 (305)	7920 (3590)	96 x 40 x 48
	04-124-27	1800	3.63 (92)	8005 (11915)	1000 (305)	9180 (4165)	96 x 40 x 48

Standards Compliance:

ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.390 (PE-39), RoHS compliant



Product Description

CASPIC-F cables are designed for use in duct or direct burial applications where protection from moisture is required. CASPIC-F may be used aerially, but must be attached to a support strand. CASPIC-F cables are recommended for use in high-risk areas where additional mechanical or rodent protection is required.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin, color coded in accordance with industry standards.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs or less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded unit binders.
- **FILLING COMPOUND:** The core assembly is filled with an 80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** The dual shielding system consists of two metal tapes.
 - **Inner:** A corrugated, copolymer coated, 8-mil aluminum tape is applied directly over the core wrap. The aluminum tape does not butt or overlap at any point along the length of the cable.
 - **Outer:** A corrugated, copolymer coated, 6-mil steel tape is applied directly over the aluminum and overlaps. The shield interfaces are flooded.
- **JACKET:** A black, linear low-density polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information, such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		km	Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km		Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	2.8	9.2	28.0	1.5	5.0	7,000	15,000
22	0.64	1.0	1.6	4.0	13.1	56.6	1.5	5.0	5,000	15,000
24	0.50	1.0	1.6	5.0	16.4	89.5	1.5	5.0	4,000	15,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz
P.S.WUNEXT mean (dB)	58	47	
P.S.WUNEXT worst pair (dB)	53	42	
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	80	145	-	-
more than 12	80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	800	2625	-	-
more than 12	800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. Overall O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
19 AWG (0.90 mm)	04-026-94	6	0.57 (15)	175 (260)	5000 (1524)	1040 (470)	46 x 25 x 20
	04-028-94	12	0.72 (18)	285 (425)	5000 (1524)	1630 (740)	52 x 25 x 20
	04-031-94	25	0.95 (24)	515 (765)	5000 (1524)	2865 (1300)	62 x 30 x 24
	04-034-94	50	1.26 (32)	915 (1360)	5000 (1524)	5275 (2390)	78 x 40 x 39
	04-038-94	100	1.73 (44)	1715 (2550)	2500 (762)	4985 (2260)	78 x 40 x 39
22 AWG (0.64 mm)	04-057-94	6	0.46 (12)	110 (165)	5000 (1524)	660 (300)	44 x 18 x 20
	04-059-94	12	0.56 (14)	170 (255)	5000 (1524)	1015 (460)	46 x 25 x 20
	04-062-94	25	0.71 (18)	290 (430)	5000 (1524)	1655 (750)	52 x 25 x 20
	04-065-94	50	0.93 (24)	495 (735)	5000 (1524)	2845 (1290)	65 x 30 x 32
	04-069-94	100	1.22 (31)	880 (1310)	5000 (1524)	5100 (2315)	78 x 40 x 39
	04-073-94	200	1.67 (42)	1645 (2450)	2500 (762)	4725 (2145)	72 x 35 x 36
24 AWG (0.50 mm)	04-092-94	6	0.41 (10)	90 (135)	5000 (1524)	515 (235)	36 x 18 x 14
	04-094-94	12	0.49 (12)	130 (195)	5000 (1524)	760 (345)	44 x 18 x 20
	04-097-94	25	0.61 (16)	205 (305)	5000 (1524)	1190 (540)	46 x 25 x 20
	04-100-94	50	0.77 (20)	340 (505)	5000 (1524)	1905 (865)	52 x 25 x 20
	04-104-94	100	1.01 (26)	600 (895)	5000 (1524)	3290 (1490)	62 x 30 x 24
	04-108-94	200	1.36 (35)	1090 (1620)	5000 (1524)	6150 (2790)	78 x 40 x 39
	04-110-94	300	1.63 (41)	1560 (2320)	2500 (762)	4515 (2050)	72 x 35 x 36
	04-112-94	400	1.84 (47)	2015 (3000)	2500 (762)	5735 (2600)	78 x 40 x 39
	04-116-94	600	2.22 (56)	2945 (4385)	1250 (381)	4295 (1950)	72 x 35 x 36
	04-118-94	900	2.68 (68)	4300 (6400)	1250 (381)	6170 (2800)	84 x 40 x 42

Standards Compliance:

ANSI/ICEA S-84-608-2002; RDUP 7 CFR 1755.390 (PE-39), RoHS compliant



BELL OSP COPPER CABLE



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Product Description

ALPETH cable is a solid insulated, single jacketed aircore design intended for aerial installations. In this application, the cable must be attached to a support strand (messenger). ALPETH cable is not recommended for any buried or duct application, with or without air pressure.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet capacitance unbalance requirements. In cables having 25 pairs or less, the pairs are combined into a cylindrical core. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. For 1200 pair and larger, the color code is a Mirror Image design.
- **CORE WRAP:** A complete covering of non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength.
- **SHIELD:** A corrugated bare 8-mil aluminum tape is applied longitudinally over the core wrap. Bare aluminum is used to assure good electrical contact with non-piercing bonding clamps.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.
- **OPTIONS:** If extra mechanical protection is desired, an additional outer steel armor and polyethylene jacket (UM) can be requested.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.9	45.0	28.0	1.5	5	5,000	10,000
22	0.64	1.0	1.6	4.6	15.3	91.0	56.5	1.5	5	4,000	10,000
24	0.50	1.0	1.6	5.7	19.4	144.0	89.5	1.5	5	3,000	10,000
26	0.40	1.0	1.6	7.2	23.6	232.0	144.2	1.5	5	2,400	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz		Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
P.S.WUNEXT mean (dB)		58		47		Pairs		pF/kft	pF/km	pF/kft	pF/km
P.S.WUNEXT worst pair (dB)		53		42		more than 12		80	145	25	45

Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	65	63	63	61
P.S. ELFEXT worst pair (dB/kft)	59	57	57	57
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	51	49	49	47
P.S. ELFEXT worst pair (dB/kft)	45	43	43	43

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
more than 12		800	2625	175	574

Part Numbers and Physical Characteristics							
	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
BHBA - 19 AWG (0.90 mm)	20-031-42	25	0.76 (19)	310 (460)	10000 (3048)	3895 (1765)	420
	20-034-42	50	1.00 (25)	570 (850)	10000 (3048)	6495 (2945)	420
	20-038-42	100	1.34 (34)	1070 (1590)	5000 (1524)	6145 (2785)	420
	20-042-42	200	1.85 (47)	2075 (3090)	2500 (762)	5985 (2715)	420
	20-044-42	300	2.23 (57)	3065 (4560)	2000 (610)	6925 (3140)	420
	20-046-42	400	2.73 (69)	4172 (6215)	1260 (384)	5997 (2723)	420
BHAA - 22 AWG (0.64 mm)	20-062-42	25	0.60 (15)	180 (270)	15000 (4572)	3495 (1585)	420
	20-065-42	50	0.77 (20)	315 (470)	15000 (4572)	5520 (2505)	420
	20-069-42	100	1.02 (26)	580 (865)	10000 (3048)	6595 (2990)	420
	20-073-42	200	1.38 (35)	1090 (1620)	5000 (1524)	6245 (2835)	420
	20-075-42	300	1.66 (42)	1600 (2380)	3300 (1006)	6075 (2755)	420
	20-077-42	400	1.89 (48)	2110 (3140)	2500 (762)	6070 (2755)	420
	20-081-42	600	2.28 (58)	3115 (4635)	2000 (610)	7025 (3185)	420
	20-083-42	900	2.76 (70)	4625 (6885)	1100 (335)	5885 (2670)	420
BKMA - 24 AWG (0.50 mm)	20-097-42	25	0.51 (13)	125 (185)	20000 (6096)	3295 (1495)	420
	20-100-42	50	0.64 (16)	215 (320)	20000 (6096)	5095 (2310)	420
	20-104-42	100	0.83 (21)	380 (565)	13300 (4054)	5850 (2655)	420
	20-108-42	200	1.12 (28)	710 (1055)	8000 (2438)	6475 (2935)	420
	20-110-42	300	1.33 (34)	1035 (1540)	5700 (1737)	6695 (3035)	420
	20-112-42	400	1.52 (39)	1355 (2015)	4400 (1341)	6755 (3065)	420
	20-116-42	600	1.82 (46)	1995 (2970)	3100 (945)	6980 (3165)	420
	20-118-42	900	2.19 (56)	2950 (4390)	2200 (671)	7285 (3305)	420
	20-120-42	1200	2.50 (64)	3905 (5810)	1600 (488)	7045 (3195)	420
	20-121-42	1500	2.79 (71)	4860 (7235)	1250 (381)	6870 (3115)	420
BKTA - 26 AWG (0.40 mm)	20-124-42	1800	3.05 (78)	5810 (8645)	1140 (347)	7420 (3365)	420
	20-132-42	25	0.44 (11)	90 (135)	20000 (6096)	2595 (1175)	420
	20-135-42	50	0.55 (14)	150 (225)	20000 (6096)	3795 (1720)	420
	20-139-42	100	0.70 (18)	260 (385)	20000 (6096)	5995 (2720)	420
	20-143-42	200	0.93 (24)	470 (700)	10000 (3048)	5495 (2495)	420
	20-145-42	300	1.07 (27)	675 (1005)	8000 (2438)	6195 (2810)	420
	20-147-42	400	1.23 (31)	875 (1300)	6600 (2012)	6570 (2980)	420
	20-151-42	600	1.47 (37)	1290 (1920)	5000 (1524)	7245 (3285)	420
	20-153-42	900	1.75 (45)	1890 (2815)	3300 (1006)	7030 (3190)	420
	20-155-42	1200	2.00 (51)	2495 (3715)	2200 (671)	6285 (2850)	420
	20-156-42	1500	2.25 (57)	3100 (4615)	2000 (610)	6995 (3175)	420
	20-157-42	1800	2.45 (62)	3695 (5500)	1600 (488)	6705 (3040)	420
	20-158-42	2100	2.65 (67)	4305 (6405)	1140 (347)	5705 (2585)	420
	20-159-42	2400	2.86 (73)	4988 (7430)	1000 (305)	5770 (2620)	420
	20-161-42	2700	2.97 (75)	5495 (8180)	1050 (320)	6565 (2980)	420
	20-162-42	3000	3.13 (80)	6090 (9065)	800 (244)	5665 (2570)	420

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-85-625-2002, RoHS compliant



Product Description

PASP cable is a solid-insulated, double-jacketed, armored aircore design intended for use in outside cable plant where a greater risk of physical damage exists. The inner jacket provides protection to the cable core in the event of severe damage to the outer protective sheath.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance limits. In cables having 25 pairs or less, the pairs are combined into a cylindrical core. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. For 1200 pair and larger, the color code is a Mirror Image design.
- **CORE WRAP:** A complete covering of a non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength.
- **INNER JACKET:** A polyethylene inner jacket provides additional protection against mechanical damage and helps prevent the ingress of moisture.
- **SHIELD:** A corrugated bare 8-mil aluminum tape is applied longitudinally over the inner jacket. Bare aluminum is used to assure good electrical contact with non-piercing bonding clamps.
- **ARMOR:** A corrugated, copolymer coated, 6-mil steel tape is applied over the aluminum shield to help protect the core from mechanical damage. The armor is bonded to the outer jacket to reduce the possibility of tape buckling during installation, ingress of water to the aluminum shield and of water along the cable between the armor and outer jacket.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
Over 12	83 + 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.8	45	28.0	1.5	5.0	5,000	20,000
22	0.64	1.0	1.6	4.7	15.4	91	56.5	1.5	5.0	4,000	20,000
24	0.50	1.0	1.6	5.9	19.4	144	89.5	1.5	5.0	3,000	20,000
26	0.40	1.0	1.6	7.4	24.3	232	144.2	1.5	5.0	2,400	20,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz	
P.S.WUNEXT mean (dB)		58		47	
P.S.WUNEXT worst pair (dB)		53		42	
Minimum Far End Crosstalk at 150 kHz					
Conductor size (AWG)		19	22	24	26
P.S. ELFEXT mean (dB/kft)		65	63	63	61
P.S. ELFEXT worst pair (dB/kft)		59	57	57	57
Minimum Far End Crosstalk at 772 kHz					
Conductor size (AWG)		19	22	24	26
P.S. ELFEXT mean (dB/kft)		51	49	49	47
P.S. ELFEXT worst pair (dB/kft)		45	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
more than 12		800	2625	175	574

Part Numbers and Physical Characteristics							
	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
BHBH - 19 AWG (0.90 mm)	20-031-05	25	0.89 (23)	415 (620)	10000 (3048)	4945 (2245)	420
	20-034-05	50	1.13 (29)	705 (1050)	5000 (1524)	4320 (1960)	420
	20-038-05	100	1.50 (38)	1280 (1905)	3300 (1006)	5020 (2275)	420
	20-042-05	200	2.20 (56)	2424 (3611)	2000 (610)	5630 (2556)	420
	20-044-05	300	2.43 (62)	3460 (5150)	1250 (381)	5120 (2320)	420
BHAH - 22 AWG (0.64 mm)	20-062-05	25	0.72 (18)	260 (385)	15000 (4572)	4695 (2130)	420
	20-065-05	50	0.90 (23)	425 (630)	10000 (3048)	5045 (2290)	420
	20-069-05	100	1.15 (29)	715 (1065)	7500 (2286)	6160 (2795)	420
	20-073-05	200	1.54 (39)	1300 (1935)	3750 (1143)	5670 (2570)	420
	20-075-05	300	1.83 (47)	1865 (2775)	3300 (1006)	6950 (3150)	420
	20-077-05	400	2.05 (52)	2405 (3580)	2000 (610)	5605 (2540)	420
	20-081-05	600	2.48 (63)	3515 (5230)	1250 (381)	5190 (2355)	420
	20-083-05	900	2.96 (75)	5110 (7605)	1100 (335)	6415 (2910)	420
	20-085-05	1200	3.37 (86)	6601 (9833)	800 (200)	5865 (2663)	420
BKMH - 24 AWG (0.50 mm)	20-097-05	25	0.63 (16)	195 (290)	20000 (6096)	4695 (2130)	420
	20-100-05	50	0.76 (19)	300 (445)	13300 (4054)	4785 (2170)	420
	20-104-05	100	0.97 (25)	500 (745)	10000 (3048)	5795 (2630)	420
	20-108-05	200	1.24 (32)	860 (1280)	6600 (2012)	6470 (2935)	420
	20-110-05	300	1.49 (38)	1240 (1845)	4400 (1341)	6250 (2835)	420
	20-112-05	400	1.68 (43)	1595 (2375)	3300 (1006)	6060 (2750)	420
	20-116-05	600	1.99 (51)	2290 (3410)	2500 (762)	6520 (2955)	420
	20-118-05	900	2.38 (61)	3335 (4965)	1600 (488)	6130 (2780)	420
	20-120-05	1200	2.72 (69)	4355 (6480)	1100 (335)	5585 (2535)	420
	20-121-05	1500	2.99 (76)	5350 (7960)	1100 (335)	6680 (3030)	420
	20-124-05	1800	3.25 (83)	6340 (9435)	800 (244)	5865 (2660)	420
	20-125-05	2100	3.58 (91)	7329 (10917)	750 (229)	6279 (2851)	420
BKTH - 26 AWG (0.40 mm)	20-132-05	25	0.56 (14)	150 (225)	20000 (6096)	3795 (1720)	420
	20-135-05	50	0.67 (17)	220 (325)	20000 (6096)	5195 (2355)	420
	20-139-05	100	0.82 (21)	350 (520)	13300 (4054)	5450 (2470)	420
	20-143-05	200	1.06 (27)	600 (895)	8000 (2438)	5595 (2540)	420
	20-145-05	300	1.20 (31)	820 (1220)	6600 (2012)	6205 (2815)	420
	20-147-05	400	1.40 (36)	1075 (1600)	5000 (1524)	6170 (2800)	420
	20-151-05	600	1.64 (42)	1520 (2260)	3300 (1006)	5810 (2635)	420
	20-153-05	900	1.93 (49)	2175 (3235)	2600 (792)	6450 (2925)	420
	20-155-05	1200	2.20 (56)	2845 (4235)	2200 (671)	7055 (3200)	420
	20-156-05	1500	2.45 (62)	3490 (5195)	1600 (488)	6380 (2895)	420
	20-157-05	1800	2.66 (68)	4135 (6155)	1300 (396)	6170 (2800)	420
	20-158-05	2100	2.85 (72)	4770 (7100)	1140 (347)	6235 (2825)	420
	20-159-05	2400	3.05 (80)	5465 (8141)	1100 (335)	7012 (3183)	420
	20-161-05	2700	3.18 (81)	6015 (8950)	1140 (347)	7650 (3470)	420

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-85-625-2002, RoHS compliant



Product Description

SELF-SUPPORT cable is a solid insulated, single jacketed aircore design with a built-in support member intended specifically for aerial applications. The undulated, shielded core is laid parallel to a flooded steel support member and jacketed in an integral extrusion to form a "figure-8" configuration. The supporting member is an integral part of the cable sheath yet readily available for gripping, pulling and tensioning. Installation is fast and easy using standard methods and hardware.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance limits. In cables of 25 pairs, the pairs are combined into a cylindrical core. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. To eliminate strain on the conductors, the core assembly is undulated to provide sufficient slack during installation.
- **CORE WRAP:** A complete covering of non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength.
- **SHIELD:** A corrugated, 8-mil aluminum tape is applied longitudinally over the core wrap.
- **SUPPORT MEMBER:** A 1/4 inch, 7-strand Extra High-Strength (EHS) galvanized steel member, fully flooded for corrosion protection, serves as the support member and is an integral part of the sheath.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count AWG and product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 + 4, - 5	52 + 2, - 3

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.8	45	28.0	1.5	5.0	5,000	10,000
22	0.64	1.0	1.6	4.7	15.4	91	56.5	1.5	5.0	4,000	10,000
24	0.50	1.0	1.6	5.9	19.4	144	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.4	24.3	232	144.2	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz	
P.S.WUNEXT mean (dB)		58		47	
P.S.WUNEXT worst pair (dB)		53		42	
Minimum Far End Crosstalk at 150 kHz					
Conductor size (AWG)		19	22	24	26
P.S. ELFEXT mean (dB/kft)		65	63	63	61
P.S. ELFEXT worst pair (dB/kft)		59	57	57	57
Minimum Far End Crosstalk at 772 kHz					
Conductor size (AWG)		19	22	24	26
P.S. ELFEXT mean (dB/kft)		51	49	49	47
P.S. ELFEXT worst pair (dB/kft)		45	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Part Numbers and Physical Characteristics								
	Part #	Pair Count	Nom. Cable Only O.D. inches (mm)	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
BHBS - 19 AWG (0.90 mm)	20-026-43	6	0.48 (12)	0.95 (24)	283 (422)	10000 (3050)	3612 (1640)	420
	20-031-43	25	0.92 (23)	1.38 (35)	465 (690)	5000 (1530)	3237 (1470)	420
	20-034-43	50	1.09 (28)	1.55 (39)	710 (1055)	5000 (1530)	4295 (1948)	420
BHAS - 22 AWG (0.64 mm)	20-062-43	25	0.58 (15)	1.05 (27)	310 (461)	10000 (3050)	3895 (1766)	420
	20-065-43	50	0.74 (19)	1.20 (31)	445 (662)	7500 (2290)	4135 (1875)	420
	20-069-43	100	1.00 (25)	1.47 (37)	705 (1049)	6000 (1830)	5025 (2279)	420
BKMS - 24 AWG (0.50 mm)	20-097-43	25	0.49 (12)	0.96 (24)	260 (387)	13300 (4055)	4255 (1930)	420
	20-100-43	50	0.62 (16)	1.09 (28)	345 (513)	13300 (4055)	5385 (2442)	420
	20-104-43	100	0.80 (20)	1.27 (32)	515 (766)	8000 (2440)	4915 (2229)	420
	20-108-43	200	1.09 (28)	1.56 (40)	840 (1250)	5000 (1530)	4995 (2265)	420
BKTS - 26 AWG (0.40 mm)	20-132-43	25	0.45 (11)	0.92 (23)	256 (381)	20000 (6100)	5905 (2681)	420
	20-135-43	50	0.52 (13)	0.97 (25)	280 (417)	13300 (4055)	4520 (2050)	420
	20-139-43	100	0.67 (17)	1.14 (29)	390 (580)	10000 (3050)	4695 (2129)	420
	20-143-43	200	0.93 (24)	1.40 (36)	647 (964)	8000 (2440)	5958 (2705)	420
	20-145-43	300	1.25 (32)	1.72 (44)	853 (1271)	5000 (1530)	5047 (2291)	420

TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm
Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-85-625-2002, RoHS compliant

Product Description

REINFORCED SELF-SUPPORT cable is a solid insulated, double-jacketed, armored, self-supporting aircore design intended for aerial installations where hazards from squirrel attack, tree limb abrasion or lightning exist. The undulated, shielded, jacketed core is covered with a flooded steel armor, laid parallel to a flooded steel support member and jacketed in an integral extrusion to form a "figure-8" configuration. The steel strand member is readily available for gripping, pulling and tensioning using standard methods and hardware.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet capacitance unbalance limits. In 25 pair cables, the pairs are combined into a cylindrical core. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. To eliminate strain on the conductors, the core assembly is undulated to provide sufficient slack during installation.
- **CORE WRAP:** A complete covering of a non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength.
- **SHIELD & INNER JACKET:** A corrugated, 8-mil aluminum tape is applied longitudinally over the core wrap. A polyethylene inner jacket helps protect the core and shield against mechanical damage and ingress of moisture.
- **ARMOR:** A corrugated bare 6-mil steel tape is applied longitudinally over the inner jacket. The inner and outer surfaces of the steel are flooded.
- **SUPPORT MEMBER:** A 1/4 inch, 7-strand Extra High-Strength (EHS) galvanized steel member, fully flooded for corrosion protection, serves as the support member and is an integral part of the sheath.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 + 4 - 5	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.8	45	28.0	1.5	5.0	5,000	10,000
22	0.64	1.0	1.6	4.7	15.4	91	56.5	1.5	5.0	4,000	10,000
24	0.50	1.0	1.6	5.9	19.4	144	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.4	24.3	232	144.2	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz	772 kHz	Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
				Pairs	pF/kft	pF/km	pF/kft	pF/km	
P.S. WUNEXT mean (dB)		58	47	12 or less	80	145	-	-	
P.S. WUNEXT worst pair (dB)		53	42	more than 12	80	145	25	45	

Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	65	63	63	61
P.S. ELFEXT worst pair (dB/kft)	59	57	57	57
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	51	49	49	47
P.S. ELFEXT worst pair (dB/kft)	45	43	43	43

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km	
12 or less	800	2625	-	-	
more than 12	800	2625	175	574	

*For cables of 12 pairs or less, the maximum average attenuation may be increased by 10% over the values shown.

Reinforced Self-Support BHBP/BHAP/BKMP/BKTP

Part Numbers and Physical Characteristics								
	Part #	Pair Count	Nom. Cable Only O.D. inches (mm)	Nom. Overall O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
BHBP - 19 AWG (0.90 mm)	20-026-20	6	0.83 (21)	1.31 (33)	377 (562)	10000 (3050)	4552 (2067)	420
	20-031-20	25	1.18 (30)	1.66 (42)	631 (940)	5000 (1530)	3937 (1787)	420
	20-034-20	50	1.39 (35)	1.87 (47)	953 (1420)	3300 (1010)	3927 (1783)	420
BHAP - 22 AWG (0.64 mm)	20-062-20	25	0.87 (22)	1.33 (34)	455 (675)	10000 (3050)	4200 (1905)	420
	20-065-20	50	1.05 (27)	1.51 (38)	625 (930)	7500 (2290)	4465 (2025)	420
	20-069-20	100	1.30 (33)	1.76 (45)	940 (1400)	5000 (1530)	4475 (2029)	420
BKMP - 24 AWG (0.50 mm)	20-097-20	25	0.83 (21)	1.29 (33)	400 (595)	10000 (3050)	4345 (1971)	420
	20-100-20	50	0.94 (24)	1.40 (36)	510 (760)	10000 (3050)	5445 (2469)	420
	20-104-20	100	1.13 (29)	1.59 (40)	715 (1065)	5000 (1530)	4145 (1880)	420
	20-108-20	200	1.42 (36)	1.88 (48)	1120 (1665)	4000 (1220)	4995 (2265)	420
BKTP - 26 AWG (0.40 mm)	20-132-20	25	0.69 (18)	1.15 (29)	335 (500)	13300 (4060)	4850 (2200)	420
	20-135-20	50	0.80 (20)	1.26 (32)	410 (610)	10000 (3050)	4645 (2107)	420
	20-139-20	100	0.97 (25)	1.43 (36)	560 (835)	8000 (2440)	4955 (2247)	420
	20-143-20	200	1.21 (31)	1.67 (42)	810 (1205)	5000 (1530)	4670 (2118)	420
	20-145-20	300	1.35 (34)	1.81 (46)	1045 (1555)	3300 (1010)	4110 (1864)	420

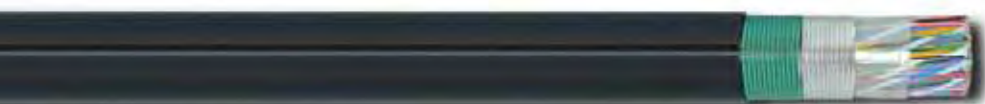
TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-85-625-2002, RoHS compliant



Product Description

Bonded STALPETH cable is a foam-skin insulated, single jacketed, armored aircore design intended for use in ducts to provide more efficient duct utilization than standard PIC designs.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22, 24 and 26 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standard.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance requirements. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. For 1200 pair and larger, the color code is mirror image design.
- **CORE WRAP:** A complete covering of a non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength.
- **SHIELD:** A corrugated bare 8-mil aluminum tape is applied longitudinally over the core wrap. Bare aluminum is used to assure good electrical contact with non-piercing bonding clamps.
- **ARMOR:** A corrugated, copolymer coated, 6-mil steel tape is applied over the aluminum shield to help protect the core from mechanical damage. The armor is bonded to the outer jacket to reduce the possibility of tape buckling during installation, ingress of water to the aluminum shield and of water along the cable between the armor and outer jacket.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count AWG, product identification and a telephone handset is printed at 2 ft. intervals on the cable jacket. Sequential footage markings are printed at alternate 2 ft. intervals.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs		nF/mile						nF/km			
All Pairs		83 ± 4						52 ± 2			
Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
22	0.64	1.0	1.6	5.0	16.4	91	56.5	1.5	5.0	1,400	5,000
24	0.50	1.0	1.6	6.3	20.7	144	89.5	1.5	5.0	1,200	5,000
26	0.40	1.0	1.6	7.9	25.9	232	144.2	1.5	5.0	1,000	5,000

Minimum Near End Crosstalk (NEXT) at	150 kHz	772 kHz	
P.S.WUNEXT mean (dB)	58	47	
P.S.WUNEXT worst pair (dB)	53	42	
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	22	24	26
P.S. ELFEXT mean (dB/kft)	63	63	61
P.S. ELFEXT worst pair (dB/kft)	57	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	22	24	26
P.S. ELFEXT mean (dB/kft)	49	49	47
P.S. ELFEXT worst pair (dB/kft)	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
All Pairs		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
All Pairs		800	2625	175	574

Part Numbers and Physical Characteristics							
	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
DCAZ - 22 AWG (0.64 mm)	19-081-01	603	2.08 (53)	2990 (4450)	2200 (671)	7375 (3345)	420
	19-083-01	900	2.49 (63)	4375 (6510)	1600 (488)	7795 (3535)	420
	19-085-01	1200	2.85 (72)	5770 (8585)	1200 (366)	7720 (3500)	420
DCMZ - 24 AWG (0.50 mm)	19-116-01	600	1.70 (43)	1960 (2915)	3900 (1189)	8440 (3830)	420
	19-118-01	900	2.02 (51)	2860 (4255)	2616 (797)	8275 (3755)	420
	19-120-01	1200	2.30 (58)	3755 (5590)	2000 (610)	8305 (3765)	420
	19-121-01	1500	2.57 (65)	4660 (6935)	1600 (488)	8250 (3745)	420
	19-124-01	1800	2.81 (71)	5545 (8250)	1250 (381)	7725 (3505)	420
	19-125-01	2100	3.04 (77)	6440 (9585)	1150 (351)	8200 (3720)	420
	19-126-01	2400	3.22 (82)	7320 (10895)	876 (267)	7205 (3270)	420
DCTZ - 26 AWG (0.40 mm)	19-151-01	600	1.38 (35)	1285 (1910)	5700 (1737)	8120 (3685)	420
	19-153-01	900	1.62 (41)	1850 (2755)	3900 (1189)	8010 (3635)	420
	19-155-01	1200	1.84 (47)	2420 (3600)	3200 (975)	8540 (3875)	420
	19-156-01	1500	2.08 (53)	2995 (4455)	2500 (762)	8285 (3755)	420
	19-157-01	1800	2.26 (57)	3560 (5300)	2080 (634)	8200 (3720)	420
	19-158-01	2100	2.41 (61)	4115 (6125)	1250 (381)	5940 (2695)	420
	19-159-01	2400	2.58 (66)	4685 (6970)	1600 (488)	8290 (3760)	420
	19-161-01	2700	2.71 (69)	5240 (7800)	1250 (381)	7345 (3330)	420
	19-162-01	3000	2.86 (73)	5800 (8630)	1200 (366)	7755 (3520)	420
	19-164-01	3600	3.03 (77)	6885 (10245)	1150 (351)	8715 (3950)	420
	19-167-01	4200	3.26 (83)	7995 (11900)	900 (274)	7990 (3625)	420

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-85-625-2002, RoHS compliant

Product Description

STEAMPETH cable is a solid insulated, single jacketed, armored aircore design intended for use in underground systems where a high incidence of damage could occur if steam enters the duct. The cable is designed for application in high temperature environments up to 230° F.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 24 and 26 AWG.
- **INSULATION:** Each conductor has a solid polypropylene insulation to provide the higher temperature rating. Standard color codes are used for pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance requirements. Multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. For 1200 pair and larger, mirror image color coding is used.
- **CORE WRAP:** A complete covering of a non-hygroscopic dielectric material protects the core and help provide core-to-shield dielectric strength.
- **SHIELD:** A corrugated bare 8-mil aluminum tape is applied longitudinally over the core wrap. Bare aluminum is used to assure good electrical contact with non-piercing bonding clamps.
- **ARMOR:** A corrugated, copolymer coated, 6-mil steel tape is applied over the aluminum shield to help protect the core from mechanical damage. The armor is bonded to the outer jacket to reduce the possibility of tape buckling during installation, ingress of water to the aluminum shield and seepage of water along the cable between the armor and outer jacket.
- **OUTER JACKET:** A black, medium density polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, above-normal temperatures, ground chemicals and stresses expected during installation.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count AWG, product identification, a telephone handset and sequential footage markings are printed at 2 foot intervals.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
All Pairs	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
24	0.50	1.0	1.6	5.9	19.4	144	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.4	24.3	232	144.2	1.5	5.0	2,400	10,000
Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz				Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual	Maximum RMS
P.S. WUNEXT mean (dB)		58		47						pF/kft	pF/km
P.S. WUNEXT worst pair (dB)		53		42				All Pairs		80	145
Minimum Far End Crosstalk at 150 kHz								Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual	Maximum Avg
Conductor size (AWG)		24		26						pF/kft	pF/km
P.S. ELFEXT mean (dB/kft)		63		61				All Pairs		800	2625
P.S. ELFEXT worst pair (dB/kft)		57		57						175	574
Minimum Far End Crosstalk at 772 kHz											
Conductor size (AWG)		24		26							
P.S. ELFEXT mean (dB/kft)		49		47							
P.S. ELFEXT worst pair (dB/kft)		43		43							

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
DKMN - 24 AWG (0.50 mm)	27-116-19	600	1.87 (48)	2135 (3175)	3200 (975)	7625 (3460)	420
	27-118-19	900	2.23 (57)	3110 (4630)	2100 (640)	7325 (3325)	420
	27-120-19	1200	2.55 (65)	4100 (6100)	1600 (488)	7355 (3335)	420
	27-124-19	1800	3.10 (79)	6035 (8980)	1150 (351)	7735 (3510)	420
DKTN - 26 AWG (0.40 mm)	27-145-19	300	1.11 (28)	750 (1115)	8600 (2621)	7245 (3285)	420
	27-151-19	600	1.51 (38)	1395 (2075)	4800 (1463)	7490 (3400)	420
	27-153-19	900	1.79 (46)	2015 (3000)	3300 (1006)	7445 (3375)	420
	27-155-19	1200	2.04 (52)	2635 (3920)	2120 (646)	6380 (2895)	420
	27-157-19	1800	2.50 (64)	3885 (5780)	1650 (503)	7205 (3270)	420
	27-159-19	2400	2.87 (73)	5110 (7605)	1250 (381)	7185 (3260)	420
	27-162-19	3000	3.18 (81)	6325 (9415)	1150 (351)	8070 (3660)	420
	27-164-19	3600	3.36 (85)	7495 (11155)	850 (259)	7165 (3250)	420

Power Station High Potential Filled ASP (CMAW)



Product Description

High Potential Filled ASP cable with solid insulation is a single jacketed, filled, armored design intended for applications associated with power substations. The cable provide exceptional durability and resistance to moisture. The finished cable meets all standard electrical requirements plus a 20 kv high voltage test between the conductors and the shield.

Physical Description

- **CONDUCTORS:** Solid annealed bare copper in 22 AWG.
- **INSULATION:** Each conductor has an insulation of color coded solid polyolefin, Standard color codes are used for pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance requirements. In 25 pair cables, the pairs are combined into a cylindrical core. In cables having 50 pair and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color-coded non-hygroscopic binders. The entire core assembly is completely filled with 80°C ETPR compound, filling the air space between the insulated conductors.
- **CORE WRAP:** A non hygroscopic core wrap protects the core and provides improved mechanical and electrical characteristics.
- **SHIELD and ARMOR:** A corrugated bare 8 mil aluminum tape covered by a corrugated bare 6-mil steel tape is applied longitudinally over the core wrap. The inner and outer surfaces of the aluminum shield and steel armor are flooded with an adhesive compound to provide a moisture barrier and to inhibit corrosion.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected on standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's ID, Pair count, AWG, product ID and telephone handset is printed every two feet. Sequential footage marking is printed at two feet intervals.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs		nF/mile	nF/km
All Pairs		83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C) 772 kHz		Max Conductor Resistance @ 68°F Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
22	0.64	1.0	1.6	4.0	13.1	91	56.5	1.5	5.0	5,000	20,000

Far End Crosstalk (dB/kft)		150 kHz	772 kHz
P.S.ELFEXT mean		63	49
P.S.ELFEXT worst pair		57	43
Near End Crosstalk (dB)			
P.S.WUNEXT mean		58	47
P.S.WUNEXT worst pair		53	42

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
All Pairs	80	145	25	45
Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
All Pairs	800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair size	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxDxD (in)
CMAW - 22 AWG (0.64 mm)	21-062-48	25	0.71 (18)	285 (425)	10000 (3048)	3645 (1655)	420
	21-065-48	50	0.93 (24)	495 (735)	10000 (3048)	5745 (2605)	420
	21-069-48	100	1.22 (31)	875 (1300)	5000 (1524)	5170 (2345)	420
	21-073-48	200	1.76 (45)	1758 (2619)	2500 (760)	5190(2360)	420
	21-075-48	300	2.11 (54)	2529 (3767)	2500 (760)	7115(3235)	420
	21-077-48	400	2.40 (61)	3293 (4906)	1250 (380)	4910(2230)	420
	21-081-48	600	2.88 (73)	4803 (7155)	1250 (380)	6800(3090)	420

Standards Compliance

Telcordia GR-421-CORE; ANSI/ICEA S-84-608-2002, RoHS compliant



Product Description

Filled ALPETH cable with foam skin insulation is a single jacketed filled design intended for direct burial application. An ETPR compound completely coats each insulated conductor and fills the air space between conductors. The shielding and jacketing combined with the filling and flooding compounds throughout the cable provide exceptional durability and resistance to moisture.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standard.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance requirements. In 25 pair cables, the pairs are combined into a cylindrical core. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. The entire core assembly is completely filled with an 80°C ETPR compound, filling the air space between the insulated conductors. For 1200 pair and larger, the color code is a mirror image design.
- **CORE WRAP:** A non-hygroscopic core wrap protects the core and provides improved mechanical and electrical characteristics.
- **SHIELD:** A corrugated bare 8-mil aluminum tape is applied longitudinally over the core wrap. The inner and outer surfaces of the aluminum shield are flooded.
- **OUTER JACKET:** A black, polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.2	10.5	45	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.5	14.8	91	56.5	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	144	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.0	23.0	232	144.2	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz		Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
P.S.WUNEXT mean (dB)		58		47		Pairs		pF/kft	pF/km	pF/kft	pF/km
P.S.WUNEXT worst pair (dB)		53		42		All Pairs		80	145	25	45

Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	65	63	63	61
P.S. ELFEXT worst pair (dB/kft)	59	57	57	57
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	51	49	49	47
P.S. ELFEXT worst pair (dB/kft)	45	43	43	43

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
All Pairs		800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
ANBA - 19 AWG (0.90 mm)	09-031-77	25	0.78 (20)	355 (530)	10000 (3048)	4345 (1970)	420
	09-034-77	50	1.03 (26)	655 (975)	5000 (1524)	4070 (1845)	420
	09-038-77	100	1.37 (35)	1225 (1825)	3300 (1006)	4840 (2195)	420
	09-042-77	200	1.92 (49)	2405 (3580)	2000 (610)	5605 (2540)	420
	09-044-77	300	2.30 (58)	3535 (5260)	1650 (503)	6630 (3005)	420
ANAA - 22 AWG (0.64 mm)	09-062-77	25	0.60 (15)	200 (300)	15000 (4572)	3795 (1720)	420
	09-065-77	50	0.77 (20)	350 (520)	15000 (4572)	6045 (2740)	420
	09-069-77	100	1.02 (26)	645 (960)	7500 (2286)	5635 (2555)	420
	09-073-77	200	1.38 (35)	1225 (1825)	5000 (1524)	6920 (3140)	420
	09-075-77	300	1.65 (42)	1800 (2680)	3300 (1006)	6735 (3055)	420
	09-077-77	400	1.88 (48)	2365 (3520)	2500 (762)	6710 (3045)	420
	09-081-77	600	2.28 (58)	3500 (5210)	1650 (503)	6570 (2980)	420
	09-083-77	900	2.76 (70)	5190 (7725)	1000 (305)	5985 (2715)	420
	09-085-77	1200	3.15 (80)	6870 (10225)	834 (254)	6525 (2960)	420
ANMA - 24 AWG (0.50 mm)	09-097-77	25	0.52 (13)	140 (210)	20000 (6096)	3595 (1630)	420
	09-100-77	50	0.66 (17)	240 (355)	20000 (6096)	5595 (2540)	420
	09-104-77	100	0.85 (22)	430 (640)	10000 (3048)	5095 (2310)	420
	09-108-77	200	1.14 (29)	810 (1205)	5000 (1524)	4845 (2200)	420
	09-110-77	300	1.37 (35)	1180 (1755)	5000 (1524)	6695 (3035)	420
	09-112-77	400	1.55 (39)	1545 (2300)	4000 (1219)	6975 (3165)	420
	09-116-77	600	1.88 (48)	2285 (3400)	2500 (762)	6510 (2950)	420
	09-118-77	900	2.25 (57)	3345 (4980)	1650 (503)	6315 (2865)	420
	09-120-77	1200	2.58 (66)	4430 (6595)	1250 (381)	6335 (2870)	420
	09-121-77	1500	2.87 (73)	5510 (8200)	1000 (305)	6305 (2860)	420
	09-124-77	1800	3.13 (80)	6590 (9805)	840 (256)	6330 (2870)	420
	09-125-77	2100	3.40 (86)	7725 (11495)	750 (229)	6590 (2990)	420
ANTA - 26 AWG (0.40 mm)	09-132-77	25	0.44 (11)	100 (150)	20000 (6096)	2795 (1270)	420
	09-135-77	50	0.55 (14)	165 (245)	20000 (6096)	4095 (1855)	420
	09-139-77	100	0.71 (18)	290 (430)	15000 (4572)	5145 (2335)	420
	09-143-77	200	0.94 (24)	535 (795)	10000 (3048)	6145 (2785)	420
	09-145-77	300	1.09 (28)	755 (1125)	6000 (1829)	5325 (2415)	420
	09-147-77	400	1.25 (32)	995 (1480)	5000 (1524)	5770 (2615)	420
	09-151-77	600	1.49 (38)	1450 (2160)	3300 (1006)	5580 (2530)	420
	09-153-77	900	1.78 (45)	2120 (3155)	2500 (762)	6095 (2765)	420
	09-155-77	1200	2.03 (52)	2790 (4150)	2000 (610)	6375 (2890)	420
	09-156-77	1500	2.28 (58)	3490 (5195)	1300 (396)	5330 (2420)	420
	09-157-77	1800	2.49 (63)	4165 (6200)	1250 (381)	6000 (2720)	420
	09-158-77	2100	2.69 (68)	4870 (7250)	1200 (366)	6640 (3010)	420
	09-159-77	2400	2.86 (73)	5535 (8235)	1000 (305)	6330 (2870)	420

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-84-608-2002, RoHS compliant



Product Description

FILLED ASP cable with foam-skin insulation is a single jacketed, armored, filled design intended for direct burial applications in high risk areas. An ETPR compound completely coats each insulated conductor and fills the air space between conductors. The shielding, armoring and jacketing combined with the filling and flooding compounds throughout the cable, provide exceptional durability and resistance to moisture.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standard.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance requirements. In 25 pair cables, the pairs are combined into a cylindrical core. In cables having 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. The entire core assembly is completely filled with an 80°C ETPR compound, filling the air space between the insulated conductors. For 1200 pair and larger, the color code is a mirror image design.
- **CORE WRAP:** A non-hygroscopic core wrap protects the core and provides improved mechanical and electrical characteristics.
- **SHIELD AND ARMOR:** A corrugated bare 8-mil aluminum tape covered by a corrugated bare 6-mil steel tape is applied longitudinally over the core wrap. The inner and outer surfaces of the aluminum shield and steel tape are flooded with an adhesive compound to provide a moisture barrier and to inhibit corrosion.
- **OUTER JACKET:** A black, polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **JACKET MARKINGS:** Information such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz* @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.2	10.5	45	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.5	14.8	91	56.5	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	144	89.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	7.0	23.0	232	144.2	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz	
P.S.WUNEXT mean (dB)	58		47	
P.S.WUNEXT worst pair (dB)	53		42	
Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	65	63	63	61
P.S. ELFEXT worst pair (dB/kft)	59	57	57	57
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	51	49	49	47
P.S. ELFEXT worst pair (dB/kft)	45	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
more than 12	80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
more than 12	800	2625	175	574

Part Numbers and Physical Characteristics							
	Part #	Pair size	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
ANBW - 19 AWG (0.90 mm)	22-031-83	25	0.81 (21)	410 (610)	10000 (3048)	4895 (2220)	420
	22-034-83	50	1.07 (27)	735 (1095)	5000 (1524)	4470 (2030)	420
	22-038-83	100	1.41 (36)	1340 (1995)	5000 (1524)	7495 (3400)	420
	22-042-83	200	1.96 (50)	2570 (3825)	2000 (610)	5935 (2690)	420
	22-044-83	300	2.35 (60)	3740 (5565)	1650 (503)	6965 (3160)	420
ANAW - 22 AWG (0.64 mm)	22-062-83	25	0.63 (16)	240 (355)	18000 (5486)	5115 (2320)	420
	22-065-83	50	0.80 (20)	405 (605)	15000 (4572)	6870 (3115)	420
	22-069-83	100	1.05 (27)	730 (1085)	7500 (2286)	6270 (2845)	420
	22-073-83	200	1.42 (36)	1340 (1995)	5000 (1524)	7495 (3400)	420
	22-075-83	300	1.69 (43)	1940 (2885)	3300 (1006)	7195 (3265)	420
	22-077-83	400	1.92 (49)	2530 (3765)	2500 (762)	7120 (3230)	420
	22-081-83	600	2.32 (59)	3705 (5515)	1650 (503)	6910 (3135)	420
	22-083-83	900	2.81 (71)	5445 (8105)	1100 (335)	6785 (3075)	420
	22-085-83	1200	3.20 (81)	7160 (10655)	834 (254)	6765 (3070)	420
ANMW - 24 AWG (0.50 mm)	22-097-83	25	0.55 (14)	175 (260)	20000 (6096)	4295 (1950)	420
	22-100-83	50	0.69 (18)	290 (430)	20000 (6096)	6595 (2990)	420
	22-104-83	100	0.88 (22)	500 (745)	13300 (4054)	7445 (3375)	420
	22-108-83	200	1.18 (30)	900 (1340)	6600 (2012)	6735 (3055)	420
	22-110-83	300	1.41 (36)	1295 (1925)	5000 (1524)	7270 (3300)	420
	22-112-83	400	1.59 (40)	1680 (2500)	4000 (1219)	7515 (3410)	420
	22-116-83	600	1.92 (49)	2445 (3640)	2500 (762)	6910 (3135)	420
	22-118-83	900	2.29 (58)	3545 (5275)	2000 (610)	7885 (3575)	420
	22-120-83	1200	2.63 (67)	4670 (6950)	1250 (381)	6635 (3010)	420
	22-121-83	1500	2.92 (74)	5775 (8595)	1000 (305)	6570 (2980)	420
	22-124-83	1800	3.18 (81)	6880 (10240)	950 (290)	7330 (3325)	420
	22-125-83	2100	3.45 (88)	8045 (11975)	940 (287)	8960 (4065)	487
ANTW - 26 AWG (0.40 mm)	22-132-83	25	0.47 (12)	130 (195)	20000 (6096)	3395 (1540)	420
	22-135-83	50	0.58 (15)	205 (305)	20000 (6096)	4895 (2220)	420
	22-139-83	100	0.74 (19)	340 (505)	15000 (4572)	5895 (2675)	420
	22-143-83	200	0.98 (25)	610 (910)	10000 (3048)	6895 (3130)	420
	22-145-83	300	1.13 (29)	840 (1250)	6000 (1829)	5835 (2645)	420
	22-147-83	400	1.29 (33)	1100 (1635)	6000 (1829)	7395 (3355)	420
	22-151-83	600	1.53 (39)	1580 (2350)	4000 (1219)	7115 (3225)	420
	22-153-83	900	1.83 (47)	2275 (3385)	2500 (762)	6485 (2940)	420
	22-155-83	1200	2.07 (53)	2965 (4415)	2000 (610)	6725 (3050)	420
	22-156-83	1500	2.33 (59)	3695 (5500)	1600 (488)	6705 (3040)	420
	22-157-83	1800	2.54 (65)	4400 (6550)	1250 (381)	6295 (2855)	420
	22-158-83	2100	2.74 (70)	5120 (7620)	1200 (366)	6940 (3150)	420
	22-159-83	2400	2.91 (74)	5805 (8640)	1000 (305)	6600 (2995)	420
	22-161-83	2700	3.08 (78)	6485 (9650)	740 (226)	5595 (2535)	420
	22-162-83	3000	3.24 (82)	7185 (10695)	750 (229)	6185 (2805)	420

Standards Compliance

Telcordia GR-421-CORE; ANSI/ICEA S-84-608-2002, RoHS compliant



Product Description

T-Screen filled ASP cable with foam skin insulation is a single jacketed, armored, filled design intended for direct burial applications in high risk areas. An ETPR compound completely coats each insulated conductor and fills the air space between conductors. An internal separator screen is included that provides two core compartments for use in T1C PCM applications. The shielding, armor and jacketing combined with the filling and flooding compounds throughout the cable, provides exceptional durability and resistance to moisture.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 and 24 AWG.
- **INSULATION:** Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer coating of solid, colored polyolefin. The conductor insulation is color coded in accordance with industry standard.
- **CORE ASSEMBLY:** Twisted pairs are assembled and equally placed on either side of the T-Screen dividing the core into two electrically isolated compartments.
- **CORE WRAP:** A non-hygroscopic core wrap protects the core and provides improved mechanical and electrical characteristics.
- **SCREEN:** A coated 4-mil aluminum tape is applied to separate the cable into two halves.
- **SHIELD AND ARMOR:** A corrugated bare 8-mil aluminum tape covered by a corrugated bare 6-mil steel tape is applied longitudinally over the core wrap. The inner and outer surfaces of the aluminum shield and steel tape are flooded.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **JACKET MARKINGS:** Information, such as manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset is printed at 2 ft. intervals on the cable jacket.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

nF/mile								nF/km			
All Pairs								83 ± 4			
Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68°F (20° C)		Max Conductor Resistance @ 68°F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
22	0.64	1.0	1.6	4.5	14.8	91	56.5	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.6	18.4	144	89.5	1.5	5.0	3,000	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz	772 kHz	1600 kHz
P.S.WUNEXT mean (dB)		58	47	-
P.S.WUNEXT worst pair (dB)		53	42	-
P.S.NEXT between Compartments (dB)		-	-	78
Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)		22	24	
P.S. ELFEXT mean (dB/kft)		63	63	
P.S. ELFEXT worst pair (dB/kft)		57	57	
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)		22	24	
P.S. ELFEXT mean (dB/kft)		49	49	
P.S. ELFEXT worst pair (dB/kft)		43	43	

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
		pF/kft	pF/km	pF/kft	pF/km
All Pairs		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
		pF/kft	pF/km	pF/kft	pF/km
All Pairs		800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
KNAW - 22 AWG (0.64 mm)	24-417-83	28	0.69 (18)	280 (415)	10000 (3048)	3595 (1630)	420
	24-440-83	54	0.95 (24)	510 (760)	10000 (3048)	5895 (2675)	420
	24-456-83	106	1.10 (28)	785 (1170)	7500 (2286)	6685 (3030)	420
	24-472-83	158	1.29 (33)	1105 (1645)	5000 (1524)	6320 (2865)	420
	24-493-83	210	1.46 (37)	1420 (2115)	4280 (1305)	6875 (3115)	420
	24-526-83	314	1.70 (43)	2005 (2985)	2500 (762)	5810 (2635)	420
	24-564-83	418	1.98 (50)	2675 (3980)	2500 (762)	7485 (3395)	420
	24-586-83	616	2.40 (61)	3875 (5765)	1650 (503)	7190 (3260)	420
KNMW - 24 AWG (0.50 mm)	24-618-83	28	0.63 (16)	220 (325)	10000 (3048)	2995 (1360)	420
	24-642-83	54	0.79 (20)	350 (520)	10000 (3048)	4295 (1950)	420
	24-657-83	106	0.92 (23)	540 (805)	5000 (1524)	3495 (1585)	420
	24-692-83	210	1.21 (31)	955 (1420)	5000 (1524)	5570 (2525)	420

T-SCREEN Aircore Design

KHAH - 22 AWG (0.64 mm)	24-440-05	54	0.98 (25)	475 (705)	7500 (2286)	4360 (1975)	420
	24-456-05	106	1.20 (31)	780 (1160)	5000 (1524)	4695 (2130)	420
	24-472-05	158	1.44 (37)	1095 (1630)	4250 (1295)	5450 (2470)	420
	24-493-05	210	1.60 (41)	1395 (2075)	3300 (1006)	5400 (2450)	420
	24-564-05	418	2.12 (54)	2550 (3795)	2000 (610)	5895 (2675)	420
	24-586-05	616	2.54 (65)	3660 (5445)	1250 (381)	5370 (2435)	420

* Electrical specifications may differ from those shown.

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-84-608-2002, RoHS compliant



OSP COPPER WIRE



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C-Rural Wire



Product Description

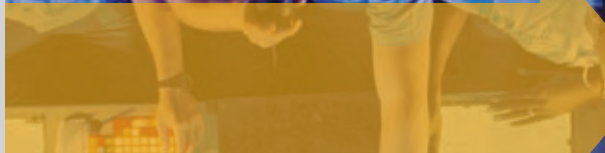
C-Rural Wire is quickly and easily installed, utilizing standard hardware and installation procedures for single circuit aerial distribution rural networks.

Physical Description

- CONDUCTORS: 14 AWG solid 30% conductivity copper-covered steel.
- INSULATION: Black polyolefin compound extruded over the two conductors in parallel to form an integrated oval configuration.
A raised rigid tracer on one edge of the jacket provides conductor polarity identification.

Part Numbers and Physical Characteristics					
Part #	Minor Dimension inches (mm)	Major Dimension inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
10-026-06	0.15 (3.8)	0.28 (7.1)	36 (54)	1000 (305)	Coil
10-016-06	0.15 (3.8)	0.28 (7.1)	36 (54)	5500 (1676)	Wooden Reel
10-096-06	0.15 (3.8)	0.28 (7.1)	36 (54)	19000 (5791)	Steel Reel

Standards Compliance:
Telcordia TA-TSY-000125, RoHS compliant



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Product Description

Multi-pair, self-supporting IMRDW wire is used for subscriber lines in exchange plant; single-pair is often used for lateral runs from aerial plant. In both single and multi-pair types, the wire core is laid parallel to a solid steel support wire and jacketed in an integral extrusion to form a "figure-8" configuration utilizing a 0.109 inch solid, extra-high strength steel support member. The IM construction permits fast, economical installation and facilitates removal and re-use of wire.

Physical Description

- **CONDUCTORS:** Solid annealed bare copper in 19, 22 and 24 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. Standard color codes are used for pair identification.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance. In multi-pair constructions, pair twist lays are varied to minimize crosstalk and meet capacitance unbalance requirements. Twisted pairs are formed into a firm, round core.
- **CORE COVERING:** The core assembly is completely enclosed by a non-hygroscopic, dielectric wrap.
- **OUTER JACKET:** A black polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses encountered in standard installations.
- **SUPPORT WIRE:** A single 0.109" solid, extra-high strength steel, is jacketed in an integral extrusion with the core.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
Maximum Individual	94	58
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F		Maximum Average Attenuation @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Minimum Volts DC
AWG	mm	megohm-kft	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair	
19	0.90	5000	1600	3.6	11.8	45.0	28.0	5.0	7,200
22	0.64	5000	1600	5.1	16.7	91.0	56.4	5.0	7,200
24	0.50	5000	1600	6.5	21.3	144.0	89.5	5.0	7,200

Crosstalk Loss	dB/kft	dB/km
Min. FEXT @ 150 kHz	63	58
Min. NEXT @ 772 kHz	44dB / 1000 ft (305m)	

Capacitance Unbalance @ 1000 Hz	pF/kft
Maximum Pair to Pair	80
Maximum Pair to Ground	800

Part Numbers and Physical Characteristics

	Part #	Pair Count	Dimensions Minor inches (mm)	Dimensions Major inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
19 AWG (0.90 mm)	10-001-15	1	0.2 (5.1)	0.48 (12.2)	60 (90)	5000 (1525)	Reel
	10-002-15	2	0.25 (6.4)	0.53 (13.5)	70 (105)	5000 (1525)	Reel
	10-003-15	3	0.3 (7.6)	0.59 (15.0)	85 (125)	5000 (1525)	Reel
	10-006-15	6	0.39 (9.9)	0.68 (17.2)	120 (180)	5000 (1525)	Reel
	10-012-15	12	0.48 (12.2)	0.77 (19.5)	180 (270)	5000 (1525)	Reel
22 AWG (0.64 mm)	10-002-17	2	0.2 (5.1)	0.48 (12.2)	60 (90)	5000 (1525)	Reel
	10-003-17	3	0.23 (5.8)	0.51 (12.9)	65 (95)	5000 (1525)	Reel
	10-004-17	4	0.24 (6.0)	0.52 (13.2)	70 (104)	5000 (1525)	Reel
	10-006-17	6	0.29 (7.5)	0.58 (14.8)	85 (125)	5000 (1525)	Reel
	10-012-17	12	0.36 (9.2)	0.65 (16.5)	115 (170)	5000 (1525)	Reel
	10-018-17	18	0.43 (11)	0.72 (18.3)	150 (225)	5000 (1525)	Reel
24 AWG (0.50 mm)	10-006-19	6	0.25 (6.4)	0.54 (13.7)	70 (105)	5000 (1525)	Reel
	10-012-19	12	0.32 (8.2)	0.61 (15.4)	95 (140)	5000 (1525)	Reel

TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

RDUP PE-27 & PE-28 deactivated by RDUP, ICEA S-89-648 as applicable, RoHS Compliant



Product Description

IMRDWS is an aerial wire designed for use in extending communications service (voice, data, and/or video) to a subscriber premises from the distribution point. This product has additional capabilities over the standard IMRDW product because it contains a shielding screen. The conductors are wrapped within a metallic aluminum shield to insulate them from interference and thus provide high quality digital transmission. In addition, a drain wire runs longitudinally the length of the wire to drain off Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI). Without shielding and a drain wire, noise can be introduced into circuits from high voltage AC power lines, machinery with motors, x-ray systems, and TV sets and AM radio stations. Shielding also lessens the chance that DSL or other high frequency transmission protocols will interfere with other signals on adjacent cables.

Physical Description

- **CONDUCTORS:** Solid annealed bare copper in 22 AWG.
- **COPPER INSULATION:** Each conductor is insulated with a solid colored polyolefin or high-density polyethylene material in distinctive colors.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs to minimize resistance unbalance and cross-talk.
- **SHIELDING SCREEN AND DRAIN WIRE:** An 8-mil aluminum shield with a drain wire provides high quality digital transmission medium for XDSL technologies and when properly grounded, removes spectrum interferences.
- **OUTER JACKET:** A black, polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses encountered in standard installations.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **SUPPORT WIRE:** A "Figure 8" configuration utilizing a 0.109", solid, extra high strength, steel support wire.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Minimum Insulation Resistance 68° F		Maximum Average Attenuation @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Minimum Volts DC	
AWG	mm	megohm-kft	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair	Cdr. to Cdr.	Cdr. to Shield
22	0.64	5000	1600	5.1	16.7	91.0	56.4	5.0	7,200	3,600

Crosstalk Loss		dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz	pF/kft	pF/km
Min. FEXT @ 150 kHz		63	58	Maximum Individual Pair to Pair	80	145
Min. NEXT @ 722 kHz		44 dB/1000 ft (305m)		Maximum Individual Pair to Ground	800	2,625

Part Numbers and Physical Characteristics

Part #	Pair Count	Dimensions		Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
		Minor in(mm)	Major in(mm)			
10-061-29	6	0.6 (15.3)	0.32 (8.1)	95 (142)	2133 (650)	Reel

Standards Compliance:

ICEA S-89-648 as applicable, RoHS Compliant

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Product Description

ADP NMS is a PVC-jacketed aerial service wire offered in two, three, five or six pair. It is designed for use in extending telephone service to subscriber premises from the distribution cable or cable terminal. Major features include small size and light weight coupled with abrasion resistant jacket. Standard hardware and installation procedures are directly applicable to this product.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance.
- **STRENGTH MEMBERS:** Non-metallic or fiberglass strength members are placed in the jacket parallel to the core assembly, to provide the necessary longitudinal strength.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** A black, weather resistant, polyvinyl chloride jacket is extruded over the strength members and ripcord to protect the core from mechanical damage, degradation by sunlight and ingress of moisture. The jacket bonds to the strength members to provide the required strength characteristics.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Volts DC
AWG	mm	megohm-mile	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair	5 secs, no breakdown
22	0.64	5000	1600	5.1	16.7	91.0	56.0	5.0	7,200

Crosstalk Loss	dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz, Pair to Pair	pF/kft	pF/km
FEXT @ 150 kHz; Minimum Individual	63	58	Maximum Individual Pair	80	145
NEXT @ 722 kHz; Minimum Individual	48 dB / 1000 ft (305m)				

Part Numbers and Physical Characteristics

Part #	Pair Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
12-004-08	2	0.18 (4.8)	0.36 (9.1)	35 (50)	750 (230)	POP™ Box
12-010-08	2	0.18 (4.8)	0.36 (9.1)	35 (50)	1000 (305)	Coil
12-023-08	2	0.18 (4.8)	0.36 (9.1)	35 (50)	5000 (1524)	Reel
12-019-08	3	0.21 (5.3)	0.39 (9.9)	40 (60)	600 (183)	POP™ Box
12-022-08	3	0.21 (5.3)	0.39 (9.9)	40 (60)	750 (228)	Coil
12-519-08	5	0.27 (7)	0.48 (12)	68 (101)	400 (122)	POP™ Box
12-024-08	5	0.27 (7)	0.48 (12)	68 (101)	2500 (763)	Reel
12-025-08	5	0.27 (7)	0.48 (12)	68 (101)	1000 (305)	Reel
12-026-08	5	0.27 (7)	0.48 (12)	68 (101)	700 (213)	IPL Coil
12-006-08	6	0.27 (7)	0.48 (12)	70 (105)	400 (122)	Coil
12-007-08	6	0.27 (7)	0.48 (12)	70 (105)	2500 (763)	Reel
12-008-08	6	0.27 (7)	0.48 (12)	70 (105)	3500 (1068)	Reel
12-009-08	6	0.27 (7)	0.48 (12)	70 (105)	1000 (305)	Reel

TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

Telecordia GR-1069-CORE; RDUP PE 7; ANSI/ICEA S-89-648-2000; UL Listed, Subject 523; RoHS Compliant

ADP NMS (6x24) Compact Design



Product Description

The ADP NMS 6x24 Compact Design features a black abrasion resistant PVC-jacket and is used to extend telephone service to subscriber premises from the distribution cable or cable terminal. The product features four fiberglass yarns that provide all the longitudinal strength necessary. Simple access procedures allow for quick and easy installation with the small standard off the shelf industry hardware. This product offers six pairs in the size and shape of the traditional three pair product.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 24 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance.
- **STRENGTH MEMBERS:** Non-metallic or fiberglass strength members are placed in the jacket parallel to the core assembly, to provide the necessary longitudinal strength.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** A black, weather resistant, polyvinyl chloride jacket is extruded over the strength members and ripcord to protect the core from mechanical damage. The jacket bonds to the fiber glass strength members to provide the required strength characteristics.

Electrical Specifications

Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @68°F and @ 772 kHz		Conductor DC Resistance @ 68°F Max Individual		Resistance Unbalance Maximum %
AWG	mm	megohm-mile	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair
24	0.50	1000	1600	5.8	19.0	144.0	89.5	5.0

Crosstalk Loss		dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz, Pair to Pair		pF/kft	pF/km
FEXT @ 150 kHz; Minimum Individual		63	58	Maximum Individual Pair		80	145
NEXT @ 722 kHz; Minimum Individual		44 dB / 1000 ft (305m)					

Part Numbers and Physical Characteristics

Part #	Pair Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Package ft (m)	Package
12-801-08	6	0.21 (5.3)	0.38 (9.7)	50 (74)	600 (183)	POP™ Box
12-802-08	6	0.21 (5.3)	0.38 (9.7)	50 (74)	1000 (305)	Reel

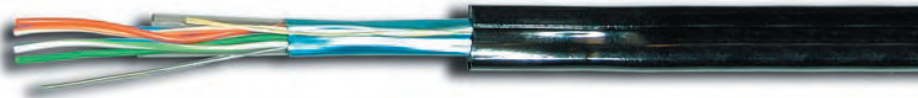
TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmsel=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

Telcordia, TR-TSY-000121; ANSI/ICEA S-89-648-2000; UL Listed, Subject 523; RoHS Compliant



Product Description

ADP-S is a PVC-jacketed, aerial service wire designed for use in extending communications service (voice, data and or video) to a subscriber premises from the distribution cable terminal. This product has additional capabilities over the standard ADP NMS product because it contains a shielding screen. The core is wrapped within a metallic foil to provide shielding from interference and thus provide high quality digital transmission. In addition, a drain wire runs longitudinally the length of the wire to drain off Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI). Without shielding and a drain wire, noise can be introduced into circuits from high voltage AC power lines, machinery with motors, x-ray systems, TV sets and AM radio stations. Shielding also lessens the chance that DSL or other high frequency transmission protocols will interfere with other signals on adjacent cables.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance.
- **SHIELDING SCREEN AND DRAIN WIRE:** A 0.002 inch metallic foil shield with a drain wire provides high quality digital transmission medium for XDSL technologies and when properly grounded, removes spectrum interferences.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **STRENGTH MEMBERS:** Non-metallic or fiberglass strength members are placed in the jacket parallel to the core assembly, to provide the necessary longitudinal strength.
- **JACKET:** A black, weather resistant, polyvinyl chloride jacket is extruded over the yarns and ripcord to protect the core from mechanical damage, degradation by sunlight and ingress of moisture. The jacket bonds to the fiberglass strength members to provide the required strength characteristics.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 68°F 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Volts DC
AWG	mm	megohm-mile	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair %	5 secs, no breakdown
22	0.64	1000	1600	5.1	16.7	91.0	56.0	5.0	7,200

Crosstalk Loss	dB/kft	dB/km
FEXT @ 150 kHz; Minimum Individual	63	58
NEXT @ 722 kHz; Minimum Individual	44 dB / 1000 ft (305m)	

Capacitance Unbalance @ 1000 Hz, Pair to Pair	pF/kft	pF/km
Maximum Individual Pair	80	145

Part Numbers and Physical Characteristics

Part #	Pair Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
12-301-07	3	0.25 (6.3)	0.43 (10)	55 (82)	1000 (305)	Reel
12-302-07	3	0.25 (6.3)	0.43 (10)	55 (82)	400 (122)	POP™ Box
12-303-07	3	0.25 (6.3)	0.43 (10)	55 (82)	750 (229)	Reel
12-501-07	5	0.28 (7.1)	0.49 (12)	78 (116)	1000 (305)	Reel

TECH TIP

Sag and Tension guidelines for these products are available online:

http://www.spsx.com/communicationscable.aspx?id=1710&ekmense=c580fa7b_10_108_1710_1/techinfo/sag-tension.htm

Standards Compliance:

Telecordia GR-1069-CORE; RDUP PE 7; ANSI/ICEA S-89-648-2000; UL Listed; RoHS Compliant

Integrated Messenger Wire IM/F, IM/H & IM/G

Product Description

IM/F IM/H and IM/G aerial service wire in 2, 3, 6 and 12 pair is self supporting. The conductors are laid parallel to an (F) 0.083 inch, (H) 0.109 inch, or (G) 0.095 inch solid extra-strength steel support wire. Both the conductors and support wire are jacketed in an integral "figure-8" configuration. This product permits fast, economical installation from aerial distribution cable terminals to building entrance protectors or network interface units on the subscriber's premises. The fully color coded core expedites splicing and terminating procedures.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19 and 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. Standard color codes are used for pair identification with compounds chosen for electrical balance and permanency.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the twisted pairs. In multi-pair constructions, pair twist lays are varied to minimize crosstalk and meet capacitance limits. Twisted pairs are formed into a firm, round core.
- **OUTER JACKET:** A black, fire retardant, polyvinyl chloride jacket provides a tough flexible protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses encountered in standard installations. The steel support wire is jacketed in an integral extrusion with the core.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

All Pairs		nF/mile				nF/km			
Maximum Individual		94				58			
Wire Average		83 ± 7				52 ± 4			
Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Minimum Volts DC
AWG	mm	megohm-kft	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair	
19	0.9	5,000	1,600	3.6	11.8	45	28.0	5.0	5 secs, no breakdown
22	0.64	5,000	1,600	5.1	16.7	91	56.0	5.0	7,200

Crosstalk Loss		dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz		pF/kft	pF/km
FEXT @ 150 kHz; Minimum Individual		63	58	Individual Maximum Pair to Pair		80	145
NEXT @ 722 kHz; Minimum Individual		44 dB / 1000 ft (305 m)		Individual Maximum Pair to Ground		800	2,625

Part Numbers and Physical Characteristics

	Part #	Support Size	Pair Count	Dimensions		Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
				Minor inches (mm)	Major inches (mm)			
19 AWG (0.90 mm)	10-921-38	IM/G 0.095	2	0.27 (6.8)	0.51 (12.9)	73 (109)	656 (200)	Coil
	10-923-38	IM/G 0.095	2	0.27 (6.8)	0.51 (12.9)	73 (109)	4921 (1500)	Reel
22 AWG (0.64 mm)	10-002-34	IM/F 0.083	2	0.22 (5.7)	0.46 (11.7)	55 (82)	600 (183)	Coil
	10-102-34	IM/F 0.083	2	0.22 (5.7)	0.46 (11.7)	55 (82)	5000 (1525)	Reel
	10-503-34	IM/F 0.083	3	0.24 (6.2)	0.48 (12.3)	72 (107)	1000 (305)	Coil
	10-106-34	IM/F 0.083	6	0.30 (7.6)	0.53 (13.6)	80 (119)	3500 (1067)	Reel
	10-206-34	IM/F 0.083	6	0.30 (7.6)	0.53 (13.6)	80 (119)	1000 (305)	Reel
	10-306-34	IM/F 0.083	6	0.30 (7.6)	0.53 (13.6)	80 (119)	400 (122)	Coil
	10-261-38	IM/G 0.095	6	0.30 (7.6)	0.55 (13.9)	80 (119)	492 (150)	Coil
	10-262-38	IM/G 0.095	6	0.30 (7.6)	0.55 (13.9)	80 (119)	2461 (750)	Reel
	10-265-38	IM/G 0.095	6	0.30 (7.6)	0.55 (13.9)	80 (119)	5000 (1562)	Reel
	10-281-38	IM/G 0.095	12	0.38 (7.6)	0.65 (16.6)	114 (170)	410 (125)	Coil
	10-284-38	IM/G 0.095	12	0.38 (7.6)	0.65 (16.6)	114 (170)	2460 (750)	Reel
	10-285-38	IM/G 0.095	12	0.38 (7.6)	0.65 (16.6)	114 (170)	8202 (2500)	Reel
	10-102-35	IM/H 0.109	12	0.38 (7.6)	0.66 (16.7)	130 (193)	1000 (305)	Reel
	10-012-35	IM/H 0.109	12	0.38 (7.6)	0.66 (16.7)	130 (193)	250 (76)	Coil
	10-212-35	IM/H 0.109	12	0.38 (7.6)	0.66 (16.7)	130 (193)	5000 (1525)	Reel

Contact Superior Essex for additional configurations and AWG sizes.

Standards Compliance:

Telcordia TR-NWT-000122; ANSI/ICEA S-89-648-2002; UL Listed, RoHS Compliant



TEST LAB

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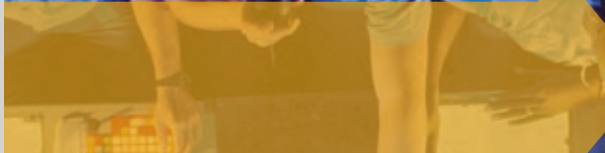
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Product Description

BDW A is a filled, double-jacketed buried wire intended for direct burial applications. Applications include distribution circuits and service entrance wires. BDW A is designed to withstand installation stresses. BDW A is filled with an ETPR compound, which completely coats each insulated conductor and fills the air space between conductors. BDW A is recommended for non-gopher areas.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of twisted pairs. Pair twist lays are varied to minimize crosstalk and meet capacitance unbalance limits.
- **FILLING COMPOUND:** The wire core is completely filled with an 80°C ETPR compound, filling the air spaces between insulated conductors.
- **INNER JACKET:** A polyethylene inner jacket provides additional mechanical and moisture protection.
- **SHIELD:** BDW A - A smooth, copolymer-coated, 8-mil aluminum tape is applied longitudinally over the inner jacket and is bonded to the outer jacket. The space under the tape is flooded to eliminate all air space.
- **OUTER JACKET:** A black, linear low-density polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.

Electrical Specifications

Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Minimum Insulation Resistance 68° F		Conductor DC Resistance @ 68°F Maximum Individual		Attenuation @ 68°F and 772 kHz Maximum Average		Resistance Unbalance Maximum %	Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	megohm-mile	megohm-km	ohms/mile	ohms/km	dB/kft	dB/km	Individual Pair	Cdr. to Cdr.	Cdr. to Shld
19	0.90	1000	1600	45.0	28.0	3.1	10.2	5.0	7,000	20,000
22	0.64	1000	1600	91.0	56.4	4.4	14.4	5.0	5,000	20,000
24	0.50	1000	1600	144.0	89.5	5.5	18.0	5.0	4,000	20,000

Crosstalk Loss	dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz	pF/kft	pF/km
Min. FEXT @ 150 kHz	63	58	Maximum Individual Pair to Pair	80	145
Min. NEXT @ 772 kHz	44 dB / 1000 ft (305m)		Maximum Individual Pair to Ground	800	2,625

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
BDW A 19 AWG (0.90 mm)	04-023-85	2	0.38 (9.7)	65 (97)	5000 (1525)	Reel
	04-025-85	3	0.42 (11)	85 (125)	5000 (1525)	Reel
22 AWG (0.64 mm)	04-052-84	2	0.32 (8.1)	45 (65)	1000 (305)	Reel
	04-053-84	2	0.32 (8.1)	45 (65)	2500 (763)	Reel
	04-055-84	2	0.32 (8.1)	45 (65)	5000 (1525)	Reel
	04-056-84	3	0.33 (8.4)	50 (75)	1000 (305)	Reel
	04-062-84	3	0.33 (8.4)	50 (75)	2500 (763)	Reel
	04-058-84	3	0.33 (8.4)	50 (75)	5000 (1525)	Reel
	04-061-85	6	0.41 (10)	80 (120)	1000 (305)	Reel
	04-058-85	6	0.41 (10)	80 (120)	2500 (763)	Reel
	04-057-85	6	0.41 (10)	80 (120)	5000 (1525)	Reel
24 AWG (0.50 mm)	04-098-85	2	0.27 (6.9)	30 (45)	5000 (1525)	Reel
	04-101-85	3	0.29 (7.4)	40 (60)	5000 (1525)	Reel
	04-097-85	6	0.35 (8.9)	55 (80)	5000 (1525)	Reel

Standards Compliance:

ANSI/CEA S-86-634-2004, RoHS Compliant



Product Description

BDW B and BDW G are filled, double-jacketed buried wires intended for direct burial applications. Applications include distribution circuits and service entrance wires. All types are designed to withstand installation stresses. They are filled with an ETPR compound, which completely coats each insulated conductor and fills the air space between conductors. BDW B is recommended for non-gopher areas. BDW G provides protection from rodents or harsh environments.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22 and 24 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of twisted pairs. Pair twist lays are varied to minimize crosstalk and meet capacitance unbalance limits.
- **INNER JACKET:** A linear low-density polyethylene inner jacket provides additional mechanical and moisture protection.
- **FILLING COMPOUND:** The wire core is completely filled with an 80°C ETPR compound, filling the air spaces between insulated conductors.
- **SHIELD:** BDW G - A corrugated, 5-mil gopher resistant armor, which provides excellent mechanical protection, is applied longitudinally over the inner jacket. The armor is flooded.
- **OUTER JACKET:** A black polyethylene outer jacket provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.

Electrical Specifications

For BDW B and BDW G Electrical Specifications please refer to BDW A on page 140.

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
BDW G 19 AWG (0.90 mm)	04-022-16	2*	0.37 (9.4)	70 (105)	5000 (1525)	Reel
	04-025-16	3*	0.41 (10)	90 (135)	5000 (1525)	Reel
22 AWG (0.64 mm)	04-052-17	2	0.32 (8.1)	55 (80)	1000 (305)	Reel
	04-053-17	2	0.32 (8.1)	55 (80)	2500 (763)	Reel
	04-055-17	2	0.32 (8.1)	55 (80)	5000 (1525)	Reel
	04-056-17	3	0.33 (8.4)	60 (90)	1000 (305)	Reel
	04-057-17	3	0.33 (8.4)	60 (90)	2500 (763)	Reel
	04-058-17	3	0.33 (8.4)	60 (90)	5000 (1525)	Reel
	04-067-16	6*	0.40 (10)	90 (135)	1000 (305)	Reel
	04-062-16	6*	0.40 (10)	90 (135)	2500 (763)	Reel
	04-058-16	6*	0.40 (10)	90 (135)	5000 (1525)	Reel
24 AWG (0.50 mm)	04-094-16	2	0.27 (6.9)	40 (60)	5000 (1525)	Reel
	04-091-16	3	0.29 (7.4)	45 (65)	5000 (1525)	Reel

Standards Compliance:

RDUP 7 CFR 1755.860 * (PE-86), ANSI/ICEA S-86-634-2004, RoHS Compliant



Product Description

BW CF/BRF is designed for direct burial applications and is available in 2, 3, 5 and 6 pair sizes. It is filled with an ETPR compound which is chemically and electrically compatible with all other materials in the wire. The compound completely coats each insulated conductor and fills the air space between conductors. BW CF/BRF can be used for distribution circuits and service entrance wires.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG and 19 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the twisted pairs. Pair twist lays are varied to minimize crosstalk and meet capacitance unbalance limits.
- **CORE COVERING:** A non-hygroscopic core wrap protects the core and provides improved mechanical and electrical characteristics.
- **FILLING COMPOUND:** The wire core is completely filled with an 80°C ETPR compound, filling the air spaces between insulated conductors.
- **SHIELD:** A corrugated 4-mil copper clad steel or bronze tape is longitudinally applied over the core wrap. The outer surface of the shield is flooded with an adhesive compound to provide a moisture barrier and to inhibit corrosion.
- **RIPCORDER:** A ripcord is applied over the shield and beneath the jacket to facilitate jacket removal.
- **JACKET:** A black, weather-resistant polyvinyl chloride jacket is extruded over the shield and ripcord to protect the core from minor mechanical damage, degradation by sunlight and ingress of moisture and water.

Electrical Specifications

Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Minimum Insulation Resistance 68° F		Conductor DC Resistance @ 68°F Maximum Individual		Attenuation @ 772 kHz Maximum Average		Resistance Unbalance Maximum %	Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	megohm-mile	megohm-km	ohms/mile	ohms/km	dB/kft	dB/km	Individual Pair	Cdr. to Cdr.	Cdr. to Shld
22	0.64	1000	1600	91.0	56.4	4.4	14.4	5.0	5,000	15,000

Crosstalk Loss	dB/kft	dB/km
Min. FEXT @ 150 kHz	63	58
Min. NEXT @ 772 kHz	44 dB / 1000 ft (305m)	

Capacitance Unbalance @ 1000 Hz	pF/kft	pF/km
Maximum Individual Pair to Pair	80	145
Maximum Individual Pair to Ground	800	2,625

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
22 AWG (0.64 mm)	25-063-80	2	0.27 (6.9)	43 (64)	250 (76)	Coil
	25-069-80	2	0.27 (6.9)	43 (64)	1300 (396)	Spool
	25-078-80	2	0.27 (6.9)	43 (64)	8250 (2514)	Reel
	25-062-80	2	0.27 (6.9)	43 (64)	700 (214)	Coil
	25-061-80	2	0.27 (6.9)	43 (64)	1500 (458)	Reel
	25-064-80	2	0.27 (6.9)	43 (64)	3000 (915)	Reel
	25-351-80	3	0.30 (7.6)	53 (79)	500 (153)	Coil
	25-360-80	3	0.30 (7.6)	53 (79)	1200 (366)	Reel
	25-353-80	3	0.30 (7.6)	53 (79)	3000 (915)	Reel
	25-358-80	3	0.30 (7.6)	53 (79)	5000 (1525)	Reel
	25-530-80	5	0.33 (8.4)	67 (100)	300 (92)	Reel
	25-154-80	5	0.33 (8.4)	67 (100)	500 (153)	Coil
	25-527-80	5	0.33 (8.4)	67 (100)	900 (274)	Spool
	25-549-80	5	0.33 (8.4)	67 (100)	5500 (1676)	Reel
	25-525-80	5	0.33 (8.4)	67 (100)	925 (282)	Reel
	25-526-80	5	0.33 (8.4)	67 (100)	1200 (366)	Reel
	25-565-80	5	0.33 (8.4)	67 (100)	2500 (763)	Reel
	25-667-85	6	0.37 (9.4)	81 (121)	600 (183)	Coil
	25-680-85	6	0.37 (9.4)	81 (121)	700 (214)	Spool
	25-685-85	6	0.37 (9.4)	81 (121)	1200 (366)	Reel
	25-654-85	6	0.37 (9.4)	81 (121)	2500 (762)	Reel
19 AWG (0.90 mm)	25-682-85	6	0.37 (9.4)	81 (121)	4000 (1219)	Reel
	25-681-80	6	0.37 (9.4)	81 (121)	800 (244)	Reel
	25-658-80	6	0.37 (9.4)	81 (121)	5000 (1525)	Reel
	25-684-80	6	0.37 (9.4)	81 (121)	12000 (3660)	Reel
	25-722-80	2	0.32 (8.1)	62 (92)	1600 (488)	Reel
	25-759-80	2	0.32 (8.1)	62 (92)	5000 (1525)	Reel

Standards Compliance:

Telcordia TR-NWT-000124; ANSI/ICEA S-86-634-2004, RoHS Compliant



Product Description

BW GDJ, available in 2, 3, 5 and 6 pair sizes, is intended for direct burial applications and is well suited to withstand installation stresses. It is filled with an ETPR compound, which is chemically and electrically compatible with all other materials in the wire. The compound completely coats each insulated conductor and fills the air space between conductors. BW GDJ effectively combats attacks by rodents. It can be used for distribution circuits and service entrance wires.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19 and 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Conductors are twisted into pairs in a manner designed to minimize resistance unbalance. Pair twist lays are varied to minimize crosstalk.
- **FILLING COMPOUND:** The core is completely filled with an 80°C ETPR compound, filling the spaces between conductors.
- **INNER JACKET:** A polyethylene inner jacket provides additional mechanical and moisture protection. The outer surface of the inner jacket is flooded.
- **ARMOR:** A corrugated 5-mil gopher resistant armor is applied longitudinally over the inner jacket. The inner and outer surface of the armor is flooded to prevent water flow between the shield and outer jacket.
- **RIPCORD:** A ripcord is applied beneath the inner jacket to facilitate jacket removal. A second ripcord can also be applied under the outer jacket.
- **JACKET:** A black, polyvinyl chloride jacket is extruded over the armor to protect the core from minor mechanical damage, degradation by sunlight and the ingress of moisture.

Electrical Specifications

Mutual Capacitance at 1000 Hz

All Pairs		nF/mile	nF/km
Maximum Individual		94	58
Wire Average		83 ± 7	52 ± 4

Conductor Size		Minimum Insulation Resistance @ 68° F		Conductor DC Resistance @ 68°F Maximum Individual		Attenuation @ 68°F and 772 kHz Maximum Average		Resistance Unbalance Maximum %	Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	megohm-mile	megohm-km	ohms/mile	ohms/km	dB/kft	dB/km	Individual Pair	Cdr. to Cdr.	Cdr. to Shld
19	0.90	1000	1600	45.0	28.0	3.1	10.1	5.0	7,000	20,000
22	0.64	1000	1600	91.0	56.4	4.4	14.4	5.0	5,000	20,000

Crosstalk Loss		dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz	pF/kft	pF/km
Min. FEXT @ 150 kHz		63	58	Maximum Individual Pair to Pair	80	145
Min. NEXT @ 772 kHz		44 dB/ 1000 ft (305 m)		Maximum Individual Pair to Ground	800	2,625

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
19 AWG (0.90 mm)	25-020-79	2	0.37 (9.4)	80 (119)	900 (275)	Reel
	25-021-79	2	0.37 (9.4)	80 (119)	7000 (2135)	Reel
22 AWG (0.64 mm)	25-063-79	2	0.37 (9.4)	80 (119)	600 (183)	Coil
	25-064-79	2	0.37 (9.4)	80 (119)	5000 (1525)	Reel
	25-351-79	3	0.33 (8.4)	70 (104)	500 (153)	Coil
	25-355-79	3	0.41 (10)	100 (149)	600 (183)	Reel
	25-360-79	3	0.33 (8.4)	70 (104)	1200 (366)	Reel
	25-354-79	3	0.33 (8.4)	70 (104)	3000 (915)	Reel
	25-361-79	3	0.33 (8.4)	70 (104)	8000 (2440)	Reel
	25-552-79	5	0.38 (9.0)	90 (134)	500 (153)	Coil
	25-555-79	5	0.38 (9.0)	90 (134)	1000 (305)	Reel
	25-547-79	5	0.38 (9.0)	90 (134)	2000 (610)	Reel
	25-553-79	5	0.38 (9.0)	90 (134)	5000 (1525)	Reel
	25-681-79	6	0.40 (10.0)	100 (149)	800 (244)	Reel
	25-654-79	6	0.40 (10.0)	100 (149)	350 (107)	Coil
	25-662-79	6	0.40 (10.0)	100 (149)	1000 (305)	Reel
	25-663-79	6	0.40 (10.0)	100 (149)	2000 (610)	Reel
	25-653-79	6	0.40 (10.0)	100 (149)	3000 (915)	Reel
	25-658-79	6	0.40 (10.0)	100 (149)	5000 (1525)	Reel
	25-662-79	6	0.40 (10.0)	100 (149)	1000 (305)	Reel

Standards Compliance:

Telcordia TR-NWT-000124; ANSI/ICEA S-86-634-2004, RoHS Compliant



CANADIAN OSP COPPER



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Product Description

Superior Essex CELFIL cable with foam skin insulation is a single jacketed design for use in duct or direct burial installations.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Individual conductors are insulated with a dual-extruded cellular inner layer and a color coded solid polyolefin skin.
- **TWISTED PAIRS:** Insulated conductors are twisted to form pairs with varying lays to minimize crosstalk and meet capacitance unbalance limitations.
- **CABLE ASSEMBLY:** Cables of 25 pairs and less are assembled in concentric layers to form a cylindrical core. Cables having 50 pairs and more are assembled from concentrically formed units with 25 pairs per unit. These may be stranded into 50 pair or 100 pair groups, which are then cabled to form the complete cylindrical core assembly. For 1200 pair and larger, the color code is a Mirror Image design.
- **MOISTURE RESISTANCE:** A moisture-resistant PEPJ compound is applied to the cable core which completely coats each insulated conductor and fills the interstices between pairs and units.
- **CORE COVERING:** A non-hygroscopic core wrap is applied over the assembled core which furnishes mechanical as well as high dielectric protection between shielding and individual conductors.
- **FLOODING COMPOUND:** A flooding compound is applied to fill all the voids under the shield.
- **SHIELD:** An electrically continuous 8-mil flat aluminum shielding tape, with a polyolefin film fused and chemically bonded to both sides, is applied longitudinally over the core and bonded to the outer jacket.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** Black medium-density polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **IDENTIFICATION AND LENGTH MARKING:** Manufacturer's identification, date of jacketing, gauge, pair count, sequential length and cable type are marked on the jacket at one meter intervals.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F		Nom. Attenuation @ 68°F (20° C) 1 kHz		Max Conductor Resistance @ 68°F Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	kft	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Shld.
19	0.90	1.0	1.6	0.24	0.8	8.5	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	0.33	1.1	17.3	56.6	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	0.43	1.4	26.1	85.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	0.55	1.8	44.0	144.2	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz	
P.S.WUNEXT mean (dB)	58		47	
P.S.WUNEXT worst pair (dB)	53		42	
Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	65	63	63	61
P.S. ELFEXT worst pair (dB/kft)	59	57	57	57
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	51	49	49	47
P.S. ELFEXT worst pair (dB/kft)	45	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	140	254	-	-
more than 12	140	254	25	45
Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	800	2625	-	-
more than 12	800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
BJBB - 19 AWG (0.90 mm)	85-026-13	6	0.49 (12)	120 (180)	4594 (1400)	660 (300)	44 x 18 x 20
	85-028-13	12	0.58 (15)	190 (285)	4594 (1400)	1040 (470)	46 x 25 x 20
	85-031-13	25	0.77 (20)	355 (530)	7924 (2415)	3100(1410)	62 x 30 x 24
	85-034-13	50	1.03 (26)	655 (975)	4594 (1400)	3295(1500)	62 x 30 x 24
	85-038-13	100	1.37 (35)	1225 (1825)	3002 (915)	3965 (1800)	62 x 30 x 24
	85-042-13	200	1.92 (49)	2420 (3600)	1558 (475)	4385 (1990)	72 x 35 x 36
BJAB - 22 AWG (0.64 mm)	85-057-13	6	0.38 (9.7)	70 (105)	9186 (2800)	750 (340)	44 x 18 x 20
	85-059-13	12	0.47 (12)	115 (170)	9186 (2800)	1220 (555)	46 x 25 x 20
	85-061-13	18	0.53 (14)	155 (230)	4594 (1400)	820 (370)	44 x 18 x 20
	85-062-13	25	0.60 (15)	200 (300)	9186 (2800)	2080 (945)	58 x 25 x 20
	85-065-13	50	0.76 (19)	350 (520)	6004 (1830)	2345 (1065)	58 x 25 x 20
	85-069-13	100	1.02 (26)	650 (965)	4594 (1400)	3275 (1485)	62 x 30 x 24
	85-073-13	200	1.37 (35)	1225 (1825)	2608 (795)	3565 (1615)	65 x 30 x 32
	85-075-13	300	1.66 (42)	1815 (2700)	2182 (665)	4575 (2075)	72 x 35 x 36
	85-077-13	400	1.88 (48)	2375 (3535)	1952 (595)	5335 (2420)	78 x 40 x 39
	85-081-13	600	2.29 (58)	3545 (5275)	1542 (470)	6165 (2795)	78 x 40 x 39
	85-083-13	900	2.75 (70)	5225 (7775)	854 (260)	5075 (2305)	72 x 35 x 36
	85-085-13	1200	3.18 (81)	6950 (10364)	620 (190)	7113 (3226)	96 x 42 x 56
BJMB - 24 AWG (0.50 mm)	85-092-13	6	0.35 (8.9)	60 (90)	4594 (1400)	320 (145)	30 x 18 x 12
	85-094-13	12	0.41 (10)	85 (125)	4594 (1400)	455 (205)	36 x 18 x 14
	85-097-13	25	0.52 (13)	140 (210)	4594 (1400)	750 (340)	44 x 18 x 20
	85-100-13	50	0.65 (17)	240 (355)	8792 (2680)	2355(1070)	58 x 25 x 20
	85-104-13	100	0.84 (21)	430 (640)	6578 (2005)	3115(1415)	62 x 30 x 24
	85-108-13	200	1.14 (29)	810 (1205)	5232 (1595)	4850(2205)	72 x 35 x 36
	85-110-13	300	1.36 (35)	1180 (1755)	3724 (1135)	5010 (2270)	72 x 35 x 36
	85-112-13	400	1.55 (39)	1555 (2315)	2888 (880)	5105(2320)	72 x 35 x 36
	85-116-13	600	1.88 (48)	2305 (3430)	1838 (560)	4850(2205)	72 x 35 x 36
	85-118-13	900	2.26 (57)	3385 (5040)	1280 (390)	4945(2250)	72 x 35 x 36
	85-120-13	1200	2.57 (65)	4450 (6625)	1280 (390)	6395(2905)	78 x 40 x 39
	85-121-13	1500	2.85 (72)	5515 (8210)	1050 (320)	6490(2950)	78 x 40 x 39
	85-124-13	1800	3.11 (79)	6575 (9785)	688 (210)	5225 (2370)	78 x 40 x 39
	85-126-13	2400	3.47 (88)	8531 (12694)	620 (190)	8099 (3674)	96 x 42 x 56
BJTB - 26 AWG (0.40 mm)	85-132-13	25	0.44 (11)	100 (150)	4594 (1400)	525 (235)	36 x 18 x 14
	85-135-13	50	0.55 (14)	165 (245)	4594 (1400)	865 (395)	44 x 18 x 20
	85-139-13	100	0.70 (18)	290 (430)	4594 (1400)	1535 (695)	52 x 25 x 20
	85-143-13	200	0.94 (24)	535 (795)	4594 (1400)	2745 (1245)	62 x 30 x 24
	85-145-13	300	1.09 (28)	755 (1125)	2624 (800)	2225 (1010)	58 x 25 x 20
	85-147-13	400	1.25 (32)	995 (1480)	2624 (800)	2855 (1295)	58 x 25 x 20
	85-151-13	600	1.50 (38)	1465 (2180)	1738 (530)	2835 (1285)	62 x 30 x 24
	85-153-13	900	1.79 (46)	2145 (3190)	1722 (525)	3980 (1805)	62 x 30 x 24
	85-155-13	1200	2.03 (52)	2805 (4175)	1264 (385)	4160 (1885)	72 x 35 x 36
	85-156-13	1500	2.29 (58)	3515 (5230)	1246 (380)	4995 (2265)	72 x 35 x 36
	85-157-13	1800	2.50 (64)	4200 (6250)	1214 (370)	5800 (2630)	78 x 40 x 39
	85-158-13	2100	2.69 (68)	4885 (7270)	1182 (360)	6475 (2935)	78 x 40 x 39
	85-159-13	2400	2.85 (72)	5540 (8245)	1000 (305)	6240 (2830)	78 x 40 x 39
	85-161-13	2700	3.01 (77)	6200 (9225)	1000 (305)	6900 (3130)	78 x 40 x 39



Product Description

Superior Essex ALPETH cables are designed primarily for aerial use. In this application, the cable must be attached to a support strand (messenger). If the cable is to be placed in a duct, the cable must be pressurized.

Physical Description

- **CONDUCTORS:** Solid bare annealed copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Individual conductors are insulated with color coded solid polyolefin.
- **TWISTED PAIRS:** Insulated conductors are twisted to form pairs with varying lays to minimize crosstalk and meet capacitance unbalance limitations.
- **CABLE ASSEMBLY:** Cables of 25 pairs and less are assembled in concentric layers to form a cylindrical core. Cables having more than 25 pairs and more are assembled from concentrically formed units with not more than 25 pair per unit, which may be stranded into 50 pair or 100 pair groups, which are cabled to form the complete cylindrical core assembly. For 1200 pair and larger, the color code is a Mirror Image design.
- **CORE COVERING:** A non-hygroscopic core wrap is applied over the assembled core which furnishes mechanical as well as high dielectric protection between shielding and individual conductors.
- **SHIELD:** An electrically continuous 8-mil flat aluminum shielding tape with a polyolefin film fused and chemically bonded to both sides, is applied longitudinally over the core and bonded to the outer jacket.
- **JACKET:** Black medium-density polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.
- **IDENTIFICATION AND LENGTH MARKING:** Manufacturer's identification, date of jacketing, gauge, pair count, sequential length and cable type surface marked on jacket at one meter intervals. Sequentially numbered length markings are located at one meter intervals.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F		Nom. Attenuation @ 68°F (20° C) 1 kHz		Max Conductor Resistance @ 68°F Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	kft	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Shld.
19	0.90	1.0	1.6	0.24	0.8	8.5	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	0.33	1.1	17.3	56.6	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	0.43	1.4	26.1	85.5	1.5	5.0	3,000	10,000
26	0.40	1.0	1.6	0.55	1.8	44.0	144.2	1.5	5.0	2,400	10,000

Minimum Near End Crosstalk (NEXT) at		150 kHz		772 kHz	
P.S.WUNEXT mean (dB)		58		47	
P.S.WUNEXT worst pair (dB)		53		42	
Minimum Far End Crosstalk at 150 kHz					
Conductor size (AWG)		19	22	24	26
P.S. ELFEXT mean (dB/kft)		65	63	63	61
P.S. ELFEXT worst pair (dB/kft)		59	57	57	57
Minimum Far End Crosstalk at 772 kHz					
Conductor size (AWG)		19	22	24	26
P.S. ELFEXT mean (dB/kft)		51	49	49	47
P.S. ELFEXT worst pair (dB/kft)		45	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		140	254	-	-
more than 12		140	254	25	45
Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size FxTxD (in)
BHBB - 19 AWG (0.90 mm)	85-026-01	6	0.47 (12)	105 (155)	4594 (1400)	590 (270)	44 x 18 x 20
	85-028-01	12	0.56 (14)	170 (255)	4594 (1400)	945 (430)	46 x 25 x 20
	85-031-01	25	0.74 (19)	310 (460)	4594 (1400)	1625 (740)	52 x 25 x 20
	85-034-01	50	0.98 (25)	565 (840)	4594 (1400)	2965 (1345)	65 x 30 x 32
	85-038-01	100	1.31 (33)	1060 (1580)	3002 (915)	3470 (1575)	62 x 30 x 24
	85-042-01	200	1.84 (47)	2075 (3090)	1492 (455)	3385 (1535)	62 x 30 x 24
	85-044-01	300	2.25 (57)	3098 (4609)	1000 (305)	4810 (2182)	78 x 36 x 48
	85-046-01	400	2.35 (66)	4096 (6095)	710 (215)	4600 (2086)	78 x 36 x 48
BHAB - 22 AWG (0.64 mm)	85-057-01	6	0.38 (9.7)	65 (95)	4594 (1400)	345 (155)	30 x 18 x 12
	85-059-01	12	0.45 (11)	100 (150)	4594 (1400)	525 (235)	36 x 18 x 14
	85-062-01	25	0.59 (15)	180 (270)	5724 (1745)	1195 (540)	46 x 25 x 20
	85-065-01	50	0.75 (19)	310 (460)	5724 (1745)	2020 (915)	58 x 25 x 20
	85-069-01	100	1.00 (25)	570 (850)	4594 (1400)	2905 (1320)	62 x 30 x 24
	85-073-01	200	1.35 (34)	1080 (1605)	3412 (1040)	4300 (1950)	72 x 35 x 36
	85-075-01	300	1.64 (42)	1595 (2375)	2182 (665)	4095 (1855)	72 x 35 x 36
	85-077-01	400	1.86 (47)	2105 (3135)	2132 (650)	5100 (2315)	72 x 35 x 36
	85-081-01	600	2.27 (58)	3135 (4665)	1410 (430)	5035 (2285)	72 x 35 x 36
	85-083-01	900	2.74 (70)	4640 (6905)	688 (210)	3805 (1725)	72 x 35 x 36
BKMB - 24 AWG (0.50 mm)	85-092-01	6	0.34 (8.6)	50 (75)	4594 (1400)	275 (125)	30 x 18 x 12
	85-094-01	12	0.40 (10)	75 (110)	4594 (1400)	410 (185)	36 x 18 x 14
	85-097-01	25	0.50 (13)	125 (185)	4594 (1400)	680 (310)	44 x 18 x 20
	85-100-01	50	0.63 (16)	215 (320)	4594 (1400)	1155 (525)	46 x 25 x 20
	85-104-01	100	0.81 (21)	380 (565)	4594 (1400)	1950 (885)	52 x 25 x 20
	85-108-01	200	1.09 (28)	705 (1050)	4594 (1400)	3605 (1635)	65 x 30 x 32
	85-110-01	300	1.30 (33)	1025 (1525)	1838 (560)	2085 (945)	52 x 25 x 20
	85-112-01	400	1.50 (38)	1355 (2015)	1492 (455)	2265 (1030)	58 x 25 x 20
	85-116-01	600	1.81 (46)	2010 (2990)	1264 (385)	2830 (1285)	62 x 30 x 24
	85-118-01	900	2.17 (55)	2970 (4420)	1182 (360)	4125 (1870)	72 x 35 x 36
BKTB - 26 AWG (0.40 mm)	85-120-01	1200	2.49 (63)	3915 (5825)	952 (290)	4340 (1970)	72 x 35 x 36
	85-132-01	25	0.43 (11)	90 (135)	4594 (1400)	475 (215)	36 x 18 x 14
	85-135-01	50	0.53 (14)	150 (225)	4822 (1470)	830 (375)	44 x 18 x 20
	85-139-01	100	0.68 (17)	255 (380)	4594 (1400)	1335 (605)	46 x 25 x 20
	85-143-01	200	0.91 (23)	465 (690)	4594 (1400)	2380 (1080)	58 x 25 x 20
	85-145-01	300	1.05 (27)	665 (990)	2624 (800)	1950 (885)	52 x 25 x 20
	85-147-01	400	1.21 (31)	870 (1295)	2624 (800)	2530 (1145)	58 x 25 x 20
	85-151-01	600	1.45 (37)	1290 (1920)	2394 (730)	3455 (1570)	65 x 30 x 32
	85-153-01	900	1.74 (44)	1900 (2830)	1526 (465)	3270(1485)	65 x 30 x 32
	85-155-01	1200	1.98 (50)	2495 (3715)	1460 (445)	4255 (1930)	72 x 35 x 36
	85-156-01	1500	2.23 (57)	3105 (4620)	1000 (305)	3720 (1685)	72 x 35 x 36
	85-157-01	1800	2.43 (62)	3705 (5515)	1312 (400)	5560 (2520)	78 x 40 x 39



Product Description

Double jacketed aircore cable commonly called "SEALPAP" is a solid-insulated design intended for use in outside plant where a greater risk of physical damage exists. The inner jacket provides protection to the cable core in the event of severe damage to the outer protective sheath.

Physical Description

- **CONDUCTORS:** Solid annealed bare copper in 19, 22, 24 and 26 AWG.
- **INSULATION:** Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the paired conductors. Pair twist lays and the relative placement of the pairs are designed to minimize crosstalk and meet the capacitance unbalance limits. In cables having 25 pairs or less, the pairs are combined into a cylindrical core. In cables of 50 pairs and more, multiples of 25 pair groups are assembled to form the final cable core. Each group is identified by color coded non-hygroscopic binders. For 1200 pair and larger, the color code is a Mirror Image design.
- **CORE WRAP:** A complete covering of a non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength.
- **INNER JACKET:** A polyethylene inner jacket provides additional protection against mechanical damage and helps prevent the ingress of moisture. Ripcords are placed between the core wrap and the inner jacket and between the inner jacket and shield.
- **SHIELD:** A smooth 8-mil two-side coated aluminum tape is applied longitudinally over the inner jacket.
- **JACKET:** A black, medium-density polyethylene provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, and stresses expected in standard installations. The overall outer jacket is bonded to the aluminum shield for additional moisture resistance.
- **JACKET MARKINGS:** Information such as manufacturer's identification, plant location, date of jacketing, pair count, AWG, product identification, sequential length markings in meters and a telephone handset.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

		nF/mile	nF/km
All Pairs		83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation 772kHz @ 68° F (20° C)		Max Conductor Resistance @ 68° F (20° C) Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.9	45.0	28.0	1.5	5.0	5,000	20,000
22	0.64	1.0	1.6	4.6	15.3	91.0	56.6	1.5	5.0	4,000	20,000
24	0.50	1.0	1.6	5.7	19.4	144.0	89.5	1.5	5.0	3,000	20,000
26	0.40	1.0	1.6	7.2	23.6	232.0	144.2	1.5	5.0	2,400	20,000

Minimum Near End Crosstalk (NEXT) at	150 kHz		772 kHz	
P.S.WUNEXT mean (dB)	58		47	
P.S.WUNEXT worst pair (dB)	53		42	
Minimum Far End Crosstalk at 150 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	65	63	63	61
P.S. ELFEXT worst pair (dB/kft)	59	57	57	57
Minimum Far End Crosstalk at 772 kHz				
Conductor size (AWG)	19	22	24	26
P.S. ELFEXT mean (dB/kft)	51	49	49	47
P.S. ELFEXT worst pair (dB/kft)	45	43	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz		Maximum Individual		Maximum RMS	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		80	145	-	-
more than 12		80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz		Maximum Individual		Maximum Avg	
Pairs		pF/kft	pF/km	pF/kft	pF/km
12 or less		800	2625	-	-
more than 12		800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nom. O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
BHBFB - 19 AWG (0.90 mm)	85-031-41	25	0.84 (21)	355 (530)	9006 (2745)	3990 (1810)	420
	85-034-41	50	1.07 (27)	625 (930)	4512 (1375)	3615 (1640)	420
	85-038-41	100	1.43 (36)	1170 (1740)	2986 (910)	4290 (1945)	420
	85-042-41	200	1.96 (50)	2230 (3320)	2230 (680)	5770 (2615)	420
BHAF - 22 AWG (0.64 mm)	85-062-41	25	0.68 (17)	215 (320)	5724 (1745)	2025 (920)	420
	85-065-41	50	0.85 (22)	360 (535)	5724 (1745)	2855 (1295)	420
	85-069-41	100	1.09 (28)	635 (945)	4282 (1305)	3515 (1595)	420
	85-073-41	200	1.47 (37)	1190 (1770)	3412 (1040)	4855 (2200)	420
	85-077-41	400	1.99 (51)	2260 (3365)	2132 (650)	5615 (2545)	420
	85-081-41	600	2.42 (62)	3370 (5015)	1410 (430)	5545 (2515)	420
BKMF - 24 AWG (0.50 mm)	85-097-41	25	0.62 (16)	169 (251)	6000 (1830)	1013 (460)	420
	85-100-41	50	0.72 (18)	255 (380)	6316 (1925)	2405 (1090)	420
	85-104-41	100	0.91 (23)	430 (640)	6004 (1830)	3375 (1530)	420
	85-108-41	200	1.18 (30)	770 (1145)	2116 (645)	2425 (1100)	420
	85-110-41	300	1.43 (36)	1130 (1680)	2280 (695)	3370 (1530)	420
	85-112-41	400	1.62 (41)	1475 (2195)	2280 (695)	4160 (1885)	420
	85-116-41	600	1.94 (49)	2160 (3215)	1312 (400)	3630 (1645)	420
	85-118-41	900	2.33 (59)	3190 (4745)	1050 (320)	4145 (1880)	420
	85-120-41	1200	2.64 (67)	4165 (6200)	1312 (400)	6260 (2840)	420
BKTF - 26 AWG (0.40 mm)	85-135-41	50	0.63 (16)	185 (275)	4822 (1470)	1685 (765)	420
	85-139-41	100	0.77 (20)	300 (445)	4822 (1470)	2240 (1015)	420
	85-143-41	200	1.00 (25)	525 (780)	4822 (1470)	3325(1510)	420
	85-147-41	400	1.33 (34)	970 (1445)	2394 (730)	3115 (1415)	420
	85-151-41	600	1.58 (40)	1410 (2100)	2394 (730)	4170 (1890)	420
	85-153-41	900	1.87 (48)	2045 (3045)	1510 (460)	3885 (1760)	420
	85-155-41	1200	2.13 (54)	2695 (4010)	1526 (465)	4910 (2225)	420

Standards Compliance:

Telcordia GR-421-CORE; ANSI/ICEA S-85-625-2002, RoHS Compliant



Product Description

Self support cable is a plastic insulated, single jacketed aircore design with a built-in support member intended specially for aerial applications. The core and support member (messenger) lay parallel to each other forming a cross-sectional "figure 8". The messenger is an integral part of the cable sheath, yet readily available for gripping, pulling and tensioning. Installation is fast and easy using standard methods and hardware.

Physical Description

- **CONDUCTORS:** Solid annealed bare copper in 19, 22 and 24 AWG.
- **INSULATION:** Individual conductors are insulated with color coded solid polyolefin.
- **TWISTED PAIRS:** Individual insulated conductors are twisted into pairs with varying lay lengths to minimize crosstalk and specific color combinations to provide pair identification.
- **CORE ASSEMBLY:** Cables of 25 pairs and less are assembled into a cylindrical core. Cables larger than 25 pairs are assembled into units, which are then used to assemble the core. Units are individually identifiable by color coded binders.
- **CORE WRAP:** A non-hygroscopic, dielectric tape is applied over the core assembly to provide thermal protection for the core.
- **SHIELDING:** A corrugated, copolymer coated, 8-mil aluminum tape is applied longitudinally with an overlap. The shield interfaces are flooded with an adhesive compound to provide a moisture barrier and inhibit corrosion.
- **SUPPORT MEMBER:** A 1/4 inch, 7-strand Extra High Strength (EHS) galvanized steel messenger serves as the support member and is an integral part of the sheath. The messenger is flooded to inhibit corrosion.
- **JACKET:** A black, polyethylene jacket is applied overall. The jacket provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations.
- **JACKET MARKINGS:** Information including the manufacturer's identification, date of jacketing, pair count, AWG and meter sequentials at 1 meter intervals.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

Total Number of Pairs	nF/mile	nF/km
12 or less	83 ± 7	52 ± 4
Over 12	83 ± 4	52 ± 2

Conductor Size		Minimum Insulation Resistance 68° F (20° C)		Max Average Attenuation @ 68° F (20° C) 772 kHz		Max Conductor Resistance @ 68° F Ohms/sheath		Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	mile	km	Avg.	Individual Pair	Cdr. to Cdr.	Cdr. to Grnd.
19	0.90	1.0	1.6	3.3	10.8	45.0	28.0	1.5	5.0	4,500	10,000
22	0.64	1.0	1.6	4.6	15.3	91.0	56.6	1.5	5.0	3,600	10,000
24	0.50	1.0	1.6	5.7	19.4	144.0	89.5	1.5	5.0	3,000	10,000

Minimum Near End Crosstalk (NEXT) at	150 kHz	772 kHz	
P.S.WUNEXT mean (dB)	58	47	
P.S.WUNEXT worst pair (dB)	53	42	
Minimum Far End Crosstalk at 150 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	65	63	63
P.S. ELFEXT worst pair (dB/kft)	59	57	57
Minimum Far End Crosstalk at 772 kHz			
Conductor size (AWG)	19	22	24
P.S. ELFEXT mean (dB/kft)	51	49	49
P.S. ELFEXT worst pair (dB/kft)	45	43	43

Capacitance Unbalance Pair to Pair @ 1 kHz	Maximum Individual		Maximum RMS	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	80	145	-	-
more than 12	80	145	25	45

Capacitance Unbalance Pair to Ground @ 1 kHz	Maximum Individual		Maximum Avg	
Pairs	pF/kft	pF/km	pF/kft	pF/km
12 or less	800	2625	-	-
more than 12	800	2625	175	574

Part Numbers and Physical Characteristics

	Part #	Pair Count	Minor Dimensions inches (mm)	Major Dimensions inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size
BHBS-BC - 19 AWG (0.90 mm)	07-021-51	6	0.48 (12)	0.96 (24)	240 (355)	10006 (3050)	1023 (1526)	420
	07-021-52	25	0.60 (15)	1.07 (27)	440 (655)	5019 (1530)	2990(4459)	420
	07-021-53	50	0.98 (25)	1.45 (34)	710 (1055)	5019 (1530)	4345 (6480)	420
BHAS-BC - 22 AWG (0.64 mm)	07-021-54	25	0.58 (15)	1.05 (27)	325 (485)	10006 (3050)	1109 (1654)	420
	07-021-55	50	0.74 (19)	1.20 (31)	460 (685)	7513 (2290)	4238 (6320)	420
	07-021-56	100	1.00 (25)	1.47 (37)	720 (1070)	6004 (1830)	5105 (7613)	420
BKMS-BC - 24 AWG (0.50 mm)	07-021-57	50	0.62 (16)	1.09 (28)	385 (573)	13303 (4055)	5904 (8805)	420
	07-021-58	100	0.80 (22)	1.27 (32)	575 (856)	8005 (2440)	5305 (8031)	420
	07-021-59	200	1.09 (28)	1.56 (40)	1013 (1508)	5020 (1530)	5867 (8750)	420

Standards Compliance

Telecordia GR-421-CORE; ANSI/ICEA S-85-625-1996, RoHS Compliant



Product Description

ADP-X-NMS Wire is a PVC-jacketed aerial service wire designed for eXtreme outdoor environments. The ADP-X-NMS wire is designed for heavy loading conditions which are identified as locations that have a very high potential for extreme icing and very high winds. ADP-X-NMS is offered with the Superior Essex QuickCount® feature in meters. Offered in a two pair size, this aerial service wire is designed for use in extending telephone service to subscriber premises from the distribution cable or cable terminal. Standard hardware and installation procedures are directly applicable to this product.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in Blue/White, Orange/White distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance.
- **STRENGTH MEMBERS:** Fiberglass strength members are placed in the jacket parallel to the core assembly to provide the necessary longitudinal strength.
- **RIPCORD:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** A black, weather resistant, polyvinyl chloride jacket is extruded over the yarns and ripcord to protect the core from mechanical damage, degradation by sunlight and ingress of moisture. The jacket bonds to the fiberglass strength members to provide the required strength characteristics.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Volts DC
AWG	mm	megohm-mile	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair	
22	0.64	1,000	1,600	5.1	16.7	91.0	56.0	5.0	5 secs, no breakdown 7,200

Crosstalk Loss		dB/kft	dB/km
FEXT @ 150 kHz; Minimum Individual		63	58
NEXT @ 722 kHz; Minimum Individual		48 dB / 1000 ft (305 m)	

Capacitance Unbalance @ 1000 Hz, Pair to Pair	pF/kft	pF/km
Maximum Individual Pair	80	145

Part Numbers and Physical Characteristics

Part #	Pair Count	Minor Dimensions inches (mm)	Major Dimensions inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
11-003-16	2	0.18 (4.6)	0.36 (9.1)	36 (54)	492 (150)	ReelSaver™ Coil
11-003-15	2	0.18 (4.6)	0.36 (9.1)	36 (54)	984 (300)	Coil

Standards Compliance:

Telcordia GR-1069-CORE; Meets the Extra Strength Objective 04-61; RDUP PE-7; ANSI/ICEA S-89-648-2000; UL Listed, RoHS Compliant



Product Description

Superior Essex ADW is a PVC jacketed two or four pair aerial service wire designed for use in extending telephone service to subscriber premises from the distribution cable or cable terminal. Major features include small size and light weight coupled with abrasion resistant jacket. Standard hardware and installations procedures are directly applicable to this product.

Physical Description

- **CONDUCTORS:** Solid bare annealed copper in 22 AWG (0.64 mm).
- **INSULATION:** Individual conductors are insulated with solid polyolefin in distinctive colors. The two-pair color code is Blue/White and Orange/Red. The four-pair color code is Blue/White, Orange/Red, Black/Green and Yellow/Brown.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance.
- **STRENGTH MEMBERS:** Fiberglass strength members are placed in the jacket parallel to the core assembly to provide the necessary longitudinal strength.
- **RIPCORDER:** A jacket ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** A sky Blue grey weather-resistant PVC jacket is extruded over the strength members to protect the core from mechanical damage, degradation by sunlight and the ingress of moisture. The jacket bonds to the fiberglass strength members to provide the required strength characteristics.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

	nF/mile	nF/km
All Pairs	113	70

Conductor Size		Insulation Resistance @ 60°F		Capacitance Unbalance @ 1000Hz Pair to Pair Maximum		Max Conductor DC Resistance @ 20°F Max. Individual		Resistance Unbalance Maximum	Dielectric Strength DC Potential - Volts Minimum	
AWG	mm	megohm-mile	megohm-km	pF/kft	pF/km	ohms/kft	ohms/km	Individual Pair %	Cdr. to Cdr.	Cdr. to H ₂ O
22	0.64	380	610	140	254	16.8	56.6	5.0	4000	5000

Part Numbers and Physical Characteristics

Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
12-022-09	2	0.24 (6.1)	30 (45)	1476 (450)	Coil
12-021-09	2	0.24 (6.1)	30 (45)	656 (200)	POP [®] star Box
12-023-09	2	0.24 (6.1)	30 (45)	5000 (1525)	Reel
12-041-09	4	0.33 (8.4)	55 (80)	820 (250)	Coil
12-042-09	4	0.33 (8.4)	55 (80)	3937 (1200)	Reel
12-043-09	4	0.33 (8.4)	55 (80)	328 (100)	POP Box

Integrated Messenger Wire IM/F, IM/H & IM/G



Product Description

IM/F IM/H and IM/G aerial service wire in 2, 3, 6 and 12 pair is self supporting. The conductors are laid parallel to an (F) 0.083 inch, (H) 0.109 inch, or (G) 0.095 inch solid extra-strength steel support wire. Both the conductors and support wire are jacketed in an integral "figure-8" configuration. This product permits fast, economical installation from aerial distribution cable terminals to building entrance protectors or network interface units on the subscriber's premises. The fully color coded core expedites splicing and terminating procedures.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 19 and 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. Standard color codes are used for pair identification with compounds chosen for electrical balance and permanency.
- **CORE ASSEMBLY:** Individual conductor dimensions are tightly controlled to limit resistance unbalance of the twisted pairs. In multi-pair constructions, pair twist lays are varied to minimize crosstalk and meet capacitance limits. Twisted pairs are formed into a firm, round core.
- **OUTER JACKET:** A black, fire retardant, polyvinyl chloride jacket provides a tough flexible protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses encountered in standard installations. The steel support wire is jacketed in an integral extrusion with the core.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

All Pairs		nF/mile				nF/km			
Maximum Individual		94				58			
Wire Average		83 ± 7				52 ± 4			
Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum %	Dielectric Strength Minimum Volts DC
AWG	mm	megohm-kft	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair	
19	0.9	5,000	1,600	3.6	11.8	45	28.0	5.0	5 secs, no breakdown
22	0.64	5,000	1,600	5.1	16.7	91	56.0	5.0	7,200

Crosstalk Loss		dB/kft	dB/km
FEXT @ 150 kHz; Minimum Individual		63	58
NEXT @ 722 kHz; Minimum Individual		44 dB / 1000 ft (305 m)	

Capacitance Unbalance @ 1000 Hz		pF/kft	pF/km
Individual Maximum Pair to Pair		80	145
Individual Maximum Pair to Ground		800	2,625

Part Numbers and Physical Characteristics

Part #	Support Size	Pair Count	Dimensions		Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
			Minor inches (mm)	Major inches (mm)			
19 AWG (0.90 mm)	10-921-38	IM/G 0.095	2	0.27 (6.8)	0.51 (12.9)	73 (109)	Coil
	10-923-38	IM/G 0.095	2	0.27 (6.8)	0.51 (12.9)	73 (109)	Reel
22 AWG (0.64 mm)	10-002-34	IM/F 0.083	2	0.22 (5.7)	0.46 (11.7)	55 (82)	Coil
	10-102-34	IM/F 0.083	2	0.22 (5.7)	0.46 (11.7)	55 (82)	Reel
	10-503-34	IM/F 0.083	3	0.24 (6.2)	0.48 (12.3)	72 (107)	Coil
	10-106-34	IM/F 0.083	6	0.30 (7.6)	0.53 (13.6)	80 (119)	Reel
	10-206-34	IM/F 0.083	6	0.30 (7.6)	0.53 (13.6)	80 (119)	Reel
	10-306-34	IM/F 0.083	6	0.30 (7.6)	0.53 (13.6)	80 (119)	Coil
	10-261-38	IM/G 0.095	6	0.30 (7.6)	0.55 (13.9)	80 (119)	Coil
	10-262-38	IM/G 0.095	6	0.30 (7.6)	0.55 (13.9)	80 (119)	Reel
	10-265-38	IM/G 0.095	6	0.30 (7.6)	0.55 (13.9)	80 (119)	Reel
	10-281-38	IM/G 0.095	12	0.38 (7.6)	0.65 (16.6)	114 (170)	Coil
	10-284-38	IM/G 0.095	12	0.38 (7.6)	0.65 (16.6)	114 (170)	Reel
	10-285-38	IM/G 0.095	12	0.38 (7.6)	0.65 (16.6)	114 (170)	Reel
	10-102-35	IM/H 0.109	12	0.38 (7.6)	0.66 (16.7)	130 (193)	Reel
	10-012-35	IM/H 0.109	12	0.38 (7.6)	0.66 (16.7)	130 (193)	Coil
	10-212-35	IM/H 0.109	12	0.38 (7.6)	0.66 (16.7)	130 (193)	Reel

Contact Superior Essex for additional configurations and AWG sizes.

Standards Compliance:

Telcordia TR-NWT-000122; ANSI/ICEA S-89-648-2002; UL Listed, RoHS Compliant



Product Description

ADP NMS is a PVC-jacketed aerial service wire offered with the Superior Essex QuickCount® in meters feature. Available in a two and six pair size. ADP NMS printed in meters is designed for use in extending telephone service to subscriber premises from the distribution cable or cable terminal. Major features include small size and light weight coupled with abrasion resistant jacket. Standard hardware and installation procedures are directly applicable to this product.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance.
- **STRENGTH MEMBERS:** Fiberglass yarns are placed parallel to the core to provide the necessary longitudinal strength.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** A black, weather resistant, polyvinyl chloride jacket is extruded over the yarns and ripcord to protect the core from mechanical damage, degradation by sunlight and ingress of moisture. The jacket bonds to the fiberglass strength members to provide the required strength characteristics.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 68°F and 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum	Dielectric Strength Volts DC
AWG	mm	megohm-mile	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair %	5 secs, no breakdown
22	0.64	1,000	1,600	5.1	16.7	91.0	56.0	5.0	7,200

Crosstalk Loss		dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz, Pair to Pair		pF/kft	pF/km
FEXT @ 150 kHz; Minimum Individual		63	58	Maximum Individual Pair		80	145
NEXT @ 722 kHz; Minimum Individual		48 dB / 1000 ft (305 m)					

Part Numbers and Physical Characteristics

Part #	Pair Count	Minor Dimensions inches (mm)	Major Dimensions inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length (m)	Package
12-015-08	2	0.18 (4.8)	0.36 (9.1)	35 (50)	150	ReelSaver™ Coil
12-014-08	2	0.18 (4.8)	0.36 (9.1)	35 (50)	228	POP® Box
12-013-08	2	0.18 (4.8)	0.36 (9.1)	35 (50)	300	Coil
11-003-66	6	0.27 (7)	0.48 (12)	70 (105)	305	Reel
11-003-65	6	0.27 (7)	0.48 (12)	70 (105)	122	Coil

Standards Compliance:

Telecordia GR-1069-CORE; RDUP PE-7; ANSI/ICEA S-89-648-2000; UL Listed, RoHS Compliant



Product Description

Superior Essex BCBD wire with foam skin insulation is a single jacketed design for use in subscriber distribution.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG.
- **INSULATION:** Individual conductors are insulated with a dual-extruded cellular inner layer and a color coded solid outer layer of polyolefin.
- **TWISTED PAIRS:** Insulated conductors are twisted to form pairs with varying lays to minimize crosstalk and meet capacitance unbalance limitations.
- **MOISTURE RESISTANCE:** A moisture-resistant PEPJ compound is applied to the wire core which completely coats each insulated conductor and fills the interstices between pairs.
- **CORE COVERING:** A non-hygroscopic core wrap is applied over the assembled core which furnishes mechanical as well as high dielectric protection between shielding and individual conductors.
- **FLOODING COMPOUND:** A flooding compound is applied to fill all the voids under the shield.
- **SHIELD:** An electrically-continuous 8-mil flat aluminum shielding tape, with a polyolefin film fused and chemically bonded to both sides, is applied longitudinally over the core and bonded to the outer jacket.
- **JACKET:** Black medium-density polyethylene provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations.

Electrical Specifications

Average Mutual Capacitance at 1000 Hz

	nF/mile	nF/km
All Pairs	83 ± 7	51.6 ± 4

Conductor Size		Minimum Insulation Resistance @ 60°F		Max Average Attenuation @ 68°F 150 kHz		Max Conductor Resistance @ 68°F Ohms/sheath		Resistance Unbalance Maximum	Dielectric Strength DC Potential - Volts Minimum	
AWG	mm	gigohm-mile	gigohm-km	dB/kft	dB/km	kft	km	Individual Pair %	Cdr. to Cdr.	Cdr. to Gnd.
22	0.64	1.0	1.6	0.33	1.1	17.3	56.6	5.0	3,600	10,000

Capacitance Unbalance Pair to Pair

Pairs	Maximum Individual pF/kft	Maximum Individual pF/km
4	140	254

Capacitance Unbalance Pair to Ground

Pairs	Maximum Individual pF/kft	Maximum Individual pF/km
4	800	2625

Part Numbers and Physical Characteristics

Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
85-235-06	4	0.30 (7.6)	45 (65)	1640 (500)	Reel
85-233-06	4	0.30 (7.6)	45 (65)	4590 (1400)	Reel
85-234-06	4	0.30 (7.6)	45 (65)	656 (200)	Coil



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OSP COMPOSITE



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Product Description

Series 71 W composite drop cables combine fiber and copper technologies in a web design. The composite design provides a cost benefit compared to installing separate fiber and copper cables. The independent fiber and copper cables are combined in a single jacket design utilizing a web separator.

This lightweight design is easy to access since the cables are easily separated at the web. In addition, each independent cable also contains a ripcord.

Physical Description

The construction of this product combines an BSW OSP copper wire and a Series 513 fiber optic cable. These independent cables are simultaneously jacketed in a medium density polyethylene outer jacket with a ripcord included for ease of use. The cables are joined by a web that can be split to direct the cables to separate locations.

Copper cable: BSW cable with solid insulation is a single-jacketed, armored, filled design intended for direct bury applications. A corrugated 4 mil bronze shield is applied over the core wrap. An ETPR compound provides water blocking protection. Electrical specifications can be found in the copper section for BSW wires.

Fiber Optic Cable: Series 513 is a single central tube cable. The central tube contains the optical fibers, the tube is surrounded by the flexible yarns which provide the tensile strength. Dry super absorbent polymers provide the water blocking protection.

Features

- Independent fiber and copper cables combined in a web design
- Combined transport technologies in one cable
- Optical / Electrical Technology

Benefits

- Reduces cost of cable and labor
- Cost-effective installation
- Ideal for multiple projects, voice, video, data and powering.

Applications

- Network Power and FTTP

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-20°C to + 70°C

Optical Specifications	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.22	.35/.35/.22	.35/.35/.22

Part Numbers and Physical Characteristics

Part #	Fiber Type	Fiber Count	Pair Count x AWG	Standard Reel Length
71-024-12	RWP SMF	2	2 X 19	8,000 ft
71-202-12	RWP SMF	2	5 X 19	8,000 ft
71-055-12	RWP SMF	2	2 X 22	8,000 ft
71-402-12	RWP SMF	2	5 X 22	8,000 ft

Standards Compliance:

Copper and Fiber Cables meet applicable Telcordia, RDUP and ICEA specifications. Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Series 71 OJ composite drop cables combine fiber and copper technologies in an overjacket design. The composite design provides a cost benefit compared to installing separate fiber and copper cables.

Physical Description

This design allows great flexibility regarding the independent cables used in the overall construction. These independent cables are encased in a outer jacket of low density polyethylene with an ripcord included for ease of use.

Copper cable: BSW cable with solid insulation is a single-jacketed, armored, filled design intended for direct bury applications. A corrugated 4 mil bronze shield is applied over the core wrap. An ETPR compound provides water blocking protection. Electrical specifications can be found in the copper section for BSW wires.

Fiber Optic Cable: Series 513 is a single central tube cable. The central tube contains the optical fibers, the tube is surrounded by the flexible yarns which provide the tensile strength. Dry super absorbent polymers provide the water blocking protection.

Features

- Independent fiber and copper cables combined in a overjacket design
- Combined transport technologies in one cable
- Overjacket
- Various combinations available

Benefits

- Lightweight, flexible construction
- Cost-effective installation
- Easy separation of technologies
- Ideal for multiple projects

Applications

- Network Power and FTTP

Environmental Specifications			
Operation/Storage		-40°C to + 70°C	
Installation		-20°C to + 70°C	
Optical Specifications	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.22	.35/.35/.22	.35/.35/.22

Part Numbers and Physical Characteristics				
Part #	Fiber Type	Fiber Count	Pair Count x AWG	Standard Reel Length
71-055-02	RWP SMF	2	2 X 22	8,000 ft
71-402-02	RWP SMF	2	5 X 22	8,000 ft
71-057-14	RWP SMF	4	6 X 22	8,000 ft

Standards Compliance:

Copper and Fiber Cables meet applicable Telcordia, RDUP and ICEA specifications. Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Series 5V cables are designed for outside plant broadband applications. These cables combine copper and fiber optic technologies into one composite cable and are suitable for voice, video and data communications. The copper cable offers the option of providing network power to eliminate the cost of local powering. The wide range of copper and fiber counts make this cable ideal for most projects.

Physical Description

The construction of this product combines an ANAW OSP copper cable and a Series 51 fiber optic cable. These independent cables are simultaneously jacketed in a medium density polyethylene outer jacket with a ripcord included for ease of entry. The web connects the cables and can be easily split to direct the cables to different locations.

Copper Cable: ASP cable with foam skin insulation is a single-jacketed, armored, filled design intended for direct bury applications. An ETPR compound provides water blocking protection. Electrical specifications can be found in the copper section for ANAW cables.

Fiber Optic Cable: Series 51 is a single central tube cable. The central tube contains the optical fibers, the tube is surrounded by the flexible yarns which provide the tensile strength. Dry super absorbent polymers provide the water blocking protection. The outer jacket is Medium Density Polyethylene. A ripcord is provided for ease of entry.

Features

- Independent fiber and copper cables under one jacket
- Web
- Optical/Electrical Technology
- Web Design
- PFM™ gel

Benefits

- Reduces labor cost
- Easy separation to different locations
- Ideal for Voice, Video and Data
- Lower cost
- Non-sticky gel reduces installation time and labor cost

Applications

- Direct bury, conduit, lashed aerial

Environmental Specifications			
Operation/Storage		-40°C to + 70°C	
Installation		-20°C to + 70°C	
Optical Specifications	Single mode Conventional		Single mode TeraFlex
Wavelength (nm)	1310/1550		1310/1383/1550
Max Attenuation (dB/km)	.40/.30		.40/.40/.30
Typical Attenuation (dB/km)	.35/.22		.35/.35/.22

Part Numbers and Physical Characteristics						
Part #	Count		Nominal Component O.D.		Approx. Weight lbs/kft (kg/km)	Standard Qty (ft)
	cpr	fbr	cpr(fbr)	cpr(fbr)		
5V0063061	6	6	0.45 (0.37)	11 (9)	176 (262)	14,800
5V0063121	12	6	0.56 (0.37)	14 (9)	234 (348)	14,800
5V0123121	12	12	0.56 (0.37)	14 (9)	234 (348)	14,800
5V0183181	18	18	0.61 (0.37)	15 (9)	285 (425)	14,800
5V0123251	25	12	0.72 (0.37)	18 (9)	355 (528)	12,700
5V0243251	25	24	0.72 (0.37)	18 (9)	355 (528)	12,700

* Part numbers shown include RWP Single mode fiber

Standards Compliance:

Copper and Fiber Cables meet applicable Telcordia Specifications (GR-421-Core, GR 20 Core). Facilities are registered to ISO 9001: 2000 & TL 9000



Product Description

Series 70 OJ cables are designed for outside plant broadband applications. These cables combine copper and fiber optic technologies into one composite cable and are suitable for voice video and data communications. The copper cable offers the option of providing network power to eliminate the cost of local powering. The wide range of copper and fiber counts make this cable ideal for most projects.

Physical Description

The construction of this product combines an ANAW OSP copper cable and a Series 51 fiber optic cable. These independent cables are encased in a linear low density polyethylene outer jacket with a ripcord included for ease of use.

Copper Cable: ASP cable with foam skin insulation is a single-jacketed, armored, filled design intended for direct bury applications. An ETPR compound provides water blocking protection. The outer jacket is a LLDPE jacket. Electrical specifications can be found in the copper section for ANAW cables.

Fiber Optic Cable: Series 51 is a single central tube cable. The central tube contains the optical fibers, the tube is surrounded by the flexible yarns which provide the tensile strength. Dry super absorbent polymers provide the water blocking protection. The outer jacket is Medium Density Polyethylene. A ripcord is provided for ease of entry.

Features

- Independent fiber and copper cables under one jacket
- Overjacket
- Optical/Electrical Technology
- PFM™ gel

Benefits

- Reduces labor cost
- Easy separation to different locations
- Ideal for Voice, Video and Data
- Non-sticky gel reduces installation and labor cost

Applications

- Direct bury, conduit, lashed aerial

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-20°C to + 70°C

Optical Specifications	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.22	.35/.35/.22	.35/.35/.22

Part Numbers and Physical Characteristics

Part #	Count		Nominal Component O.D.		Approximate Cable Weight lbs/kft (kg/km)	Standard Qty (ft)
	cpr	fbr	cpr(fbr)	cpr(fbr)		
70-425-18	36	18	0.76 (0.37)	19 (9)	442.8 (658)	11,100
70-425-36	36	36	0.76 (0.37)	19 (9)	442.8 (658)	11,100
70-065-24	50	24	0.88 (0.37)	22 (9)	545.6 (811)	8,900
70-065-48	50	48	0.88 (0.37)	22 (9)	545.6 (811)	8,900
70-067-36	75	36	1.00 (0.37)	25 (9)	724.14 (1077)	6000
70-067-72	75	72	1.00 (0.51)	25 (13)	734.2 (1092)	6000
70-069-48	100	48	1.15 (0.37)	29 (9)	895.2 (1331)	6000
70-069-72	100	72	1.15 (0.51)	29 (13)	923.9 (1374)	6000
70-071-72	150	72	1.34 (0.51)	34 (13)	1260.0 (1874)	3000
70-071-96	150	96	1.34 (0.51)	34 (13)	1260.0 (1874)	3000
70-073-96	200	96	1.50 (0.51)	38 (13)	1615.0 (2403)	2500

* Part numbers shown include RWP Single mode fiber

Standards Compliance:

Copper and Fiber Cables meet applicable Telcordia Specifications (GR-421-Core, GR 20 Core). Facilities are registered to ISO 9001: 2000 & TL 9000



Product Description

Series 5F combines the broadband performance of Category 5e with the unlimited capacity of optical fiber. A BBDNE Category 5e OSP cable and a Series 513 fiber optic cable are overjacketed into one cable in order to offer flexibility and ease of installation.

Physical Description

FIBER COMPONENTS

- FIBER: One to twelve fibers
- RUGGED LOOSE TUBE: Optical fibers placed inside a single gel filled loose tube.
- STRENGTH MEMBERS: Water-blocking flexible dielectric strength members are helically applied over the core.
- JACKET: A black, weather resistant jacket is applied to protect the core from mechanical damage, degradation by sunlight and ingress of moisture.
- WATER-BLOCKING: Super absorbent powder.

COPPER COMPONENTS

- PAIRS: 4x24 AWG
- CONSTRUCTION: Inner Polyethylene jacket, Polymer coated smooth aluminum tape, Black Polyethylene jacket.
- WATER-BLOCKING: PEPJ

Features

- Fiber & Cat 5e
- Over jacket design
- Single unit construction
- 1-12 fibers
- PFM Gel

Benefits

- Offers the maximum bandwidth for FTT Premise, Business, etc.
- Ease of use
- Lower installation costs
- High capacity
- Non-sticky gel reduces installation time and labor cost

Applications

- Drop Cables
- Broadband Network
- Fiber-to-the-Premises

Environmental Specifications

Operation / Storage	-40°C to +70°C
Installation	-10°C to +70°C

Optical Specifications	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max. Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.22	.35/.35/.22	.35/.35/.22

Part Numbers and Physical Characteristics

Part #	Fiber Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Bend Radius inches (mm)	Max Tensile Load		Standard Qty. ft (m)
					Install lbs (N)	Long Term lbs (N)	
11-003-30*	4	0.63 (16) x 0.43 (10.9)	100 (148.8)	5.5 (139.7)	300 (136)	100 (45)	5000 (1524)

*Part numbers shown include RWP Single mode fiber

Standards Compliance:

Copper and fiber cables meet applicable Telcordia TIA 568-B.2. Facilities are registered to ISO 9001: 2000 & TL 9000, ANSI/ICEA S-90-661-2002, RoHS Compliant.



Product Description

Series L cables combine the attributes of fiber optic and copper technologies in a single cable. Designed for OSP applications, these cables improve network flexibility by addressing the need to transmit electrical power while providing virtually unlimited bandwidth to the subscriber. Labor savings are also realized making this product ideal for various projects.

Features

- Fiber tubes and copper pairs in one jacket
- Wide range of copper and fiber counts
- Single mode, multimode and hybrid designs
- Copper conductors or twisted pairs
- Various Cable Designs

Benefits

- Reduced material cost and significant installation savings
- Sizes available for large and small projects
- Multiple network applications
- Capable of voice transmission, cable location and site powering
- Multiple Applications

Optical Specifications	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max. Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.22	.35/.35/.22	.35/.35/.22

Electrical Specifications					
Conductor Size		Conductor DC Resistance @ 68°F Max Individual		Resistance Unbalance Maximum	Dielectric Strength DC Potential - Volts Minimum
AWG	mm	ohms/mile	ohms/km	Individual Pair %	Cdr. to Cdr.
19	0.90	45.0	28.0	5.0	7,000
22	0.64	91.0	56.6	5.0	5,000
24	0.50	144.0	89.5	5.0	4,000

Maximum Voltage	Maximum Amperage/Conductor
150 VDC	1.0 A

Note

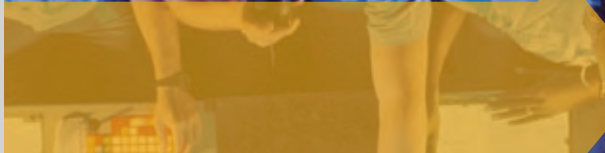
- Special cable lengths are available upon request.
- Please contact your Superior Essex sales professional with your application requirements.

Part Numbers and Physical Characteristics							
Part #	Description	Copper Pairs	Fibers	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Load	
						Install lbs (N)	Long Term lbs (N)
12024D01Q	LTSJSA D/F	6	24	0.60 (16.05)	156 (232)	600 (2700)	200 (890)
12024D02Q	LTSJSA F/M	2	24	0.50 (12.20)	108 (161)	600 (2700)	200 (890)
11024C01Q	LTSJ D/F	1	24	0.40 (10.85)	58 (86)	600 (2700)	200 (890)
11024D01Q	LTSJ F/M	2	24	0.40 (11.05)	69 (103)	600 (2700)	200 (890)

*Part numbers shown include RWP Single mode fiber

Standards Compliance:

Copper and fiber cables meet applicable Telcordia and RDUP specifications. Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS Compliant



THERE ARE THOSE WHO WANT TO INSTALL THE BEST CABLE

AND THOSE WHO HAVE TO

When even the slightest delay can mean the difference between disaster and success, there's no room for compromising on data cable. That's why more network designers choose Superior Essex for critical environments. Our data cable products are engineered to outperform the industry standard on every level – for customers whose networks are anything but standard.



For detailed performance information and real-life case studies, visit www.spsx.com/comm/performance



Product Description

BroadGain®-CX buried drop wires combine copper and coaxial cable technologies within a single-jacket design using a web separator. This design allows for easy separation of the copper conductors from the coaxial cable and makes it lighter and more flexible than double-jacket designs. While the Series 11 Quad shielded coaxial drop provides support for many broadband applications, the copper pairs provide flexibility for several transmission paths of voice, telemetry and data. The tough, black PVC outer jacket, filled interior and shielded design make BroadGain-CX suitable for any OSP installation.

Physical Description

- **BURIED WIRE CONDUCTORS:** Solid annealed copper in 22 AWG.
- **INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Pair twist lays are varied to minimize crosstalk and meet capacitance unbalance limits. The wire is completely filled with an 80°C ETPR compound, filling the air spaces between insulated conductors.
- **CORE COVERING:** A non-hygroscopic core wrap protects the core and provides improved mechanical and electrical characteristics. The outer surface of the core wrap is flooded.
- **SHIELD:** A corrugated 4-mil Copper clad steel tape is longitudinally applied over the core wrap. The outer surface of the shield is flooded to prevent water penetration between the shield and jacket.
- **SERIES 11 QUAD (COAX TECHNOLOGY) CONDUCTORS:** 14 AWG 0.06 inch (1.63 mm) copper covered steel center conductor.
- **INSULATION:** Foamed polyethylene insulation.
- **SHIELD:** Quad shield which consists of four layers: bonded foil, 60% braid, foil and 40% braid.
- **OUTER JACKET:** PVC material is provided around both components with a web separator that facilitates separating of the independent elements.

Electrical Specifications

Copper Pairs Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Insulation Resistance Minimum		Attenuation - Max Average @ 772 kHz		Conductor DC Resistance @ 68°F Maximum Individual		Resistance Unbalance Maximum	Dielectric Strength Volts DC	
AWG	mm	megohm-mile	megohm-km	dB/kft	dB/km	ohms/mile	ohms/km	Individual Pair %	Cdr. to Cdr.	Cdr. to Gnd.
22	0.64	1,000	1,600	91.0	56.4	4.4	14.4	5.0	5,000	15,000

Crosstalk Loss	dB/kft	dB/km
FEXT @ 150 kHz; Minimum Individual	63	58
NEXT @ 722 kHz; Minimum Individual	48 dB	

Capacitance Unbalance @ 1000 Hz, Pair to Pair	pF/kft	pF/km
Pair to Pair, Maximum	80	145

Series 11 Quad Shielded Coax

Nominal Cable Diameter	0.4 inches (10mm)
Nominal Impedance	75 Ohms
Nominal Velocity of Propagation	85%

Part Numbers and Physical Characteristics

Part #	Description	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
89-324-21	5 x 22 BW BWCF/11Quad	123 (230)	1000 (305)	Reel
89-324-01	2 x 22 BW BWCF/11Quad	99 (147)	1000 (305)	Reel

Standards Compliance:

Telcordia TR-NWT-000124; ANSI/ICEA S-86-634-2004; Telcordia GR-1398-CORE and SCTE IPS-SP-001, as applicable, RoHS compliant



PREMISES FIBER



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Simplex, Duplex and Quad Fiber Optic Interconnect Cable OFNR/OFNP



Product Description

Simplex, duplex and quad cables are typically used for patch cords and intra-building installations. Superior Essex designed these cables for environments where small size, flexible construction and flame resistance are required, and are available in both riser and plenum versions. Higher performance optical fibers are offered as standard; including RWP for Single mode, 220/600 62.5 µm multimode and 10G/150 laser optimized 50 µm multimode.

Physical Description

- The design consists of flexible tight buffer material extruded over the fiber to a diameter of 900 µm for use with standard connectors. Dielectric yarns are applied for additional strength and a flame resistant outer jacket covers the strength members. Appropriate materials are used to achieve an OFNR (riser) or OFNP (plenum) rating.
- Standard 2.9 mm and small form factor 2 mm diameters are available for simplex and duplex designs.

Jacket Colors

- RWP Single mode – Yellow
- TeraGain 62.5/125 µm and 500/500 50/125 µm multimode – Orange
- TeraGain 10G/150, 10G/300 and 10G/550 – Aqua

Applications

- Cross-connects and patch applications
- Communication closets to wall outlets
- Drop ceiling applications (plenum)
- Fiber to the work area

Environmental Specifications	Plenum	Riser
Operation	-40°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C

Part Numbers and Physical Characteristics

	Part #	Fiber Type	Configuration	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
							Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
OFNR	330013101	RWP SMF	Round	1	0.11 (2.9)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A30013101	RWP SMF	Round	1	0.08 (2.0)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B30023101	RWP SMF	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C30023101	RWP SMF	Zip	2	0.08 x 0.17 (2.0 x 4.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	330023101	RWP SMF	Round	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	330043101	RWP SMF	Round	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
OFNP	340013101	RWP SMF	Round	1	0.11 (2.9)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A40013101	RWP SMF	Round	1	0.08 (2.0)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B40023101	RWP SMF	Zip	2	0.11 x 0.24 (2.9 x 6.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C40023101	RWP SMF	Zip	2	0.08 x 0.17 (2.0 x 4.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	340023101	RWP SMF	Round	2	0.20 (5.0)	16 (24)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	340043101	RWP SMF	Round	4	0.20 (5.0)	18 (26)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
OFNR	330016G01	62.5/125 MM	Round	1	0.11 (2.9)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A30016G01	62.5/125 MM	Round	1	0.08 (2.0)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B30026G01	62.5/125 MM	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C30026G01	62.5/125 MM	Zip	2	0.08 x 0.17 (2.0 x 4.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	330026G01	62.5/125 MM	Round	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	330046G01	62.5/125 MM	Round	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
OFNP	340016G01	62.5/125 MM	Round	1	0.11 (2.9)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A40016G01	62.5/125 MM	Round	1	0.08 (2.0)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B40026G01	62.5/125 MM	Zip	2	0.11 x 0.24 (2.9 x 6.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C40026G01	62.5/125 MM	Zip	2	0.08 x 0.17 (2.0 x 4.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	340026G01	62.5/125 MM	Round	2	0.20 (5.0)	16 (24)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	340046G01	62.5/125 MM	Round	4	0.20 (5.0)	18 (26)	100 (440)	30 (132)	3.1 (80)	2.0 (50)

Part Numbers and Physical Characteristics										
Part #	Fiber Type	Configurations	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius		
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)	
OFNR	33001AG01	10G/150	Round	1	0.11 (2.9)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A3001AG01	10G/150	Round	1	0.08 (2.0)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B3002AG01	10G/150	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C3002AG01	10G/150	Zip	2	0.08 x 0.17 (2.0 x 4.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	33002AG01	10G/150	Round	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	33004AG01	10G/150	Round	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
OFNP	34001AG01	10G/150	Round	1	0.11 (2.9)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A4001AG01	10G/150	Round	1	0.08 (2.0)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B4002AG01	10G/150	Zip	2	0.11 x 0.24 (2.9 x 6.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C4002AG01	10G/150	Zip	2	0.08 x 0.17 (2.0 x 4.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	34002AG01	10G/150	Round	2	0.20 (5.0)	16 (24)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	34004AG01	10G/150	Round	4	0.20 (5.0)	18 (26)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
OFNR	33001BG01	10G/300	Round	1	0.11 (2.9)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A3001BG01	10G/300	Round	1	0.08 (2.0)	4 (6)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B3002BG01	10G/300	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C3002BG01	10G/300	Zip	2	0.08 x 0.17 (2.0 x 4.2)	8 (12)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	33002BG01	10G/300	Round	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	33004BG01	10G/300	Round	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
OFNP	34001BG01	10G/300	Round	1	0.11 (2.9)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	A4001BG01	10G/300	Round	1	0.08 (2.0)	5 (7)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	B4002BG01	10G/300	Zip	2	0.11 x 0.24 (2.9 x 6.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	C4002BG01	10G/300	Zip	2	0.08 x 0.17 (2.0 x 4.2)	10 (14)	100 (440)	30 (132)	2.0 (50)	1.2 (30)
	34002BG01	10G/300	Round	2	0.20 (5.0)	16 (24)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	34004BG01	10G/300	Round	4	0.20 (5.0)	18 (26)	100 (440)	30 (132)	3.1 (80)	2.0 (50)

* To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance:

Listed as OFNR (UL 1666), Listed as OFNP (NFPA 262), Designed in accordance with Telcordia GR-409-CORE, ANSI/TIA/EIA 568-B.3, RoHS Compliant.

Single Unit Premises Distribution Fiber Optic Cables

OFNR/OFNP



Product Description

These Superior Essex premises distribution fiber optic cables are constructed using a single unit – single jacket RoHS compliant design with fiber counts from 6 through 24. Standard fibers for these cables include Reduced Water Peak (RWP) Single mode, TeraGain® 220/600 62.5 µm multimode and TeraGain® 10G/150 – laser optimized 50 µm multimode fiber. All fibers exceed industry requirements.

Physical Description

- The design consists of flexible 900 µm tight buffered industry standard 250 µm fibers (900/250/125 µm) and are suitable for use with standard connectors, like the SC, ST, and FC, and small-form-factor connectors like the LC. Dielectric aramid yarns are applied for strength while maintaining flexibility. The 18- and 24-fiber cable designs have a flexible glass reinforced central strength element for added durability and performance. For fibers 18 through 24, the 900 µm tight buffered fibers are Bandmarked making them easily distinguishable from fibers 1 through 12. A durable, flame resistant outer jacket is applied over the cable core using appropriate OFNR or OFNP rated materials. All materials used in the construction of these cables are RoHS compliant.

Jacket Colors

- RWP Single mode – Yellow
- TeraGain 62.5/125 µm and 500/500 50/125 µm multimode – Orange
- TeraGain 10G/150, 10G/300 and 10G/550 – Aqua

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets
- "Behind-the-shelf" connections

Environmental Specifications	Plenum	Riser
Operation	-20°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C

Part Numbers and Physical Characteristics

	Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
OFNR	430063101	RWP SMF	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	430083101	RWP SMF	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
	430123101	RWP SMF	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
	430183K01	RWP SMF	18	0.28 (7.1)	32 (48)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	430243K01	RWP SMF	24	0.335 (8.5)	41 (61)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
OFNP	440063101	RWP SMF	6	0.20 (5.0)	19 (29)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	440083101	RWP SMF	8	0.24 (6.0)	24 (36)	100 (440)	30 (132)	3.5 (90)	2.4 (60)
	440123101	RWP SMF	12	0.26 (6.5)	28 (42)	100 (440)	30 (132)	3.9 (100)	2.8 (70)
	440183K01	RWP SMF	18	0.262 (6.7)	29 (43)	809 (3600)	150 (660)	45 (198)	4.9 (124)
	440243K01	RWP SMF	24	0.285 (7.2)	35 (53)	674 (3000)	150 (660)	45 (198)	5.2 (131)
OFNR	430066G01	62.5/125 MM	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	430086G01	62.5/125 MM	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
	430126G01	62.5/125 MM	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
	430186K01	62.5/125 MM	18	0.28 (7.1)	32 (48)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	430246K01	62.5/125 MM	24	0.335 (8.5)	41 (61)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)

Part Numbers and Physical Characteristics (cont.)

Fiber Optic Cable Data Sheet - Standard Specifications (mm)									
Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius		
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)	
OFNP	440066G01	62.5/125 MM	6	0.20 (5.0)	19 (29)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	440086G01	62.5/125 MM	8	0.24 (6.0)	24 (36)	100 (440)	30 (132)	3.5 (90)	2.4 (60)
	440126G01	62.5/125 MM	12	0.26 (6.5)	28 (42)	100 (440)	30 (132)	3.9 (100)	2.8 (70)
	440186K01	62.5/125 MM	18	0.262 (6.7)	29 (43)	150 (660)	45 (198)	7.8 (198)	4.9 (124)
	440246K01	62.5/125 MM	24	0.285 (7.2)	35 (53)	150 (660)	45 (198)	8.3 (210)	5.2 (131)
OFNR	43006AG01	10G/150	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	43008AG01	10G/150	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
	43012AG01	10G/150	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
	43018AK01	10G/150	18	0.28 (7.1)	32 (48)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	43024AK01	10G/150	24	0.335 (8.5)	41 (61)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
OFNP	44006AG01	10G/150	6	0.20 (5.0)	19 (29)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	44008AG01	10G/150	8	0.24 (6.0)	24 (36)	100 (440)	30 (132)	3.5 (90)	2.4 (60)
	44012AG01	10G/150	12	0.26 (6.5)	28 (42)	100 (440)	30 (132)	3.9 (100)	2.8 (70)
	44018AK01	10G/150	18	0.262 (6.7)	29 (43)	150 (660)	45 (198)	7.8 (198)	4.9 (124)
	44024AK01	10G/150	24	0.285 (7.2)	35 (53)	150 (660)	45 (198)	8.3 (210)	5.2 (131)
OFNR	43006BG01	10G/300	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	43008BG01	10G/300	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
	43012BG01	10G/300	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
	43018BK01	10G/300	18	0.28 (7.1)	32 (48)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	43024BK01	10G/300	24	0.335 (8.5)	41 (61)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
OFNP	44006BG01	10G/300	6	0.20 (5.0)	19 (29)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	44008BG01	10G/300	8	0.24 (6.0)	24 (36)	100 (440)	30 (132)	3.5 (90)	2.4 (60)
	44012BG01	10G/300	12	0.26 (6.5)	28 (42)	100 (440)	30 (132)	3.9 (100)	2.8 (70)
	44018BK01	10G/300	18	0.262 (6.7)	29 (43)	150 (660)	45 (198)	7.8 (198)	4.9 (124)
	44024BK01	10G/300	24	0.285 (7.2)	35 (53)	150 (660)	45 (198)	8.3 (210)	5.2 (131)

* To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance:

Listed as OFNR (UL 1666), Listed as OFNP (NFPA 262), Designed in accordance with Telcordia GR-409-CORE, ANSI/TIA/EIA 568-B.3, RoHS Compliant.

Multi-Unit Premises Distribution Fiber Optic Cables

OFNR/OFNP



Product Description

These Superior Essex premises distribution fiber optic cables are constructed using 6 or 12-fiber subunits stranded around a central strength member in a RoHS compliant design for fiber counts from 18 through 72 for plenum and 18 through 144 for riser. Standard fibers for these cables include Reduced Water Peak (RWP) Single mode, TeraGain 220/600 62.5 μ m multimode and TeraGain® 10G/150 – laser optimized 50 μ m multimode fiber. All fibers exceed industry requirements.

Physical Description

The design consists of flexible 900 μ m tight buffered industry standard 250 μ m fibers (900/250/125 μ m) and are suitable for use with standard connectors, like the SC, ST, and FC, and small-form-factor connectors like the LC. Subunits are constructed using dielectric aramid yarns for strength while maintaining flexibility and are jacketed using the color appropriate to the type of fiber in the cable. 6-fiber subunits are used for cable fiber counts from 18 through 36, while 12-fiber subunits are used for cable fiber counts from 48 through 144. The subunits are then Reverse-Oscillating-Lay (ROL) stranded around a flexible high-strength glass reinforced rod which provides exceptional resistance to dimensional changes due to temperature. A durable, flame resistant outer jacket is applied over the cable core using appropriate OFNR or OFNP rated materials. All materials used in the construction of these cables are RoHS compliant.

Jacket Colors

- RWP Single mode – Yellow
- TeraGain 62.5/125 μ m and 500/500 50/125 μ m multimode – Orange
- TeraGain 10G/150, 10G/300 and 10G/550 – Aqua

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets
- "Behind-the-shelf" connections

Environmental Specifications	Plenum	Riser
Operation	-20°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C

Part Numbers and Physical Characteristics

	Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
OFNR	430183101	RWP SMF	18	0.53 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	430243101	RWP SMF	24	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
	430363101	RWP SMF	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	430483101	RWP SMF	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	430603101	RWP SMF	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)
	430723101	RWP SMF	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
	430963101	RWP SMF	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)
	431443101	RWP SMF	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)
OFNP	440183101	RWP SMF	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)
	440243101	RWP SMF	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)
	440363101	RWP SMF	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)
	440483101	RWP SMF	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)
	440603101	RWP SMF	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)
	440723101	RWP SMF	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)
OFNR	430186G01	62.5/125 MM	18	0.53 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	430246G01	62.5/125 MM	24	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
	430366G01	62.5/125 MM	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	430486G01	62.5/125 MM	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	430606G01	62.5/125 MM	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)
	430726G01	62.5/125 MM	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
	430966G01	62.5/125 MM	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)
	431446G01	62.5/125 MM	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)

Part Numbers and Physical Characteristics (cont.)

	Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
OFNP	440186G01	62.5/125 MM	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)
	440246G01	62.5/125 MM	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)
	440366G01	62.5/125 MM	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)
	440486G01	62.5/125 MM	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)
	440606G01	62.5/125 MM	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)
	440726G01	62.5/125 MM	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)
OFNR	43018AG01	10G/150	18	0.53 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	43024AG01	10G/150	24	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
	43036AG01	10G/150	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	43048AG01	10G/150	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	43060AG01	10G/150	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)
	43072AG01	10G/150	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
	43096AG01	10G/150	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)
	43144AG01	10G/150	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)
OFNP	44018AG01	10G/150	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)
	44024AG01	10G/150	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)
	44036AG01	10G/150	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)
	44048AG01	10G/150	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)
	44060AG01	10G/150	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)
	44072AG01	10G/150	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)
OFNR	43018BG01	10G/300	18	0.53 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	43024BG01	10G/300	24	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
	43036BG01	10G/300	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	43048BG01	10G/300	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	43060BG01	10G/300	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)
	43072BG01	10G/300	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
	43096BG01	10G/300	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)
	43144BG01	10G/300	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)
OFNP	44018BG01	10G/300	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)
	44024BG01	10G/300	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)
	44036BG01	10G/300	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)
	44048BG01	10G/300	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)
	44060BG01	10G/300	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)
	44072BG01	10G/300	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)
OFNR	43018FG01	10G/550	18	0.53 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)
	43024FG01	10G/550	24	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
	43036FG01	10G/550	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	43048FG01	10G/550	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
	43060FG01	10G/550	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)
	43072FG01	10G/550	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
	43096FG01	10G/550	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)
	43144FG01	10G/550	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)
OFNP	44018FG01	10/550	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)
	44024FG01	10/550	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)
	44036FG01	10/550	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)
	44048FG01	10/550	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)
	44060FG01	10/550	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)
	44072FG01	10/550	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)

* To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance:

Listed as OFNR (UL 1666), Listed as OFNP (NFPA 262), ICEA S-83-596-2001, Telcordia GR-409-CORE, ANSI/TIA/EIA 568-B.3, RoHS compliant

Fiber Reel-in-a-Box with QuickCount® Marking System



Product Description

Superior Essex is the first manufacturer to offer a premises fiber cable product family that is packaged as a Reel-in-a-box and includes the innovative QuickCount® footage marking system. The Reel-in-a-Box packaging of fiber cable is a true advantage for installers who are pulling fiber cable in multiple locations. The Reel-in-a-Box package not only stacks and travels better, it also protects the fiber cable better than an open reel. The QuickCount® feature provides footage marking on the cable jacket counting down from 1000ft. This feature has been widely valued in Superior Essex copper cable products for its ability to save time and material by providing an immediate, exact view of unused cable length. The Superior Essex QuickCount®, Reel-in-a-Box product is available for riser and plenum, multimode and Single mode fiber cables in Duplex, Quad, 6-fiber and 12 fiber constructions.

Physical Description

The design consists of flexible tight buffer material extruded over the fiber to a diameter of 900 µm for use with standard connectors. Dielectric yarns are applied for additional strength and a flame resistant outer jacket covers the strength members. Appropriate materials are used to achieve an OFNR (riser) or OFNP (plenum) rating



Features

- QuickCount® countdown footage markings
- Reel-in-a-Box packaging
- Heavy-Duty package design
- 1000' packages
- Multimode and Single mode

Benefits

- Allows installer an immediate, exact view of unused cable
- Saves time by eliminating payoff stands and provides the ability to quickly place the reel and begin pulling
- Protects the fiber cable more than open reels; avoids damage to material
- Reduces cable waste due to left over short lengths
- Allows flexibility of using Reel-in-a-Box for virtually all optical fiber cable networking applications

Applications

- Cross-connects and patch applications
- Closet to closet backbone connections
- Plenum and riser pathways
- Fiber to the work area

Environmental Specifications	Plenum	Riser
Operation	-40°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C

Part Numbers and Physical Characteristics										
Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Put-up (ft)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius		
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)	
OFNR	33002AGBB	10G/150	2	0.20 (5.0)	1,000	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	330026GBB	62.5/125 MM	2	0.20 (5.0)	1,000	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	W3002AGBB	10G/150	2	0.20 (5.0)	1,000	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	W30026GBB	62.5/125 MM	2	0.20 (5.0)	1,000	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	33004AGBB	10G/150	4	0.20 (5.0)	1,000	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	330046GBB	62.5/125 MM	4	0.20 (5.0)	1,000	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	W3004AGBB	10G/150	4	0.20 (5.0)	1,000	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	W30046GBB	62.5/125 MM	4	0.20 (5.0)	1,000	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	43006AGBB	10G/150	6	0.20 (5.0)	1,000	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	430066GBB	62.5/125 MM	6	0.20 (5.0)	1,000	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)
	W3006AGBB	10G/150	6	0.20 (5.0)	1,000	16 (24)	169 (750)	84 (375)	3.5 (90)	2.4 (60)
	W30066GBB	62.5/125 MM	6	0.20 (5.0)	1,000	16 (24)	169 (750)	84 (375)	3.5 (90)	2.4 (60)
	43012AGBB	10G/150	12	0.26 (6.5)	1,000	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
	430126GBB	62.5/125 MM	12	0.26 (6.5)	1,000	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
	W3012AGBB	10G/150	12	0.26 (6.5)	1,000	24 (36)	225 (1000)	112 (500)	3.9 (100)	2.8 (70)
	W30126GBB	62.5/125 MM	12	0.26 (6.5)	1,000	24 (36)	225 (1000)	112 (500)	3.9 (100)	2.8 (70)
OFNP	34002AGBB	10G/150	2	0.20 (5.0)	1,000	16 (24)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	340026GBB	62.5/125 MM	2	0.20 (5.0)	1,000	16 (24)	100 (440)	30 (132)	3.1 (80)	2.0 (50)
	34004AGBB	10G/150	4	0.20 (5.0)	1,000	18 (26)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	340046GBB	62.5/125 MM	4	0.20 (5.0)	1,000	18 (26)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	24004AGBB	10G/150	4	0.20 (5.0)	1,000	18 (26)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	240046GBB	62.5/125 MM	4	0.20 (5.0)	1,000	18 (26)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	44006AGBB	10G/150	6	0.20 (5.0)	1,000	19 (29)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	440066GBB	62.5/125 MM	6	0.20 (5.0)	1,000	19 (29)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	24006AGBB	10G/150	6	0.20 (5.0)	1,000	19 (29)	169 (750)	84 (375)	3.1 (80)	2.0 (50)
	240066GBB	62.5/125 MM	6	0.20 (5.0)	1,000	19 (29)	169 (750)	84 (375)	3.1 (80)	2.0 (50)
	44012AGBB	10G/150	12	0.26 (6.5)	1,000	28 (42)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	440126GBB	62.5/125 MM	12	0.26 (6.5)	1,000	28 (42)	100 (400)	30 (132)	3.1 (80)	2.0 (50)
	24012AGBB	10G/150	12	0.26 (6.5)	1,000	28 (42)	225 (1000)	112 (500)	3.9 (100)	2.8 (70)
	240126GBB	62.5/125 MM	12	0.26 (6.5)	1,000	28 (42)	225 (1000)	112 (500)	3.9 (100)	2.8 (70)

For complete optical fiber specifications, see page 230.

Part # Positions 1 & 2: Cable Type

W3 = Waterblocking Indoor/Outdoor OFNR

24 = Indoor/Outdoor OFNP

33/34 = Interconnect

43/44 = Distribution

Part # Positions 3, 4, 5: # of Fibers

002 through 012

Part # Position 6: Fiber Types

3 = Single mode RWP A = TeraGain 50 µm 10G/150

5 = TeraGain 50 µm B = TeraGain 50 µm 10G/300

6 = TeraGain 62.5 µm

Jacket colors:

Orange = Multimode 62.5 µm

Yellow = Single mode

Aqua = TeraGain 10G 50 µm

Standards Compliance:

Listed as OFNR (UL 1666), Listed as OFNP (NFPA 262), Designed in accordance with Telcordia GR-409-CORE, ANSI/TIA/EIA 568-B.3, RoHS Compliant.

Indoor/Outdoor Tight Buffer Fiber Optic Cables

OFNR/OFNP



Product Description

Superior Essex indoor/outdoor tight buffer riser and plenum fiber optic cables are ideally suited for installations that require partial or complete routing of pathways outside the building. These cables can be installed in conduits, inner-ducts and steam tunnels, as well as within building riser and plenum locations. The tight buffer feature of these indoor/outdoor cables eliminates the need for breakout kits and or other special termination equipment associated with loose tube OSP cables. The outer jacket is comprised of a rugged UL listed sunlight resistant polymer that allows for the cable to be exposed to direct sunlight without the concern of material degradation and greatly reduces moisture migration. All fiber types are available, including 50/125 μ m, 62.5/125 μ m and Single mode.

Physical Description

- The design consists of flexible tight buffer material extruded over the fiber to a diameter of 900 μ m for use with standard connectors. Dielectric yarns are applied for additional strength and a flame resistant outer jacket covers the strength members. Appropriate materials are used to achieve an OFNR (riser) or OFNP (plenum) rating.

Features

- Tested and Qualified to GR-409
- Exceeds TIA/EIA 568-B.3 optical performance
- 900 μ m tight buffered fibers
- Black, UL listed Sunlight Resistant outer jacket
- OFNR and OFNP water resistant, Indoor/Outdoor design
- All – dielectric
- Jacket Ripcord

Benefits

- Assurance that cable investment will last
- Future-proof fiber performance for current and future networking applications
- Connect directly to mechanical connectors
- Can be placed in open path ways without the need for additional cable protection and costs
- Eliminates the need to purchase separate cables for riser or plenum Indoor and Outdoor applications
- No additional grounding materials need to be purchased
- Saves time in cable preparation

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets

Environmental Specifications	Plenum	Riser
Operation	-40°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C
Crush	10N/mm	10N/mm
Impact	6 N-m	6 N-m

Part Numbers and Physical Characteristics

Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius		Vertical Rise
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)	ft (m)
OFNR Indoor/Outdoor									
230023101	RWP SMF	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
230043101	RWP SMF	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
230063101	RWP SMF	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
230083101	RWP SMF	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
230123101	RWP SMF	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
230183101	RWP SMF	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
230243101	RWP SMF	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
230363101	RWP SMF	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
230483101	RWP SMF	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
230603101	RWP SMF	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)	1096 (334)
230723101	RWP SMF	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
230963101	RWP SMF	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
231443101	RWP SMF	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)
OFNP Indoor/Outdoor									
240023101	RWP SMF	2	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
240043101	RWP SMF	4	0.20 (5.0)	18 (26)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
240063101	RWP SMF	6	0.20 (5.0)	19 (29)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
240083101	RWP SMF	8	0.24 (6.0)	24 (36)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
240123101	RWP SMF	12	0.26 (6.5)	28 (42)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
240183101	RWP SMF	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)	702 (214)
240243101	RWP SMF	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)	856 (261)
240363101	RWP SMF	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)	1096 (334)
240483101	RWP SMF	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)	1096 (334)
240603101	RWP SMF	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)	1096 (334)
240723101	RWP SMF	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)	1096 (334)

Part Numbers and Physical Characteristics (cont.)									
Part #	Fiber Type	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius		Vertical Rise
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)	
OFNR Indoor/Outdoor									
230026G01	62.5/125 MM	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
230046G01	62.5/125 MM	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
230066G01	62.5/125 MM	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
230086G01	62.5/125 MM	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
230126G01	62.5/125 MM	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
230186G01	62.5/125 MM	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
230246G01	62.5/125 MM	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
230366G01	62.5/125 MM	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
230486G01	62.5/125 MM	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
230606G01	62.5/125 MM	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)	1096 (334)
230726G01	62.5/125 MM	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
230966G01	62.5/125 MM	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
231446G01	62.5/125 MM	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)
OFNP Indoor/Outdoor									
240026G01	62.5/125 MM	2	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
240046G01	62.5/125 MM	4	0.20 (5.0)	18 (26)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
240066G01	62.5/125 MM	6	0.20 (5.0)	19 (29)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
240086G01	62.5/125 MM	8	0.24 (6.0)	24 (36)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
240126G01	62.5/125 MM	12	0.26 (6.5)	28 (42)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
240186G01	62.5/125 MM	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)	702 (214)
240246G01	62.5/125 MM	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)	856 (261)
240366G01	62.5/125 MM	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)	1096 (334)
240486G01	62.5/125 MM	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)	1096 (334)
240606G01	62.5/125 MM	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)	1096 (334)
240726G01	62.5/125 MM	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)	1096 (334)
OFNR Indoor/Outdoor									
23002BG01	10G/300	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
23004BG01	10G/300	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
23006BG01	10G/300	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
23008BG01	10G/300	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
23012BG01	10G/300	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
23018BG01	10G/300	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
23024BG01	10G/300	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
23036BG01	10G/300	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
23048BG01	10G/300	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
23060BG01	10G/300	60	0.69 (17.6)	148 (220)	300 (1320)	90 (396)	11.1 (282)	6.9 (176)	1096 (334)
23072BG01	10G/300	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
23096BG01	10G/300	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
23144BG01	10G/300	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)
OFNP Indoor/Outdoor									
24002BG01	10G/300	2	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
24004BG01	10G/300	4	0.20 (5.0)	18 (26)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
24006BG01	10G/300	6	0.20 (5.0)	19 (29)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
24008BG01	10G/300	8	0.24 (6.0)	24 (36)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
24012BG01	10G/300	12	0.26 (6.5)	28 (42)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
24018BG01	10G/300	18	0.49 (12.4)	84 (125)	300 (1320)	90 (396)	7.8 (198)	4.9 (124)	702 (214)
24024BG01	10G/300	24	0.52 (13.1)	104 (155)	300 (1320)	90 (396)	8.3 (210)	5.2 (131)	856 (261)
24036BG01	10G/300	36	0.61 (15.5)	148 (220)	300 (1320)	90 (396)	9.8 (248)	6.1 (155)	1096 (334)
24048BG01	10G/300	48	0.62 (15.8)	141 (210)	300 (1320)	90 (396)	10.0 (253)	6.2 (158)	1096 (334)
24060BG01	10G/300	60	0.68 (17.2)	171 (255)	300 (1320)	90 (396)	10.8 (275)	6.8 (172)	1096 (334)
24072BG01	10G/300	72	0.74 (18.9)	212 (315)	600 (2700)	90 (396)	11.9 (302)	7.4 (189)	1096 (334)

* To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance:

Listed as OFNR (UL 1666), Listed as OFNP (NFPA 262), Designed and tested in accordance with Telcordia GR-409-CORE, GR-2961-CORE, ISO/IEC 11801, ANSI/TIA/EIA 568-B.3

Water-Blocked/Sunlight Resistant Indoor/Outdoor

Tight Buffer Fiber Optic Cables – Riser Rated OFNR



Product Description

Superior Essex water-blocked (dry technology), sunlight resistant indoor/outdoor tight buffer riser rated cable line offers the system designer the ultimate in premises fiber optic cable utility. These cables can be installed in open spaces, trays, conduits, inner-ducts, trenches, steam tunnels and building riser locations. These cables incorporate the latest in dry-water blocking technology. This system of water blocking eliminates the need to clean off the traditional gel-based water-blocking compounds found in loose-tube cables. In addition, breakout kits and or other special termination equipment associated with loose tube OSP cables are not required. The outer jacket is comprised of a rugged UL listed sunlight resistant polymer that allows for the cable to be exposed to long-term direct sunlight without the concern of material degradation. All fiber types are available, including 50/125 μm , 62.5/125 μm and Single mode.

Physical Description

- **Single-unit Design (2 – 12 Fibers):** the design consists of flexible tight buffer material extruded over the fiber to a diameter of 900 μm . Multiple 900 μm , color coded fibers are combined with aramid and water-blocking elements to obtain proper strength and water-blocking characteristics. The core construction is then covered with flame, chemical and sunlight resistance black outer jacket.
- **Multiple-unit Design (18 – 144 fibers):** the design consists of multi-fiber dry water-blocked sub-units. For 18 through 36 fiber designs, six-fiber sub-units are grouped together to form the cable core. For 48 through 144 fiber constructions, 12 fiber sub-units are used. For all multiunit constructions, the core is comprised of the water-blocked sub-units cabled together with additional strength members and dry water-blocking elements. The core construction is then covered with flame, chemical and sunlight resistance black outer jacket.

Features

- Tested and Qualified to GR-409 and GR-2961
- Exceeds TIA/EIA 568-B.3 optical performance
- Dry-block design meets Telcordia GR-20 water block requirements
- 900 μm tight-buffered fibers
- Black, UL listed Sunlight Resistant and outer jacket
- UL/NEC Listed OFNR/FT4
- All – dielectric

Benefits

- Assurance that cable investment is maintained over the life of the system
- Future-proof fiber performance for current and future multi-gigabit applications
- Cable integrity maintained even if damage occurs to protective layers
- Direct connectorization without additional hardware
- Confidence that cable will last even with long-term exposure to direct sunlight
- Eliminates the need to purchase separate cables for OSP and indoor/riser applications
- No additional grounding materials need to be purchased
- Saves time in cable preparation

Applications

- Intra/Inter-building Backbones
- Trench/Conduit/Duct/Tray pathways
- Dry or wet locations

Environmental Specifications	Plenum	Riser
Operation	-40°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C
Crush	10N/mm	10N/mm
Impact	6 N-m	6 N-m

Water-Blocked/Sunlight Resistant Indoor/Outdoor Tight Buffer Fiber Optic Cables – Riser Rated OFNR

Part Numbers and Physical Characteristics								
Part #	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius		Vertical Rise
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)	ft (m)
Reduced Water Peak Single mode Fiber								
W30023101	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
W30043101	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
W30063101	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
W30083101	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
W30123101	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
W30183101	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
W30243101	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
W30363101	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W30483101	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W30723101	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
W30963101	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
W31443101	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)
TeraGain® 62.5/125 µm (220/600 Mhz-km) MMF								
W30026G01	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
W30046G01	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
W30066G01	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
W30086G01	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
W30126G01	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
W30186G01	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
W30246G01	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
W30366G01	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W30486G01	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W30726G01	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
W30966G01	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
W31446G01	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)
TeraGain® 50/125 µm (700/500 Mhz-km) MMF								
W3002AG01	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
W3004AG01	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
W3006AG01	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
W3008AG01	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
W3012AG01	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
W3018AG01	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
W3024AG01	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
W3036AG01	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W3048AG01	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W3072AG01	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
W3096AG01	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
W3144AG01	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)
TeraGain® 50/125 µm (1500/500 Mhz-km) MMF								
W3002BG01	2	0.20 (5.0)	14 (21)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	98 (31)
W3004BG01	4	0.20 (5.0)	15 (22)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	108 (33)
W3006BG01	6	0.20 (5.0)	16 (24)	150 (660)	45 (200)	3.1 (80)	2.0 (50)	121 (37)
W3008BG01	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)	154 (47)
W3012BG01	12	0.26 (6.5)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)	180 (55)
W3018BG01	18	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)	702 (214)
W3024BG01	24	0.52 (13.3)	87 (130)	300 (1320)	90 (396)	8.4 (213)	5.2 (133)	856 (261)
W3036BG01	36	0.63 (15.9)	128 (190)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W3048BG01	48	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)	1096 (334)
W3072BG01	72	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)	1096 (334)
W3096BG01	96	0.89 (22.5)	269 (400)	600 (2700)	90 (396)	14.2 (360)	8.9 (225)	1096 (334)
W3144BG01	144	0.98 (25.0)	276 (410)	600 (2700)	90 (396)	15.7 (400)	9.8 (250)	1096 (334)

* To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance

UL Listed Sunlight Resistant, Listed as OFNR (UL 1666), Designed and tested in accordance with Telcordia GR-409-CORE, GR-20-CORE, GR-2961-CORE, ISO/IEC 11801, ANSI/TIA/EIA 568-B.3, RoHS Compliant.



Product Description

Superior Essex offers a broad line of products including multimode and Single mode fibers within the same fiber optic cable. The use of hybrid fiber designs have proven useful to network systems designers because it offers the flexibility to run diverse applications upgrades without the need to install new cables. Superior Essex hybrid fiber optic cables are available in stranded tight buffer premises distribution cables, as well as all other loose tube cable product designs. Hybrid cables are used for standard campus networking applications and can be manufactured with a wide variety of fiber type combinations. They will save the designer and the customer significant costs over the lifetime of the physical cable plant.

Physical Description

- The tight buffer design consists of flexible tight buffer material extruded over the fiber to a diameter of 900 µm for use with standard connectors. Dielectric yarns are applied for additional strength and a flame resistant outer jacket covers the strength members. Appropriate materials are used to achieve an OFNR (riser) or OFNP (plenum) rating.
- The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape, then encased with a black fire resistant jacket. Ripcords are included for ease of entry.
- Hybrid cables are offered in most loose tube designs.
- Single mode fibers are assigned first in the color and/or sub-unit scheme. Multimode fibers are assigned remaining colors and/or sub-units.

Features

- GR-409, GR-20 and GR-2961 Qualified Designs
- TeraGain Multimode and Single mode under one jacket
- Compliant with TIA/EIA-568-B.3
- Armored, Riser and Plenum designs
- Design options include: armored, Indoor/Outdoor, Tight Buffered riser and plenum, and looetube.

Benefits

- Most cost-effective cables for the varied applications
- Eliminates the need for additional pathway space for different cable types
- Assures applications compliance for all current networking applications
- UL Flame rating options help to reduce additional expensive materials to meet building safety codes
- Cost savings because Inter-building runs can be done without the need for conduits or inner-ducts

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets

Environmental Specifications	Tight Buffer	Loose Tube
Operation	-40°C to + 75°C	-50°C to + 70°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 70°C
Installation	-20°C to + 65°C	-10°C to + 65°C

Part Numbers and Physical Characteristics								
Part #	Fiber Count		Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
	RWP SMF	62.5/125*			Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
Premise Distribution Riser **								
43012HGA1	6	6	0.26 (6.0)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
43018HGA1	6	12	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
43024HGA1	12	12	0.52 (13.4)	87 (130)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
43024HGB1	6	18	0.52 (13.4)	87 (130)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
43048HGB1	24	24	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
43072HGC1	36	36	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
Premise Distribution Plenum **								
44012HGA1	6	6	0.26 (6.5)	28 (42)	100 (440)	30 (132)	3.9 (100)	2.8 (70)
44018HGA1	6	12	0.49 (12.4)	84 (125)	320 (1320)	90 (396)	7.8 (198)	4.9 (124)
44024HGA1	12	12	0.52 (13.4)	104 (155)	320 (1320)	90 (396)	8.7 (220)	5.4 (137)
44024HGD1	6	18	0.52 (13.4)	104 (155)	320 (1320)	90 (396)	8.7 (220)	5.4 (137)
44048HGC1	24	24	0.62 (15.8)	171 (255)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
44072HGC1	36	36	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
Indoor/Outdoor Tight Buffer Riser **								
23012HGB1	6	6	0.26 (6.0)	24 (36)	150 (660)	45 (200)	3.9 (100)	2.8 (70)
23018HGA1	6	12	0.54 (13.7)	94 (140)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
23024HGC1	12	12	0.52 (13.4)	87 (130)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
23024HGA1	6	18	0.52 (13.4)	87 (130)	300 (1320)	90 (396)	8.7 (220)	5.4 (137)
23048HGC1	24	24	0.63 (15.9)	121 (180)	300 (1320)	90 (396)	10.0 (254)	6.3 (159)
23072HGC1	36	36	0.76 (19.3)	185 (275)	600 (2700)	90 (396)	12.2 (309)	7.6 (193)
Indoor/Outdoor Multiple Loose Tube Riser ***								
13012H1A1	6	6	0.51 (13.2)	102 (152)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
13018HTA1	6	12	0.51 (13.2)	102 (152)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
13024HTA1	12	12	0.51 (13.2)	104 (154)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
13024HTB1	6	18	0.51 (13.2)	105 (156)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
13048H1A1	24	24	0.51 (13.2)	107 (159)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
13072H1C1	36	36	0.56 (14.2)	127 (188)	600 (2700)	200 (890)	11.2 (284)	5.6 (142)

* TeraGain® 62.5/125

Many more fiber combinations and cable types are available.
Contact your sales representative for more information.
Refer to page 230 for detailed Fiber Specifications.

**Standards Compliance

Listed as OFNR (UL 1666), Listed as OFNP (NFPA 262), Designed and tested in accordance with Telcordia GR-409-CORE, GR-20-CORE, GR-2961-CORE, ISO/IEC 11801, ANSI/TIA/EIA 568-B.3

***Standards Compliance

Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000

Interlocked Armor Fiber Optic Cables OFCR/OFCP



Product Description

Interlocked Armor Fiber Optic Cables provide for an extremely well protected cable package ideally suited for harsh environments. The armor is available in steel or aluminum and comes with either an OFCR (Riser) or OFCP (Plenum) rating. This product design offers the system designer a product that can be installed in high traffic areas where added mechanical protection and security are required. The flexible interlocked armored cable design is also popular for retrofit applications and eliminates the need to install rigid conduit while still meeting building code guidelines. The complete line of Superior Essex Fiber Optic cables is available with interlocking armor.

Physical Description

- The standard product offering uses the 33-series, 34 series, 43-series and 44-series products as the core cables. The heavy duty outer armor is a flexible interlocking aluminum tape helically applied over the inner cable. Further protection is provided by an outer flame retardant jacket.

Features

- Thick, Flexible metallic armor
- Flame retardant, UL listed designs
- Full line of Superior Essex cables available

Benefits

- Reduce incidences of circuit disruption due to rodents or mechanically abusive applications
- Eliminates the need for multiple cables for installation
- Customized designs reduces cable inventory requirements

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways, trays, risers, plenums
- Service entrance to communication closets

Environmental Specifications	Plenum	Riser
Operation	-40°C to + 75°C	-40°C to + 75°C
Storage/Shipping	-40°C to + 75°C	-40°C to + 75°C
Installation	-20°C to + 65°C	-20°C to + 65°C

Part Numbers and Physical Characteristics

Part #	Fiber Type	Fiber Count	UL Rating	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
Riser Rated, Aluminum Interlocked Armor, FR-PVC Jacket									
L30023301	RWP SMF	2	OFCR	0.57 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L30043301	RWP SMF	4	OFCR	0.57 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L30063401	RWP SMF	6	OFCR	0.57 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L30123401	RWP SMF	12	OFCR	0.62 (15.8)	253 (377)	450 (2025)	330 (1350)	7.4 (188)	6.2 (157)
L30183K1Q	RWP SMF	18	OFCR	0.624 (15.8)	136 (202)	450 (2025)	330 (1350)	12.5 (31.7)	9.4 (23.8)
L30243K1Q	RWP SMF	24	OFCR	0.740 (18.8)	169 (252)	450 (2025)	330 (1350)	14.8 (37.6)	11.1 (28.2)
L30363401	RWP SMF	36	OFCR	0.97 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L30483401	RWP SMF	48	OFCR	0.97 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L30723401	RWP SMF	72	OFCR	1.12 (28.4)	508 (757)	450 (2025)	330 (1350)	13.4 (340)	11.2 (284)
L30963401	RWP SMF	96	OFCR	1.22 (31.0)	560 (835)	450 (2025)	330 (1350)	14.6 (370)	12.2 (309)
L31443401	RWP SMF	144	OFCR	1.32 (33.5)	612 (912)	450 (2025)	330 (1350)	15.8 (401)	13.2 (335)
Plenum Rated, Aluminum Interlocked Armor, FR-PVC Jacket									
L40023301	RWP SMF	2	OFCP	0.57 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L40043301	RWP SMF	4	OFCP	0.57 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L40063401	RWP SMF	6	OFCP	0.57 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L40123401	RWP SMF	12	OFCP	0.62 (15.7)	253 (377)	450 (2025)	330 (1350)	7.4 (188)	6.2 (157)
L40183K1Q	RWP SMF	18	OFCP	0.58 (14.8)	105 (156)	450 (2025)	330 (1350)	11.7 (29.7)	8.8 (22.3)
L40243K1Q	RWP SMF	24	OFCP	0.58 (14.8)	111 (165)	450 (2025)	330 (1350)	11.7 (29.7)	8.8 (22.3)
L40363401	RWP SMF	36	OFCP	0.97 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L40483401	RWP SMF	48	OFCP	0.97 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L40723401	RWP SMF	72	OFCP	1.07 (27.2)	482 (720)	450 (2025)	330 (1350)	12.8 (325)	10.7 (271)

Interlocked Armor Fiber Optic Cables OFCR/OFCP

Part Numbers and Physical Characteristics (cont.)									
Part #	Fiber Type	Fiber Count	UL Rating	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
Riser Rated, Aluminum Interlocked Armor, FR-PVC Jacket									
L30026301	62.5/125 MM	2	OFCR	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L30046301	62.5/125 MM	4	OFCR	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L30066401	62.5/125 MM	6	OFCR	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L30126401	62.5/125 MM	12	OFCR	0.620 (15.8)	253 (377)	450 (2025)	330 (1350)	7.4 (188)	6.2 (157)
L30186K1Q	62.5/125 MM	18	OFCR	0.624 (15.8)	136 (202)	450 (2025)	330 (1350)	12.5 (31.7)	9.4 (23.8)
L30246K1Q	62.5/125 MM	24	OFCR	0.740 (18.8)	169 (252)	450 (2025)	330 (1350)	14.8 (37.6)	11.1 (28.2)
L30366401	62.5/125 MM	36	OFCR	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L30486401	62.5/125 MM	48	OFCR	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L30726401	62.5/125 MM	72	OFCR	1.120 (28.4)	508 (757)	450 (2025)	330 (1350)	13.4 (340)	11.2 (284)
L30966401	62.5/125 MM	96	OFCR	1.220 (31.0)	560 (835)	450 (2025)	330 (1350)	14.6 (370)	12.2 (309)
L31446401	62.5/125 MM	144	OFCR	1.320 (33.5)	612 (912)	450 (2025)	330 (1350)	15.8 (401)	13.2 (335)
Plenum Rated, Aluminum Interlocked Armor, FR-PVC Jacket									
L40026301	62.5/125 MM	2	OFCP	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L40046301	62.5/125 MM	4	OFCP	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L40066401	62.5/125 MM	6	OFCP	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L40126401	62.5/125 MM	12	OFCP	0.620 (15.7)	253 (377)	450 (2025)	330 (1350)	7.4 (188)	6.2 (157)
L40186K1Q	62.5/125 MM	18	OFCP	0.58 (14.8)	105 (156)	450 (2025)	330 (1350)	11.7 (29.7)	8.8 (22.3)
L40246K1Q	62.5/125 MM	24	OFCP	0.58 (14.8)	111 (165)	450 (2025)	330 (1350)	11.7 (29.7)	8.8 (22.3)
L40366401	62.5/125 MM	36	OFCP	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L40486401	62.5/125 MM	48	OFCP	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L40726401	62.5/125 MM	72	OFCP	1.070 (27.2)	482 (720)	450 (2025)	330 (1350)	12.8 (325)	10.7 (271)
Riser Rated, Aluminum Interlocked Armor, FR-PVC Jacket									
L3002B301	10G/300	2	OFCR	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L3004B301	10G/300	4	OFCR	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L3006B401	10G/300	6	OFCR	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L3012B401	10G/300	12	OFCR	0.620 (15.8)	253 (377)	450 (2025)	330 (1350)	7.4 (188)	6.2 (157)
L3018BK1Q	10G/300	18	OFCR	0.624 (15.8)	136 (202)	450 (2025)	330 (1350)	12.5 (31.7)	9.4 (23.8)
L3024BK1Q	10G/300	24	OFCR	0.740 (18.8)	169 (252)	450 (2025)	330 (1350)	14.8 (37.6)	11.1 (28.2)
L3036B401	10G/300	36	OFCR	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L3048B401	10G/300	48	OFCR	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L3072B401	10G/300	72	OFCR	1.120 (28.4)	508 (757)	450 (2025)	330 (1350)	13.4 (340)	11.2 (284)
L3096B401	10G/300	96	OFCR	1.220 (31.0)	560 (835)	450 (2025)	330 (1350)	14.6 (370)	12.2 (309)
L3144B401	10G/300	144	OFCR	1.320 (33.5)	612 (912)	450 (2025)	330 (1350)	15.8 (401)	13.2 (335)
Plenum Rated, Aluminum Interlocked Armor, FR-PVC Jacket									
L4002B301	10G/300	2	OFCP	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L4004B301	10G/300	4	OFCP	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L4006B401	10G/300	6	OFCP	0.570 (14.0)	226 (337)	450 (2025)	330 (1350)	6.8 (172)	5.7 (145)
L4012B401	10G/300	12	OFCP	0.620 (15.7)	253 (377)	450 (2025)	330 (1350)	7.4 (188)	6.2 (157)
L4018BK1Q	10G/300	18	OFCP	0.58 (14.8)	105 (156)	450 (2025)	330 (1350)	11.7 (29.7)	8.8 (22.3)
L4024BK1Q	10G/300	24	OFCP	0.58 (14.8)	111 (165)	450 (2025)	330 (1350)	11.7 (29.7)	8.8 (22.3)
L4036B401	10G/300	36	OFCP	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L4048B401	10G/300	48	OFCP	0.970 (24.6)	429 (639)	450 (2025)	330 (1350)	11.6 (295)	9.7 (246)
L4072B401	10G/300	72	OFCP	1.070 (27.2)	482 (720)	450 (2025)	330 (1350)	12.8 (325)	10.7 (271)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230
Standard outer jacket color for MM fiber is orange. Steel armoring is also available.

Standards Compliance:

Listed as OFCR (UL 1666), Listed as OFCP (NFPA 262), Designed in accordance with Telcordia GR-409-CORE, ANSI/TIA/EIA 568-B.3



OSP FIBER CABLE



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Loose Tube Single Jacket All-Dielectric Cables

Series 11



Product Description

Loose tube cables are the product of choice as the backbone in outside plant environments. Loose tube all-dielectric cables are designed for use in underground ducts and lashed aerial applications. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape, then encased with a black polyethylene jacket. Ripcords are included for ease of entry.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- Improved operating temperature range
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Non sticky gel allows for easier and faster cleanup

Applications

- Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cable
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
110063101	6	0.40 (11.1)	55 (82)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110123T01	12	0.40 (11.1)	55 (82)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110243T01	24	0.40 (11.1)	55 (82)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110363T01	36	0.40 (11.1)	55 (82)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110483101	48	0.40 (11.1)	55 (82)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110723101	72	0.48 (12.2)	67 (100)	600 (2700)	200 (890)	10 (256)	5 (128)
110963101	96	0.55 (13.9)	87 (130)	600 (2700)	200 (890)	11.6 (294)	5.8 (147)
111443101	144	0.70 (17.5)	142 (211)	600 (2700)	200 (890)	14.8 (376)	7.4 (188)
112163101	216	0.72 (18.3)	145 (216)	600 (2700)	200 (890)	14.8 (376)	7.4 (188)
112883101	288	0.80 (20.5)	183 (272)	600 (2700)	200 (890)	17.2 (436)	8.6 (218)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE, RDUP Designation MLT

Loose Tube Double Jacket Non-Armor Cables

Series 1G



Product Description

Loose tube cables are the product of choice as the backbone in outside plant environments and double jacket cables offer additional mechanical protection. Loose Tube Double Jacket all-dielectric cables are designed for use in direct burial, underground ducts and lashed aerial applications. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is then wrapped with flexible strength members covered with a water blocking tape, then encased with a black polyethylene inner jacket. Water-blocking yarns and a black polyethylene outer jacket are applied. Ripcords are located under each jacket.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube for all fiber counts.
- Improved operating temperature range
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Non sticky gel allows for easier and faster cleanup

Applications

- Direct Buried, Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cables
- Local Loop, metro and long-haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1G0063101	6	0.50 (13.4)	86 (127)	600 (2700)	200 (890)	11.3 (286)	5.6 (143)
1G0123T01	12	0.50 (13.4)	86 (127)	600 (2700)	200 (890)	11.3 (286)	5.6 (143)
1G0243T01	24	0.50 (13.4)	86 (127)	600 (2700)	200 (890)	11.3 (286)	5.6 (143)
1G0363T01	36	0.50 (13.4)	86 (127)	600 (2700)	200 (890)	11.3 (286)	5.6 (143)
1G0483101	48	0.50 (13.4)	86 (127)	600 (2700)	200 (890)	11.3 (286)	5.6 (143)
1G0723101	72	0.61 (15.5)	115 (171)	600 (2700)	200 (890)	12.2 (310)	6.1 (155)
1G0963101	96	0.69 (17.6)	147 (218)	600 (2700)	200 (890)	13.9 (352)	6.9 (176)
1G1443101	144	0.85 (21.5)	219 (326)	600 (2700)	200 (890)	16.9 (430)	8.5 (215)
1G2163101	216	0.85 (21.5)	216 (321)	600 (2700)	200 (890)	16.9 (430)	8.5 (215)
1G2883101	288	0.98 (24.8)	283 (421)	600 (2700)	200 (890)	19.5 (496)	9.8 (248)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE, RDUP Designation MLT, RoHS compliant

Loose Tube Single Jacket Single Armor Cables

Series 12



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube armored cables are designed for improved mechanical and rodent protection in direct bury applications. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape, a corrugated steel armor is applied and then encased with a black polyethylene jacket. Ripcords are included for ease of entry.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube for all fiber counts
- Improved operating temperature range
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Improved compressive strength and rodent protection
- Non-sticky gel allows for easier and faster cleanup

Applications

- Direct Bury, Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
120063101	6	0.50 (12.2)	93 (139)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120123T01	12	0.50 (12.2)	93 (139)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120243T01	24	0.50 (12.2)	93 (139)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120363T01	36	0.50 (12.2)	93 (139)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120483101	48	0.50 (12.2)	93 (139)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120723101	72	0.53 (13.3)	108 (161)	600 (2700)	200 (890)	11.2 (282)	6.1 (155)
120963101	96	0.60 (16.1)	152 (225)	600 (2700)	200 (890)	13.6 (352)	6.9 (176)
121443101	144	0.78 (19.7)	220 (328)	600 (2700)	200 (890)	16.8 (426)	8.5 (215)
122163101	216	0.81 (20.5)	228 (339)	600 (2700)	200 (890)	16.8 (426)	8.5 (215)
122883101	288	0.90 (22.7)	274 (408)	600 (2700)	200 (890)	19.0 (484)	9.8 (248)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT, RoHS compliant

Loose Tube Double Jacket Single Armor Cables

Series 1A



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube armored cables are designed for improved mechanical and rodent protection in direct bury applications and double jacket cables offer additional mechanical protection. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape then encased with a black polyethylene inner jacket. Water-blocking yarns and a corrugated steel armor are applied and a black polyethylene outer jacket completes the cable construction. Ripcords are located under each jacket.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts.
- Improved operating temperature range
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Improved compressive strength and rodent protection
- Non-sticky gel allows for easier and faster cleanup

Applications

- Direct Buried
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1A0063101	6	0.60 (15.5)	145 (217)	600 (2700)	200 (890)	13.0 (330)	6.5 (165)
1A0123T01	12	0.60 (15.5)	145 (217)	600 (2700)	200 (890)	13.0 (330)	6.5 (165)
1A0243T01	24	0.60 (15.5)	145 (217)	600 (2700)	200 (890)	13.0 (330)	6.5 (165)
1A0363T01	36	0.60 (15.5)	145 (217)	600 (2700)	200 (890)	13.0 (330)	6.5 (165)
1A0483101	48	0.60 (15.5)	145 (217)	600 (2700)	200 (890)	13.0 (330)	6.5 (165)
1A0723101	72	0.66 (16.7)	164 (245)	600 (2700)	200 (890)	14.0 (354)	7.0 (177)
1A0963101	96	0.73 (18.4)	196 (291)	600 (2700)	200 (890)	15.4 (392)	7.7 (196)
1A1443101	144	0.90 (22)	274 (408)	600 (2700)	200 (890)	18.2 (460)	9.1 (230)
1A2163101	216	0.90 (22)	267 (397)	600 (2700)	200 (890)	18.2 (460)	9.1 (230)
1A2883101	288	1.00 (25)	334 (497)	600 (2700)	200 (890)	20.4 (520)	10.2 (260)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT, RoHS compliant

Loose Tube Double Jacket Double Armor Cables

Series 1D



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube armored cables are designed for improved mechanical and rodent protection in direct bury applications, double jacket cables offer additional mechanical protection. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The buffer tubes are reverse oscillated lay stranded around a central member. The core is wrapped with flexible strength members covered with a water blocking tape, a corrugated steel armor is applied and then encased with a black polyethylene inner jacket. Water-blocking yarns, a corrugated steel armor and a black polyethylene outer jacket complete the cable construction. Ripcords are located under each jacket.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid design
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts.
- Improved operating temperature range
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic substances offer easy location, dielectric substances eliminate grounding or bonding problems
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Improved compressive strength and rodent protection
- Non-sticky gel allows for easier and faster cleanup

Applications

- Direct Buried
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1D0063101	6	0.70 (17.5)	207 (308)	600 (2700)	200 (890)	14.6 (370)	7.3 (185)
1D0123T01	12	0.70 (17.5)	207 (308)	600 (2700)	200 (890)	14.6 (370)	7.3 (185)
1D0243T01	24	0.70 (17.5)	207 (308)	600 (2700)	200 (890)	14.6 (370)	7.3 (185)
1D0363T01	36	0.70 (17.5)	207 (308)	600 (2700)	200 (890)	14.6 (370)	7.3 (185)
1D0483101	48	0.70 (17.5)	207 (308)	600 (2700)	200 (890)	14.6 (370)	7.3 (185)
1D0723101	72	0.78 (19.7)	253 (376)	600 (2700)	200 (890)	15.6 (394)	7.8 (197)
1D0963101	96	0.82 (21.6)	298 (443)	600 (2700)	200 (890)	16.4 (432)	8.2 (216)
1D1443101	144	0.90 (23.9)	362 (538)	600 (2700)	200 (890)	20.2 (512)	10.1 (256)
1D2163101	216	1.01 (25.6)	403 (600)	600 (2700)	200 (890)	20.2 (512)	10.1 (256)
1D2883101	288	1.11 (28.6)	516 (768)	600 (2700)	200 (890)	22.2 (572)	11.1 (286)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT, RoHS compliant

Loose Tube Triple Jacket Double Armor Cables

Series 1C



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube armored cables are designed for direct bury applications and triple jacket double armor cables offer additional mechanical protection. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The buffer tubes are reverse oscillated lay stranded around a dielectric central member. The core is helically wrapped with water-blocking strength members and then encased with a black polyethylene inner jacket. A corrugated steel armor is applied and a second black polyethylene jacket surrounds the cable core. Another corrugated steel armor is applied and a third black polyethylene outer jacket completes the cable construction. Ripcords and water-blocking yarns are located under each jacket.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts.
- Improved operating temperature range
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Improved compressive strength and rodent protection
- Non-sticky gel allows for easier and faster cleanup

Applications

- Direct Buried, Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cables
- Local Loop
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1C0063101	6	0.80 (20.3)	265 (394)	600 (2700)	200 (890)	16.4 (418)	8.2 (209)
1C0123T01	12	0.80 (20.3)	265 (394)	600 (2700)	200 (890)	16.4 (418)	8.2 (209)
1C0243T01	24	0.80 (20.3)	265 (394)	600 (2700)	200 (890)	16.4 (418)	8.2 (209)
1C0363T01	36	0.80 (20.3)	265 (394)	600 (2700)	200 (890)	16.4 (418)	8.2 (209)
1C0483101	48	0.80 (20.3)	265 (394)	600 (2700)	200 (890)	16.4 (418)	8.2 (209)
1C0723101	72	0.87 (22.1)	265 (394)	600 (2700)	200 (890)	17.6 (446)	8.8 (223)
1C0963101	96	0.94 (23.8)	285 (424)	600 (2700)	200 (890)	19.0 (484)	9.5 (242)
1C1443101	144	1.08 (27.4)	328 (488)	600 (2700)	200 (890)	22.0 (558)	11.0 (279)
1C2163101	216	1.08 (27.4)	330 (490)	600 (2700)	200 (890)	22.0 (558)	11.0 (279)
1C2883101	288	1.19 (30.4)	364 (542)	600 (2700)	200 (890)	24.2 (614)	12.1 (307)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT, RoHS compliant

Loose Tube Single Jacket Cables Self Support

Series 11M



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube self support cables are designed for use in aerial applications as an alternative to lashing. These cables reduce installation time and costs. Superior Essex offers self support cables for spans up to 700 feet. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members, a water blocking tape then encased with a black polyethylene jacket with integrated EHS steel messenger. Ripcords are included for ease of entry.

Features

- Available with up to 120 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts.
- Improved operating temperature range
- Conforms to Standard Pole attachment hardware
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Allows use in colder environments.
- Standard Installation Practices.
- Non-sticky gel allows for easier and faster clean up

Applications

- Aerial Self Support
- Trunk, Distribution and Feeder Cables
- Local Loop
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1100631M1	6	0.40 (11)	0.80 (20)	209 (311)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110123TM1	12	0.40 (11)	0.80 (20)	209 (311)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110243TM1	24	0.40 (11)	0.80 (20)	209 (311)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
110363TM1	36	0.40 (11)	0.80 (20)	209 (311)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
1104831M1	48	0.40 (11)	0.80 (20)	209 (311)	600 (2700)	200 (890)	9.2 (236)	4.6 (118)
1107231M1	72	0.48 (12)	0.94 (24)	226 (336)	600 (2700)	200 (890)	10.0 (256)	5.0 (128)
1109631M1	96	0.55 (13)	1.01 (26)	250 (372)	600 (2700)	200 (890)	11.6 (294)	5.8 (147)
1112031M1	120	0.60 (15)	1.06 (27)	279 (415)	600 (2700)	200 (890)	13.4 (338)	6.7 (169)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT-8, RoHS compliant



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube self support cables are designed for use in aerial applications as an alternative to lashing, and double jacket cables offer additional mechanical protection. These cables reduce installation time and costs. Superior Essex offers self support cables for spans up to 700 feet. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The buffer tubes are reverse oscillated lay stranded around a central member. The core is helically wrapped with water-blocking strength members and then encased with a black polyethylene inner jacket. A water blocking tape is applied and a black polyethylene outer jacket with integrated EHS steel messenger completes the cable construction. Ripcords are located under each jacket.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Improved operating temperature range
- Conforms to Standard Pole attachment hardware
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic substances offer easy location, dielectric substances eliminate grounding or bonding problems
- Reduces cable prep and installation time
- Allows use in colder environments.
- Standard Installation Practices.
- Non sticky gel allows for easier and faster clean up

Applications

- Aerial Self Support
- Broadband Network
- Local Loop
- Trunk, Distribution and Feeder Cables

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1G00631M1	6	0.50 (13)	0.96 (24)	236 (352)	600 (2700)	200 (890)	11 (286)	5.6 (143)
1G0123TM1	12	0.50 (13)	0.96 (24)	236 (352)	600 (2700)	200 (890)	11 (286)	5.6 (143)
1G0243TM1	24	0.50 (13)	0.96 (24)	237 (353)	600 (2700)	200 (890)	11 (286)	5.6 (143)
1G0363TM1	36	0.50 (13)	0.96 (24)	238 (355)	600 (2700)	200 (890)	11 (286)	5.6 (143)
1G04831M1	48	0.50 (13)	0.96 (24)	240 (357)	600 (2700)	200 (890)	11 (286)	5.6 (143)
1G07231M1	72	0.61 (15)	1.07 (27)	256 (381)	600 (2700)	200 (890)	12 (310)	6.1 (155)
1G09631M1	96	0.69 (17)	1.15 (29)	288 (428)	600 (2700)	200 (890)	13 (352)	6.9 (176)
1G12031M1	120	0.76 (19)	1.22 (31)	320 (476)	600 (2700)	200 (890)	15 (388)	7.6 (194)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT-8, RoHS compliant

Loose Tube Single Jacket Single Armor Self Support

Series 12M



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube self support cables are designed for use in aerial applications as an alternative to lashing. These cables reduce installation time and costs. Superior Essex offers self support cables for spans up to 700 feet. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape, a corrugated steel armor is applied and then encased with a black polyethylene jacket with integrated EHS steel messenger. Ripcords are included for ease of entry.

Features

- Available with up to 120 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Improved operating temperature range
- Corrugated steel armor
- Conforms to standard pole attachment hardware
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Allows use in colder environments.
- Improved compressive strength and rodent protection
- Standard installation practices.
- Non sticky gel allows for easier and faster clean up

Applications

- Aerial Self Support
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1200631M1	6	0.50 (12.2)	0.98 (24)	249 (371)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120123TM1	12	0.50 (12.2)	0.98 (24)	249 (371)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120243TM1	24	0.50 (12.2)	0.98 (24)	249 (371)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
120363TM1	36	0.50 (12.2)	0.98 (24)	249 (371)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
1204831M1	48	0.50 (12.2)	0.98 (24)	249 (371)	600 (2700)	200 (890)	10.4 (262)	5.2 (131)
1207231M1	72	0.53 (13.3)	1.02 (25)	268 (399)	600 (2700)	200 (890)	11.2 (282)	5.6 (141)
1209631M1	96	0.60 (16.1)	1.14 (29)	304 (452)	600 (2700)	200 (890)	13.6 (327)	6.8 (164)
1212031M1	120	0.70 (17.8)	1.22 (31)	344 (512)	600 (2700)	200 (890)	15.2 (372)	7.6 (186)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT-8, RoHS compliant

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Loose Tube Double Jacket Single Armor Self Support

Series 1AM



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Loose tube self support cables are designed for use in aerial applications as an alternative to lashing, and double jacket cables offer additional mechanical protection. These cables reduce installation time and costs. Superior Essex offers self support cables for spans up to 700 feet. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape then encased with a black polyethylene jacket inner jacket. Water-blocking yarns and a corrugated steel armor are applied and a black polyethylene outer jacket with integrated EHS steel messenger completes the cable construction. Ripcords are located under each jacket.

Features

- Available with up to 288 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Improved operating temperature range
- Corrugated steel armor
- Conforms to standard pole attachment hardware
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Metallic option offers ease of location, dielectric design eliminates grounding issues
- Reduces cable prep and installation time
- Allows use in colder environments.
- Improved compressive strength and rodent protection
- Standard installation practices.
- Non sticky gel allows for easier and faster clean up

Applications

- Aerial Self Support
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1A00631M1	6	0.60 (15.5)	1.06 (27)	290 (432)	600 (2700)	200 (890)	13 (312)	6.5 (156)
1A0123TM1	12	0.60 (15.5)	1.06 (27)	290 (432)	600 (2700)	200 (890)	13 (312)	6.5 (156)
1A0243TM1	24	0.60 (15.5)	1.06 (27)	290 (432)	600 (2700)	200 (890)	13 (312)	6.5 (156)
1A0363TM1	36	0.60 (15.5)	1.06 (27)	290 (432)	600 (2700)	200 (890)	13 (312)	6.5 (156)
1A04831M1	48	0.60 (15.5)	1.06 (27)	290 (432)	600 (2700)	200 (890)	13 (312)	6.5 (156)
1A07231M1	72	0.66 (16.7)	1.12 (28)	315 (469)	600 (2700)	200 (890)	14 (337)	7.0 (169)
1A09631M1	96	0.73 (18.4)	1.19 (30)	352 (524)	600 (2700)	200 (890)	15 (372)	7.7 (186)
1A12031M1	120	0.80 (20.3)	1.26 (32)	390 (580)	600 (2700)	200 (890)	17 (402)	8.3 (201)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - MLT-8, RoHS compliant



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Single Loose tube cables offer a low cost alternative to traditional stranded loose tube cables. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube includes up to 8 fiber bundles, each containing up to 12 fibers bound within a color coded binder. The core tube is then helically wrapped with water-blocking strength members, then encased with a black polyethylene jacket. Ripcords are included to provide ease of access to the cable core.

Features

- Available with up to 96 fibers
- Single mode, Multimode, RWP SMF and NZDS
- Dielectric outer strength members
- Dry (SAP) core standard
- Highly flexible
- Small cable diameter
- Fewer cable components
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Easy handling
- Installation of more fibers in less space
- Reduced cost
- Non sticky gel allows for easier and faster clean up

Applications

- Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cable
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
510063101	6	0.30 (7.9)	39 (58)	600 (2700)	200 (890)	6.2 (158)	3.1 (79)
510123101	12	0.30 (7.9)	39 (58)	600 (2700)	200 (890)	6.2 (158)	3.1 (79)
510243101	24	0.39 (9.80)	56 (83)	600 (2700)	200 (890)	7.8 (196)	3.9 (98)
510363101	36	0.39 (9.80)	56 (83)	600 (2700)	200 (890)	7.8 (196)	3.9 (98)
510483101	48	0.39 (9.80)	56 (83)	600 (2700)	200 (890)	7.8 (196)	3.9 (98)
510723101	72	0.50 (11.6)	78 (116)	600 (2700)	200 (890)	9.2 (232)	4.6 (116)
510963101	96	0.50 (11.6)	78 (116)	600 (2700)	200 (890)	9.2 (232)	4.6 (116)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - SLT, RoHS compliant



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Single Loose tube cables offer a low cost alternative to traditional stranded loose tube cables. Armored cables are designed for improved mechanical and rodent protection in direct bury applications. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube includes up to 8 fiber bundles, each containing up to 12 fibers bound with a color coded binder. The core is wrapped with flexible strength members covered with a water blocking tape, a corrugated steel armor is applied and then encased with a black polyethylene jacket. Ripcords are included for ease of entry.

Features

- Available with up to 96 fibers
- Single mode, Multimode, RWP SMF and NZDS
- Dielectric outer strength members
- Dry (SAP) core standard
- Highly flexible
- Small cable diameter
- Fewer cable components
- Corrugated Armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Easy handling
- Installation of more fibers in less space
- Reduced cost
- Improved compressive strength and rodent protection
- Non sticky gel allows for easier and faster clean up

Applications

- Direct bury
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
520063101	6	0.40 (9.1)	62 (92)	600(2700)	200 (890)	7.0 (180)	3.5 (90)
520123101	12	0.40 (9.1)	62 (92)	600 (2700)	200 (890)	7.0 (180)	3.5 (90)
520243101	24	0.44 (10.95)	83 (124)	600 (2700)	200 (890)	8.6 (218)	4.3 (109)
520363101	36	0.44 (10.95)	83 (124)	600 (2700)	200 (890)	8.6 (218)	4.3 (109)
520483101	48	0.44 (10.95)	83 (124)	600 (2700)	200 (890)	8.6 (218)	4.3 (109)
520723101	72	0.51 (12.75)	111 (165)	600 (2700)	200 (890)	10.0 (256)	5.0 (128)
520963101	96	0.51 (12.75)	111 (165)	600 (2700)	200 (890)	10.0 (256)	5.0 (128)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Telcordia GR-20-CORE; RDUP Designation - SLT, RoHS compliant

Single Flex Tube All-Dielectric Cables *Series F1*



Product Description

Loose tube cables are the product of choice as the backbone in outside plant applications. Single Loose tube cables offer a low cost alternative to traditional stranded loose tube cables. The highly flexible single tube reduces installation problems. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The single flex tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube includes up to 8 fiber bundles, each containing up to 12 fibers bound with a color coded binder. The core is wrapped with water blocking tape and then encased with a black polyethylene jacket containing rigid strength rods. Ripcords are included for ease of entry.

Features

- Available with up to 96 fibers
- Single mode, Multimode, RWP SMF and NZDS
- Dielectric outer strength members
- Dry (SAP) core standard
- Highly flexible tube
- Small cable diameter
- Fewer cable components
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Easy handling
- Installation of more fibers in less space
- Reduced cost
- Non sticky gel allows for easier and faster clean up

Applications

- Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cable
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
F10063601	6	0.50 (11)	69 (102)	600 (2700)	200 (890)	9.1 (230)	4.5 (115)
F10123601	12	0.50 (11)	69 (102)	600 (2700)	200 (890)	9.1 (230)	4.5 (115)
F10243101	24	0.50 (11)	69 (102)	600 (2700)	200 (890)	9.1 (230)	4.5 (115)
F10363101	36	0.50 (11)	69 (102)	600 (2700)	200 (890)	9.1 (230)	4.5 (115)
F10483101	48	0.50 (11)	69 (102)	600 (2700)	200 (890)	9.1 (230)	4.5 (115)
F10723101	72	0.54 (14)	93 (139)	600 (2700)	200 (890)	10.6 (270)	5.3 (135)
F10963101	96	0.54 (14)	93 (139)	600 (2700)	200 (890)	10.6 (270)	5.3 (135)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Products are qualified by Telcordia to Bellcore GR-20-CORE; RDUP Designation - SLT; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Single Loose tube cables offer a low cost alternative to traditional stranded loose tube cables and armoring provides additional protection for certain environments. The highly flexible single tube reduces installation problems. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The single flex tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube includes up to 8 fiber bundles, each containing up to 12 fibers bound with a color coded binder. The core is wrapped with flexible strength members covered with a water blocking tape, a corrugated steel armor is applied and then encased with a black polyethylene jacket containing rigid steel rods. Ripcords are included for ease of entry.

Features

- Available with up to 96 fibers
- Single mode, Multimode, RWP SMF and NZDS
- Metallic outer strength members
- Dry (SAP) core standard
- Highly flexible tube
- Small cable diameter
- Fewer cable components
- Corrugated Armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Offers ease of location
- Reduces cable prep and installation time
- Easy handling
- Installation of more fibers in less space
- Reduced cost
- Improved compressive strength and rodent protection
- Non sticky gel allows for easier and faster clean up

Applications

- Underground Duct, Lashed Aerial
- Trunk, Distribution and Feeder Cables
- Local Loop, Metro and Long-Haul
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
F200636S1	6	0.51 (13)	117 (174)	600 (2700)	200 (890)	10.1 (257)	5.1 (129)
F201236S1	12	0.51 (13)	117 (174)	600 (2700)	200 (890)	10.1 (257)	5.1 (129)
F202431S1	24	0.51 (13)	117 (174)	600 (2700)	200 (890)	10.1 (257)	5.1 (129)
F203631S1	36	0.51 (13)	117 (174)	600 (2700)	200 (890)	10.1 (257)	5.1 (129)
F204831S1	48	0.51 (13)	117 (174)	600 (2700)	200 (890)	10.1 (257)	5.1 (129)
F207231S1	72	0.60 (15)	137 (203)	600 (2700)	200 (890)	11.7 (298)	5.9 (149)
F209631S1	96	0.60 (15)	137 (203)	600 (2700)	200 (890)	11.7 (298)	5.9 (149)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Products are qualified by Telcordia to Bellcore GR-20-CORE; Accepted by RDUP to RDUP 7 CFR 1755.900 (PE 90):

RDUP Designation - SLT; Certified to ICEA S-87-640-1999; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

The Superior Essex loose tube riser cables are ideal for campus environments, private networks and local area networks. These dual purpose cables save money and installation time by allowing a direct transition from indoor to outdoor applications with a single cable. Because these cables are fully water blocked with dry elements, stripping and termination is much faster. These cables comply with the standards for both outside plant and indoor riser applications. Loose tube riser cables are available up to 216 fibers. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillated lay. The core is wrapped with flexible strength members covered with a water blocking tape, then encased with a black fire resistant jacket. Ripcords are included for ease of entry.

Features

- Available with up to 216 fibers
- Single mode, Multimode, RWP SMF, NZDS and hybrid fiber
- Dielectric center and outer strength members
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- Transitions from indoor to outdoor to indoor with no termination
- PFM™ gel
- RoHS Compliant

Benefits

- High fiber density
- Multiple network applications
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Reduces the number of tools required.
- Reduces labor cost
- Non sticky gel allows for easier and faster clean up
- No lead or heavy metal

Applications

- UL Listed Sunlight Resistant Indoor/Outdoor
- Lashed aerial, duct or riser
- Inter-building connection
- Campus Environments

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 65°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
130066G01	6	0.50 (12)	93 (138)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
130126G01	12	0.50 (12)	93 (138)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
130246G01	24	0.50 (12)	93 (138)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
130366G01	36	0.50 (12)	93 (138)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
130486G01	48	0.50 (12)	93 (138)	600 (2700)	200 (890)	10.2 (264)	5.1 (132)
130726G01	72	0.53 (13)	109 (163)	600 (2700)	200 (890)	11.2 (284)	5.6 (142)
130966G01	96	0.60 (15)	139 (206)	600 (2700)	200 (890)	12.8 (324)	6.4 (162)
131446G01	144	0.70 (17)	199 (297)	600 (2700)	200 (890)	16.0 (404)	8.0 (202)
132166G01	216	0.80 (20)	215 (320)	600 (2700)	200 (890)	16.0 (404)	8.0 (202)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize TeraGain 62.5 µm MM fiber
For complete optical fiber specifications, see page 230.

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; Listed as OFNR (UL 1666); Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

The loose tube OFNR cables are ideal for campus environments, private networks and local area networks. These dual purpose cables save money and installation time by allowing a direct transition from indoor to outdoor applications with a single cable. Loose tube cables are the product of choice as the backbone in outside plant applications. Single Loose tube cables offer a low cost alternative to traditional stranded loose tube cables. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube includes up to 8 fiber bundles, each containing up to 12 fibers bound with a color coded binder. The core tube is then helically wrapped with water-blocking strength members, then encased with a black fire resistant jacket. Ripcords are included to provide ease of access to the cable core.

Features

- Available with up to 96 fibers
- Single mode, Multimode, RWP SMF and NZDS
- Dielectric outer strength members
- Dry (SAP) core standard
- Highly flexible
- Small cable diameter
- Fewer cable components
- Transitions from indoor to outdoor to indoor with no termination
- PFM™ gel
- RoHS Compliant

Benefits

- High fiber density
- Multiple network applications
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Easy handling
- Installation of more fibers in less space
- Reduced cost
- Reduces labor cost
- Non-sticky gel allows for easier and faster clean up
- No lead or heavy metal

Applications

- UL Listed Sunlight Resistant Indoor/Outdoor
- Lashed aerial, duct or riser
- Inter-building connection
- Campus Environments

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 65°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. O.D. inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
530066G01	6	0.30 (7)	39 (57)	600 (2700)	200 (890)	5.9 (150)	3.0 (75)
530126G01	12	0.30 (7)	39 (57)	600 (2700)	200 (890)	5.9 (150)	3.0 (75)
530246G01	24	0.40 (10)	57 (85)	600 (2700)	200 (890)	7.4 (188)	3.7 (94)
530366G01	36	0.40 (10)	57 (85)	600 (2700)	200 (890)	7.4 (188)	3.7 (94)
530486G01	48	0.40 (10)	57 (85)	600 (2700)	200 (890)	7.4 (188)	3.7 (94)
530726G01	72	0.50 (13)	106 (157)	600 (2700)	200 (890)	10.0 (254)	5.0 (127)
530966G01	96	0.50 (13)	106 (157)	600 (2700)	200 (890)	10.0 (254)	5.0 (127)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize TeraGain 62.5 µm MM fiber

For complete optical fiber specifications, see page 230.

Standards Compliance:

Products are qualified by Telcordia GR-20-CORE; Listed as OFNR (UL 1666); Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant

Series 1H – Heavy Duty Loose Tube OFNR Cables



Product Description

The Superior Essex heavy duty loose tube OFNR cables are ideally suited for harsh environment applications including mining, steel mills, refineries, lumber mills and many other situations requiring a rugged cable construction. These cables have been specifically designed to have greater tensile, crush and impact ratings. With a dual layer of flexible strength members and double-layer of rugged flame retardant and sunlight resistant jacket, this cable design possesses design features ideal for environmentally demanding applications.

Physical Description

- The heavy duty loose tube design features optical fibers placed inside PFM™ gel filled buffer tubes. The core is constructed by stranding the buffer tubes around a central member using reverse oscillated lay. The core is wrapped with flexible strength members and covered by a water blocking tape, then encased in a black fire resistant jacket. A second layer of flexible strength members is applied and then encased in a black fire and sunlight resistant jacket. Ripcords are applied under each jacket.

Features

- Single mode, Multimode, RWP SMF and hybrid
- UL Listed, Sunlight Resistant
- Transitions from Indoor to Outdoor
- Heavy Duty Design
- PFM™ gel

Benefits

- Multiple Network Applications
- Longer Cable Life
- Reduces Labor Costs
- Allows for Harsh Environment Application
- Non sticky gel allows for easier and faster clean up

Applications

- IEEE Networks from 10 MBPS to 10 GBPS
- Long vertical runs
- Cable trays
- Outdoor/indoor pathways

Environmental Specifications	
Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 65°C
Mechanical Specifications	
Installation Max. Load	600 lbs (4400 N)
Long Term Load	200 lbs (1320 N)
Crush	260 lbs/in (450 N/cm)

Part Numbers and Physical Characteristics							
Part #*	Fiber Count	Cable Diameter inches (mm)	Nom. Cable Weight lbs/kft (kg/km)	Impact n*m	Min Bend Radius		Vertical Rise ft (m)
					Install inches (mm)	Long Term inches (mm)	
1H0066G01	6	0.50 (13)	119 (176)	4.41	11 (28)	8 (21)	2,200 (671)
1H0126G01	12	0.50 (13)	119 (176)	4.41	11 (28)	8 (21)	2,200 (671)
1H0246G01	24	0.50 (13)	119 (176)	4.41	11 (28)	8 (21)	2,200 (671)
1H0366G01	36	0.50 (13)	119 (176)	4.41	11 (28)	8 (21)	2,200 (671)
1H0486G01	48	0.50 (13)	119 (176)	4.41	11 (28)	8 (21)	2,200 (671)
1H0726G01	72	0.60 (15)	163 (243)	5.15	11 (28)	8 (21)	1,840 (560)
1H0966G01	96	0.68 (17)	206 (307)	5.88	14 (35)	10 (26)	1,450 (443)
1H1446G01	144	0.84 (21)	268 (399)	6.62	17 (43)	13 (32)	1,050 (320)
1H2166G01	216	0.84 (21)	285 (425)	6.62	17 (43)	13 (32)	1,050 (320)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize TeraGain 62.5 µm MM fiber
For complete optical fiber specifications, see page 230.

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; Listed as OFNR (UL 1666); Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

ADP FTTP (Aerial Drop) is an aerial solution for Fiber-To-The-Premises. ADP FTTP adds a standard fiber component to a proven self support aerial drop product offering combinations up to 12 fibers and 2-22 AWG twisted pairs. This option offers the flexibility of twisted pair copper for communications or power with the future proofing capabilities of optical fiber. It is completely water-blocked using dry technology to reduce weight and increase user friendliness. ADP FTTP uses standard off the shelf self support hardware and well-known industry accepted installation practices. The combination of off the shelf hardware, standard installation practices and reliable cable components assure you of both the lowest installed cost and the highest performance reliability of any Fiber-To-The-Premises product on the market today.

Physical Description

- **FIBER:** One to twelve optical fibers.
- **RUGGED LOOSE TUBE:** Optical fibers placed inside PFM™ gel filled buffer tube.
- **COPPER CONDUCTORS:** Solid annealed copper in 22 AWG.
- **COPPER INSULATION:** Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- **COPPER MAXIMUM AMPERAGE:** 1.0 A
- **COPPER MAXIMUM VOLTAGE:** 150 VDC
- **STRENGTH MEMBERS:** Four fiberglass yarns are placed parallel to the core assembly, two on either side, to provide the necessary longitudinal strength.
- **RIPCORDER:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **JACKET:** A black, weather resistant polyvinyl chloride jacket is extruded over the yarns and rip-cord to protect the core from mechanical damage, degradation by sunlight and ingress of moisture. The jacket bonds to the fiberglass strength members to provide the required strength characteristics.

Features

- ADP-NMS design
- Rectangular Shape
- Flexible Strength Members
- Composite Fiber/Copper Design
- Conforms to Standard Pole attachment hardware
- Dry Waterblock (Core)
- PFM™ gel

Benefits

- Proven Design
- Off the shelf hardware
- All Dielectric Self Support
- Powering and Communications
- Standard Installation Practices
- Craft Friendly
- Non-sticky gel allows for easier and faster clean up

Applications

- Aerial Self Support
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 65°C

Electrical Specifications

Conductor	Conductor DC Resistance @ 68°F Max Individual		Resistance Unbalance Maximum	Dielectric Strength DC Potential Volts Min.
	ohms/mile	ohms/km	Individual Pair %	Cdr. to Cdr.
22 AWG (0.64 mm)	91.0	56.4	5.0	7,200

Part Numbers and Physical Characteristics

Part #	Copper Pair Count	Fiber Count	Minor Dimension inches (mm)	Major Dimension inches (mm)	Standard Package	Approx. Weight lbs/kft (kg/km)
570013101	0	1	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)
570013121	2	1	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)
570023101	0	2	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)
570023121	2	2	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)
570043101	0	4	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)
570063101	0	6	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)
570123101	0	12	0.27 (7)	0.48 (12.3)	1,000 ft Reel	84 (38)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; UL Listed; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

UG FTTP all-dielectric cables are designed for outside plant applications, specifically as a drop cable. The reduced diameter maximizes duct space and offers the lowest installed cost. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube contains up to 12 fibers. The core tube is then helically wrapped with water-blocking strength members and encased with a black polyethylene jacket. Ripcords are included to provide ease of access to the cable core.

Features

- Available with up to 12 fibers
- Single mode, Multimode, RWP SMF
- Dielectric outer strength members
- Highly flexible
- Small cable diameter
- Dual ripcords
- Dry (SAP) core design
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Eliminates grounding or bonding problems
- Easy handling
- Installation of more fibers in less space, reduced cost
- Ripcords allow easy fiber access
- Reduces cable prep and installation time
- Non-sticky gel allows for easier and faster clean up

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber to the Premises

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
510023301	2	0.28 (7.0)	32 (42)	300 (1335)	100 (445)	5.5 (140)	2.8 (70)
510043301	4	0.28 (7.0)	32 (42)	300 (1335)	100 (445)	5.5 (140)	2.8 (70)
510063301	6	0.28 (7.0)	32 (42)	300 (1335)	100 (445)	5.5 (140)	2.8 (70)
510083301	8	0.32 (7.9)	38 (56)	300 (1335)	100 (445)	5.5 (140)	2.8 (70)
510123301	12	0.32 (7.9)	38 (56)	300 (1335)	100 (445)	5.5 (140)	2.8 (70)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Buried FTTP cables are designed for outside plant applications, specifically as a drop cable. The reduced diameter maximizes duct space and offers additional armoring protection. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube contains up to 12 fibers. The core tube is then helically wrapped with water-blocking strength members. A corrugated aluminum armor is applied and encased with a black polyethylene jacket.

Features

- Corrugated Aluminum Armor
- Single mode, Multimode, RWP SMF
- Dielectric outer strength members
- Highly flexible
- Small cable diameter
- Color coded fibers
- Dual ripcords
- Dry (SAP) core design
- PFM™ gel

Benefits

- Additional compressive strength and rodent protection.
- Multiple network applications
- Eliminates grounding or bonding problems
- Easy handling
- Installation of more fibers in less space, reduced cost
- Easy identification during installation
- Ripcords allow easy fiber access
- Reduces cable prep and installation time
- Non sticky gel allows for easier and faster clean up

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
520023301	2	0.33 (8.4)	42 (62)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520043301	4	0.33 (8.4)	42 (62)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520063301	6	0.33 (8.4)	42 (62)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520083301	8	0.40 (9.0)	62 (92)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520123301	12	0.40 (9.0)	62 (92)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Buried FTTP Composite is a underground solution for Fiber-To-The-Premises. Buried FTTP Composite offers a standard fiber component with twisted copper pairs in combinations up to 12 fibers and 6-22 AWG twisted pairs. This option offers the flexibility of twisted pair copper for communications or power with the future proofing capabilities of optical fiber. The core is completely water-blocked using dry technology to reduce weight and increase user friendliness, the gel filled tube utilizes our non-sticky PFM™ gel.

Physical Description

- FIBER: One to twelve optical fibers.
- RUGGED LOOSE TUBE: Optical fibers placed inside gel filled buffer tube.
- COPPER CONDUCTORS: 1-6 pairs of solid annealed copper in 22 AWG.
- COPPER INSULATION: Each conductor is insulated with solid polyolefin in distinctive colors. The insulation of the tip conductor is marked with a stripe of the mating ring insulation color to reduce the possibility of splitting pairs during installation.
- COPPER MAXIMUM AMPERAGE: 1.0 A
- COPPER MAXIMUM VOLTAGE: 150 VDC
- Corrugated Aluminum Shield

Features

- Composite Fiber/Copper design
- Round Shape
- Aluminum shield
- Dry Waterblock (core)
- PFM gel

Benefits

- Multiple Network applications
- Conforms to Standard Practices and Hardware
- Improved Flexibility
- Reduced weight and increased craft friendliness
- Non-sticky gel allows for easier and faster clean up

Applications

- Fiber To The Premises
- Broadband Network
- Buried, Underground

Electrical Specifications

Conductor	Conductor DC Resistance @ 68°F Max Individual		Resistance Unbalance Maximum	Dielectric Strength DC Potential Volts Min.
	ohms/mile	ohms/km	Individual Pair %	Cdr. to Cdr.
22 AWG (0.64 mm)	91.0	56.4	5.0	7,200

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 65°C

	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	0.40/0.30	0.40/0.40/0.30	0.40/0.40/0.30
Typical Attenuation (dB/km)	0.35/0.22	0.35/0.35/0.22	0.35/0.35/0.22

Part Numbers and Physical Characteristics

Part #*	Copper Pair Count	Fiber Count	Nominal O.D. inches (mm)	Nominal Weight lbs/kft (kg/km)	Standard Package
720023321	2	2	0.40 (10)	61 (91)	Reel
720043321	2	4	0.40 (10)	61 (91)	Reel
720063321	2	6	0.40 (10)	61 (91)	Reel
720023361	6	2	0.40 (10)	81 (120)	Reel
720043361	6	4	0.40 (10)	81 (120)	Reel
720063361	6	6	0.40 (10)	81 (120)	Reel
720123361	6	12	0.40 (10)	81 (120)	Reel

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230;

*All part #'s shown above utilize RWP SMF

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Fiber Reel-in-a-Box with the QuickCount® marking system



Superior Essex is the first manufacturer to offer a premises fiber cable product family that is packaged as a Reel-in-a-Box and includes the innovative QuickCount footage marking system. The Reel-in-a-Box packaging of fiber cable is a true advantage for installers who are pulling fiber cable in multiple locations. The Reel-in-a-Box package not only stacks and travels better, it also protects the fiber cable better than an open reel. The QuickCount feature provides footage marking on the cable jacket counting down from 1,100 or 2,200 feet depending on packaging.

FEATURES

- QuickCount countdown footage markings
- Reel-in-a-Box Packaging
- Heavy-duty package design
- 1,100 and 2,200 feet length package
- Superior Essex TeraGain™, TeraGain™ XT and single mode

This feature has been widely valued in Superior Essex copper cable products for its ability to save time and material by providing an immediate, exact view of unused cable length. The Superior Essex QuickCount, Reel-in-a-Box product is available for riser and plenum, TeraGain™ and TeraGain™ XT multi-mode and single mode fiber cables in duplex, quad and 6-fiber constructions.

BENEFITS

- Allows installer an immediate, exact view of unused cable
- Saves time by eliminating payoff stands and provides the ability to quickly place the reel and begin pulling
- Protects the fiber cable more than open reels; avoids damage to material
- Up to 2X the length of typical UTP packages which helps eliminate cable waste due to leftover short lengths
- Allows flexibility of using Reel-in-a-Box for virtually all optical fiber cable networking applications

PRODUCT BULLETIN
PREMISES FIBER PRODUCTS



Product Description

Toneable Drop FTTP offers the most flexible solution for Fiber-to-the-Premises applications. The toneable unit allows for easy location after installation. The small profile reduces cost and increases both ease of use and access to small conduits. This product is the low cost solution to the network's last 100 meters. The durable design incorporates two dielectric rigid rods for tensile and crush protection, bracketing a single enhanced loose tube containing up to twelve optical fibers and PFM™ gel. This is a water-blocked design, using a "dry" water absorbing thread to prevent the migration of moisture. A black, weather resistant jacket of PVC or MDPE completes the cable construction.

Physical Description

- **FIBER:** One to twelve fibers
- **STRENGTH MEMBERS:** Water-blocking dielectric strength members are placed parallel to the single loose tube, one on each side, to provide the necessary longitudinal strength.
- **RUGGED LOOSE TUBE:** Optical fibers placed inside a single gel filled loose tube.
- **JACKET:** A black, weather resistant jacket is applied to protect the core from mechanical damage, degradation by sunlight and ingress of moisture.
- **24 AWG COPPER WIRE:** Is encased in the jacket to offer ease of location.

Features

- 1-12 Fiber
- Universal design
- Toneable Element
- PFM™ gel
- Dielectric Rods
- Dry Waterblock
- Polyethylene or PVC jacket

Benefits

- Offers the maximum bandwidth for FTT Premises, Business, etc.
- Aerial or direct bury
- Ease of location
- Non-sticky gel reduces installation time and labor cost
- Excellent crush resistance
- Craft friendly, less weight
- Improved flexibility

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Packaging Options

Toneable FTTP drop is offered as a bulk reel with a standard length of 2500ft or in a Reel-in-a-box. The Reel-in-a-box is a weather resistant package containing 1000ft and weighs only 35lbs. "QuickCount" print is standard only on 1,000ft reel box, this feature reduces scrap by identifying the length of cable remaining in the package.

Standard Length	2500'	1000'
Standard Shipping Reel Size	30 x 18 x 14	14 x 10 x 6
Standard Shipping Reel Weight	63 lbs	7 lbs
Total Shipping Weight	121 lbs	35 lbs

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 70°C

Optical Specifications

	Single mode	RWP Single mode	TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.20	.35/.32/.2	.35/.33/.20
Part Number Designation	9	3	K

Part Numbers and Physical Characteristics

Part #*		Fibers	Nominal O.D. mm	Weight lbs/kft	Bend Radius Inches (mm)	Tensile Load Short term / Long term lbs	Standard Qty. Feet
57002311Q	2-RWP TONE MDPE FTTP SLT D/F	2	8.1 x 4.9	23	3.15 (76)	300/90	2500
57002312Q	2-RWP TONE PVC FTTP SLT D/F	2	8.1 x 4.9	23	3.15 (76)	300/90	2500
5700231AQ	2-RWP TONE PVC FTTP SLT D/F	2	8.1 x 4.9	23	3.15 (76)	300/90	1000
5700231CQ	2-RWP TONE PVC FTTP D/F 1K RB	2	8.1 x 4.9	23	3.15 (76)	300/90	1000
5700231BQ	2-RWP TONE MDPE FTTP D/F 1K RB	2	8.1 x 4.9	23	3.15 (76)	300/90	1000
57004311Q	4-RWP TONE MDPE FTTP SLT D/F	4	8.1 x 4.9	23	3.15 (76)	300/90	2500
57004312Q	4-RWP TONE PVC FTTP SLT D/F	4	8.1 x 4.9	23	3.15 (76)	300/90	2500
5700431CQ	4-RWP TONE PVC FTTP D/F 1K RB	4	8.1 x 4.9	23	3.15 (76)	300/90	1000
5700431BQ	4-RWP TONE MDPE FTTP D/F 1K RB	4	8.1 x 4.9	23	3.15 (76)	300/90	1000
57006311Q	6-RWP TONE MDPE FTTP SLT D/F	6	8.1 x 4.9	23	3.15 (76)	300/90	2500
57006312Q	6-RWP TONE PVC FTTP SLT D/F	6	8.1 x 4.9	23	3.15 (76)	300/90	2500
5700631CQ	6-RWP TONE PVC FTTP D/F 1K RB	6	8.1 x 4.9	23	3.15 (76)	300/90	1000
5700631BQ	6-RWP TONE MDPE FTTP D/F 1K RB	6	8.1 x 4.9	23	3.15 (76)	300/90	1000
57012311Q	12-RWP TONE MDPE FTTP SLT D/F	12	8.1 x 4.9	23	3.15 (76)	300/90	2500
57012312Q	12-RWP TONE PVC FTTP SLT D/F	12	8.1 x 4.9	23	3.15 (76)	300/90	2500
5701231CQ	12-RWP TONE PVC FTTP D/F 1K RB	12	8.1 x 4.9	23	3.15 (76)	300/90	1000
5701231BQ	12-RWP TONE MDPE FTTP D/F 1K RB	12	8.1 x 4.9	23	3.15 (76)	300/90	1000

*Above part numbers utilize RWP SMF

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance:

Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Universal Drop FTTP offers the most flexible solution for Fiber-to-the-Premises applications. This all dielectric cable requires no grounding or bonding. The small profile reduces cost and increases both ease of use and access to small conduits. This durable design incorporates two dielectric rigid rods for tensile and crush protection, bracketing a single enhanced loose tube containing up to twelve optical fibers and PFM™ gel. This is a water-blocked design, using a “dry” water absorbing thread to prevent the migration of moisture. A black, weather resistant jacket completes the cable construction.

Physical Description

- **FIBER:** One to twelve fibers
- **STRENGTH MEMBERS:** Water-blocking dielectric strength members are placed parallel to the single loose tube, one on each side, to provide the necessary longitudinal strength.
- **RUGGED LOOSE TUBE:** Optical fibers placed inside a single gel filled loose tube.
- **JACKET:** A black, weather resistant jacket is applied to protect the core from mechanical damage, degradation by sunlight and ingress of moisture.

Features

- 1-12 Fiber
- Universal design
- Dielectric
- PFM™ gel
- Dielectric Rods
- Dry Waterblock
- Polyethylene or PVC jacket

Benefits

- Offers the maximum bandwidth for FTT Premises, Business, etc.
- Aerial or direct bury
- Eliminates bonding and grounding
- Non-sticky gel reduces installation time and labor cost
- Excellent crush resistance
- Craft friendly, less weight
- Improved flexibility

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Packaging Options

Universal FTTP drop is offered as a bulk reel with a standard length of 2500ft or in a Reel-in-a-box. The Reel-in-a-box is a weather resistant package containing 1000ft and weighs only 35lbs. “QuickCount” print is standard only on 1,000 ft reel box, this feature reduces scrap by identifying the length of cable remaining in the package.

Standard Length	2500'	1000'
Standard Shipping Reel Size	30 x 18 x 14	14 x 10 x 6
Standard Shipping Reel Weight	63 lbs	7 lbs
Total shipping weight	121 lbs	35 lbs

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 70°C

Optical Specifications

	Single mode	RWP Single mode	TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.20	.35/.32/.20	.35/.33/.20
Part Number Designation	9	3	K

Part Numbers and Physical Characteristics

Part #*		Fibers	Nominal O.D. mm	Weight lbs/ft	Bend Radius Inches (mm)	Tensile Load Short term / Long term lbs	Standard Qty. Feet
57002301Q	2-RWP UNIV MDPE FTTP SLT D/F	2	8.1 x 4.9	23	3.15 (76)	300/90	2500
57002302Q	2-RWP UNIV PVC FTTP SLT D/F	2	8.1 x 4.9	23	3.15 (76)	300/90	2500
5700230AQ	2-RWP UNIV PVC FTTP SLT D/F	2	8.1 x 4.9	23	3.15 (76)	300/90	1000
5700230CQ	2-RWP UNIV PVC FTTP D/F 1K RB	2	8.1 x 4.9	23	3.15 (76)	300/90	1000
57002302Q	2-RWP UNIV MDPE FTTP D/F 1K RB	2	8.1 x 4.9	23	3.15 (76)	300/90	1000
57004301Q	4-RWP UNIV MDPE FTTP SLT D/F	4	8.1 x 4.9	23	3.15 (76)	300/90	2500
57004302Q	4-RWP UNIV PVC FTTP SLT D/F	4	8.1 x 4.9	23	3.15 (76)	300/90	2500
5700430CQ	4-RWP UNIV PVC FTTP D/F 1K RB	4	8.1 x 4.9	23	3.15 (76)	300/90	1000
57004302Q	4-RWP UNIV MDPE FTTP D/F 1K RB	4	8.1 x 4.9	23	3.15 (76)	300/90	1000
57006301Q	6-RWP UNIV MDPE FTTP SLT D/F	6	8.1 x 4.9	23	3.15 (76)	300/90	2500
57006302Q	6-RWP UNIV PVC FTTP SLT D/F	6	8.1 x 4.9	23	3.15 (76)	300/90	2500
5700630CQ	6-RWP UNIV PVC FTTP D/F 1K RB	6	8.1 x 4.9	23	3.15 (76)	300/90	1000
57006302Q	6-RWP UNIV MDPE FTTP D/F 1K RB	6	8.1 x 4.9	23	3.15 (76)	300/90	1000
57012301Q	12-RWP UNIV MDPE FTTP SLT D/F	12	8.1 x 4.9	23	3.15 (76)	300/90	2500
57012302Q	12-RWP UNIV PVC FTTP SLT D/F	12	8.1 x 4.9	23	3.15 (76)	300/90	2500
5701230CQ	12-RWP UNIV PVC FTTP D/F 1K RB	12	8.1 x 4.9	23	3.15 (76)	300/90	1000

*Above part numbers utilize RWP SMF
To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

Standards Compliance:

Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant

Universal FTTP OFNR



Product Description

Universal FTTP OFNR offers the most complete solution for the fiber to the premises application. This compact cable is RoHS compliant and OFNR rated making this cable universal in application. The cable is designed for use in duct, aerial, direct bury and riser environments. The product is RoHS compliant meaning no heavy metals. The single tube contains PFM™ gel which provides ease of clean up. The OFNR rating allows use of the cable inside buildings removing the need for termination. This product is standard with TeraFlex™ optical fiber which complies with ITU G.652D and provides increased bend performance.

Physical Description

This loose tube cable contains from 1 to 12 optical fibers in a single PFM™ gel filled tube. The tube is bracketed by 2 rigid GRP rods with water blocking capabilities. A black weather resistant outer jacket of PVC protects the core.

Features

- 1-12 Fiber
- Universal design
- TeraFlex Fiber
- PFM™ gel
- OFNR rating
- Reel-in-a-Box Package
- GR-20
- RoHS Compliant

Benefits

- Offers the maximum bandwidth for FTT Premise Business, etc.
- Aerial - direct bury - Conduit - Indoor Riser
- G.652D compliant bend insensitive
- Non-sticky gel reduces installation time and labor cost
- Indoor/Outdoor use
- QuickCount® countdown footage marking feature reduces scrap; easy to carry and store
- Industry accepted standard
- No lead or heavy metals

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Standards

- GR-20-CORE

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 70°C

Optical Specifications

	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.20	.35/.35/.20	.35/.35/.20
Part Number Designation	9	3	K

Part Numbers and Physical Characteristics

Part #	Description	Fibers	Nominal O.D. in	Weight lbs/kft	Cable Bend Radius Inches (mm)	Tube Bend Radius Inches (mm)	Tensile Load Short term / Long term lbs	Standard Qty. Feet
57002K04Q	2-TeraFlex™ UNIV OFNR SLT D/F	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
57002K0DQ	2-TeraFlex™ UNIV OFNR SLT D/F 1KRB	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57002304Q	2-RWP UNIV OFNR SLT D/F	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
5700230DQ	2-RWP UNIV OFNR SLT D/F 1KRB	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57004K04Q	4-TeraFlex™ UNIV OFNR SLT D/F	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
57004K0DQ	4-TeraFlex™ UNIV OFNR SLT D/F 1KRB	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57004304Q	4-RWP UNIV OFNR SLT D/F	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
5700430DQ	4-RWP UNIV OFNR SLT D/F 1KRB	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57012K04Q	12-TeraFlex™ UNIV OFNR SLT D/F	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
57012K0DQ	12-TeraFlex™ UNIV OFNR SLT D/F 1KRB	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57012304Q	12-RWP UNIV OFNR SLT D/F	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
5701230DQ	12-RWP UNIV OFNR SLT D/F 1KRB	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000

Standards Compliance:

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Toneable FTTP OFCR offers the most complete solution for the fiber to the premises application. This compact cable is RoHS compliant and OFCR rated making this cable universal in application. The cable is designed for use in duct, aerial, direct bury and riser environments. Cable location is made simple with the toneable cop-per wire. The product is RoHS compliant meaning no heavy metals. The single tube contains PFM™ gel which provides ease of clean up. The OFCR rating allows use of the cable inside buildings removing the need for termination. This product is standard with TeraFlex™ optical fiber which complies with ITU G.652D and provides increased bend performance.

Physical Description

This loose tube cable contains from 1 to 12 optical fibers in a single PFM™ gel filled tube. The tube is bracketed by 2 rigid GRP rods with water blocking capabilities. A black weather resistant outer jacket of PVC contains the toneable element and protects the core.

Features

- 1-12 Fiber
- Universal design
- TeraFlex Fiber
- PFM™ gel
- OFNR rating
- Reel-in-a-Box Package
- GR-20
- RoHS Compliant
- Toneable element

Benefits

- Offers the maximum bandwidth for FTT Premise Business, etc.
- Aerial - direct bury - Conduit - Indoor Riser
- G.652D compliant band insensitive
- Non-sticky gel reduces installation time and labor cost
- Indoor/Outdoor use
- QuickCount® countdown footage marking feature reduces scrap; easy to carry and store
- Industry accepted standard
- No lead or heavy metals
- Ease of location

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Standards

- GR-20-CORE

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 70°C

Optical Specifications

	Single mode Conventional	Single mode RWP	Single mode TeraFlex
Wavelength (nm)	1310/1550	1310/1383/1550	1310/1383/1550
Max Attenuation (dB/km)	.40/.30	.40/.40/.30	.40/.40/.30
Typical Attenuation (dB/km)	.35/.20	.35/.35/.20	.35/.35/.20
Part Number Designation	9	3	K

Part Numbers and Physical Characteristics

Part #	Description	Fibers	Nominal O.D. in	Weight lbs/kft	Cable Bend Radius Inches (mm)	Tube Bend Radius Inches (mm)	Tensile Load Short term / Long term lbs	Standard Qty. Feet
57002K14Q	2-SMB TONE OFCR SLT D/F	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
57002K1DQ	2-SMB TONE OFCR SLT D/F 1KRB	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57002314Q	2-RWP TONE OFCR SLT D/F	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
5700231DQ	2-RWP TONE OFCR SLT D/F 1KRB	2	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57004K14Q	4-SMB TONE OFCR SLT D/F	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
57004K1DQ	4-SMB TONE OFCR SLT D/F 1KRB	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57004314Q	4-RWP TONE OFCR SLT D/F	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
5700431DQ	4-RWP TONE OFCR SLT D/F 1KRB	4	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57012K14Q	12-SMB TONE OFCR SLT D/F	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
57012K1DQ	12-SMB TONE OFCR SLT D/F 1KRB	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000
57012314Q	12-RWP TONE OFCR SLT D/F	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	2,500
5701231DQ	12-RWP TONE OFCR SLT D/F 1KRB	12	0.319 x 0.193	23	3.19 (81)	1.06 (27)	300/90	1,000

Standards Compliance:

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant

Figure 8 FTTP Cables Series 573Q



Product Description

Figure 8 FTTP offers an aerial solution for Fiber-to-the-Premises applications. This small profile aerial cable incorporates an 2.1mm solid steel strand supporting a single enhanced loose tube containing up to twelve optical fibers and PFM gel. The small profile reduces cost and problems associated with wind or ice load. This is a water-blocked design, using a "dry" water absorbing thread to prevent the migration of moisture. A black, weather resistant jacket of PVC completes the cable construction.

Physical Description

- FIBER: 1-12 fibers
- RUGGED LOOSE TUBE: Optical fibers placed inside a single gel filled loose tube
- STRENGTH MEMBERS: 2.1mm solid steel strand
- JACKET: A black, PVC weather resistant jacket is applied to protect the core from mechanical damage, degradation by sunlight and ingress of moisture

Features

- 1-12 Fibers
- PFM Gel
- Dry Waterblock
- PVC jacket

Benefits

- Offers the maximum bandwidth for FTT Premise, Business, etc.
- Non-sticky gel reduces installation time and labor cost
- Craft friendly, less weight
- Improved flexibility

Standards

- GR-20-CORE

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-10°C to + 60°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Major Dimension inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
57001323Q	1	0.18 (4.5)	0.33 (8.5)	38 (57)	300 (1334)	90 (400)	4.4 (110)	2.2 (55)
57002323Q	2	0.18 (4.5)	0.33 (8.5)	38 (57)	300 (1334)	90 (400)	4.4 (110)	2.2 (55)
57004323Q	4	0.18 (4.5)	0.33 (8.5)	38 (57)	300 (1334)	90 (400)	4.4 (110)	2.2 (55)
57006323Q	6	0.18 (4.5)	0.33 (8.5)	38 (57)	300 (1334)	90 (400)	4.4 (110)	2.2 (55)
57008323Q	8	0.18 (4.5)	0.33 (8.5)	38 (57)	300 (1334)	90 (400)	4.4 (110)	2.2 (55)
57012323Q	12	0.18 (4.5)	0.33 (8.5)	38 (57)	300 (1334)	90 (400)	4.4 (110)	2.2 (55)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance:

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant



Product Description

Superior Essex Stranded Tube Armored Ribbon Cable is designed for outside plant applications specifically direct bury installations. Our industry leading optical fiber ribbons are manufactured with high dimensional precision and low planarity which equates to low losses during mass fusion splicing.

Physical Description

The stranded tube design features optical fibers ribbons placed inside gel filled tubes. Each tube contains up to twelve discretely identified, 12 fiber ribbons for maximum design load capacity of 1008 fibers. The core is helically wrapped with water-blocking strength members. A corrugated steel armor is applied over the stranded core. Rigid steel rods encased in a polyethylene outer jacket completes the construction

Features

- Available with up to 1008 fibers
- Single mode, RWP SMF
- Multiple stranded tubes
- Corrugated steel armor
- Ribbonized fiber

Benefits

- High fiber density
- Multiple network applications
- Individual tube access
- Compressive strength, rodent protection and ease of location
- Saves labor cost by offering mass fusion splicing

Applications

- Direct Bury
- Broadband Network
- Local Loop
- Trunk, Distribution and Feeder Cables

Environmental Specifications

Operation	-40°C to + 70°C
Installation	-30°C to + 60°C
Storage/Shipping	-40°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
S23603101	360	1.25 (31.8)	490 (730)	600 (2700)	180 (800)	25 (636)	12.5 (318)
S24323101	432	1.25 (31.8)	490 (730)	600 (2700)	180 (800)	25 (636)	12.5 (318)
S25763101	576	1.25 (31.8)	490 (730)	600 (2700)	180 (800)	25 (636)	12.5 (318)
S28643101	864	1.25 (31.8)	490 (730)	600 (2700)	180 (800)	25 (636)	12.5 (318)
S2A083101	1008	1.25 (31.8)	490 (730)	600 (2700)	180 (800)	25 (636)	12.5 (318)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Telcordia GR-20-CORE, RDUP PE90, RoHS compliant

Single Tube Ribbon Non Armored Cables *Series R1*



Product Description

Single Tube Ribbon cable is designed for outside plant applications, specifically lashed aerial and underground duct installations. Superior Essex's industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion splicing.

Physical Description

The Single Tube Ribbon Cable features optical ribbons inside a single PFM™ gel filled tube. The core tube includes up to eighteen 12 or 24 fiber ribbons. Each 12 fiber ribbon unit is discretely identified and captured in an easy peel matrix for ease of ribbon breakout and management. The core tube is wrapped with a water-blocking tape. Longitudinal strength elements are applied over the core tube and encased within a black polyethylene jacket.

Features

- Available with up to 432 fibers
- Single mode, NZDS, or RWP SMF
- Dielectric strength members
- Highly flexible tube
- Ribbonized fiber
- Meets or exceeds Bellcore and RDUP specifications
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Dielectric design eliminates grounding issues
- Easy handling and easy tube access
- Saves labor cost by offering mass fusion splicing
- Industry approved
- Non-sticky gel allows for easier and faster clean up, compared to grease-based gel's.

Applications

- Lashed Aerial, Underground Duct
- Broadband Network
- Local Loop
- Trunk, Distribution and Feeder Cables

Environmental Specifications

Operation	-40°C to + 70°C
Installation	-30°C to + 60°C
Storage/Shipping	-40°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
R10123101	12	0.40 (11)	76 (113)	600 (2700)	180 (800)	9.1 (230)	4.5 (115)
R10483101	48	0.40 (11)	76 (113)	600 (2700)	180 (800)	9.1 (230)	4.5 (115)
R10723101	72	0.50 (13)	101 (149)	600 (2700)	180 (800)	10.6 (270)	5.3 (135)
R10963101	96	0.50 (13)	101 (149)	600 (2700)	180 (800)	10.6 (270)	5.3 (135)
R11443101	144	0.60 (15)	123 (182)	600 (2700)	180 (800)	10.6 (270)	5.3 (135)
R11923101	192	0.67 (17)	140 (209)	600 (2700)	180 (800)	13.4 (340)	6.7 (170)
R12163101	216	0.67 (17)	140 (209)	600 (2700)	180 (800)	13.4 (340)	6.7 (170)
R12883101	288	0.78 (20)	185 (275)	600 (2700)	180 (800)	15.6 (400)	7.8 (200)
R13603101	360	0.78 (20)	185 (275)	600 (2700)	180 (800)	15.6 (400)	7.8 (200)
R14323101	432	0.78 (20)	185 (275)	600 (2700)	180 (800)	15.6 (400)	7.8 (200)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Telcordia GR-20-CORE; RDUP PE 90, RDUP Designation - SLT-D-R, RoHS compliant.



Product Description

Single Tube Armored Ribbon cable is designed for outside plant applications, specifically lashed aerial and underground duct installations. Superior Essex's industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion splicing.

Physical Description

The Single Tube Armored Ribbon Cable features optical ribbons inside a single PFM™ gel filled tube. The core tube includes up to eighteen 12 or 24 fiber ribbons. Each 12 fiber ribbon unit is discretely identified and captured in an easy peel matrix for ease of ribbon breakout and management. The core tube is wrapped with a water-blocking tape. A corrugated steel armor and longitudinal strength elements are applied over the core tube and encased within a black polyethylene jacket.

Features

- Available with up to 432 fibers
- Single mode, NZDS, or RWP SMF
- Metallic outer strength members
- Highly flexible tube
- Corrugated steel armor
- Ribbonized fiber
- Meets or exceeds Bellcore and RDUP specifications
- PFM gel

Benefits

- High fiber density
- Multiple network applications
- Metallic design offers easy location
- Easy handling and easy tube access
- Compressive strength, rodent protection and ease of location
- Saves labor cost by offering mass fusion splicing
- Industry approved
- Non-sticky gel allows for easier and faster clean up, compared to grease-based gel's

Applications

- Direct Bury
- Broadband Network
- Local Loop
- Trunk, Distribution and Feeder Cables

Environmental Specifications

Operation	-40°C to + 70°C
Installation	-30°C to + 60°C
Storage/Shipping	-40°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
R200631S1	6	0.50 (13)	118 (175)	600 (2700)	180 (800)	10.1 (257)	5.1 (129)
R201231S1	12	0.50 (13)	118 (175)	600 (2700)	180 (800)	10.1 (257)	5.1 (129)
R202431S1	24	0.50 (13)	118 (175)	600 (2700)	180 (800)	10.1 (257)	5.1 (129)
R203631S1	36	0.50 (13)	118 (175)	600 (2700)	180 (800)	10.1 (257)	5.1 (129)
R204831S1	48	0.50 (13)	118 (175)	600 (2700)	180 (800)	10.1 (257)	5.1 (129)
R207231S1	72	0.60 (15)	137 (204)	600 (2700)	180 (800)	11.7 (298)	5.9 (149)
R209631S1	96	0.60 (15)	137 (204)	600 (2700)	180 (800)	11.7 (298)	5.9 (149)
R214431S1	144	0.60 (15)	146 (217)	600 (2700)	180 (800)	11.7 (298)	5.9 (149)
R219231S1	192	0.67 (17)	187 (278)	600 (2700)	180 (800)	13.4 (340)	6.7 (170)
R221631S1	216	0.67 (17)	187 (278)	600 (2700)	180 (800)	13.4 (340)	6.7 (170)
R228831S1	288	0.84 (21)	261 (388)	600 (2700)	180 (800)	16.8 (420)	8.4 (210)
R236031S1	360	0.84 (21)	261 (388)	600 (2700)	180 (800)	16.8 (420)	8.4 (210)
R243231S1	432	0.84 (21)	261 (388)	600 (2700)	180 (800)	16.8 (420)	8.4 (210)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Telcordia GR-20-CORE; RDUP PE 90, RDUP Designation - SLT-D-R, RoHS compliant.



TECHNICAL INFORMATION



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Multimode Optical Fiber

Multimode fibers are identified by the physical size of the core as measured in microns (μm) and the applications for which they are typically used. Multimode fibers, the most common types having 62.5/125 μm and 50/125 μm core/cladding dimensions, are used for data communications links with the local area network (LAN). The term multimode refers to the way the light travels down the fiber. For each pulse of light launched into the fiber by light source (transceiver), the light signal energy travels within the fiber core along multiple paths, or modes. It is this method of light propagation that limits the bandwidth and distances that can be supported by multimode fibers. Multimode fibers are used in short distance LAN applications usually less than two kilometers (6560 feet) between connections. Typical network applications include building-to-building and communications closet-to-closet backbones, intelligent highway systems and fiber-to-the-desk. Multimode is the fiber of choice for these short distance applications cables because of the large core size, which allows for inexpensive connectivity, greater durability and the use of low-cost light sources.

Typically, a light emitting diode (LED), operating at a nominal wavelength of 850 nm, is used as the light source for multimode fiber optic cable applications. The use of LED-based transceivers, multimode cables and inexpensive multimode connector systems have provided network designers with a relatively low-cost, high-bandwidth technology for campus-like networks. Recent technology breakthroughs in fiber optic transceiver technology have led to a new light source that extends the distance and increases the signal carrying capacity of multimode fibers. This next-generation light source uses a vertical cavity surface emitting laser, or VCSEL (pronounced "vicsel").

The use of VCSEL transceivers, when compared to traditional LED-based transmission systems, allows for greater distances for traditional applications such as 100 Mbps and for higher bandwidth applications such as gigabit (1 Gbps) Ethernet. The VCSEL source transmits light through the center region of the fiber core. This has created the requirement for laser-optimized multimode fiber. One of the most popular emerging applications for VCSEL-based LAN application is 10 GBPS Ethernet. By using laser-optimized fibers, network engineers can improve transmission performance over greater distances.

TeraGain® fibers are available in 62.5/125 μm and 50/125 μm fiber types. These fibers have been designed to provide greater data rate and distance support compared to other manufacturers' optical fiber cables. In particular, the bandwidths of TeraGain optical fibers are greater than the standard multimode fibers offered by other manufacturers and exceed the requirements specified in TIA 568. TeraGain optical fibers can be used with either LED or laser (VCSEL) transmission equipment. Refer to the table on page 230 for specific performance information.

TeraGain 10G are 50/125 multimode fibers specifically optimized for 850 nm lasers (or VCSELs) that are the heart of the new 10 GB Ethernet systems specified in TIA 568. These fibers exceed industry specifications for both bandwidth and for differential modal dispersion. TeraGain 10G fibers support 10 GB Ethernet applications in three ranges, 150, 300 meters and 550 meters. These ranges allow engineers to cost effectively design the right fiber for their application requirements. Refer to the table on page 230 for specific performance information.

Single mode Optical Fiber

Single mode fiber is used primarily for intermediate and long distance outside plant applications that have distances between connections of up to 75 Km (46.6 miles). It is the exceptional information carrying capacity and low-loss properties of this fiber that make it ideal for these demanding applications.

The core, or light-carrying region of the fiber, is approximately 8.3 μm in diameter. This narrows the transmission pathway allowing for only a single path, or mode, for each pulse of light traveling down the core of the fiber. The light transmission technology is laser-based for all Single mode communications applications. By combining the extremely high bandwidth properties of Single mode fiber with high precision laser-based transceivers, equipment and network systems designers can create networks capable of sending simultaneous voice and data transmission well beyond 10 Gbps over many miles.

Superior Essex offers many types of Single mode fibers for communications applications. Based on the application, Superior Essex can recommend the following Single mode fiber types.

Standard Single mode fiber offered by Superior Essex is an excellent choice for patch cords, LAN, wide area network (WAN) and metropolitan area networks (MAN). This fiber has operating wavelengths centered at 1310 nm and 1550 nm. Refer to the table on page 230 for performance information.

Reduced Water Peak Single mode fiber, which has been modified to offer low attenuation at 1383nm, is becoming the most commonly recommended fiber for all types of network applications. Standard optical fiber displays an attenuation increase at or about 1383nm. This wavelength is known as the water peak region and is where light is strongly absorbed by water, causing high attenuation or signal loss. Specifically, hydroxyl ions, which make up half of a water molecule, are always present at some level within the glass core and cause increased attenuation over this wavelength region. Superior Essex Reduced Water Peak Single mode fiber reduces this effect and is therefore not only an excellent choice for traditional applications, but also for more advanced systems such as coarse wavelength division multiplexing (CWDM) and dense wavelength division multiplexing (DWDM) technologies. Refer to the table on page 230 for performance information.

Non-Zero Dispersion Shifted (NZDS) fiber is used for very high data rates over very long distances (> 30 KM). Because of core/cladding modifications, this fiber is more expensive than standard Single mode. The advantage of NZDS is that it allows for longer distances between repeaters and therefore lowers the overall system cost for long distance networks. Refer to the table on page 230 for performance information.

TeraFlex™ bend insensitive fiber is a reduced water peak Single mode fiber that complies with ITU G.652 D. The bend sensitivity of this fiber has been improved so that it can be coiled into a 20 mm diameter loop with ≤ 0.5 dB incurred loss @ 1625 nm and ≤ 0.2 dB incurred loss @ 1550 nm - five times better bending performance than leading RWP fibers. TeraFlex offers excellent Polarized Mode Dispersion (PMD) of ≤ 0.1 ps/km per individual fiber. TeraFlex is an ideal choice for FTTP applications where small enclosures are normal and space is at a premium.

Optical Fiber Selection Chart

Description		Conventional Single mode	Reduced Water Peak Single mode	Zero Water Peak Single mode	TeraFlex Reduced Water Peak Single mode	NZDS Single mode	TeraGain® 62.5/125 Standard	TeraGain® 50/125 Standard	TeraGain® 50/125 10G-150	TeraGain® 50/125 10G-300	TeraGain® 50/125 10G-550
Part # Designator		9	3	2	K	8	6	5	A	B	F
Max Attenuation (dB/km) @850/1300	Premise	N/A	N/A	N/A	N/A	N/A	3.5/1.5	3.5/1.5	3.5/1.5	3.5/1.5	3.5/1.5
	OSP	N/A	N/A	N/A	N/A	N/A	3.5/1.0	3.5/1.5	3.5/1.5	3.5/1.5	3.5/1.5
Max Attenuation (dB/km) @1310/1383/1550	Premise	0.7/NA/0.7	0.7/0.7/0.7	0.7/0.7/0.7	0.7/0.7/0.7	N/A	N/A	N/A	N/A	N/A	N/A
	OSP	0.4/NA/0.3	0.4/0.4/0.3	0.4/0.4/0.3	0.4/0.4/0.3	NA/NA/.25	N/A	N/A	N/A	N/A	N/A
Typical Attenuation (dB/km) @850/1300	Premise	N/A	N/A	N/A	N/A	N/A	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0
	OSP	N/A	N/A	N/A	N/A	N/A	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0
Typical Attenuation (dB/km) @1310/1383/1550	Premise	0.7/NA/0.7	0.7/0.7/0.7	0.7/0.7/0.7	0.7/0.7/0.7	-/-/0.7	N/A	N/A	N/A	N/A	N/A
	OSP	0.34/NA/0.2	0.34/0.33/0.22	0.34/0.33/0.22	0.34/0.33/0.22	(-/-/0.3)	N/A	N/A	N/A	N/A	N/A
Maximum Individual Fiber Polarization Mode Dispersion		≤0.2 ps/√km	≤0.2 ps/√km	≤0.2 ps/√km	≤0.1 ps/√km	≤0.1 ps/√km	N/A	N/A	N/A	N/A	N/A
Cable Cutoff Wavelength		≤1260 nm	≤1260 nm	≤1260 nm	≤1260 nm	N/A	N/A	N/A	N/A	N/A	N/A
Zero Dispersion Wavelength		1300-1324	1302-1324	1302-1324	1302-1322	N/A	N/A	N/A	N/A	N/A	N/A
Mode Field Diameter 1310		8.8 to 9.6 μm	8.8 to 9.6 μm	8.8 to 9.6 μm	8.8 to 9.6 μm	N/A	N/A	N/A	N/A	N/A	N/A
Mode Field Diameter 1550		9.5 to 11.5 μm	9.9 to 10.9 μm	9.9 to 10.9 μm	9.9 to 10.9 μm	7.8 to 10.0 μm	N/A	N/A	N/A	N/A	N/A
Proof test		100 KPSI	100 KPSI	100 KPSI	100 KPSI	100 KPSI	100 KPSI	100 KPSI	100 KPSI	100 KPSI	100 KPSI
Max Attenuation 1490		N/A	≤0.25 dB per km	≤0.25 dB per km	≤0.25 dB per km	≤0.30 dB per km	N/A	N/A	N/A	N/A	N/A
Max Attenuation 1625		N/A	≤0.25 dB per km	≤0.25 dB per km	≤0.25 dB per km	≤0.25 dB per km	N/A	N/A	N/A	N/A	N/A
MacroBending Attenuation increase 1310nm											
100 Turns, 50mm Mandrel		≤0.05 dB	≤0.05 dB	≤0.05 dB	≤0.01 dB	≤0.05 dB	N/A	N/A	N/A	N/A	N/A
Maximum Dispersion Slope		0.092 ps/nm ² -km	0.092 ps/nm ² -km	0.092 ps/nm ² -km	0.092 ps/nm ² -km	N/A	N/A	N/A	N/A	N/A	N/A
Cladding Diameter		125.0 ±1.2 μm	125.0 ±0.9 μm	125.0 ±0.9 μm	125.0 ±0.7 μm	125.0 ±0.7 μm	125.0 ±1.5 μm	125.0 ±1.5 μm	125.0 ±1.0 μm	125.0 ±1.0 μm	125.0 ±1.0 μm
Core/Clad Concentricity Error		≤0.6 μm	≤0.5 μm	≤0.5 μm	≤0.5 μm	≤0.5 μm	≤1.5 μm	≤1.5 μm	≤1.5 μm	≤1.5 μm	≤1.5 μm
Cladding Non-circularity		≤1%	≤1%	≤1%	≤1%	≤0.7%	≤1.5%	≤1.5%	≤1.5%	≤1.5%	≤1.5%
Coating/Cladding Concentricity Error		≤ 12 μm	≤ 12 μm	≤ 12 μm	≤ 12 μm	≤ 12 μm	≤ 10 μm	≤ 10 μm	≤ 10 μm	≤ 10 μm	≤ 10 μm
Min Bandwidth (MHz-Km)											
Overfilled Launch		850/1300	N/A	N/A	N/A	N/A	220/600	500/500	700/500	1500/500	3500/500
Laser EMB		850/1300	N/A	N/A	N/A	N/A	-/-	-/-	950/500	2000/500	4700/500
Guaranteed Supportable Distances											
10 MBPS Ethernet		850/1300	N/A	N/A	N/A	N/A	1250/-	1250/-	1250/-	1250/-	1250/-
100 MBPS Ethernet		850/1300	N/A	N/A	N/A	N/A	300/2000	300/2000	300/2000	300/2000	300/2000
1 GBPS Ethernet		850/1300	N/A	N/A	N/A	N/A	300/550	300/1000	750/600	970/600	1040/600
10 GBPS Ethernet Premise		850/1300	N/A	N/A	N/A	N/A	35/300	82/300	150/300	300/300	550/300
10 GBPS Ethernet OSP		10km-40km	10km-40km	10km-40km	10km-40km	>40km	N/A	N/A	N/A	N/A	N/A
ISO/IEC		OS1	-	OS1	-	-	OM1	OM2	OM2	OM3	OM3
Standards											
Telcordia		GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE	GR-20-CORE
ITU-T		G.652.b	G.652.D	G.652.D	G.652.D	G.655	G.651	G.651	G.651	G.651	G.651
TIA		492CAAA	492CAAB	492CAAB	492CAAB	N/A	492AAAA-A	492AAAB	492AAAB	492AAAC-A	492AAAC-A
IEC		60793	60793-2-50	60793-2-50 Type B.1.3	60793-2-50	-	60793-2-10 Type A1b	60793-2-10 Type A1a.1	60793-2-10 Type A1a.1	60793-2-10 Type A1a.2	60793-2-10 Type A1a.2
ANSI/ICEA		S-87-640	S-87-640	S-87-640	S-87-640	S-87-640	S-87-640	S-87-640	S-87-640	S-87-640	S-87-640

Cable Options

Flooding Compound/Markings	Part Number Designator (last digit in part #)	
• Standard :	Dry (SAP) Block / Marked in Feet	1
• Options :	Dry (SAP) Block / Marked in Meters	2
	Flooding Compound / Marked in Feet	3
	Flooding Compound / Marked in Meters	4

Central Members / Strength Members

• Standard :	Dielectric / Dielectric
• Options :	Standard loose tube cables are available with a steel center member
	Single tube cables are available with steel strength members embedded in the outer jacket

Other Cable Options Include :

- Special Protection Jacket
- Rodent & Fuel Protection
- Nylon Outer Jacket

Superior Essex can add an additional jacket to most fiber optic cables to provide better protection against rodents and petroleum products. Contact your Superior Essex sales representative for further information.

Optical Fiber Color Codes and Conversion Table

Convert	To	Multiply by
μm	mils	0.03937
mm	in	0.03937
cm	in	0.3937
m	ft	3.2808
km	ft	3280.8
km	mi	0.62137
kg	lbs	2.2046
kg/km	lbs/1000 ft	0.67197
N	lbs f	0.22481
N-m	ft-lbs	0.73756
N/cm	lbs/in	0.57101
kPa	PSI	0.14504
°C	°F	1.8 x °C + 32
°F	°C	(°F-32)/1.8

ANSI/TIA/EIA-598-B Standard Fiber Color Code

• 1 Blue

• 2 Orange

• 3 Green

• 4 Brown

• 5 Slate

• 6 White

• 7 Red

• 8 Black

• 9 Yellow

• 10 Violet

• 11 Rose

• 12 Aqua

• 13 fibers and higher, the color code is repeated, Black stripe or dash is added, according to the ANSI/TIA/EIA-598-B specifications

Fiber Jacket Colors

• Outside Plant Cables

Black

• Indoor/Outdoor Cables

Black

• Laser-Optimized 50 μm Premises Cables

Aqua

• Multimode Premises Cables

Orange

• Single mode Premises Cables

Yellow

• Hybrid Premises Cables

Orange

• 1 Extruded color stripe is available

Standard stripe colors:

• Orange • Green • Yellow • Blue
(Other colors available upon request)

• Custom jacket colors available

Copper Wire & Cable NEC Fire Resistance Ratings

Article 800 of the National Electrical Code (NEC), also known as NFPA 70, covers requirements for low-voltage communications cables. The NEC requires that cables used in premises, both commercial and residential, be “listed for the purpose” by a Nationally Recognized Test Laboratory (NRTL, pronounced “nurtle”). Other countries have similar requirements. UL (Underwriters Laboratories Inc.) is the most recognized listing agency in the US. UL 444 is the overall specification used to identify the requirements for listed communications cables.

Many of the fire resistance test procedures called out in UL 444 are written by UL. However, other laboratories, such as ITS (Intertek Testing Services) and CSA (Canadian Standards Association), can also provide listing compliance to the NEC.

Five levels of fire resistance are specified. These are outlined below, from most stringent to least. The ratings are hierarchical, i.e., from a fire resistance standpoint, a higher rating can be substituted for any lower rating, but not vice versa.

NEC Designation	Common Term	Test	Comments
CMP	Communications Plenum	NFPA 262	Cable must have resistance to flame spread and reduced smoke generating properties. These cables are approved for placement in air handling ducts and chambers (plenums) without the use of fireproof conduit. The purpose of the rating is to lessen the transmission of fire and visible smoke to unaffected parts of the building. Toxic or corrosive elements of the smoke are not measured.
CMR	Communications Riser	UL 1666	Cable must not transmit flame from one floor to another when placed vertically in a building shaft (riser).
CMG	Communications General use	CSA C22.2 No. 0.3-M (Vertical Tray)	Cable may not transmit flame for more than 4 ft, 11 in. It shall not penetrate floors or ceilings, i.e., may only be used within a single floor. This designation was added as a part of the harmonization efforts between US and Canadian standards.
CM	Communications General Purpose	UL 1581 (Vertical Tray)	Cable may not transmit flame for more than 4 ft, 11 in. It shall not penetrate floors or ceilings, i.e., may only be used within a single floor.
CMX	Communications Limited Purpose	UL 1581 VW-1 (Vertical Wire)	Cable meets the least stringent flame spread requirements of all ratings. For residential use, but can only be installed in one and two-family (duplex) housing units. Often rated with optional UL requirements for outdoor use ¹ .

¹ These “outdoor” requirements are limited to some cold temperature properties and UV resistance. They do not qualify a cable to be substituted for an Outside Plant cable. For example, they have no protection against the intrusion of water, which can destroy a cable’s transmission properties and physically degrade a cable as well. The purpose of the “outdoor” rating is to ensure the cable can withstand outdoor exposure in the short run between the Network Interface Unit and the point of entry into the interior of the home.

In response to growing demand for data applications, premises cable performance has evolved such that several categories of transmission performance for Unshielded Twisted Pair (UTP) cables have been developed. These categories are detailed below.

Although some categories are no longer common, all are provided for historical purposes. The categories are hierarchical, i.e., a higher category can be substituted for any lower category, but not vice versa.

Category	Maximum Bandwidth	Common Applications	Specifications	Comments
6A	500 MHz	10 GB Ethernet	ANSI/TIA-568-B.2-10	Designed for reduced alien crosstalk
6	250 MHz	1000 Mbps Gigabit Ethernet	TIA/EIA-568-B.2-1-2002	Doubles the bandwidth of CAT 5e and vastly improves signal-to-noise margins.
5e	100 MHz	1000 Mbps Gigabit Ethernet	TIA/EIA-568-B.2-2001 ANSI/ICEA S-90-661	Characterized by tightly twisted pairs to reduce crosstalk loss.
5	100 MHz	1000 Mbps Gigabit Ethernet 100 Mbps Fast Ethernet 100 Mbps TPDDI 622 Mbps ATM	TIA/EIA-568-B.2-2001 ANSI/ICEA S-90-661	No longer recognized as an appropriate medium for commercial networking installations (replaced by CAT 5e or higher).
4	20 MHz	10 Mbps Ethernet 16 Mbps Token Ring (IEEE 802.5)	TIA/EIA-568-A (CAT 4)	No longer used.
3	16 MHz	100 Mbps Fast Ethernet (IEEE 802.3) Analog Voice Telecom Closet Wiring	TIA/EIA-568-B (Category 3) ANSI/ICEA S-90-661	Minimum allowed by the FCC for horizontal cable in commercial and residential voice and data applications. Market trend is to abandon CAT 3 in favor of installing CAT 5e or higher for both data and voice.

OSP Color Code Charts

Pair Identification Colors

- For pairs numbering 1 through 25, the pair identification colors are outlined below. In cable constructions containing more than 25 pairs, the colors are repeated as necessary. Color coded binders are used to identify 25 pair groups of color coded pairs.

Pair Number	Tip Color	Ring Color	Pair Number	Tip Color	Ring Color
1	White	Blue	16	Yellow	Blue
2	White	Orange	17	Yellow	Orange
3	White	Green	18	Yellow	Green
4	White	Brown	19	Yellow	Brown
5	White	Slate	20	Yellow	Slate
6	Red	Blue	21	Violet	Blue
7	Red	Orange	22	Violet	Orange
8	Red	Green	23	Violet	Green
9	Red	Brown	24	Violet	Brown
10	Red	Slate	25	Violet	Slate
11	Black	Blue			
12	Black	Orange			
13	Black	Green			
14	Black	Brown			
15	Black	Slate			

Identification of Groups of Pairs

- For cables through 600 pairs, 25 pair groups are identified by their binder colors in the same sequence as the pair identification is accomplished. Group 1 has White-Blue binders, Group 2 has White-Orange binders, etc. In this manner, each pair is uniquely identified. In cables having 25 pairs or less, binders are normally not used. However, if specified, the binders will be Group 1, White-Blue. For cables of 100-pairs or less, the use of the White binder is optional.

Group Number	Group Pair Counts	Color of Binders		Group Number	Group Pair Counts	Color of Binders	
1	1-25	White-Blue	W-BL	16	376-400	Yellow-Blue	Y-BL
2	26-50	White-Orange	W-O	17	401-425	Yellow-Orange	Y-O
3	51-75	White-Green	W-G	18	426-450	Yellow-Green	Y-G
4	76-100	White Brown	W-BR	19	451-475	Yellow-Brown	Y-BR
5	100-125	White-Slate	W-S	20	476-500	Yellow-Slate	Y-S
6	126-150	Red-Blue	R-BL	21	501-525	Violet-Blue	V-BL
7	151-175	Red-Orange	R-O	22	526-550	Violet-Orange	V-O
8	176-200	Red-Green	R-G	23	551-575	Violet-Green	V-G
9	201-225	Red-Brown	R-BR	24	576-600	Violet-Brown	V-BR
10	226-250	Red-Slate	R-S				
11	251-275	Black-Blue	BK-BL				
12	276-300	Black-Orange	BK-O				
13	301-325	Black-Green	BK-G				
14	326-350	Black-Brown	BK-BR				
15	351-375	Black-Slate	BK-S				

Super-units Binder Identification Colors

- It is desirable for manufacturing purposes to combine four 25 pair groups into “super units” when cables have 900 pairs or more.

Pair Number	Group Number	Binder Color	
1-600	1-24	White	W
601-1200	25-48	Red	R
1201-1800	49-72	Black	BK
1801-2400	73-96	Yellow	Y
2401-3000	97-120	Violet	V
3001-3600	121-144	Blue	BL
3601-4200	145-168	Orange	O



BrakeBox™ Dual Brake System

This package is dual purpose. In this design the cable is placed onto a plastic spool which is placed into a box. The brake allows for back-tension and over-spin control. The spool may be taken from the box for installation or may be left in the box where the cable pays out through a slotted opening.



POP® Box

In this package, the cable is coiled into a box. The product pays out through a tube opening in the box. This design does not allow for the cable to be removed as a unit from the box.



Reel-in-a-Box

This package is dual purpose. In this design the cable is placed onto a plastic spool which is placed into a box. The spool may be taken from the box for installation or may be left in the box where the cable pays out through a slotted opening.



Knock-out Box

Cable coiled and fastened within a box. Knock out boxes can be identified by a perforated "knock-out" which is removed, allowing access to the cable.



Steel Reel

Long lengths of cable are placed onto Steel Reels. An advantage of this reel is that it is environmentally-friendly and recycled for years of service.



Wood/Plywood Reel

Reels may be made of plywood or wood. Superior Essex wooden reels can be reused an average of five times before retirement (see website for further details).



Spool

The cable or wire is wound onto a spool. The spool is placed inside a box for protection during shipment. Spools are smaller than wood or steel reels.



Coils

Coils refer to lengths of cable that have been wrapped into a shape (usually a circle) and fastened with multiple ties.

Multiple coils may be placed inside a box for shipping or shipped without being boxed onto a pallet, and then secured by stretch-wrap. Coils are always fastened with ties.

Coils can be custom configured to fit a customer's unique cable and wire feeding systems.

Steel Reel Capacities (Feet)

Reel Number	413	414	415	416	417	419	420	487
(F) Flange	48	50	56	66	78	78	83	96
(T) Traverse	18	25.4	25.4	25.4	25.4	30	39.8	44.5
(D) Drum	30	30	30	36	42	42	42	42
Reel Weight (lbs)	216	250	282	360	566	610	782	1400
Cable Nominal O.D. (in)								
0.40	7288	12535	18169	25756	38265			
0.45	5701	9374	14342	19931	29604	35013		
0.50	4814	8006	11878	16777	24441	28911		
0.55	3706	6312	9807	13382	20099	23778	37297	
0.60	3109	5382	8043	11178	16402	19408	30984	
0.65	2598	4581	6528	9897	13961	16523	26766	
0.70	2442	3885	5691	8196	11831	14003	23064	38432
0.75	2035	3276	4953	7293	10594	12541	19792	33928
0.80	1677	3109	4297	6388	9490	11236	17889	29885
0.85	1594	2607	3711	5625	7934	9395	15223	26239
0.90	1297	2160	3553	4938	7070	8373	13718	22938
0.95	1239	2066	3056	4317	6286	7446	12349	21040
1.00	1187	1982	2940	4152	6049	7167	11098	19295
1.05	949	1622	2512	3617	5373	6366	9951	16682
1.10	912	1561	2425	3129	4753	5633	8897	15234
1.15	878	1251	2052	3024	4184	4959	8619	13891
1.20	683	1208	1987	2597	4051	4803	7687	12642
1.25	660	1167	1660	2517	3549	4208	6826	12314
1.30	638	1130	1611	2442	3445	4085	6636	11191
1.35	617	881	1565	2078	2998	3556	5866	10142
1.40	598	854	1287	2020	2916	3460	5715	9162
1.45	447	830	1252	1697	2840	3369	5022	8955
1.50	434	807	1220	1652	2452	2910	4901	8063
1.55	421	785	1189	1610	2392	2838	4276	7893
1.60	410	765	956	1571	2335	2771	4178	7079
1.65	399	571	933	1298	1995	2368	4086	6938
1.70	389	557	912	1268	1950	2315	3534	6192
1.75	379	543	892	1239	1907	2265	3460	6076
1.80	264	530	872	1212	1608	1910	3390	5391
1.85	258	518	680	1187	1574	1870	3324	5295
1.90	252	507	665	958	1542	1832	2844	5203
1.95	246	496	652	939	1511	1796	2790	4586
2.00	240	485	639	920	1482	1761	2739	4510
2.05	235	338	626	902	1228	1460	2691	4437
2.10	230	331	615	885	1205	1432	2269	3879
2.15	225	324	604	869	1183	1407	2230	3819
2.20	221	318	593	680	1162	1382	2193	3761
2.30	212	306	433	656	924	1099	2123	3207
2.35	130	300	425	644	908	1081	1758	3161
2.40	128	295	418	634	893	1063	1731	3117
2.45	125	289	411	623	879	1046	1705	3075
2.50	123	285	405	613	865	1030	1679	3035
2.55	*	*	*	604	852	1014	1655	2594
2.60	*	*	*	595	839	999	1632	2560
2.65	*	*	*	443	826	984	1319	2528
2.70	*	*	*	437	647	771	1300	2497
2.75	*	*	*	430	638	760	1282	2466
2.80	*	*	*	424	628	749	1265	2076
2.85	*	*	*	418	619	738	1248	2051
2.90	*	*	*	412	611	728	1232	2027
2.95	*	*	*	406	602	718	1217	2004
3.00	*	*	*	400	594	709	1202	1981
3.05	*	*	*	*	587	700	1187	1959
3.10	*	*	*	*	579	691	927	1938
3.15	*	*	*	*	572	682	916	1600
3.20	*	*	*	*	565	674	905	1582
3.25	*	*	*	*	421	503	894	1565
3.35	*	*	*	*	416	497	884	1549
3.30	*	*	*	*	411	491	874	1533
3.40	*	*	*	*	406	485	864	1518
3.45	*	*	*	*	401	479	855	1503
3.50	*	*	*	*	396	473	846	1489

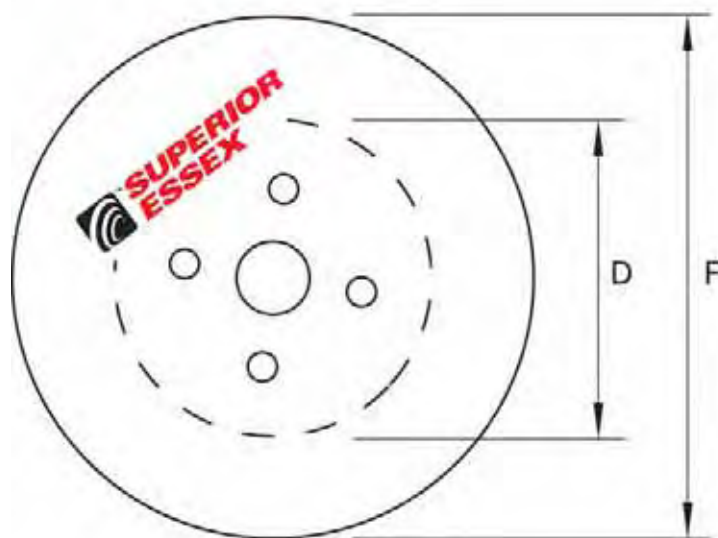
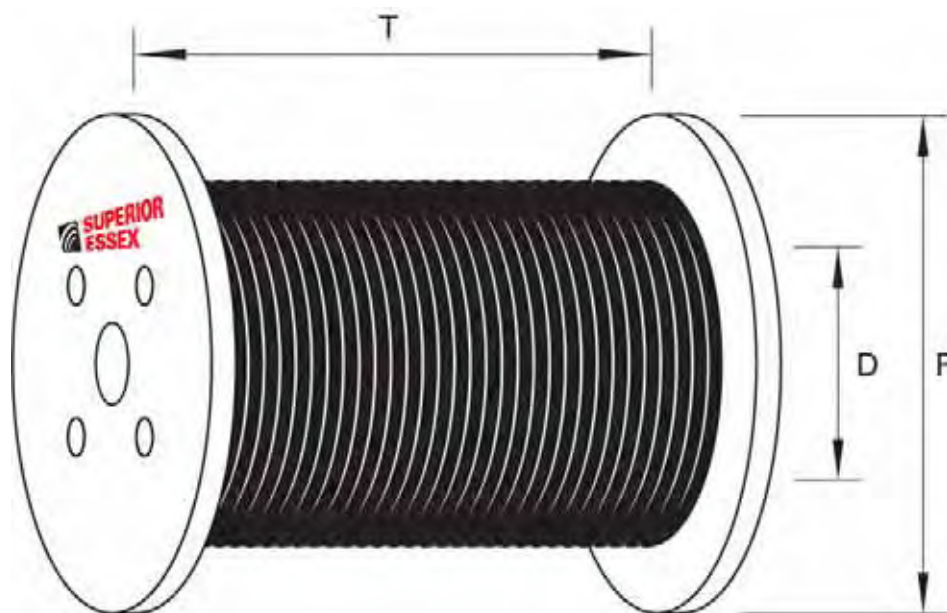
*Drum diameter is less than 12 times cable diameter (minimum bend radius). This chart applies to round cable only. Chart shows maximum calculated capacity. Actual available cable lengths may be less than capacity. Capacity is based on two inch clearance

Wood Reel Capacities (Feet)

Reel Number												
(F) Flange	30	36	44	46	52	58	62	65	72	78	84	96
(T) Traverse	18	18	18	25	25	25	30	30	36	40	40	40
(D) Drum	12	14	20	20	20	20	24	32	36	39	42	48
Reel Weight (lbs)	46	64	108	165	203	245	288	368	614	699	797	1175
Cable Nominal O.D. (in)												
0.40	3723	5844	8738	13498	19316	25088	33422	32580				
0.45	2908	4757	6802	10654	15170	19545	26054	25720	37698			
0.50	2472	3848	5576	8838	12337	16303	21714	21006	31148			
0.55	1883	3078	4541	7297	9930	12887	17191	17033	25619	32856	39025	
0.60	1580	2664	3658	5975	8378	11105	14804	14431	20898	28333	32542	
0.65	1317	2078	3177	4834	7023	9535	12710	12174	17794	23225	28199	36623
0.70	1254	1774	2754	4218	6269	8142	10858	10202	15077	20946	24383	32041
0.75	1038	1698	2379	3670	5183	6902	9214	9087	13514	17895	21007	27978
0.80	847**	1445	2046	3181	4598	6221	8299	8090	12116	15185	18003	24353
0.85	814**	1218	1748	2743	4069	5601	7469	7193	10118	13652	16277	21102
0.90	654**	1174**	1679	2639	3589	4653	6220	6381	9018	12263	14713	19217
0.95	630**	980**	1425	2264	3151	4153	5554	5645	8020	10999	13289	17499
1.00	609**	948**	1374	2187	3053	4034	5383	4974	7733	9845	11985	15925
1.05	*	781**	1155	1861	2670	3593	4797	4361	6866	8787	10789	13583
1.10	*	758**	1118	1804	2318	3186	4258	4219	6071	7816	9689	13145
1.15	*	612**	927	1519	2255	2810	3761	3682	5342	7573	8674	11911
1.20	*	*	899	1476	1944	2743	3664	3571	5181	6715	7736	10769
1.25	*	*	873	1225	1895	2406	3219	3096	4534	6523	7515	9708
1.30	*	*	712	1193	1618	2352	3143	3010	4408	5759	6679	8723
1.35	*	*	693**	1162**	1580**	2049**	2743	2588	3832	5052	6502	8492
1.40	*	*	675**	948**	1545**	2007**	2683	2520	3732	4921	5751	7606
1.45	*	*	537**	925**	1304**	1733**	2323	2458	3640	4799	5609	7419
1.50	*	*	524**	904**	1276**	1699**	2274	2091	3138	4182	4932	6618
1.55	*	*	511**	884**	1250**	1453**	1950	2041	3064	4085	4818	6465
1.60	*	*	500**	703**	1039**	1426**	1911	1995	2995	3528	4205	5737
1.65	*	*	489**	688**	1019**	1400**	1875**	1674	2554	3450	4113	5612
1.70	*	*	*	*	*	*	1841**	1638	2499	3376	4026	4949
1.75	*	*	*	*	*	*	1559**	1603	2447	3307	3483	4846
1.80	*	*	*	*	*	*	1531**	1571	2058	2825	3412	4750
1.85	*	*	*	*	*	*	1505**	1295	2017	2770	3345	4157
1.90	*	*	*	*	*	*	1255**	1269	1978	2717	3282	4078
1.95	*	*	*	*	*	*	1235**	1245	1941	2289	2808	4003
2.00	*	*	*	*	*	*	1215**	1222	1906	2246	2757	3931
2.05	*	*	*	*	*	*	*	1201	1574	2206	2708	3410
2.10	*	*	*	*	*	*	*	966	1546	2168	2661	3350
2.15	*	*	*	*	*	*	*	949**	1520	2131	2245	3294
2.20	*	*	*	*	*	*	*	933**	1494	1763	2207	3240
2.25	*	*	*	*	*	*	*	917**	1470	1734	2171	2778
2.30	*	*	*	*	*	*	*	902**	1185	1706	2137	2734
2.35	*	*	*	*	*	*	*	888**	1166	1679	2104	2692
2.40	*	*	*	*	*	*	*	875**	1148	1653	1742	2651
2.45	*	*	*	*	*	*	*	680**	1130**	1629	1716	2241
2.50	*	*	*	*	*	*	*	670**	1114**	1605	1690	2207
2.55	*	*	*	*	*	*	*	660**	1097**	1295	1666	2176
2.60	*	*	*	*	*	*	*	650**	1082**	1277	1642	2145
2.65	*	*	*	*	*	*	*	641**	1067**	1259**	1619	2115
2.70	*	*	*	*	*	*	*	*	832**	1241**	1598	2087
2.75	*	*	*	*	*	*	*	*	820**	1224**	1291	2059
2.80	*	*	*	*	*	*	*	*	809**	1208**	1273	1708
2.85	*	*	*	*	*	*	*	*	798**	1193**	1257**	1685
2.90	*	*	*	*	*	*	*	*	788**	1178**	1240**	1664
2.95	*	*	*	*	*	*	*	*	777**	919**	1225**	1643
3.00	*	*	*	*	*	*	*	*	768**	907**	1210**	1623
3.05	*	*	*	*	*	*	*	*	*	896**	1195**	1603
3.10	*	*	*	*	*	*	*	*	*	885**	1181**	1584
3.15	*	*	*	*	*	*	*	*	*	874**	1167**	1282
3.20	*	*	*	*	*	*	*	*	*	864**	911**	1267
3.25	*	*	*	*	*	*	*	*	*	854**	900**	1252**
3.30	*	*	*	*	*	*	*	*	*	*	890**	1238**
3.35	*	*	*	*	*	*	*	*	*	*	880**	1224**
3.40	*	*	*	*	*	*	*	*	*	*	870**	1210**
3.45	*	*	*	*	*	*	*	*	*	*	860**	1197**
3.50	*	*	*	*	*	*	*	*	*	*	851**	1184**
3.55	*	*	*	*	*	*	*	*	*	*	*	1172**
3.60	*	*	*	*	*	*	*	*	*	*	*	1160**
3.65	*	*	*	*	*	*	*	*	*	*	*	1148**
3.70	*	*	*	*	*	*	*	*	*	*	*	898**
3.75	*	*	*	*	*	*	*	*	*	*	*	888**
3.80	*	*	*	*	*	*	*	*	*	*	*	879**
3.85	*	*	*	*	*	*	*	*	*	*	*	871**
3.90	*	*	*	*	*	*	*	*	*	*	*	862**
3.95	*	*	*	*	*	*	*	*	*	*	*	854**
4.00	*	*	*	*	*	*	*	*	*	*	*	846**

**Drum diameter is less than 12 times cable diameter (minimum bend radius).

**Drum diameter is less than 15 times cable diameter (recommended bend radius). This chart applies to round cable only. Chart shows maximum calculated capacity. Actual available cable lengths may be less than capacity. Capacity is based on two inch clearance.



$F \times T \times D$ (Flange x Traverse x Drum)

F = Flange Diameter

T = Traverse inside distance between flanges

Note: T is inside dimension, not overall width.

D = Drum Diameter



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Glossary

Copper Glossary of Terms

ACR (Attenuation to Crosstalk Ratio): The difference between attenuation and crosstalk, measured in dB, at a given frequency. Important characteristic in networking transmission to assure that signal sent down a twisted pair is stronger at the receiving end of the cable than are any interference signals imposed on that same pair by crosstalk from adjacent pairs.

ADSL (Asymmetric Digital Subscriber Line): Modems attached to twisted pair copper wiring that transmit from 1.5 Mbps to 9 Mbps downstream (to the subscriber) and from 16 kbps to 800 kbps upstream, depending on line distance.

Amplifier: Any device that intensifies a signal without distorting the shape of the wave.

Analog: A signal that varies continuously (i.e. sound waves). Analog signals have a frequency and bandwidth measured in hertz (Hz).

ANSI: (American National Standards Institute).

Armor: A protective covering of steel wires or tape over the sheath of a telephone cable to prevent damage during its service life.

Asynchronous Transfer Mode (ATM): A high-speed, packet-switching technology used to transmit video, data, voice, etc. via fixed-length cells of 53 bytes.

Attenuation: Loss of signal power between two points. Attenuation is a ratio of input power vs. output power, measured in decibels per unit length, usually dB/km. The received signal is lower in signal power than the transmitted signal.

Backbone: The facility, such as cables and connectors, that connects equipment rooms, telecommunications closets and entrance facilities. Can be inter-building or intra-building.

Bandwidth: A measure of capacity of communications media. Greater bandwidth allows communication of more information in a given period of time. Bandwidth is generally described either in terms of analog signals in units of Hertz (Hz), which describes the maximum number of cycles per second, or in terms of digital signals in units of bits per second.

BER (Bit-Error Rate): The ratio of incorrectly transmitted bits to correctly transmitted bits.

Binder: A spirally applied colored thread or plastic ribbon used to separate and identify units and groups of cable pairs by means of color coding.

B-ISDN (Broadband Integrated Digital Network): A digital network with ATM switching operating at data rates in excess of 1.544 or 2.048 Mbps. ATM enables transport and switching of voice, data, image and video over the same infrastructure.

Broadband: An adjective used to describe large-capacity networks that are able to carry several services at the same time, such as data, voice and video.

Byte: Eight bits of digital data.

Cable, Aerial: Cable suspended in the air usually on utility poles. Except for self supporting cables an external messenger strand is used to support the cable.

Cable, Armored: A cable having an outer protection usually in the form of a steel corrugated tape.

Cable, Buried: A cable that is buried directly in the ground without being placed in underground conduit. Generally waterproof type cables are employed.

Cable, Plastic Insulated (PIC): Cable in which the conductors are insulated with plastic. Common insulation is polyethylene and polypropylene. Although a plastic, PVC insulated conductors are not referred to as PIC.

Cable, Waterproof: Cable containing a waterproof filling compound that fills all available space in the core and between core tape and shield and thus preventing the entrance of water.

Cable, Drop Wire: One or more pairs of insulated wires used to run a subscriber's line from the distribution terminal at a pole to the protector on the subscriber's premises.

Cable, Figure 8: Cables designed for self supporting aerial installations. The multi-pair core and steel support messenger are integrated in a parallel configuration to enable simultaneous installation of cable and messenger.

Capacitance: The ability of a dielectric material between conductors to store electrical energy when a difference of potential exists between the conductors. The unit of measurement is the farad, which is the capacitance value that will store a charge of one coulomb when a one volt potential difference exists between the conductors

Capacitance, Mutual: One of the primary constants of a cable pair which contributes to transmission loss.

Capacitance, Unbalance To Ground: The inequality between the grounded capacitance of a wire and its mate of a pair which causes pickup of energy from external sources, usually power transmission lines

CATV: (Community Antenna Television)

CCTV: (Closed-circuit Television)

Central Office: A building housing the telephone switching apparatus and transmission equipment.

Characteristic Impedance: In a transmission line of infinite length, the ratio of the applied voltage to the resultant current at the point the voltage is applied. Or the impedance which makes a transmission cable seem infinitely long, when connected across the cable's output terminals.

CLEC (Competitive Local Exchange Carrier): An American term for a telephone company that was created after the Telecommunications Act of 1996 made it legal for companies to compete with the ILECs. Contrast with ILEC.

Closure, Cable: Any of several types of housings that can be used to enclose cable sheath openings necessary for splicing or terminating.

CO (Central Office): A telephone company facility that handles the switching of telephone calls on the public switched telephone network (PSTN) for a small regional area.

Coaxial Capacitance: The capacitance of a single insulated conductor completely surrounded by a dielectric medium.

Conductor: A material that offers low resistance to the flow of electrical current.

Core Network: Combination of telephone switching offices and transmission plant connecting switching offices together. In the United States, local exchange core networks are linked by several competing inter-exchange networks; in the rest of the world (ROW) the Core Network extends to national boundaries.

Crosstalk: The transmitted signal on one circuit or cable pair causes interference in another circuit or cable pair.

Crosstalk, Far-End: Crosstalk measured by applying the disturbing signal on one pair at the near end and measuring the pick up on the disturbed pair at the far end.

Crosstalk, Near-End: Crosstalk measured by applying and measuring the disturbing signal on two pairs at the same end.

Data Link: The cable, receiver and transmitter that connect two points communicating with digital data.

Decibel (dB): The unit used to describe relative gain or loss of signal power, generally per unit length. Abbreviated dB, the decibel is a ratio of power out vs. power in. Increases or reductions of 3 dB will result in doubling or halving, respectively, the power in a circuit.

Delay Skew: The propagation delay difference between the slowest and fastest cable pair.

Digital: Encoded as a discrete signal in binary ones and zeros.

Digital Signal: A signal that takes on only two values, off or on, typically represented by "0" or "1". Digital signals require less power but (typically) more bandwidth than analog and copies of digital signals can be made exactly like the original.

DLC (Digital Loop Carrier): A digital transmission system designed for a telephony subscriber's loop plant. It multiplexes multiple circuits onto very few wires or onto a single fiber pair.

DS1 (Digital Signal 1): Twenty-four voice channels packed into a 193-bit frame and transmitted at 1.544 Mbps. The unframed version, or payload, is 192 bits at a rate of 1.536 Mbps.

DS1C: Two T2 frames packed into a higher-level frame transmitted at 3.15 Mbps.

DS2 (Digital Signal 2): Four T1 frames packed into a higher-level frame transmitted at 6.312 Mbps.

Copper Glossary of Terms

DSL (Digital Subscriber Line): Modems on either end of a single twisted pair wire that delivers ISDN Basic Rate Access.

DSLAM (Digital Subscriber Line Access

Multiplexer): Specifically, a device which takes a number of ADSL subscriber lines and concentrates these to a single ATM line.

Duct: Conduit for the installation and protection of cables in congested areas.

EF&I: (Engineer Furnish and Install)

Electromagnetic Coupling: The transfer of energy by means of a varying magnetic field.

ELFEXT (Equal Level Far-end Crosstalk): The ratio of the unwanted crosstalk at the far-end of the disturbed pair, used to quantify the noise seen at a receiver due to a far-end transmitter on another pair. Usually expressed in decibels (dB). Similar to ACR but is measured at the far end of the cable. It is an indication of the quality of the signal sensed by the receiver.

EMI (Electromagnetic Interference): "Noise" generated in copper conductors when electromagnetic fields induce currents. EMI may be caused by other copper cables and is caused by proximity to motors and machinery. The all-dielectric fiber optic cable design makes them immune to EMI.

Equipment Room: A centralized space for telecommunications equipment that serves the occupants of a building. An equipment room is considered distinct from a telecommunications closet because of the nature or complexity of the equipment.

Eye, Pulling: A strong metal ring usually installed at the factory, for use in pulling a cable into a duct.

Farad: A unit of capacitance that will store one coulomb of electrical charge when one volt of electrical pressure is applied.

FEP (Fluorinated Ethylene-Propylene): A thermoplastic material with good electrical properties insulating

FEXT (Far-End Crosstalk): Refers to crosstalk that is measured at the opposite end of the cable from which it is being disturbed.

F (Frequency): The number of times a periodic action occurs in a unit of time. The number of cycles that an electric current completes in one second, expressed in Hertz.

Flooding: The act of applying a liquid material over a cable or any of its components, usually for the purpose of adhesion, corrosion deterrent, or to fill voids to accomplish a specific purpose.

Frequency, Voice: Although frequencies from 32 to 16 kHz are audible to some persons the band normally used for telephone communications is limited to about 3500 Hz. Test frequency most commonly used is 1kHz.

Gas Pressurization: A method of preventing water from entering small cracks in cable splices or sheath

and for alerting personnel to larger leaks by keeping cables under pressure with dry gas.

Gigabit Ethernet: This standard was written by the IEEE 802.3 committee and adopted as a new standard for Gigabit transmission of LANs.

Group Binder: A binder applied over a number of units giving group identification.

Headroom: The amount of margin in ACR. A good rule of thumb for adequate cable headroom is 10dB ACR.

Hertz: The unit of frequency, one cycle per second.

Hybrid Cable (Copper): An assembly of two or more cables, of the same or different types or categories, continuously bound with an overall sheath to form a single unit.

Hygroscopic: Readily absorbing and retaining moisture.

IC (Intermediate Cross-Connect): A secondary cross-connect in the backbone cabling used to mechanically terminate and administer backbone cabling between the main cross-connect and horizontal cross-connect.

ILEC (Incumbent Local Exchange Carrier): A local telephone company service consistent with the services provided by a previous carrier. ILECs compete with upstart Competitive Local Exchange Carriers (CLEC).

Laminate: A sheet material made by bonding together two or more layers of the same or different material.

LAN (Local Area Network): A network connecting several nodes within a limited geographic area, usually within a building or campus

Lay: The longitudinal distance that a pair or unit advances in one spiral turn about the cable axis.

LCL (Longitudinal Conversion Loss): Ratio of the common-mode (longitudinal) signal applied to a cable or transmission channel to the resultant differential signal measured at the same end. Used to quantify the longitudinal signal seen at the transmitter due to the differential signals present on the cable or transmission channel which influences the electromagnetic emissions. Usually expressed in decibels (dB).

LCTL (Longitudinal Conversion Transfer Loss): Ratio of the common-mode (longitudinal) signal applied at the near-end of a cable or transmission channel to resultant differential signal measure at the far-end. Used to quantify the undesired differential noise seen at the receiver due to longitudinal noise coupled onto the cable from external sources. Usually expressed in decibels (dB).

LEC (Local Exchange Carrier): Any carrier that has been given permission by the state public utility commission to provide local voice level telecommunications services within a predetermined area.

MB/s (Megabit per second): A million bits per second.

MC (Main Cross-Connect): The centralized portion of the backbone cabling used to mechanically terminate and administer the backbone cabling, providing connectivity between equipment rooms, entrance facilities, horizontal cross-connects and intermediate cross-connects.

nm (Nanometer): One-billionth of a meter; 10⁻⁹ meter.

ns (Nanosecond): One-billionth of a second; 10⁻⁹ second.

OEM: Original Equipment Manufacturer

Ohm: The electrical unit of resistance. The value of resistance through which a potential difference of one volt will maintain a current of one ampere.

Outside Plant: Usually considered all cable and equipment used outside of the central office and customers' premises.

Pair: Two wires forming a single circuit, held together by twisting, binding, or a common jacket.

Pedestal: An above ground watertight housing for splicing and terminating buried cables.

Plant, Inside: Usually considered being all cable and equipment inside the central office and customer's premises.

Plenum: A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system (i.e. the space above the drop ceiling).

Plenum Cable: Cable made of fire-retardant materials that generates little smoke. These cables are installed in plenum air ducts, vertical shafts etc.

Polyethylene: A thermoplastic material having excellent electrical properties.

Polyurethane: Broad class of polymers noted for good abrasion and solvent resistance. Can be in solid or cellular form.

Polyvinyl Chloride (PVC): A general purpose thermoplastic used for wire and cable insulation and jackets.

POTS (Plain Old Telephone Service): The only name recognized around the world for basic analog telephone service. POTS takes the lowest 4kHz of bandwidth on twisted pair wiring. Any service sharing a line with POTS must either use frequencies above POTS or convert POTS to a digital signal.

POTS splitter: A device that uses filters to separate voice from data signals when they are to be carried on the same phone line, required for several types of DSL service.

Glossary

Copper / Fiber Glossary of Terms

Power Sum: The method of evaluating the performance of a single cable pair taking into account the impact of other cable pairs operating simultaneously.

Propagation Delay: The time loss due to the transmission medium between when a signal is transmitted and when it is received.

PS-ACR (Power Sum Attenuation to Crosstalk Ratio): Similar to ACR except Power Sum Near-end crosstalk is used in the calculation instead of near-end crosstalk. Used to quantify the noise seen at the receiver due to multiple near-end transmitters relative to the attenuated transmit signal present at the receiver. Usually expressed in decibels (dB).

PS-ELFEXT (Power Sum Equal Level Far-end crosstalk): The mathematical summation of the equal level far-end crosstalk power relative to the attenuated signal of the disturbing pair, coupled into a disturbed pair from all other pairs within a cable or transmission channel. Usually expressed in decibels (dB). Used to quantify the noise seen at the receiver due to multiple far-end transmitters.

PS-NEXT (Power Sum Near End Crosstalk): The measurement of the total crosstalk energy in the cable when more than one cable pair is operating simultaneously. It is determined by measuring the crosstalk of each of the pair combinations in the cable.

PSTN (Public Switched Telephone Network): The worldwide communications network that carries phone calls and data.

RBOC (Regional Bell Operating Company): The regional holding companies that resulted from the divestiture of AT&T. The original 22 Bell Telephone companies were combined into seven regional companies in 1984.

Resistance: That property of a conductor, wire or shield that determines the current flow for a given applied voltage. In DC circuits, the opposition a material offers to current flow, measured in Ohms. In AC circuits, resistance is the real component of impedance and may be higher than the value measured at DC.

Return Loss (RL): Also known as echo. Ratio of the reflected power in a cable or transmission channel to the incident power. Effectively expresses the relationship of impedance changes throughout a cable or transmission channel, as a function of frequency, relative to the normal system impedance. Used to quantify the noise seen at a receiver due to reflections (echo) from a near-end transmitter on the same pair when full duplex, bi-directional transmission is employed. Usually expressed in decibels (dB).

Riser: Pathways for indoor cables that pass between floors. It is normally a vertical shaft or space. Also a fire code rating for indoor cable.

Riser cables: Riser cables are intended for use in elevator (vertical) shafts between floors in a building. Also a fire-code rating for indoor cable connectorization.

Router: The central switching device in a packet-switched computer network that directs and controls the flow of data through the network.

RoHS: (The Restriction of Hazardous Substances Directive) RoHS 2002/95/EC was adopted in February 2003 by the European Union. The RoHS took effect on July 1, 2006, but is not a law; it is simply a directive for participating countries, including the European Union (exclusive of the United States and many other countries). This directive restricts the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment. RoHS is often referred to as the "lead-free" directive.

Sag: The downward curvature of an aerial cable or wire due to its weight.

Sheath, Cable: The protective outer covering over the cable core.

Shield: A tape, serve or braid of metal, usually copper, aluminum, or other conductive material placed around or between electric circuits or cables or their components, to prevent signal leakage or interference.

Spare Pair: An additional pair in a cable, above the guaranteed number, available in case a pair is defective when it leaves the factory.

Splice Case: A metal or plastic housing used around a cable splice to provide a water and gas tight closure.

Structural Return Loss (SRL): Ratio of the reflected power in a cable to the incident power expressed in decibels. Effectively expresses the relationship of impedance changes throughout a cable, as a function of frequency relative to the characteristic impedance of the cable. Important consideration for transmission of Analog video. Used as a figure of merit for consistency of impedance in a cable due to changes in the cable's construction or structure down a long length.

T-1: Same as DS1.

Telcordia: Formerly Bell Core, a research company once owned by the RBOCs.

TIA: The Telecommunications Industry Association. TIA creates telecommunications standards.

UL: Underwriters Laboratories, Inc.

UTP (Unshielded Twisted Pair): Cable containing one or more pairs of twisted copper without metallic shielding.

Velocity of Propagation: The transmission speed of electrical energy in a length of cable compared to speed in free space. Usually expressed as a percentage.

FIBER GLOSSARY OF TERMS

Absorption: The loss of light energy in an optical fiber, resulting from conversion of optical power into heat and caused primarily by impurities and defects in the glass.

Aerial Cable: Fiber optic cable installed on aerial supporting structures such as poles.

All-dielectric: Non-conducting; made entirely of dielectric (insulating) materials, without any metal conductors.

Aramid Yarn: Strength elements that provide tensile strength, support and additional protection of the fiber bundles. Kevlar® is a particular brand of aramid yarn.

Armor: Additional protective covering beneath outer jacket to provide physical protection against severe outdoor environments. Usually made of plastic-coated steel, it may be corrugated for flexibility.

Attenuation: A general term indicating the decrease in power of a signal in transmission as it passes from one point to another. In optical fibers, the power loss results from absorption and scattering and is normally measured in decibels (dB) per kilometer at a specific wavelength.

Bandwidth: Measure of the information-carrying capacity of an optical fiber. (This term is often used to specify the normalized bandwidth of a multimode fiber).

Bend Radius: The radius which a fiber or cable can be bent before risking increased attenuation or fiber breaks.

Blown Fiber: A method for installing fiber cable in which the cable is blown through the duct.

Bonding: Electrically connecting the metallic components of cable sheaths together.

Break Out Cable: Multi fiber cables where each fiber is further protected by an additional jacket and strength elements.

Breaking Strength: The amount of force needed to break a fiber.

Broadband: Denotes transmission facilities capable of handling a wide range of frequencies simultaneously, thus permitting multiple channels in data systems, rather than direct modulation.

Buffering: (1) An additional protective material extruded directly over the fiber coating to protect it from the environment and handling (tight-buffered); (2) extruding a tube around the coated fiber to allow isolation of the fiber from stresses in the cable (buffer tubes).

Buffer Tubes: A hard plastic cylindrical tube, with a diameter several times larger than the fiber, covering optical fiber(s) used for protection and isolation.

Cable: An assembly of one or more optical fibers formed into a core and covered with a protective sheath providing mechanical and environmental protection.

Cable Bend Radius: The effective radius resulting when a cable is bent. Often specified as a minimum bend radius that can be applied without causing damage to the cable's components.

Central Member: The center component in some cable designs. It serves as a strength and anti-buckling element. The central member material is typically either steel or glass-reinforced plastic.

Cladding: The material surrounding the core of an optical fiber. The cladding must have a lower index of refraction to keep the light in the core.

Fiber Glossary of Terms

Coating: A protective material applied directly over the cladding of the fiber during the draw process to protect the fiber from the environment and handling.

Composite Cable: A cable containing both fiber and copper media per Article 770 of the National Electrical Code (NEC).

Conduit: A pipe or tube that may be buried or installed within buildings through which cables can be pulled or housed. Synonym for duct.

Core, Cable: The central portion of a cable containing the optical fibers and surrounded by a sheath.

Core, Fiber: The central region of an optical fiber through which light is transmitted. Fiber cores have a higher index of refraction than the cladding in order to contain the light.

Decibel (dB): The unit for measuring the relative strength of light signals (attenuation), normally expressed in dB.

Dielectric Cable: A cable that contains no electrically conducting materials such as metal. Glass fibers are considered dielectric. Dielectric cables are sometimes used in areas subject to high lightning or electromagnetic interference.

Distribution Cable: Generally tight buffered fiber cables used for various indoor applications. Distribution cables are usually 6 thru 144 fiber count cables.

Duct: See conduit.

Duplex Cable: A cable containing 2 fibers. Standard configurations are duplex round and duplex zip.

Electromagnetic Interference (EMI): Any electrical interference that causes undesirable interference or failure in electronic equipment. Optical fibers neither emit nor receive EMI.

Fiber: An optical fiber is a thin piece of glass used for transmitting optical signals. An optical fiber consists of three layers: the core, cladding and coating. It is capable of carrying information in the form of light.

Fiber Bend Radius: Radius a fiber can bend before the risk of breakage or increase in attenuation.

Fiber Distributed Data Interface (FDDI): A transmission standard for a fiber optic local area network.

Fiber Optics: Light transmission through optical fibers for communication or signaling.

Grounding: Connecting the metal components of a cable sheath to earth, generally through a ground rod.

Hybrid Cable: A fiber optic cable containing two or more different types of fiber. The most common hybrid includes 62.5/125 μm multimode mixed with Single mode fiber.

Inside Plant: Tight buffered fiber optic cables used for indoor applications.

Interbuilding: Refers to between buildings.

Interconnect: Tight buffer cables such as simplex, duplex and quad cables.

Intrabuilding: Refers to within buildings.

Jacket: A plastic extrusion over a cable. Kevlar®: A strong material used in cable strength members. The name is a trademark of the Dupont Company.

Kilometer (km): One thousand meters, or approximately 3,281 feet, or 0.62 miles. The kilometer is a standard unit of length measurement in fiber optics.

LAN (Local Area Network): See Local Area Network.

Lashing: Attachment of a cable to a support strand by wrapping steel wire helically around them.

Local Area Network (LAN): A geographically limited communications network intended for the local transport of voice, data and video.

Loose Tube Cable: A type of cable construction where the fibers are encased in buffer tubes having a diameter several times larger than the fiber offering excellent fiber protection and segregation. This design offers excellent protection for outdoor environments.

Macrobanding: Visible bends often caused by exceeding suggested bend radius of a cable.

Megahertz (MHz): A unit of frequency that is equal to one million cycles per second.

Microbanding: A small fiber bend, invisible to the unaided eye, that results in light displacement and increased loss. They can occur due to coating, cabling, installation and temperature.

Minimum Bend Radius: The amount of bend a fiber (or cable) can withstand before experiencing problems in performance.

Mode: A term used to describe an independent light path through a fiber. Only one mode propagates in a Single mode fiber whereas several modes propagate in a multimode fiber.

Mode Field Diameter (MFD): The diameter of the one mode of light propagating in a Single mode fiber. Since the mode field diameter is larger than the core diameter, it replaces core diameter as the practical parameter in Single mode fiber. Synonym for spot size.

Multifiber Cable: An optical fiber cable that contains two or more fibers.

Multimode Fiber (MM): A type of optical fiber in which light travels in multiple modes. The most common multimode fiber sizes (core/cladding) are 50/125 and 62.5/125.

National Electrical Code (NEC): Defines flammability requirements for cables installed within buildings. (Local codes take precedence but may refer to or require compliance to the NEC.)

Nanometer (nm): A unit of measurement typically used to express the wavelength of light.

Nonmetallic Cable: See dielectric cable. Optical Fiber: See Fiber.

Plenum: A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system (i.e. the space above the drop ceiling).

Polarization Mode Dispersion (PMD): The broadening of a light pulse due to the time delay of one of the two pulse components. If significant enough, the result is a bit error.

RoHS: (The Restriction of Hazardous Substances Directive) RoHS 2002/95/EC was adopted in February 2003 by the European Union. The RoHS took effect on July 1, 2006, but is not a law; it is simply a directive for participating countries, including the European Union (exclusive of the United States and many other countries). This directive restricts the use of six hazardous materials in the manufacture of various types of electronic and electrical equipment. RoHS is often referred to as the "lead-free" directive.

Scattering: A property of the fiber that causes light to change direction, contributes to optical attenuation.

Sheath: The protective outer covering of a cable core, including metallic shields and jackets.

Single mode Fiber (SM): An optical fiber in which the signal travels in one mode. The fiber has a small core diameter, typically 8.3 μm .

Spot Size: See mode field diameter.

Stranding: The manufacturing process by which cable components, such as buffer tubes and yarns, are helically assembled around a central member forming a round core.

Strength Member: The part of a fiber optic cable composed of aramid yarns or fiberglass that increase the tensile strength of the cable.

Tensile Strength: The pulling strength or force necessary to break a material.

Thermoplastic: A material that softens with heat but returns to its original condition when cooled.

Tight-Buffered Cable: Type of cable construction where the plastic buffer is applied directly over the coating on the fiber to a diameter of 900 μm .

Outside Plant: The portion of a cable network that resides outside of buildings.

PE: Abbreviation used to denote polyethylene. A type of thermoplastic material used for outside plant cable jackets.

Riser cables: Riser cables are intended for use in elevator (vertical) shafts between floors in a building. They are OFNR listed (UL 1666). Also a fire-code rating for indoor cable connectorization.

Wavelength: The distance between two successive points on adjacent waves, usually measured in nanometers (nm).

Window: A range of wavelengths within which a fiber best operates.

Standard Warranty, Terms and Conditions

1. ACCEPTANCE, WAIVER, MODIFICATION, INTERPRETATION AND CONSTRUCTION

Orders which are accepted and contracts that are formed, are accepted or formed at Seller's offices on the basis of and strictly limited to the Seller's standard terms and conditions of sale, which Buyer is deemed to consent to as a condition thereto and which shall control over any contrary or additional terms and conditions on any purchase order or other document of Buyer, which additional terms and conditions are hereby objected to and to which Seller shall not be bound. Waiver of any term or condition of sale shall not constitute waiver of any other term or condition or legal remedy of Seller. Any act by Buyer of confirmation of any transaction contemplated hereby, including any order issued in response to a quote of Seller, shall constitute Buyer's acceptance of Seller's terms and conditions. No modification of any order or contract shall be binding unless in writing signed by both parties hereto. Orders and contracts shall be interpreted in accordance with and the construction hereof shall be governed by, the laws of the State of Indiana, United States of America. Captions as used herein are for convenience or reference only and shall not be deemed or construed as in any way limiting or extending the meaning of any terms and conditions.

2. TITLE, DELIVERY, RISK OF LOSS AND SHIPPING

Title to and risk of loss of all goods sold hereunder shall pass to Buyer upon their delivery, f.o.b. Seller's factory (unless a different f.o.b. point is otherwise agreed to and accepted) to any agent of Buyer, including a common carrier or warehouse, as hereinafter provided. Wherever transportation rates and carrier's liability for damage depend upon the value of the shipment as declared by shipper, Seller will declare such value as will entitle Buyer to have goods shipped at the lowest permissible transportation rates unless otherwise instructed in writing by Buyer. Buyer will furnish written destination instructions for all goods as promptly as possible. Seller shall for the account and at the expense and risk of Buyer arrange for shipment of the goods by a carrier of its own selection to Buyer's destination. In the absence of destination instructions, Seller may at Buyer's expense and with notice to Buyer, warehouse the goods in a reasonably suitable manner. Seller shall not be liable for loss or damage attributed to negligence either in selection of the carrier or the warehouse or in agreeing with either of them to contract terms on Buyer's behalf.

All shipments will be at shipper's option. Customer requested premium cost freight routing, including air freight will be shipped F.O.B. shipping point, freight collect to the customer.

The promised shipping date is the Seller's best estimate and will not operate to bind Seller to ship or make deliveries on the date indicated on quotation or order acknowledgment.

3. PRICE AND PAYMENT

Unless otherwise specified, all orders or contracts accepted will be invoiced at Seller's prices in effect on the date of shipment, which Buyer agrees to pay. Unless otherwise specified, payment terms are net 30 days and overdue accounts shall accrue charges at a rate of 1.5% (0.015) per month or the maximum legal rate, whichever is less. Credit and delivery shall be subject to Seller's approval and Seller reserves the right to alter the terms and fix a limit of credit. Each order or contract shall be treated as a distinct contract but if Buyer shall fail to fulfill the terms of payment, Seller may without prejudice to any other lawful remedy defer further shipments and/or cancel any order or contract. Buyer shall be liable to Seller for all costs and fees, including attorneys' fees, which Seller may reasonably incur in any actions by Seller taken to collect on any overdue account of Buyer. Unanticipated cost increases created by circumstances such as, but not limited to, changes in government energy policies, metal premium charges or raw materials price increases are not covered by the price quoted. Any order accepted requiring special manufacturing processes, inspection, specified weight, packaging, test results, certification, etc., is subject to additional charges.

4. INSPECTION

If upon receipt of the goods by Buyer at destination the same shall appear not to conform to this order or contract, Buyer shall within thirty (30) days after receipt thereof notify Seller of such condition and afford Seller a reasonable opportunity to inspect the goods and make any appropriate adjustment or replacement. The remedies afforded Buyer under the paragraph hereof entitled "LIMITED WARRANTIES, REMEDIES AND LIMITATIONS" shall be the exclusive remedies for defective goods whether or not discovered upon inspection by Buyer. Buyer shall not delay payment for the goods pending their inspection.

5. LIMITED WARRANTIES, REMEDIES AND LIMITATIONS

a. Defective Goods

Seller warrants to Buyer that at the time of delivery the goods sold hereunder will be free from defects in design, material and manufacture and will conform substantially to Seller's applicable specifications as stipulated in the order or contract. Seller's liability and Buyer's remedy under this warranty are strictly limited to the refund of purchase price, repair or replacement, at Seller's sole option, of goods or materials sold which are returned to Seller and which are shown to Seller's reasonable satisfaction to have been defective provided that written notice of the defect shall have been given by Buyer to Seller within one year of delivery of such goods by the Seller. Transportation charges to and from Seller's location for the return of defective goods to Seller and their re-shipment to Buyer and the risk of loss thereof will be borne by Buyer. If services or data are to be furnished hereunder, Seller warrants to Buyer that such services will be performed or such data prepared in a good workmanlike manner. Seller's liability and Buyer's remedy under this warranty are limited to the correction of such services or data as are shown to Seller's reasonable satisfaction to have been defective, provided that written notice of such defective services or data shall have been given by Buyer to Seller within thirty (30) days after the performance of such services or delivery of such data by Seller.

b. Title

Seller warrants to Buyer that it will convey good title to the property sold. Seller's liability and Buyer's remedy under this warranty are strictly limited to the removal of any title defect or, at the sole option of the Seller, to the replacement of the goods or parts thereof which are defective in title; provided however, that the rights and remedies of the parties with respect to patent infringement shall be limited to the provisions of subparagraph c. below.

c. Patent Infringement

Seller shall conduct, at its own expense, the entire defense of any claim, suit or action alleging that, without further combination, the use or resale by Buyer or any subsequent purchaser or user of the goods delivered hereunder, directly infringes any United States patent, but only on the conditions that, (1) Seller receives prompt written notice of such claim, suit or action, full opportunity and authority to assume the sole defense thereof including settlement and appeals and all information available to Buyer and defendant for such defense, (2) said goods are made according to a specification or design furnished by Seller, or if a process patent is involved, the process performed by the goods is recommended in writing by Seller and (3) the claim, suit or action is brought against Buyer or one expressly indemnified by Buyer. Provided all three of the foregoing conditions have been met, Seller shall, at its own expense, either settle said claim, suit or action or shall pay all damages excluding consequential damages and costs awarded by the court therein and, if the use or resale of such goods is finally enjoined, Seller shall, at Seller's option, procure for defendant the right to use or resell the goods, replace them with equivalent non-infringing goods, modify them so they become

non-infringing but equivalent, or remove them and refund the purchase price (less a reasonable allowance for use, damage or obsolescence). No indemnity is granted by Seller under the patents of any nation other than that specified above, nor with respect to any of the goods or components thereof manufactured according to a specification or design of anyone other than Seller. If a claim, suit or action is based on a specification or design furnished by Buyer or on the performance of a process not recommended in writing by Seller, or on the use or sale of the goods delivered hereunder in combination with other goods not delivered to Buyer by Seller, Buyer shall indemnify and save Seller harmless therefrom.

d. Exclusive Warranties and Remedies

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND ARE GIVEN AND ACCEPTED IN LIEU OF (a) ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ARISING OUT OF THE CONDUCT OF THE PARTIES and (b) ANY OBLIGATION, LIABILITY, RIGHT, CLAIM OR REMEDY FOR SELLERS NEGLIGENCE, ACTUAL OR IMPUTED. The remedies of the Buyer for breach of any warranty arising hereby, expressed or implied, or by operation of law, or for breach of any duty of Seller, expressed or implied or arising out of any conduct of the parties, shall be strictly limited to those provided herein to the exclusion of any and all other remedies including, without limitation, claims for incidental or consequential damages. No agreement varying or extending the foregoing warranties, remedies or these limitations will be binding upon Seller unless in writing, signed by a duly authorized executive officer of Seller.

6. EXCUSABLE DELAYS

Buyer acknowledges that the goods and/or services called for hereunder are to be manufactured or provided by or for Seller to fulfill this order or contract and that the delivery date(s) is (are) based on the assumption that there will be no delay due to causes beyond the reasonable control of Seller. Seller shall not be charged with any liability for delay or non-delivery when due to delays of suppliers, acts of God or the public enemy, compliance in good faith with any applicable foreign or domestic governmental regulation or order, whether or not it proves to be invalid, fires, riots, labor disputes, unusually severe weather or any other cause beyond the reasonable control of Seller. To the extent such causes actually retard deliveries on the part of the Seller, the time for performance shall be extended for as many days beyond the date thereof as is required to obtain removal of such causes. This provision shall not, however relieve Seller from using its best efforts to avoid or remove such causes and continue performance with reasonable dispatch whenever such causes are removed.

7. TAXES

In addition to the agreed purchase price of the goods and/or services called for hereunder any and all taxes (not including any U.S. income or excess profit taxes attributable to Seller) which may be imposed by any taxing authority, arising from the sale, delivery or use of the goods and/or the furnishing of the services hereunder and for which Seller may be held responsible for collection or payment, either on its own behalf or that of Buyer, shall be paid by Buyer to Seller upon Seller's demand.

8. FINANCIAL RESPONSIBILITY OF BUYER

If before completion of performance of any order or contract by Seller, a receiver or trustee is appointed for any of Buyer's property, or Buyer be adjudicated or voluntarily becomes a bankrupt under any bankruptcy, dissolution or re-organization laws or similar legislation, or if Buyer becomes insolvent or makes an assignment for the benefit of creditors, or an execution be issued pursuant to a judgement rendered against Buyer, or should Buyer be unable or refuse to make payment to Seller in accordance with any of its obligations to Seller, Seller may at its option in any of such events terminate any order or contract by giving to Buyer a written notice of its intention so to do and Seller shall thereupon be relieved of any further obligation to Buyer and Buyer shall reimburse Seller for its termination costs and expenses and a reasonable allowance for profit.

9. CANCELLATIONS AND RETURNS

Orders may be canceled and goods may be returned for credit, only upon the prior approval of Seller and upon terms protecting Seller from loss. Due to raw material and manufacturing plant scheduling, all orders once placed with and accepted by Seller are non-cancelable thirty (30) days prior to the scheduled ship date. Seller will issue a formal RETURN MATERIAL AUTHORIZATION tag to support all authorized returns. For any credit, this document must denote the Buyer's order number, Seller's invoice number, description and quantity of item to be returned and reason for request. Stock items are returnable at invoice price less 20% restocking charge. Freight prepaid to plant of manufacture. Non-stock items and/or special items are not subject to return. All material must be returned to Seller on the original pallets and in the original packaging.

10. CHANGES

Seller may at its option modify Buyer's order where necessary by making any of the following changes: (a) substituting the latest or correct part number or part description for the part number or part description set forth on the order; (b) substituting Seller's prices in effect as applicable to the order for the prices set forth in Buyer's order; (c) substituting an estimated delivery schedule which is reasonable (considering Seller's stock availability and lead time) for the delivery schedule set forth on the order; (d) correcting any stenographical or typographical error on any document.

11. COMPLIANCE WITH FAIR LABOR STANDARDS ACT

Seller hereby certifies that all goods sold hereunder which are produced or manufactured in the United States of America are produced in compliance with the Fair Labor Standards Act of 1938, as amended (29 U.S. Code 201-219). All requirements as to the certificate contemplated in the October 26, 1949 amendment to the Fair Labor Standards Act of 1938 shall be considered as satisfied by this certification.

12. APPENDICES

Any appendix or other terms and conditions of the Seller as may be attached hereto, be on the reverse hereof and/or be identified herewith are hereby incorporated and made a part of these terms and conditions. All orders or contracts shall be subject to such additional terms and conditions which shall control over any inconsistency with the terms and conditions stated herein.

13. ENTIRE AGREEMENT

The terms and conditions of this order or contract constitute the entire agreement between the parties hereto and shall supersede all previous communications, representations or agreements, either oral or written between the parties hereto with respect to the subject matter hereof.

14. CHANGES - PROCESS, MATERIAL AND PRODUCT DESIGN

Seller continually develops and uses new processes, materials and product designs in an effort to improve its products, while maintaining conformity to specifications. If your applications of our products rely upon any performance, dimensional or content criteria other than as required by the applicable specifications, you must conduct regular testing or evaluation of those specific products. Seller makes no warranty or representation of any nature that any material shipped conforms to any material of like product description as may have previously been delivered to you, except as to the applicable specifications.



Standard Jacket Colors

Premises Cables



Superior Essex offers an extensive, in-stock, line of jacket color varieties in our Marathon LAN®, Cobra, DataGain® and NextGain® products lines. These colors are available from stock with no minimum quantity required. Other colors available upon request with minimum order quantities.

Marathon LAN® Category 5e

CMR cables are available from stock in colors:



CMP cables are available from stock in colors:



DataGain® Category 6+

CMR cables are available from stock in colors:



CMP cables are available from stock in colors:



Cobra Category 5e+

CMR cables are available from stock in colors:



CMP cables are available from stock in colors:



NextGain® Category 6eX

CMR cables are available from stock in colors:



CMP cables are available from stock in colors:



PRODUCT BULLETIN
PREMISES PRODUCTS

PerformaLink® Warranty Program

Purpose: As further described below, Superior Essex warrants to the customer that premises Category 5e, Category 6, and fiber optic network installations will meet or exceed the standards as defined in the TIA 568 series industry specifications in force at the time of product purchase.

Scope: This warranty covers the permanent link of the network as defined by the TIA/EIA 568-B series, which includes the cable and connecting hardware. This warranty does not cover other elements of the channel, such as patch cords and workstation cords.

Superior Essex will honor claims on this warranty for a period of twenty-five (25) years. If system performance or material fails to meet the appropriate industry specification, the owner must notify Superior Essex, in writing, within 10 days of defect discovery date. If a warranty claim is determined by Superior Essex in its sole discretion to be valid, Superior Essex will, at its option, replace or repair the defective components of the permanent link. Superior Essex will reimburse the claimant for necessary and reasonable labor costs, provided prior approval is obtained from Superior Essex. The liability of Superior Essex for the above remedies shall not exceed \$500 per each network permanent link or end-user drop.

The electrical and optical performance provided by the combination of the different components of the permanent link will be certified by Superior Essex to meet the industry standard, as defined by the TIA 568 series standard for the "permanent link" in force at time of purchase as long as each condition listed below is met:

1. The connectivity equipment used in the network must be supplied by one or more of the approved suppliers AND each component must be manufactured, tested, and independently verified by UL, ITS/ETL, or any approved independent testing agency to meet the TIA 568 series industry standard in force at the time of purchase. The companies currently recognized as approved connectivity suppliers are:

- | | |
|--------------------------|-------------|
| • ADC Telecommunications | • Krone |
| • AllenTel | • Ortronics |
| • AMP | • Panduit |
| • Belden IBDN | • Siemon |
| • Embarq Logistics | • Systimax |
| • Hellermann Tyton | • Uniprise |

2. The network system must be designed and installed by "BICSI Certified" or Superior Essex approved designers and installers.

3. Each link in the network must be field tested in accordance with the TIA 568 series industry standard in force at the time of purchase AND the installed network links must have passed all TIA 568 requirements.

4. Appropriate registration form must be properly completed and submitted to Superior Essex within 10 days of installation completion.

5. Copies of all test reports must be submitted along with the registration form to Superior Essex and be kept on file by the registrant to be re-submitted when requested by Superior Essex. Data must be saved in raw data and summary formats and submitted via e-mail or on CD.

6. The following field testers are recognized under the Superior Essex Warranty Programs as acceptable for use to certify installations for warranty coverage.

- | | | |
|------------------------|--------------------------|-----------------|
| Fluke Networks: | Ideal Industries: | Agilent: |
| • DSP-4000 Series | • LANTEK 6, 6a, 7, | • WireScope 350 |
| • DTX Series | 7g Series | • WireScope Pro |
| • OMNIScanner 2 | • LT 8000 Series | |

This warranty will be void unless the system is maintained in accordance with industry standards and no changes are made after warranty issuance and acceptance date, unless Superior Essex grants written consent.

A claim will be reviewed for validity only if all of the following are satisfied:

- 1.) Reported within ten (10) days of date of defect discovery,
- 2.) All installation records are provided (original network installation design prints, test results, warranty registration) evidence of original test, including reports showing compliance to all applicable TIA 568 requirements.
- 3.) Copies of all original receipts for materials and labor from the date of initial installation
- 4.) Superior Essex has full and open access to inspect and evaluate the installation site.

Superior Essex warrants to Buyer that at the time of delivery the Superior Essex goods sold hereunder will be free from defects in design, material, and manufacture and will conform substantially to the Seller's applicable specifications as stated herein. Seller's liability and Buyer's remedy under this warranty are strictly limited to the repair or replacement specified above.

Administration: Registration forms can be submitted through mail, fax, or on-line through the Superior Essex Internet web site. Test data must be sent electronically. Warranty registration will then be approved or disapproved with a response sent to the registrant. Mail should be sent to:

PerformaLink® Warranty

Superior Essex
150 Interstate North Parkway SE
Atlanta, GA 30339

Exclusive Warranties and Remedies.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND ARE GIVEN AND ACCEPTED IN LIEU OF (a) ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ARISING OUT OF THE CONDUCT OR THE PARTIES, AND (b) ANY OBLIGATION, LIABILITY, RIGHT, CLAIM OR REMEDY FOR SELLERS NEGLIGENCE, ACTUAL OR IMPUTED. The remedies of the Buyer for breach of any warranty arising hereby, expressed or implied, or by operation of law, or for breach of any duty of Seller, expressed or implied or arising out of any conduct of the parties, shall be strictly limited to those provided herein to the exclusion of any and all other remedies including, without limitation, claims for incidental or consequential damages. No agreement varying or extending the foregoing warranties, remedies or these limitations will be binding upon Superior Essex unless in writing, signed by a duly authorized executive officer of Superior Essex.

PerformaLink® Registration Form

Warranty Request Date:					
End User Information:			Installation Contractor Information:		
Company Name:			Contractor Name		
Primary Contact Name:			Primary Contact Name:		
Street Address:			Street Address:		
City:	State:	Zip:	City:	State:	Zip:
Telephone:	Fax:		Telephone:	Fax:	
E-Mail Address:			E-Mail Address:		
Project:					
Project Name:			Project Manager:		
			Project Manager Phone Number:		
			Project Manager E-Mail:		
Project Site Address:			Is Project Manager RCDD certified: Y / N Certificate Number:		
City:	State:	Zip:	List any other certifications:		
Project Site Phone Number:			Any Remote Site Locations: Y / N If so, list all locations and contact information:		
Other Contact Information:					
Project Start Date:	Project Completion Date:				
Terminations					
	Voice:	Data:	Video:	Other:	
Number of Terminations					
Connectivity Manufacturer (s)					
Connectivity Manufacturer (s) Products Used :					
Are all components certified to industry standards: Y / N If so, which standards?					
List all network protocol applications:					
Is the System Designer BICSI certified? Y / N If so, provide the designer's certificate number.			Was system tested in accordance with TIA and BICSI standards? Y / N		
Did all terminations pass all tests?: Y / N			Have test results been submitted to Superior Essex?: Y / N Date Submitted:		
List Distributor or reseller of Superior Essex?:					
Your signature certifies that the above information is accurate, true and complete					
End User Customer Signature:		Date:	Installation Contractor Signature:		Date:
Superior Essex use only					
Superior Essex Approval Signature:		Date:	Version of industry standards in place at time of purchase:		

Campus Warranty Program

A Total Approach to Campus-Wide Cabling

Today's communications networks encompass much more than the inside building data cabling system. In a campus setting, the network extends outside between buildings and through the telco room. Often the voice network is kept separate from data, yet it is designed and installed simultaneously with all other network cabling.

Under the Superior Essex Campus Warranty Program, virtually all of the telecommunications cabling needs of a campus project can be met with the comprehensive coverage of a single warranty solution.

STRUCTURED CABLING SYSTEM

- 25-year Warranty on cabling and connectivity installed as PerformaLink® System*
- Lifetime Warranty on cabling and connectivity installed as NextLAN system*

How the Campus Warranty Program Works

1. Install your structured cabling system using 100% Superior Essex copper or fiber data cable in combination with a connectivity solution which is included in either the PerformaLink program, the NextLAN® system, or one of the connectivity warranty programs in which Superior Essex participates.
2. Certify your Structured Cabling installation in accordance with the requirements of PerformaLink or NextLAN programs. Your warranty on inside building structured cabling will then be provided. You may also choose to obtain your system certification and warranty through one of the connectivity warranty programs in which Superior Essex participates. Complete the registration form for the warranty of premises voice, telco room cabling and/or outside plant cabling and submit to Superior Essex. Your extended manufacturer warranty (or warranties) will then be provided.

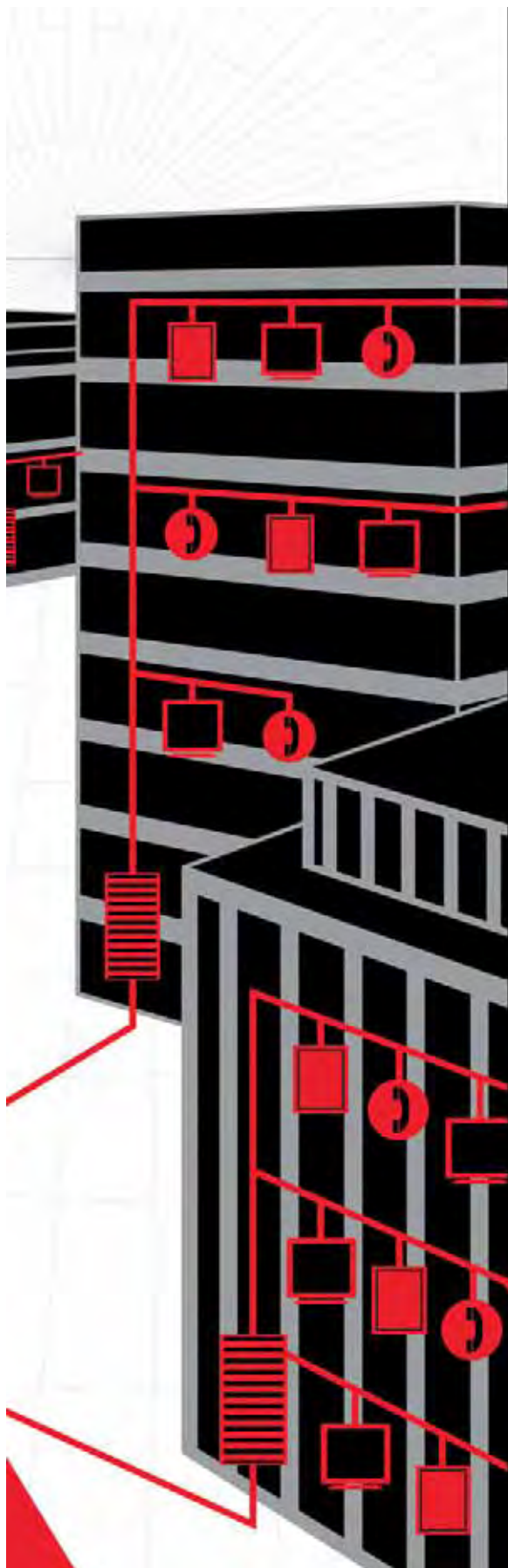
Covering all fiber and copper cabling used throughout a campus, plus connectivity hardware, the Campus Warranty Program provides true assurance from a single source.

* Details on the PerformaLink and NextLAN systems requirements are available at www.superioressex.com



OUTSIDE PLANT CABLING

20-Year Extended Manufacturer's Warranty on all OSP copper and fiber cables used within the Campus Project.



Warranty Highlights

- This warranty assures that products within the system will be free from defects in material or workmanship and will meet all published performance specifications for the term of the warranty.
- In the case of a valid claim this warranty covers repair, replacement or credit of any faulty product, and reasonable cost of labor to remedy the warranty claim.

STRUCTURED CABLING SYSTEM

- PerformaLink structured cabling systems are warranted for 25 years. Superior Essex will warrant PerformaLink copper or fiber installations to meet or exceed the applicable TIA/EIA-568-B and ISO/IEC 11801 standards when installed by a certified contractor in accordance with industry standard practices.
- NextLAN cabling systems are warranted for Lifetime of the building. The NextLAN warranty covers the permanent link, channel and inside building backbone as described in TIA/EIA-568-B (including connectivity). NextLAN will warrant copper or fiber installations to meet or exceed the applicable TIA/EIA-568-B and ISO/IEC 11801 standards when installed by a certified contractor in accordance with industry standard practices.
- PerformaLink and NextLAN warranties assure that products within the system will support current and future applications designed to operate over the Structured Cabling system as defined by TIA/EIA and ISO/IEC at the time of manufacture.

PREMISES VOICE AND OSP CABLING

- For projects which have utilized 100% Superior Essex cabling for the structured cabling portion of the network (i.e., both horizontal and inside building backbone) and after proper certification has been obtained, Superior Essex will provide a 20-year extended manufacturer warranty on all grades of additional premises copper communications cables installed into the same facilities and all grades of Outside Plant copper and fiber communications cables installed within the same campus as the structured cabling project.

PREMISES VOICE CABLING
20-Year Extended Manufacturer's Warranty
on all copper voice-grade premises cables
used within the campus project.

Superior Essex Communications Cables for Campus Applications*

PREMISES

Copper

- High Performance: Category 5e/5e+ and Category 6/6+
- Universal Data/Voice: Category 3 UTP, ARMM, Central Office/Equipment Room

Multimode and Single mode Fiber

- Distribution: OFNR and OFNP (Simplex-144 fibers)
- Indoor/Outdoor: OFNR and OFNP
- Hybrid designs

OUTSIDE PLANT CABLES

Copper

- Exchange Cable and Service Wire: 2-3600 Pair
- Composites: Copper/Fiber, Copper/Coax, Copper/Fiber/Coax, Fiber/Coax

Single mode and Multimode Fiber

- Stranded Loose Tube: 4-288 fibers
- Single Tube: 4-96 fibers
- Ribbon Cables

* Partial list only. For detailed product information please refer to the Superior Essex Communications product catalog, or view it online at www.superioressex.com



A complete set of requirements for obtaining these warranties is available from Superior Essex salespersons. This is not the actual warranty document. Sample warranty documents can also be obtained from Superior Essex and include the conditions of the warranties, which are subject to change.



Campus Warranty Registration Form

Premises Voice and OSP Cabling

End User Company Name: _____ Warranty Request Date: _____

Primary Contact Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-Mail Address: _____

Project Name: _____

Project Site Address: _____

City: _____ State: _____ Zip: _____

Project Site Telephone: _____

Project Start Date: _____ Project Completion Date: _____

Project Manager Name: _____

Project Manager Tel #: _____ Email Address _____

Installation Contractor Co: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Primary Contact Name: _____

Telephone: _____ Email Address: _____

Is the structured cabling (horizontal and backbone data) 100% Superior Essex products?: Y / N

(*Please provide a copy of the warranty certificate for the structured cabling.)

An extended warranty is requested for which products?: _____

How much (in feet) of each product was installed?: _____

Were these components installed to industry Standards?: Y / N

List Distributor(s) where Superior Essex products were purchased: _____

(*Please enclose copy(ies) of purchase invoices for products eligible for warranty.)

End User Customer Signature: _____

Your signature certifies that the above information is accurate, true and complete:

Installation Contractor Signature: _____

Registration Form – Extended Warranty

New Products

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Product Description

Buried FTTP cables are designed for outside plant applications, specifically as a drop cable. The reduced diameter maximizes duct space and offers additional armoring protection. The loose tube design offers reliable transmission performance over a broad temperature range.

Physical Description

The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube contains up to 12 fibers. The core tube is then helically wrapped with water-blocking strength members. A corrugated steel armor is applied and encased with a black polyethylene jacket.

Features

- Corrugated Steel Armor
- Single mode, Multimode, RWP SMF
- Dielectric outer strength members
- Highly flexible
- Small cable diameter
- Color coded fibers
- Dry (SAP) core design
- PFM™ gel

Benefits

- Additional compressive strength and rodent protection.
- Multiple network applications
- Eliminates grounding or bonding problems
- Easy handling
- Installation of more fibers in less space, reduced cost
- Easy identification during installation
- Reduces cable prep and installation time
- Non sticky gel allows for easier and faster clean up

Applications

- Drop Cables
- Broadband Network
- Local Loop
- Fiber-to-the-Premises

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Nom. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
520023S01	2	0.36 (9.0)	61 (90)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520043S01	4	0.36 (9.0)	61 (90)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520063S01	6	0.36 (9.0)	61 (90)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520083S01	8	0.36 (9.0)	61 (90)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)
520123S01	12	0.36 (9.0)	61 (90)	300 (1335)	100 (445)	6.4 (163)	3.2 (82)

To select a part number for a fiber type not listed, please see our fiber selection pages starting on page 230

*All part #'s shown above utilize RWP SMF

For complete optical fiber specifications, see page 230.

Standards Compliance

Products are qualified by Telcordia GR-20-CORE; Facilities are registered to ISO 9001: 2000 & TL 9000, RoHS compliant

Category 5e CMR/CMX – Outdoor Sunlight Resistant



Product Description

Superior Essex now offers a new 4 pair 24 gauge Category 5e CMR/CMX – Outdoor Sunlight Resistant Premises cable specifically designed for extreme sunlight and temperature applications. The specially formulated black jacket is designed to resist both temperatures down to -20 °C (-4 °F) and up to +60 °C (+140 °F). The level of UV blocking compounds is the same as in traditional Outside Plant cable products with the black color preventing damage from long-term UV sunlight exposure. The combination of temperature and UV tolerance makes this cable ideal for installations that require the cable to be exposed to direct sunlight for long periods of time, such as Ethernet interconnect cable for WiMAX applications or for retrofit cable applications that require exterior runs having long term outdoor exposure between two environmentally protected points.

Superior Essex Cat 5e CMR/CMX – Outdoor Sunlight Resistant Black Premises cable has been tested and listed as UL 444 Sunlight Resistant compliant. This designation requires the cable to resist 720 hours of harsh UV and heat and is more than twice the exposure time of the standard 300 hours required in the CMX Outdoor test. In addition, the CMR listing allows the cable to be used in riser spaces per UL 1666 eliminating the need to transition to fire resistant cables.

Features

- Combines indoor / outdoor applications into one product with the added feature of Sunlight Resistant black color jacket
- Exceeds UL 444
- Category 5e performance
- QuickCount® marking system
- ColorTip™ circuit identification system
- Ripcord applied under jacket
- Lead free RoHS complaint PVC jacket
- CMX Outdoor Listed
- CMR UL1666 Listed
- UL 444/UL1581 Sunlight Resistant Listed

Benefits

- Provides cost effective solution
- 720 hour sunlight resistant specification
- Meets TIA/EIA 568- B.2 specification
- Eliminates guesswork of footage in box and reduces scrap
- Easily identifiable conductor mates
- Facilitates easy opening
- Environmentally-friendly
- For Outdoor use
- For Indoor use
- Increased life in direct, long term sunlight

Applications

- 10BASE-T through 1000BASE-T Ethernet, WiMAX

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
51-240-E1	4	24 (0.5)	Black	0.22 (5.6)	22 (33)	1000' POP™ Box

Physical Description

- Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic
- Jacket: Tough, Flame Retardant, Weather and Abrasion Resistant Riser PVC (Polyvinyl Chloride)

Electrical								
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
0.772	1.8	1.5	67.0	79.5	65.2	77.9	64.0	76.9
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.3	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
0.772	62.2	75.4	19.4	32.4	66.0	71.1	63.0	70.5
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Input Impedance (Ohms)	Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
	Guaranteed	Maximum Typical		Maximum Typical	Maximum Typical		
100+/-15 @ 1-100MHz	45	21	69	9.38	9.00	5.0	0.7

Standards Compliance:

UL 444/UL1581 720 Hour UV/Heat exposure test, ANSI/ TIA/EIA-568-B.2, ANSI/ TIA/EIA-570-B, ANSI/ICEA S-90-661-2002, Listed CMX-Outdoor & UL 1666 CMR, RoHS 2002/95/EC Compliant

DataGain® Category 6+ Limited Combustible Cable

DATAGAIN LIMITED COMBUSTIBLE



Product Description

Limited Combustible DataGain is an enhanced Category 6 cable that has the highest fire safety rating possible for data cables. Limited Combustible DataGain is designed for high-risk applications where the exceptionally low smoke and low fire spread values are required. Employing the latest polymer technology, Limited Combustible DataGain is constructed entirely of chemical, oil, heat, and moisture resistant fluoropolymer; and is ideal for industrial UTP applications where severe environmental stresses would compromise standard PVC plenum or riser cables. In addition, Superior Essex's new cable printing process insures a more durable print legend on the cable compared with other Limited Combustible Cables.

Features

- UL Listed: Limited Combustible FHC 25/50
- Lower Fuel Load than Plenum PVC
- All Fluoropolymer Construction
- RoHS Compliant
- Exceeds Category Cat 6 Requirements
- Durable Cable Print
- ColorTip™ Circuit Identification System
- BrakeBox™ Payout Control System
- QuickCount® Marking System

Benefits

- Exceptional low smoke and low flame Spread Performance
- Higher safety rating for high-risk applications
- Resistant to chemical, moisture and heat exposure
- No heavy metals; and no toxic components
- Insures compatibility with new protocols
- Print legend does not rub off cable like other Limited Combustible Cables
- Easily identifiable conductor mates even in low light environments
- Adjustable tension control on reel prevents overspin and entangling of cable.
- Shows remaining feet of cable available

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring
- High risk – high liability installations

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
66-246-2D	4	23 (0.57)	Blue	0.20 (5.1)	24 (36)	1000' BrakeBox
66-246-4D	4	23 (0.57)	White	0.20 (5.1)	24 (36)	1000' BrakeBox
66-272-2D	4	23 (0.57)	Blue	0.20 (5.1)	24 (36)	1000' Reel
66-272-4D	4	23 (0.57)	White	0.20 (5.1)	24 (36)	1000' Reel

Environmental Specifications

Operation	-40°C to + 200°C
Storage/Shipping	-40°C to + 200°C
Installation	-40°C to + 200°C

DataGain Category 6+ Limited Combustible Cable

Product Description

• Conductor: 23 AWG (0.57 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic Fluoropolymer • Jacket: Thermoplastic Fluoropolymer

Electrical												
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex	
	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical
1	2.0	2.0	1.7	74.3	77.3	87.6	72.3	75.3	85.9	72.3	75.3	85.2
4	3.8	3.8	3.4	65.3	68.3	77.9	61.5	64.5	74.5	63.3	66.3	75.6
10	6.0	5.9	5.4	59.3	62.3	71.4	53.3	56.4	66.0	57.3	60.3	69.1
16	7.6	7.5	6.9	56.3	59.2	68.4	48.6	51.7	61.5	54.2	57.2	66.1
20	8.5	8.4	7.8	54.8	57.8	67.1	46.3	49.4	59.4	52.8	55.8	64.8
25	9.5	9.4	8.7	53.3	56.3	65.4	43.8	46.9	56.7	51.3	54.3	63.1
31.25	10.7	10.6	9.8	51.9	54.9	64.2	41.2	44.3	54.3	49.9	52.9	61.8
62.5	15.4	15.3	14.1	47.4	50.4	59.5	32.0	35.1	45.4	45.4	48.4	57.3
100	19.8	19.7	18.1	44.3	47.3	56.7	24.5	27.6	38.5	42.3	45.3	54.3
200	29.0	28.8	26.4	39.8	42.8	51.5	10.8	14.0	25.3	37.8	40.8	49.3
250	32.8	32.6	29.8	38.3	41.3	50.5	5.5	8.7	20.5	36.3	39.3	47.8
300		36.2	33.0		37.1	48.2		0.7	15.2		35.1	45.7
400		42.7	38.9		35.3	45.2			6.2		33.3	42.6
500			44.2			42.4						40.0
550			47.2			41.0						39.1
Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (dB/100m) Minimum			PS-ELFEXT (dB/100m) Minimum		
	TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex		TIA 568-B.2-1	Superior Essex	
	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical
1	70.3	73.3	83.6	20.0	20.2	27.5	67.8	70.7	80.6	64.8	68.3	78.6
4	59.5	62.5	72.3	23.0	23.2	32.8	55.8	58.7	68.7	52.8	56.3	66.8
10	51.3	54.5	63.7	25.0	25.5	35.1	47.8	50.7	60.9	44.8	48.3	58.9
16	46.6	49.7	59.3	25.0	25.5	35.2	43.7	46.6	56.9	40.7	44.2	54.9
20	44.3	47.4	57.2	25.0	25.5	34.9	41.8	44.7	55.0	38.8	42.3	52.9
25	41.8	44.9	54.5	24.3	24.8	35.0	39.8	42.7	53.2	36.8	40.3	51.0
31.25	39.2	42.3	52.2	23.6	24.1	34.7	37.9	40.8	51.3	34.9	38.4	49.1
62.5	30.0	33.1	43.3	21.5	22.0	32.2	31.9	34.8	45.5	28.9	32.4	43.2
100	22.5	25.6	36.5	20.1	20.6	31.2	27.8	30.7	41.6	24.8	28.3	39.3
200	8.8	12.0	23.2	18.0	18.5	29.2	21.8	24.7	35.7	18.8	22.3	33.4
250	3.5	6.7	18.4	17.3	17.8	29.1	19.8	22.7	33.7	16.8	20.3	31.4
300			13.1		16.8	27.4		18.3	32.0		15.3	29.7
400			4.2		15.9	26.0		15.8	29.2		12.8	26.8
500						24.5			26.2			23.9
550						23.6			24.6			22.5

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m)		Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
	Maximum	Typical		Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz 100+/-22 @ 100-250MHz 100+/-32 @ 250-550MHz	25	20	71	9.38	7.04	3.0	0.5

Standards Compliance:

ANSI/TIA/EIA 568-B.2-1, NFPA 255, 259 and 262 (UL 2424), UL VERIFIED TO CATEGORY 6, RoHS Compliant.

Cobra Category 5e+ Limited Combustible Cable

COBRA LIMITED COMBUSTIBLE



Product Description

Limited Combustible Cobra is an enhanced Category 5e cable that has the highest fire safety rating possible for data cables. Limited Combustible Cobra is designed for high-risk applications where the exceptionally low smoke and low fire spread values are required. Employing the latest polymer technology, Limited Combustible Cobra is constructed entirely of chemical, oil, heat, and moisture resistant fluoropolymer; and is ideally suited for industrial UTP applications where severe environmental stresses would compromise standard PVC plenum or riser cables. In addition, Superior Essex's new cable printing process insures a more durable print legend on the cable compared with other Limited Combustible Cables.

Features

- UL Listed: Limited Combustible FHC 25/50
- Lower Fuel Load than Plenum PVC
- All Fluoropolymer Construction
- RoHS Compliant
- Exceeds Category Cat5e Requirements
- Durable Cable Print
- ColorTip™ Circuit Identification System
- BrakeBox™ Payout Control System
- QuickCount® Marking System

Benefits

- Exceptional low smoke and low flame Spread Performance
- Higher safety rating for high-risk applications
- Resistant to chemical, moisture and heat exposure
- No heavy metals; and no toxic components
- Insures compatibility with new protocols
- Print legend does not rub off cable like other Limited Combustible Cables
- Easily identifiable conductor mates even in low light environments
- Adjustable tension control on reel prevents overspin and entangling of cable.
- Shows remaining feet of cable available

Applications

- 10BASE-T through 1000BASE-T Ethernet, ATM and Token Ring
- High risk – high liability installations

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
52-243-2D	4	24 (0.5)	Blue	0.19 (4.8)	23 (34)	1000' BrakeBox
52-243-4D	4	24 (0.5)	White	0.19 (4.8)	23 (34)	1000' BrakeBox

Environmental Specifications

Environmental Specifications	
Operation	-40°C to + 200°C
Storage/Shipping	-40°C to + 200°C
Installation	-40°C to + 200°C

Cobra Category 5e+ Limited Combustible Cable

Product Description

• Conductor: 24 AWG (0.5 mm) Solid Annealed Bare Copper • Insulation: Thermoplastic Fluoropolymer • Jacket: Thermoplastic Fluoropolymer

Electrical												
Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum			NEXT (dB/100m) Minimum			ACR (dB/100m) Minimum			PS-NEXT (dB/100m) Minimum		
	TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex	
	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical
1	2.0	2.0	1.8	65.3	68.3	79.4	63.3	65.9	77.7	62.3	66.3	77.2
4	4.1	4.0	3.6	56.3	59.3	69.9	52.2	54.9	66.4	53.3	57.3	67.4
8	5.8	5.7	5.1	51.8	54.8	65.1	46.0	48.8	60.0	48.8	52.8	62.7
10	6.5	6.4	5.8	50.3	53.3	63.6	43.8	46.7	57.9	47.3	51.3	61.2
16	8.2	8.2	7.4	47.3	50.3	60.4	39.1	41.9	53.1	44.3	48.3	58.0
20	9.3	9.2	8.2	45.8	48.8	59.0	36.5	39.5	50.9	42.8	46.8	56.6
25	10.4	10.3	9.3	44.3	47.3	57.5	33.9	37.0	48.3	41.3	45.3	55.1
31.25	11.7	11.6	10.5	42.9	45.9	56.0	31.2	34.3	45.7	39.9	43.9	53.5
62.5	17.0	16.8	14.9	38.4	41.4	51.7	21.4	24.7	36.8	35.4	39.4	49.2
100	22.0	21.7	19.2	35.3	38.3	48.5	13.3	19.5	29.5	32.3	36.3	46.0
155		27.8	24.2		35.5	45.7		9.3	21.6		33.5	43.1
200		32.1	27.8		29.8	43.6		3.5	16.0		27.8	41.0
250		36.5	31.4		28.3	42.0			10.7		26.3	39.4
300		40.5	34.7		27.2	40.4			5.9		25.2	37.7
350		44.4	37.8		26.2	39.3			1.7		24.2	36.8

Frequency MHz	PS-ACR (dB/100m) Minimum			Return Loss (dB/100m) Minimum			ELFEXT (dB/100m) Minimum			PS-ELFEXT (dB/100m) Minimum		
	TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex		TIA 568-B.2	Superior Essex	
	Calculated	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical	Specified	Guaran- teed	Typical
1	60.3	64.4	75.4	20.0	20.0	28.5	63.8	63.8	72.6	60.8	60.8	70.6
4	49.2	53.4	64.0	23.0	23.0	35.6	51.7	51.7	60.7	48.7	48.7	59.0
8	43.0	47.3	57.7	24.5	24.5	35.7	45.7	45.7	54.8	42.7	42.7	53.1
10	40.8	45.2	55.6	25.0	25.0	35.9	43.8	43.8	52.9	40.8	40.8	51.1
16	36.1	40.4	50.8	25.0	25.0	35.2	39.7	39.7	48.9	36.7	36.7	47.1
20	33.5	38.0	48.6	25.0	25.0	34.9	37.7	37.7	47.0	34.7	34.7	45.2
25	30.9	35.5	46.0	24.3	24.3	35.2	35.8	35.8	45.1	32.8	32.8	43.3
31.25	28.2	32.8	43.4	23.6	23.6	34.8	33.9	33.9	43.2	30.9	30.9	41.3
62.5	18.4	23.2	34.6	21.5	21.5	31.8	27.8	27.8	37.2	24.8	24.8	35.2
100	10.3	18.0	27.3	20.1	20.1	30.1	23.8	23.8	33.2	20.0	20.8	31.1
155		6.8	19.4		18.8	28.4		19.9	29.3		16.9	27.2
200		1.0	13.9		18.0	27.3		11.7	27.1		10.7	25.0
250			8.6		17.3	26.1		9.8	25.1		8.8	23.1
300			3.8		16.8	25.1		8.2	23.7		7.2	21.5
350					16.3	24.0		6.9	22.5		5.9	20.3

Input Impedance (Ohms) Guaranteed	Delay Skew (ns/100m)		Velocity of Propagation (%) Nominal	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
	Maximum	Typical		Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz 100+/-22 @ 100-350MHz	25	14	73	9.4	9.00	5.0	0.5

Standards Compliance:

ANSI/TIA/EIA 568-B.2, ANSI/ICEA S-90-661-2002, NFPA 255, 259 and 262 (UL 2424), UL VERIFIED TO CATEGORY 5e, RoHS Compliant.

25-Pair Category 5e Shielded CMR



Product Description

This twenty-five pair, twenty-four gauge category 5e tin copper shielded cable is utilized to connect equipment within a remote terminal cabinet or within a central office. Tight twist lays offer superior crosstalk performance for supporting digital subscriber line (xDSL) technologies and higher IPTV data speeds. Assembled with a cable connector on both ends, this cable and assemblies facilitates quick installation within the cabinet. The cable is manufactured with a blue or gray colored double jacket separated by a single aluminum foil shield for additional EMI reduction and added protection for the twisted pairs.

Physical Description

• Conductor: 24 AWG (0.5 mm) Tinned Copper • Insulation: Polyolefin • Round Filler • Shield: Aluminum • Ripcord • Jacket: Flame Retardant PVC (Polyvinyl Chloride)

Features

- Small outside diameter
- Vibrant insulation colors
- Meets TIA/EIA 568-B specification

Benefits

- Facilitates routing within a remote terminal
- Easier identification of conductors
- Provides cost-effective solution

Applications

- Remote terminal connecting cable
- Central office cable

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Jacket Color	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Package
55-789-19	25	24 (0.5)	Gray	0.54 (0.14)	151 (224)	5000' Wood Reel
55-799-19	25	24 (0.5)	Blue	0.54 (0.14)	151 (224)	5000' Wood Reel

Electrical

Frequency MHz	Attenuation (dB/100m) @ 20°C Maximum		NEXT (dB/100m) Minimum		ACR (dB/100m) Minimum		PS-NEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.8	65.3	77.7	63.3	75.9	62.3	75.2
4	4.1	3.7	56.3	68.7	52.2	64.9	53.3	66.0
8	5.8	5.4	51.8	61.3	46.0	55.8	48.8	58.7
10	6.5	6.0	50.3	60.7	43.8	54.5	47.3	58.3
16	8.2	7.7	47.2	56.1	39.1	48.3	44.3	53.7
20	9.3	8.6	45.8	55.3	36.5	46.5	42.8	52.9
25	10.4	9.6	44.3	53.8	33.9	44.0	41.3	51.4
31.25	11.7	10.8	42.9	52.7	31.2	41.6	39.9	50.0
62.5	17.0	15.5	38.4	48.0	21.4	32.2	35.4	45.5
100	22.0	19.8	35.3	44.5	13.3	24.2	32.3	42.2

Frequency MHz	PS-ACR (dB/100m) Minimum		Return Loss (dB/100m) Minimum		ELFEXT (dB/100m) Minimum		PS-ELFEXT (dB/100m) Minimum	
	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex	TIA 568-B.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	60.3	73.3	20.0	40.1	63.8	69.2	60.8	68.5
4	49.2	62.2	23.0	40.1	51.7	57.7	48.7	57.0
8	43.0	53.2	24.5	39.8	45.7	51.6	42.7	49.5
10	40.8	52.2	25.0	37.3	43.8	49.0	40.8	48.2
16	36.1	46.0	25.0	36.7	39.7	45.6	36.7	43.8
20	33.5	44.2	25.0	36.0	37.7	43.6	34.7	42.8
25	30.9	41.7	24.3	34.5	35.8	42.0	32.8	40.7
31.25	28.2	39.0	23.6	32.6	33.9	40.1	30.9	39.3
62.5	18.4	29.9	21.5	31.6	27.8	34.7	24.8	33.5
100	10.3	22.1	20.1	31.7	23.8	30.4	20.8	29.4

Input Impedance (Ohms)	Delay Skew (ns/100m)		Velocity of Propagation (%)	DC Resistance (Ohms/100m)		Resistance Unbalance (%)	
Guaranteed	Maximum	Typical	Nominal	Maximum	Typical	Maximum	Typical
100+/-15 @ 1-100MHz	45	21	69	9.38	9.0	5.0	0.7

Standards Compliance:

TIA/EIA-568-B.2 Cat 5e, UL 444, CMR, ANSI/ICEA S-90-661-2002, RoHS Compliant.

Non-Jacketed Tight Twist Cable Core



Product Description

This non-jacketed cable core is designed for use on the back side of cross connect and terminal blocks located in a cross connect cabinet adjacent to the RT (remote terminal). Without a jacket this product must always be utilized in a cabinet, enclosure or indoors. These products offer enhanced crosstalk performance in a 100-Ohm design for supporting digital subscriber line (xDSL) technologies and higher IPTV data speeds.

Features

- 24 AWG solid copper conductors
- High Density Polyethylene insulation
- Pairing tight twist (category 5 like twists)
- Standard telephony solid colors
- No outer jacket
- Binder strings to hold pairs together

Applications

- Terminal block stubs
- Cross connect block stubs
- Other OEM applications

Part Numbers and Physical Characteristics

Part #	Pair Count	AWG (mm)	Nom. Dia. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
11-003-53	25	24 (0.5)	0.41 (10)	82 (122)	5000 (1525)	Reel
11-003-45	50	24 (0.5)	0.57 (14)	164 (244)	5000 (1525)	Reel
11-003-46	100	24 (0.5)	0.82 (21)	328 (488)	5000 (1525)	Reel

MISCELLANEOUS COPPER

Standards Compliance:
RoHS Compliant



Product Description

Dri-Lite Single Tube Non Armored Ribbon cable is a totally gel free cable. The cable is designed for outside plant application, specifically lashed aerial and underground duct applications. Superior Essex's industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion splicing.

Physical Description

The Dri-Lite Single Tube Non Armored ribbon cable features optical ribbons inside a gel free tube which contains dry water-blocking elements. The core tube contains up to eighteen 12 or 24 fiber ribbons. Each ribbon unit is discretely identified and captured in an easy peel matrix for ease of ribbon breakout and management. The core tube is wrapped with a water-blocking tape. Longitudinal strength elements are applied over the core tube and encased within a black polyethylene jacket.

Features

- Gel Free water-blocking technology
- 12-432 Fibers
- RWP, ZWP and SMF fibers
- Highly flexible tube
- Meets or exceeds Telcordia and RDUP specifications
- Small outer diameter
- Industry leading planarity

Benefits

- Reduce preparation time and labor cost
- High fiber density
- Multiple network applications
- Easier handling and reduced loss
- Industry approved
- Up to 432 fibers in a 1 inch duct
- Excellent mass splicing results

Applications

- Lashed Aerial
- Underground Duct
- Broadband Network

Environmental Specifications

Operation	-40°C to + 70°C
Installation	-30°C to + 60°C
Storage/Shipping	-40°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
R10123D01	12	0.51 (13)	91 (136)	600 (2700)	180 (800)	10.2 (260)	5.1 (130)
R10243D01	24	0.51 (13)	91 (166)	600 (2700)	180 (800)	10.2 (260)	5.1 (130)
R10483D01	48	0.59 (15)	109 (162)	600 (2700)	180 (800)	11.8 (300)	5.9 (150)
R10723D01	72	0.59 (15)	109 (162)	600 (2700)	180 (800)	11.8 (300)	5.9 (150)
R10963D01	96	0.67 (17)	133 (197)	600 (2700)	180 (800)	13.4 (340)	6.7 (170)
R11443D01	144	0.67 (17)	133 (197)	600 (2700)	180 (800)	13.4 (340)	6.7 (170)
R11923D01	192	0.74 (19)	159 (236)	600 (2700)	180 (800)	14.8 (380)	7.4 (190)
R12163D01	216	0.74 (19)	159 (236)	600 (2700)	180 (800)	14.8 (380)	7.4 (190)
R12883D01	288	0.78 (20)	173 (258)	600 (2700)	180 (800)	15.6 (400)	7.8 (200)
R13603D01	360	0.78 (20)	173 (258)	600 (2700)	180 (800)	15.6 (400)	7.8 (200)
R14323D01	432	0.78 (20)	173 (258)	600 (2700)	180 (800)	15.6 (400)	7.8 (200)

Part numbers above contain RWP SMF fiber.

To select a part for a fiber type not listed please see the fiber selection guide on pages 230.

For complete optical specification please refer to page 230.

Standards Compliance:

Products are qualified by Telcordia to Bellcore GR-20-CORE, RDUP PE-90; RDUP Designation - SLT-D-R



Product Description

Dri-Lite Single Tube Armored Ribbon cable is a totally gel free cable. The cable is designed for outside plant application, specifically direct buried, lashed aerial and underground duct applications. Superior Essex's industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion splicing.

Physical Description

The Dri-Lite Single Tube Armored ribbon cable features optical ribbons inside a gel free tube which contains dry water-blocking elements. The core tube contains up to eighteen 12 or 24 fiber ribbons. Each ribbon unit is discretely identified and captured in an easy peel matrix for ease of ribbon breakout and management. The core tube is wrapped with a water-blocking tape. A corrugated steel armor and longitudinal strength elements are applied over the core tube and encased within a black polyethylene jacket.

Features

- Gel Free water-blocking technology
- 12-432 Fibers
- RWP, ZWP and SMF fibers
- Highly flexible tube
- Meets or exceeds Telcordia and RDUP specifications
- Small outer diameter
- Industry leading planarity

Benefits

- Reduce preparation time and labor cost
- High fiber density
- Multiple network applications
- Easier handling and reduced loss
- Industry approved
- Up to 432 fibers in a 1 inch duct
- Excellent mass splicing results

Applications

- Direct Bury
- Lashed Aerial
- Underground Duct
- Broadband Network

Environmental Specifications

Operation	-40°C to + 70°C
Installation	-30°C to + 60°C
Storage/Shipping	-40°C to + 75°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
R20123DS1	12	0.51 (13)	118 (176)	600 (2700)	180 (800)	10.2 (260)	5.1 (130)
R20243DS1	24	0.51 (13)	118 (176)	600 (2700)	180 (800)	10.2 (260)	5.1 (130)
R20483DS1	48	0.59 (15)	142 (212)	600 (2700)	180 (800)	11.8 (300)	5.9 (150)
R20723DS1	72	0.59 (15)	142 (212)	600 (2700)	180 (800)	11.8 (300)	5.9 (150)
R20963DS1	96	0.66 (17)	171 (254)	600 (2700)	180 (800)	13.2 (340)	6.6 (170)
R21443DS1	144	0.66 (17)	171 (254)	600 (2700)	180 (800)	13.2 (340)	6.6 (170)
R21923DS1	192	0.73 (19)	197 (294)	600 (2700)	180 (800)	14.6 (380)	7.3 (190)
R22163DS1	216	0.73 (19)	197 (294)	600 (2700)	180 (800)	14.6 (380)	7.3 (190)
R22883DS1	288	0.84 (21)	226 (337)	600 (2700)	180 (800)	16.8 (437)	8.4 (219)
R23603DS1	360	0.84 (21)	226 (337)	600 (2700)	180 (800)	16.8 (437)	8.4 (219)
R24323DS1	432	0.84 (21)	226 (337)	600 (2700)	180 (800)	16.8 (437)	8.4 (219)

Part numbers above contain RWP SMF fiber.
To select a part for a fiber type not listed please see the fiber selection guide on pages 230.
For complete optical specification please refer to page 230.

Standards Compliance:

Products are qualified by Telcordia to Bellcore GR-20-CORE, RDUP PE-90; RDUP Designation - SLT-D-R

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Loose Tube 12 AWG Composite Series 1N



Product Description

Loose Tube 12 AWG Composite cable is a stranded, single jacket, non-armored, gel-filled loose tube cable containing a 12AWG conductor which provides long distance tone for location.

Physical Description

This rugged loose tube design features optical fibers contained in PFM gel filled buffer tubes and a 12 AWG conductor for tone-locating. The elements (tubes, conductor and fillers) are stranded around a central strength member using a reverse oscillated lay. The core is wrapped with flexible strength members and a water-blocking tape. A black UV resistant polyethylene jacket completes the cable.

Features

- Available with up to 276 Fibers
- RWP, ZWP and NZDS Fibers
- PFM Gel
- Dry SAP Core
- Multiple Fiber Vendors
- 12 AWG Conductor

Benefits

- High fiber density
- Multiple network applications
- Reduced labor and fast clean up
- Reduces cable prep time
- Meets customer preferences
- Meets 100hm Standard

Applications

- Lashed Aerial
- Underground Duct
- Broadband Network

Environmental Specifications

Operation/Storage	-40°C to + 70°C
Installation	-30°C to + 60°C

Part Numbers and Physical Characteristics

Part #*	Fiber Count	Nom. Diameter inches (mm)	Approx. Weight lbs/kft (kg/km)	Max Tensile Loading		Min Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install inches (mm)	Long Term inches (mm)
1N0123T01	12	0.43 (10.8)	76 (113)	600 (2700)	180 (800)	8.6 (216)	4.3 (108)
1N0243T01	24	0.43 (10.8)	76 (113)	600 (2700)	180 (800)	8.6 (216)	4.3 (108)
1N0363T01	36	0.43 (10.8)	76 (113)	600 (2700)	180 (800)	8.6 (216)	4.3 (108)
1N0483T01	48	0.43 (10.8)	76 (113)	600 (2700)	180 (800)	8.6 (216)	4.3 (108)
1N0723T01	72	0.55 (13.9)	108 (161)	600 (2700)	180 (800)	11.0 (276)	5.5 (138)
1N0963T01	96	0.63 (15.7)	128 (191)	600 (2700)	180 (800)	12.6 (316)	6.3 (158)
1N1443T01	144	0.72 (18.3)	183 (273)	600 (2700)	180 (800)	14.4 (362)	7.2 (181)
1N2763T01	276	0.81 (20.5)	204 (304)	600 (2700)	180 (800)	16.2 (407)	8.1 (203)

Part numbers above contain RWP SMF fiber
To select a part for a fiber type not listed please see the fiber selection guide on pages 230
For complete optical fiber specifications, see page 230.

Standards Compliance:
Telcordia GR-20-CORE

BW-NS Buried Wire Non-Shielded



Product Description

BW-NS is a buried service wire designed for direct burial applications. It is available in 2-pair and 5-pair sizes along with several package options. This round shaped dry filled product has a ripcord and tough black outdoor PVC jacket. The wire can be used for distribution circuits and service entrance wires, and installed with a conventional backyard drop plowed.

Physical Description

- **CONDUCTORS:** Solid annealed copper in 22 AWG
- **INSULATION:** Each conductor is insulated with a High Density Polyethylene compound in distinctive colors. The insulation of the tip conductor is marked with the color stripe of its mated ring conductor to reduce the possibility of splitting pairs during installation.
- **CORE ASSEMBLY:** Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance. Twist patterns are similar to those used on larger outside plant cables.
- **RIPCORD:** A ripcord is placed parallel to the core to facilitate jacket removal.
- **FILLING COMPOUND:** Super absorbent water-blocking compound stops and blocks any moisture movement around the conductors. This is dry core technology.
- **JACKET:** A black weather resistant, polyvinyl chloride jacket is extruded around the conductors an ripcord and results in a round shaped product. This robust PVC jacketing material protects the core from mechanical damage, degradation by sunlight and ingress of moisture. The jacket is printed on the surface with standard information.

Electrical Specifications

Mutual Capacitance at 1000 Hz

All Pairs	nF/mile	nF/km
Maximum Individual	94	58
Wire Average	83 ± 7	52 ± 4

Conductor Size		Minimum Insulation Resistance 68° F		Conductor DC Resistance @ 68°F Maximum Individual		Attenuation @ 772 kHz Maximum Average		Resistance Unbalance Maximum %	Dielectric Strength DC Potential – Volts Minimum	
AWG	mm	megohm-mile	megohm-km	ohms/mile	ohms/km	dB/kft	dB/km	Individual Pair	Cdr. to Cdr.	Cdr. to Shld
22	0.64	1000	1600	91.0	56.4	4.4	14.4	5.0	5,000	15,000

Crosstalk Loss	dB/kft	dB/km	Capacitance Unbalance @ 1000 Hz	pF/kft	pF/km
Min. FEXT @ 150 kHz	63	58	Maximum Individual Pair to Pair	80	145
Min. NEXT @ 772 kHz	44 dB / 1000 ft (305m)		Maximum Individual Pair to Ground	800	2,625

Part Numbers and Physical Characteristics

	Part #	Pair Count	Nominal O.D. inches (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
22 AWG (0.64 mm)	25-262-19	2	0.26 (6.6)	41 (61)	750 (228)	POP™ Box
	25-263-19	2	0.28 (6.6)	41 (61)	1500 (458)	Reel
	25-551-19	5	0.32 (8.1)	58 (86)	500 (153)	POP™ Box
	25-527-19	5	0.32 (8.1)	58 (86)	1000 (305)	Reel

Standards Compliance:

Applicable Sections of TR-NWT-000124, RoHS Compliant