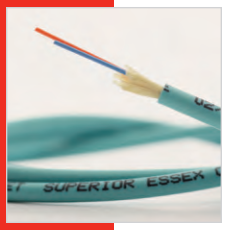
QUICK LINKS

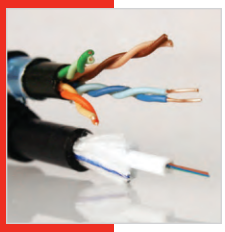
SEARCH

NOTE: *When searching for a specific part number, enter only the first 5 letters/numbers and include dashes.*

SECTIONS

UPDATED: October 1, 2010





SUPERIOR ESSEX®

COMMUNICATIONS WIRE and CABLE

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SUPERIOR ESSEX®

Our Ongoing Commitment to Quality, Value and On-Time Delivery

Superior Essex, a global leader in the design, manufacture and supply communications and data cable products, has cultivated one of the broadest offerings of high performance optical fiber and copper cables in the industry and built a reputation for delivering quality products to the market. For this reason, Superior Essex has become the preferred supplier for many of the major communications service providers, leading enterprises, universities, hospitals, military facilities and businesses around the globe for more than 50 years.

PREMISES CABLE

Our premises wire and cable products provide a total user experience that is unequaled in the industry. For years, Superior Essex cables have offered more useful features that save time and money, better performance, higher quality and better overall value than our competition. Ultimately, these subtle advantages combined with our broad portfolio of fiber and copper cable offerings make Superior Essex premises products the preferred choice for architects, engineers, consultants and contractors alike.

OUTSIDE PLANT WIRE AND CABLE

Superior Essex is the world's largest producer of Outside Plant (OSP) copper communications cables and a leader in the OSP optical fiber cable market. With more than 4,000 different optical fiber, copper and wire designs available, our products serve virtually every application demanded for OSP installations. Our strong market position was built from an endless pursuit of perfection in our products and service. It's the difference that has kept customers loyal for decades and has earned Superior Essex customer quality awards year after year.

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. And, 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. Superior Essex has firmly established a long-standing reputation for providing quality products, on-time delivery and expert technical support. Consistency matters; get it right the first time with Superior Essex.

PRODUCT PERFORMANCE

When it comes to product performance, we guarantee that when you install any of our communications cables that you'll get more than you ask for – you'll get what you want. Superior Essex has engineered some of the highest performance copper and fiber optic cable products available anywhere. In independent tests, Superior Essex Category 5e, 6 and 6A 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 our voice-grade cables.

FLEXIBILITY

The Superior Essex cable and wire catalog is extensive, but we also manufacture custom products with special requirements. Our Product Management team can quote and deliver unique designs that are tailored for your application.

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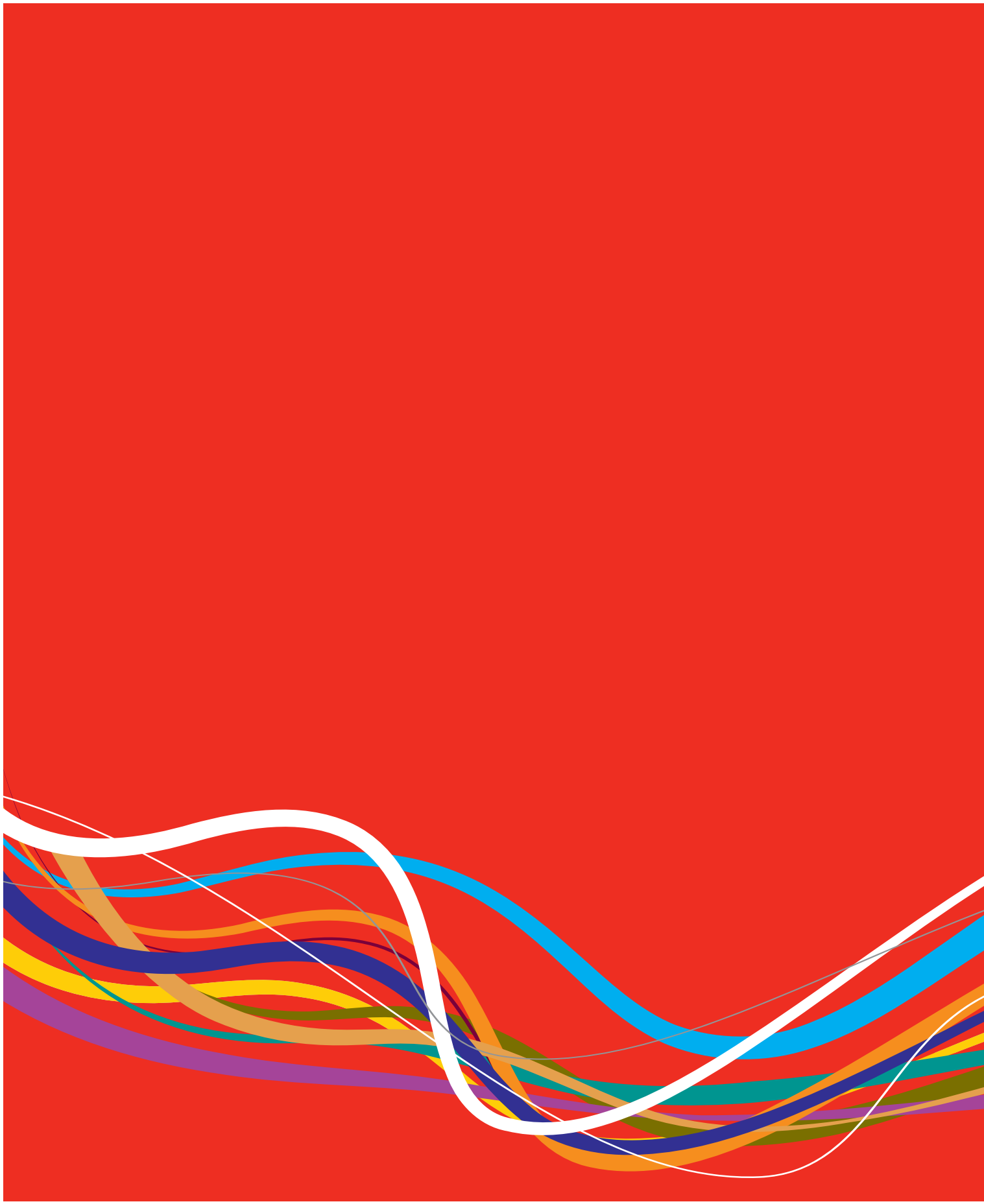

SUPERIOR ESSEX

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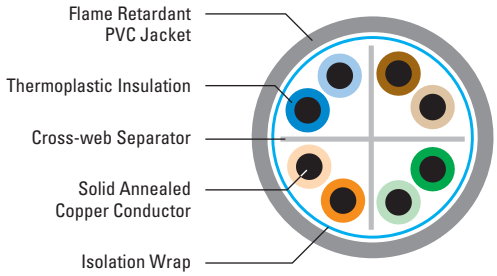
10Gain® XP Category 6A CMR/CMP



Product Description

10Gain® **XP**, with its non-conductive Isolation Wrap, is the first Category 6A cable without a continuous shield to offer 3 dB margin over Alien Crosstalk (AXT) performance requirements in ANSI/TIA-568-C.2. The uniquely designed Isolation Wrap contains discontinuous sections of metallized material, held in place by a polymeric layer. **10G**ain **XP** has a nominal 0.295 inch diameter which allows for higher cable density than other CAT 6A cable products. **10G**ain **XP** fully complies with UL 444 requirements for an unshielded twisted pair product.

Applications

- 10GBASE-T and legacy applications 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- Backward compatible to legacy protocols and applications

Features	Benefits
• Guaranteed 3 dB AXT margin	• Guaranteed AXT performance in virtually any installation environment
• UL Verified CAT 6A	• Assures consistent, worry free performance
• Tested to 650 MHz	• Assures ample bandwidth headroom
• Non-conductive Isolation Wrap	• Provides substantially more AXT protection without grounding or bonding
• Nominal 0.295 inch diameter	• Allows higher cable density and smaller bend radius
• 1.2 inch bending radius	• Flexible for use in tight spaces
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Thermoplastic CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	Cross-web
Isolation Wrap	Proprietary construction
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Package	1,000' plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Velocity of Propagation (%)	CMR: 65 CMP: 69
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 6A UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	6H-272-xA	0.295 (7.49)	47 (70)	12
CMP	6H-272-xB	0.295 (7.49)	45 (67)	12

Jacket Colors

[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Orange = D

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RoHS

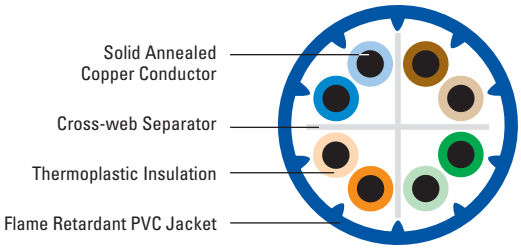
Rev 6/10 Ed 10.1

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m		NEXT Minimum dB/100 m		ACR Minimum dB/100 m		PSNEXT Minimum dB/100 m		PSACR Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical	Calculated	Typical
1	2.1	2.0	74.3	78.3	72.2	77.3	72.3	77.3	70.2	76.3
4	3.8	3.7	65.3	69.3	61.5	66.6	63.3	68.3	59.5	65.6
8	5.3	5.1	60.8	64.8	55.4	60.6	58.8	63.8	53.4	59.6
10	5.9	5.7	59.3	63.3	53.4	58.6	57.3	62.3	51.4	57.6
16	7.5	7.3	56.2	60.2	48.8	54.0	54.2	59.2	46.8	53.0
20	8.4	8.1	54.8	58.8	46.4	51.7	52.8	57.8	44.4	51.2
25	9.4	9.1	53.3	57.3	44.0	49.7	51.3	56.3	42.0	49.0
31.25	10.5	10.2	51.9	55.9	41.4	47.2	49.9	54.9	39.4	46.7
62.5	15.0	14.4	47.4	51.4	32.4	39.0	45.4	50.4	30.4	38.4
100	19.1	18.4	44.3	48.3	25.2	32.4	42.3	47.3	23.2	31.7
200	27.6	26.5	39.8	43.8	12.2	20.1	37.8	42.8	10.2	19.5
250	31.1	29.8	38.3	42.3	7.3	15.5	36.3	41.3	5.3	15.1
300	34.3	32.9	37.1	41.1	2.9	11.4	35.1	40.1	0.9	10.8
400	40.1	38.3	35.3	39.3		4.6	33.3	38.3		3.6
500	45.3	43.0	33.8	37.8			31.8	36.8		
600		47.5		36.4				35.6		
650		49.7		35.9				35.1		

Frequency MHz	Return Loss Minimum dB/100 m		ACRF Minimum dB/100 m		PSACRF Minimum dB/100 m		PSANEXT Minimum dB/100 m		PSAACRF Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex
	Specified	Typical	Specified	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	20.0	22.0	67.8	73.8	64.8	70.8	67.0	96.5	67.0	72.0
4	23.0	25.0	55.8	61.8	52.8	58.8	67.0	87.5	66.2	71.2
8	24.5	26.5	49.7	55.7	46.7	52.7	67.0	83.0	60.1	65.1
10	25.0	27.0	47.8	53.8	44.8	50.8	67.0	81.5	58.2	63.2
16	25.0	27.0	43.7	49.7	40.7	46.7	67.0	78.4	54.1	59.1
20	25.0	27.0	41.8	47.8	38.8	44.8	67.0	77.0	52.2	57.2
25	24.3	26.3	39.8	45.8	36.8	42.8	67.0	75.5	50.2	55.2
31.25	23.6	25.6	37.9	43.9	34.9	40.9	67.0	74.1	48.3	53.3
62.5	21.5	23.5	31.9	37.9	28.9	34.9	65.6	69.6	42.3	47.3
100	20.1	22.1	27.8	33.8	24.8	30.8	62.5	66.5	38.2	43.2
200	18.0	20.0	21.8	27.8	18.8	24.8	58.0	62.0	32.2	37.2
250	17.3	19.3	19.8	25.8	16.8	22.8	56.5	60.5	30.2	35.2
300	16.8	18.8	18.3	24.3	15.3	21.3	55.3	59.3	28.7	33.7
400	15.9	17.9	15.8	21.8	12.8	18.8	53.5	57.5	26.2	31.2
500	15.2	17.2	13.8	19.8	10.8	16.8	52.0	56.0	24.2	29.2
600		16.7		18.2		15.2		54.8		27.6
650		16.4		17.5		14.5		54.3		26.9

10Gain® Category 6A CMR/CMP



Product Description

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

Applications

- 10GBASE-T and legacy applications 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- Backward compatible to legacy protocols and applications

Features	Benefits
• UL Verified CAT 6A	• Assures consistent, worry-free performance
• Tested to 650 MHz	• Assures ample bandwidth headroom
• Exceptional PSACR and PSAACRF (PSAELFEXT) performance	• Performance assurance for 10 Gigabit Ethernet and multiple high-bandwidth applications
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	Cross-web
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Package	1,000′ plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Velocity of Propagation (%)	CMR: 65 CMP: 69
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 6A UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	6A-272-xA	0.35 (8.9)	51 (76)	12
CMP	6A-272-xB	0.32 (8.1)	49 (73)	12

Jacket Colors

[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Orange = D

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RoHS
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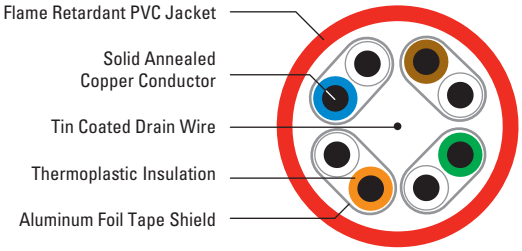
Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m			PSACR Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Specified	Guar.	Typical	Specified	Guar.	Typical	Specified	Guar.	Typical	Specified	Guar.	Typical	Specified	Guar.	Typical
1	2.0	2.0	1.7	74.3	75.3	92.4	72.3	74.3	90.7	72.3	74.3	90.3	70.3	72.3	88.7
4	3.7	3.6	3.4	65.3	66.3	82.2	61.5	63.5	78.9	63.3	65.3	80.5	59.5	61.5	77.2
8	5.2	5.1	4.7	60.8	61.8	78.0	55.5	57.5	73.3	58.8	60.8	76.4	53.5	55.5	71.7
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	51.4	53.4	69.6
16	7.4	7.2	6.7	56.2	57.2	73.8	48.8	50.8	67.2	54.2	56.2	72.0	46.8	48.8	65.4
20	8.3	8.1	7.6	54.8	55.8	71.1	46.5	48.5	63.6	52.8	54.8	69.7	44.5	46.5	62.2
25	9.3	9.1	8.5	53.3	54.3	68.9	44.0	46.0	60.5	51.3	53.3	67.4	42.0	44.0	59.1
31.25	10.4	10.2	9.5	51.9	52.9	68.3	41.5	43.5	58.9	49.9	51.9	67.0	39.5	41.5	57.6
62.5	14.9	14.5	13.6	47.4	48.4	64.3	32.5	34.5	50.8	45.4	47.4	62.3	30.5	32.5	49.0
100	19.0	18.5	17.4	44.3	45.3	61.2	25.3	27.3	44.0	42.3	44.3	59.2	23.3	25.3	42.2
155	24.0	23.4	21.9	41.4	42.4	57.3	17.5	19.5	35.7	39.4	41.4	55.9	15.5	17.5	34.4
200	27.5	26.8	25.1	39.8	40.8	57.1	12.3	14.3	32.4	37.8	39.8	54.9	10.3	12.3	30.3
250	31.0	30.2	28.2	38.3	39.3	55.9	7.4	9.4	27.6	36.3	38.3	53.3	5.4	7.4	25.4
300	34.2	33.3	31.1	37.1	38.1	53.7	3.0	5.0	22.8	35.1	37.1	51.5	1.0	3.0	20.9
350	37.2	36.3	33.8	36.1	37.1	52.7		1.0	19.1	34.1	36.1	50.1			16.9
400	40.0	39.0	36.3	35.3	37.3	52.4			15.3	33.3	36.3	49.3			13.5
450	42.7	41.6	38.7	34.5	36.5	50.2			11.6	32.5	35.5	47.8			9.7
500	45.3	44.1	41.0	33.8	35.8	48.7			7.7	31.8	34.8	46.2			5.8
550			43.2			45.6			2.3			43.7			1.0
600			45.3			44.0						42.2			
650			47.5			42.0						40.2			

Frequency MHz	Return Loss Minimum dB/100 m			ACRF Minimum dB/100 m			PSACRF Minimum dB/100 m			PSANEXT Minimum dB/100 m			PSAACRF Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Specified	Guar.	Typical	Specified	Guar.	Typical	Specified	Guar.	Typical	Specified	Guar.	Typical	Specified	Guar.	Typical
1	20.0	20.0	27.3	67.8	72.8	83.6	64.8	69.8	81.2	67.0	67.0	94.8	67.0	67.0	71.2
4	23.0	23.0	33.1	55.8	60.8	72.0	52.8	57.8	69.6	67.0	67.0	85.7	66.2	66.2	70.3
8	24.5	24.5	35.3	49.7	54.7	66.2	46.7	51.7	63.7	67.0	67.0	81.2	60.1	60.1	64.3
10	25.0	25.0	36.0	47.8	52.8	64.4	44.8	49.8	61.8	67.0	67.0	79.8	58.2	58.2	62.4
16	25.0	25.0	36.5	43.7	48.7	60.3	40.7	45.7	57.8	67.0	67.0	76.7	54.1	54.1	58.3
20	25.0	25.0	38.4	41.8	46.8	58.4	38.8	43.8	56.0	67.0	67.0	75.3	52.2	52.2	56.4
25	24.3	24.3	37.6	39.8	44.8	56.3	36.8	41.8	54.1	67.0	67.0	73.8	50.2	50.2	54.4
31.25	23.6	23.6	37.8	37.9	42.9	54.3	34.9	39.9	52.1	67.0	67.0	72.4	48.3	48.3	52.5
62.5	21.5	21.5	36.6	31.9	36.9	48.3	28.9	33.9	46.1	65.6	65.6	67.8	42.3	42.3	46.5
100	20.1	20.1	33.5	27.8	32.8	44.5	24.8	29.8	42.3	62.5	62.5	64.8	38.2	38.2	42.4
155	18.8	18.8	33.0	24.0	29.0	40.6	21.0	26.0	38.5	59.6	59.6	61.9	34.4	34.4	38.6
200	18.0	18.0	30.7	21.8	26.8	38.4	18.8	23.8	36.2	58.0	58.0	60.3	32.2	32.2	36.4
250	17.3	17.3	30.3	19.8	24.8	35.0	16.8	21.8	33.4	56.5	56.5	58.8	30.2	30.2	34.4
300	16.8	16.8	26.9	18.3	23.3	33.8	15.3	20.3	31.6	55.3	55.3	57.6	28.7	28.7	32.8
350	16.3	16.3	27.0	16.9	21.9	32.5	13.9	18.9	30.4	54.3	54.3	56.6	27.3	27.3	31.5
400	15.9	15.9	26.9	15.8	19.8	31.8	12.8	17.8	29.8	53.5	53.5	55.7	26.2	26.2	30.3
450	15.5	15.5	26.0	14.7	18.7	30.8	11.7	16.7	28.8	52.7	52.7	55.0	25.1	25.1	29.3
500	15.2	15.2	24.8	13.8	17.8	29.8	10.8	15.8	28.1	52.0	52.0	54.3	24.2	24.2	28.4
550			24.2			28.8			26.9			53.7			27.6
600			22.7			28.6			26.4			53.1			26.8
650			19.6			27.2			25.3			52.6			26.1

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



Product Description

Superior Essex offers Shielded Twisted Pair (STP) Category 6A cables in both plenum and riser versions. The cable has guaranteed performance to 600 MHz and meets or exceeds ANSI/TIA-568-C.2 for 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 4 copper pairs. The wrapped pairs are then jacketed with an appropriate flexible PVC jacket for either plenum or riser applications.

Applications

- 10GBASE-T and legacy applications 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- Backward compatible to legacy protocols and applications

Features	Benefits
• Individually foil shielded pairs	• Protects against EMI/RFI and provides exceptional NEXT, PSNEXT, ELFEXT, and Electrical Performance performance
• Exceeds specification ANSI/TIA-568-C.2 for CAT 6A cable performance	• Meets 10GBASE-T application requirements for both Insertion Loss and Return Loss and exceeds requirements for alien and internal crosstalk performance
• Riser and plenum rated designs	• UL 1666 and NFPA 262 fire rating options help to reduce additional expensive materials required to meet building safety codes
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel

Specifications	
Configuration	Copper pairs each surrounded by aluminum/Mylar® foil with center drain wire and jacket
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: White/Blue Pair 2: White/Orange Pair 3: White/Green Pair 4: White/Brown
Drain Wire	Tinned copper
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Package	1,000′ plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 73 CMP: 77
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2
NRTL Programs	UL Verified CAT 6A UL or ETL Listed CMR UL or ETL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	6S-220-xA	0.31 (7.9)	50 (74)	15
CMP	6S-220-xB	0.29 (7.4)	52 (77)	15

Jacket Colors

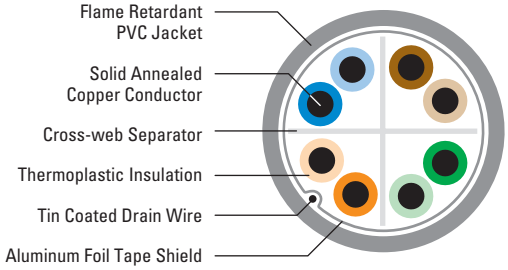
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Red = 9	Orange = D	Black = E

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
1	2.1	2.1	2.1	65.0	74.2	74.2	62.9	76.2	78.2	72.2	76.2	78.2
4	3.8	3.8	3.7	65.0	69.2	74.2	61.2	65.4	70.5	63.2	67.2	72.2
8	5.3	5.3	5.2	60.7	64.7	74.2	55.4	59.4	69.0	58.7	62.7	72.2
10	5.9	5.9	5.8	59.2	63.2	74.2	53.3	57.3	68.4	57.2	61.2	72.2
16	7.4	7.4	7.4	56.2	60.2	74.2	48.7	52.7	66.8	54.2	58.2	71.2
20	8.3	8.3	8.2	54.7	58.7	72.7	46.4	50.4	64.4	52.7	56.7	69.7
25	9.3	9.3	9.2	53.3	57.3	71.3	43.9	47.9	62.0	51.3	55.3	68.3
31.25	10.5	10.5	10.4	51.8	55.8	69.8	41.3	45.3	59.4	49.8	53.8	66.8
62.5	14.9	14.9	14.8	47.3	51.3	65.3	32.3	36.3	50.5	45.3	49.3	62.3
100	19.1	19.1	18.9	44.2	48.2	62.2	25.1	29.1	43.3	42.2	46.2	59.2
200	27.5	27.5	27.3	39.7	43.7	57.7	12.2	16.2	30.4	37.7	41.7	54.7
250	31.1	31.1	30.7	38.3	42.3	56.3	7.2	11.2	25.5	36.3	40.3	53.3
300	34.2	34.2	33.9	37.1	41.1	55.1	2.8	6.8	21.2	35.1	39.1	52.1
350	37.2	37.2	36.8	36.1	40.1	54.1		2.9	17.2	34.1	38.1	51.1
400	40.1	40.1	39.6	35.2	39.2	53.2			13.6	33.2	37.2	50.2
500	45.2	45.2	44.8	33.8	37.8	51.8			7.0	31.8	35.8	48.8
600		50.1	49.5		36.6	50.6			1.1		34.6	47.6

Frequency MHz	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT (ACRF) Minimum dB/100 m			PSELFEXT (PSACRF) Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
1	70.2	74.2	76.2	20.0	20.0	20.6	67.7	69.7	73.7	64.7	66.7	70.7
4	59.4	63.4	68.5	23.0	23.0	23.7	55.7	57.7	61.7	52.7	54.7	58.7
8	53.4	57.4	67.0	24.5	24.5	25.3	49.7	51.7	55.7	46.7	48.7	52.7
10	51.3	55.3	66.4	25.0	25.0	25.8	47.7	49.7	53.7	44.7	46.7	50.7
16	46.7	50.7	63.8	25.0	25.0	25.8	43.7	45.7	49.7	40.7	42.7	46.7
20	44.4	48.4	61.4	25.0	25.0	25.8	41.7	43.7	47.7	38.7	40.7	44.7
25	41.9	45.9	59.0	24.3	24.3	25.1	39.8	41.8	45.8	36.8	38.8	42.8
31.25	39.3	43.3	56.4	23.6	23.6	24.3	37.8	39.8	43.8	34.8	36.8	40.8
62.5	30.3	34.3	47.5	21.5	21.5	22.2	31.8	33.8	37.8	28.8	30.8	34.8
100	23.1	27.1	40.3	20.1	20.1	20.7	27.8	29.8	33.7	24.8	26.8	30.8
200	10.2	14.2	27.4	18.0	18.0	18.5	21.7	23.7	27.7	18.7	20.7	24.7
250	5.2	9.2	22.5	17.3	17.3	17.8	19.8	21.8	25.8	16.8	18.8	22.8
300	0.8	4.8	18.2	16.8	16.8	17.3	18.2	20.2	24.2	15.2	17.2	21.2
350		0.9	14.2	16.3	16.3	16.8	16.9	18.9	22.9	13.9	15.9	19.9
400			10.6	15.9	15.9	16.4	15.7	17.7	21.7	12.7	14.7	18.7
500			4.0		15.2	15.7	13.8	15.8	19.8	10.8	12.8	16.8
600			-1.9			15.1		14.2	18.2		11.2	15.2

Category 6A ScTP (F/UTP) CMR/CMP



Product Description

Category 6A ScTP (F/UTP) cable, swept out to 650 MHz, meets or exceeds ANSI/TIA-568-C.2 for CAT 6A cables, a requirement for 10GBASE-T applications. The cable is UL Verified CAT 6A and has a typical Alien Crosstalk margin of 18 dB.

The cable consists of four (4) balanced 23 AWG copper pairs around a flame retardant cross-web. The core is wrapped with a Mylar backed aluminum foil. A drain wire is applied longitudinally against the tape. The cable is then protected with a flexible riser or plenum rated PVC jacket. Standard features include ColorTip™ circuit identification system and QuickCount® length marking system measured in both feet and meters.

Applications

- 10GBASE-T and legacy applications 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- Backward compatible to legacy protocols and applications

Specifications	
Configuration	Copper pairs surrounded by aluminum PET foil with an outer drain wire and jacket
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Thermoplastic CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	Cross-web
Shield	Aluminum/PET
Drain Wire	Tinned copper
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Package	1,000′ plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 65 CMP: 69
Performance Compliance	ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 6A

Features	Benefits
• Overall shielded core	• Protects against EMI/RFI • 18 dB typical margin Alien Crosstalk performance
• Exceeds ANSI/TIA-568-C.2 specification for CAT 6A cable performance	• Meets all 10GBASE-T application requirements • Exceeds requirements for Alien Crosstalk performance
• UL Verified CAT 6A	• Assures CAT 6A performance by a nationally recognized test lab
• Riser and plenum rated designs	• Meets all fire safety requirements for either backbone or horizontal applications
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	6F-272-xA	0.29 (7.3)	40 (59)	12
CMP	6F-272-xB	0.30 (7.7)	46 (69)	12

Jacket Colors

[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Orange = D

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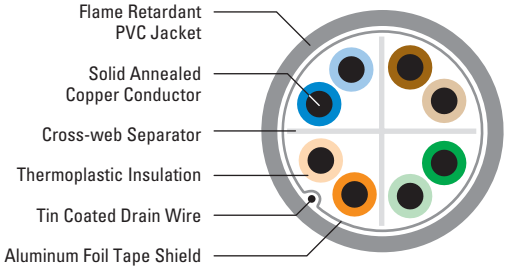
Category 6+ ScTP (F/UTP) CMR/CMP

Product Description

Category 6+ ScTP (F/UTP) cable, with guaranteed performance out to 500 MHz, exceeds ANSI/TIA-568-C.2 for CAT 6 cables. The cable is UL Verified CAT 6 and has a typical Alien Crosstalk margin of 18 dB. The cable can be used for 10GBASE-T applications for up to 55 meters per ANSI/TIA/EIA-TSB-155.

The cable consists of four (4) balanced 23 AWG copper pairs around a flame retardant cross-web. The core is wrapped with a Mylar backed aluminum foil. A drain wire is applied longitudinally against the tape. The cable is then protected with a flexible riser or plenum rated PVC jacket. Standard features include ColorTip™ circuit identification system and QuickCount® length marking system measured in both feet and meters.



Applications

- 10GBASE-T (up to 55 meters), 1000BASE-T, 100BASE-T and legacy ethernet applications
- ATM and token ring

Features	Benefits
• Overall shielded core	• Protects against EMI/RFI • 18 dB typical margin Alien Crosstalk performance
• Guaranteed performance to 500 MHz	• Assures ample headroom for existing and future high bandwidth applications
• Exceeds ANSI/TIA-568-C.2 specification for CAT 6 cable performance	• Allows for 10GBASE-T applications up to 55 meters
• UL Verified CAT 6	• Assures CAT 6 performance by a nationally recognized test lab
• Riser and plenum rated designs	• Meets all fire safety requirements for either backbone or horizontal applications
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments

Specifications	
Configuration	Copper pairs surrounded by aluminum PET foil with an outer drain wire and jacket
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Thermoplastic CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	Cross-web
Shield	Aluminum/PET with 10% overlap
Drain Wire	Tinned copper
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Package	1,000′ Plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 65 CMP: 69
Performance Compliance	ANSI/TIA-568-C.2 ANSI/TIA/EIA-TSB-155 RoHS-compliant
NRTL Programs	UL Verified CAT 6

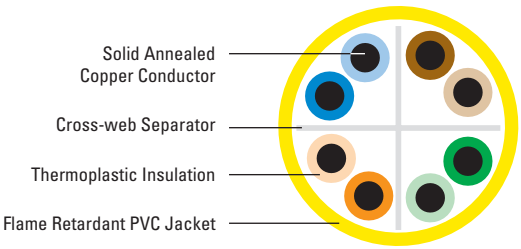
Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	6T-272-xA	0.29 (7.3)	40 (59)	12
CMP	6T-272-xB	0.30 (7.7)	46 (69)	12

Jacket Colors

[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Orange = D

NextGain® Category 6eX CMR/CMP



Product Description

NextGain® Category 6eX cable brings UTP performance to a new level. Guaranteed for 6 dB of margin (headroom) over base requirements of CAT 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.

Applications

- 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- Supports legacy protocols and applications

Features	Benefits
• Guaranteed NEXT of 6 dB greater than CAT 6 requirements	• "Future-proofing" the cable installation
• Guaranteed ACR of 30 dB at 100 MHz and 11.7 dB at 250 MHz	• Performance assurance for multiple high-bandwidth applications (e.g., fast ethernet, ATM, Gigabit Ethernet)
• Exceptional performance over CAT 6 requirements	• Reduces BER, improving network efficiency
• BrakeBox® payout control system	• Adjustable tension control on reel prevents over spin and entangling of cable
• Warranted with numerous connectivity manufacturers	• Offers flexibility in selection of connectivity solutions
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments
• Color coded box labels	• Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	Cross-web
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 70 CMP: 75
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR	54-246-xA	0.23 (5.8)	24 (36)	1,000' BrakeBox®	12
CMR	54-272-xA	0.23 (5.8)	24 (36)	1,000' Plywood Reel	16
CMP	54-246-xB	0.24 (6.1)	28 (42)	1,000' BrakeBox®	12
CMP	54-272-xB	0.24 (6.1)	28 (42)	1,000' Plywood Reel	16

Jacket Colors

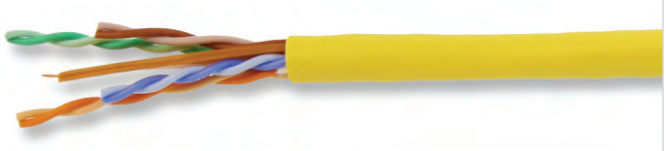
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Teal = F

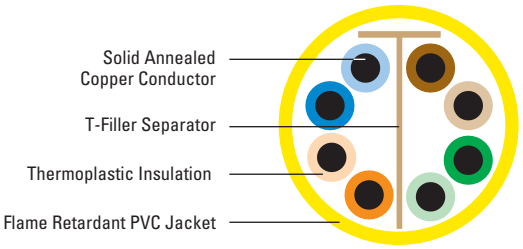
Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	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	59.4	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	52.4	64.9	52.8	58.8	70.6
25	9.5	9.4	8.7	53.3	59.3	71.2	43.8	49.9	62.5	51.3	57.3	69.1
31.25	10.7	10.6	9.8	51.9	57.9	69.1	41.2	47.3	59.3	49.9	55.9	67.2
62.5	15.4	15.3	14.1	47.4	53.4	64.6	32.0	38.1	50.6	45.4	51.4	62.6
100	19.8	19.7	18.1	44.3	50.3	62.4	24.5	30.6	44.3	42.3	48.3	60.3
200	29.0	28.8	26.3	39.8	45.8	57.0	10.8	17.0	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		4.0	21.5		38.2	52.3
350		39.5	35.9		39.2	53.1			17.1		37.2	50.8
400		43.0	38.5		38.3	50.9			12.2		36.3	48.6
450		46.0	41.3		37.5	48.3			7.0		35.5	46.3
500		48.9	44.0		36.8	48.80			4.9		34.8	46.8
550		51.8	46.6		36.2	48.1			1.6		34.2	46.0
650			51.1			45.0						43.1

Frequency MHz	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT (ACRF) Minimum dB/100 m			PSELFEXT (PSACRF) Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	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		15.9	26.7		21.7	33.6		18.7	31.1
450		-11.3	5.5		15.5	25.8			32.4			30.1
500		-14.9	3.3		15.2	24.7			30.9			28.6
550		-17.7	0.0		14.9	23.1			29.5			27.2
650						18.4			26.2			24.0

DataGain® Category 6+ CMR/CMP





Product Description

DataGain® cable provides the best value in Category 6+ cables on the market today. The innovative design, which utilizes a T-Filler separator, yields exceptional performance that exceeds TIA/EIA CAT 6 specifications. DataGain easily surpasses the performance of other cost-competitive CAT 6 cables.

Applications

- 10BASE-T through 1000BASE-T ethernet
- ATM and token ring

Features	Benefits
• Guaranteed electrical performance to 400 MHz	• Greater assurance of exceptional overall channel performance at a great value
• Guaranteed 3 dB margin in ACR and PSACR	• "Future-proofs" the cable installation
• Tested to 550 MHz	• Assures ample bandwidth headroom
• Round design with T-Filler separator	• Reduces installation time
• Warranted with numerous connectivity manufacturers	• Offers flexibility in selection of connectivity solutions
• BrakeBox® payout control system	• Adjustable tension control on reel prevents over spin and entangling of cable
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments
• Color coded box labels	• Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	T-Filler
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 71 CMP: 74
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR	66-246-xA	0.22 (5.5)	24 (36)	1,000' BrakeBox®	27
CMR	66-272-xA	0.22 (5.5)	24 (36)	1,000' Plywood Reel	16
CMR	66-240-xA	0.22 (5.5)	24 (36)	1,000' POP™ Box	20
CMP	66-246-xB	0.22 (5.5)	26 (39)	1,000' BrakeBox®	27
CMP	66-272-xB	0.22 (5.5)	26 (39)	1,000' Plywood Reel	16
CMP	66-240-xB	0.22 (5.5)	26 (39)	1,000' POP™ Box	20

Jacket Colors

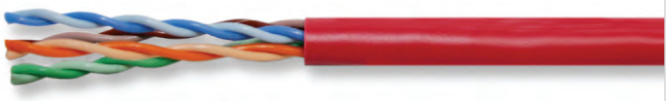
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Pink = C	Orange = D	Black = E

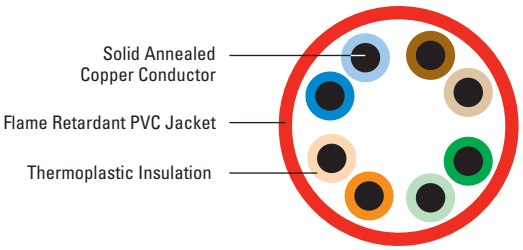
Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	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	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT (ACRF) Minimum dB/100 m			PSELFEXT (PSACRF) Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	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

Category 6 CMR/CMP





Product Description

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

Applications

- 10BASE-T through 1000BASE-T ethernet
- ATM and token ring

Features

- Meets ANSI/TIA-568-C.2 specification
- BrakeBox® payout control system
- CableID™ alpha numeric code printed every 2 feet
- QuickCount® marking system in feet and meters
- ColorTip™ circuit identification system
- Color coded box labels

Benefits

- Provides cost effective solution
- Adjustable tension control on reel prevents over spin and entangling of cable
- Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
- Provides remaining length of cable on reel
- Easily identifiable conductor mates even in low light environments
- Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 71 CMP: 74
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR	77-246-xA	0.22 (5.5)	24 (36)	1,000′ BrakeBox®	27
CMR	77-272-xA	0.22 (5.5)	24 (36)	1,000′ Plywood Reel	16
CMR	77-240-xA	0.22 (5.5)	24 (36)	1,000′ POP™ Box	20
CMP	77-246-xB	0.22 (5.5)	25 (37)	1,000′ BrakeBox®	27
CMP	77-272-xB	0.22 (5.5)	25 (37)	1,000′ Plywood Reel	16
CMP	77-240-xB	0.22 (5.5)	25 (37)	1,000′ POP™ Box	20

Jacket Colors

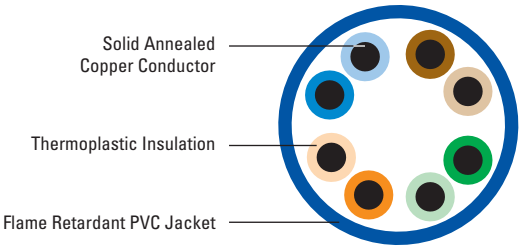
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Red = 9	Orange = D	Black = E

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m		NEXT Minimum dB/100 m		ACR Minimum dB/100 m		PSNEXT Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
1	2.0	1.7	74.3	82.9	72.3	82.2	72.3	81.9
4	3.8	3.4	65.3	77.6	61.5	74.2	63.3	75.0
8	5.3	4.8	60.8	74.4	55.4	68.9	58.8	71.9
10	6.0	5.4	59.3	70.1	53.3	64.7	57.3	68.3
16	7.6	6.9	56.2	69.6	48.7	62.5	54.2	67.1
20	8.5	7.8	54.8	68.7	46.3	60.7	52.8	65.7
25	9.5	8.8	53.3	66.1	43.8	58.7	51.3	64.7
31.25	10.7	9.8	51.9	67.8	41.2	56.2	49.9	63.4
62.5	15.4	14.2	47.4	64.0	32.0	47.8	45.4	59.1
100	19.8	18.2	44.3	58.0	24.5	38.7	42.3	55.0
155	25.2	23.0	41.4	54.5	16.3	31.6	39.4	52.1
200	29.0	26.6	39.8	53.8	10.8	26.5	37.8	50.6
250	32.8	30.1	38.3	51.0	5.5	21.1	36.3	48.7
300		33.4		53.8		19.4		49.1
350		36.5		50.1		14.3		47.5
400		39.5		49.1		8.0		44.5
450		42.3		44.6		3.3		43.4
500		45.1		42.9				41.7
550		47.7		41.6				39.1

Frequency MHz	PSACR Minimum dB/100 m		Return Loss Minimum dB/100 m		ELFEXT Minimum dB/100 m		PSELFEXT Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
1	70.3	80.2	20.0	26.0	67.8	78.7	64.8	76.6
4	59.5	71.6	23.0	31.1	55.8	65.9	52.8	64.2
8	53.4	67.1	24.5	34.5	49.7	60.1	46.7	58.4
10	51.3	62.9	25.0	36.3	47.8	58.1	44.8	56.4
16	46.7	60.2	25.0	37.7	43.7	54.0	40.7	52.2
20	44.3	58.1	25.0	36.0	41.8	52.1	38.8	50.3
25	41.8	56.1	24.3	38.6	39.8	50.2	36.8	48.4
31.25	39.2	53.6	23.6	38.3	37.9	48.1	34.9	46.4
62.5	30.0	45.0	21.5	32.8	31.9	41.4	28.9	40.3
100	22.5	37.0	20.1	30.7	27.8	36.8	24.8	35.2
155	14.3	29.1	18.8	28.8	24.0	33.3	21.0	31.9
200	8.8	24.0	18.0	27.6	21.8	32.6	18.8	31.8
250	3.5	18.8	17.3	28.5	19.8	32.5	16.8	31.3
300		15.8		28.6		30.8		28.9
350		11.6		29.0		26.8		25.4
400		5.0		24.9		24.7		23.5
450		1.2		23.9		23.2		21.9
500				25.0		22.5		21.5
550				24.2		22.4		22.0

Cobra Category 5e+ CMR/CMP



Product Description

Cobra Category 5e+ cable is the performance leader in its class. 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 to ensure that every box provides significant margin over ANSI/TIA-568-C.2 specifications for NEXT, Power Sum NEXT and Insertion Loss.

Applications

- 10BASE-T through 1000BASE-T ethernet
- ATM and token ring

Features	Benefits
• Guaranteed NEXT of 3 dB greater than ANSI/TIA-568-C.2 specification across frequency range	• Greater assurance of exceptional overall channel performance
• Guaranteed ACR of 19.5 dB at 100 MHz	• Performance assurance for multiple high-bandwidth applications
• Exceptional PSNEXT, PSELFEXT and PSACR over CAT 5e	• Reduces BER, improving network efficiency
• "WideMouth" POP™ Box design	• Reduces tension on wire to ensure proper electrical performance after installation
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments
• Color coded box labels	• Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 70 CMP: 74
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 ANSI/ICEA S-90-661-2008 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR	52-200-x5	0.19 (4.8)	19 (28)	1,000' Reel-in-a-Box	45
CMR	52-240-x5	0.19 (4.8)	19 (28)	1,000' POP™ Box	36
CMP	52-200-x8	0.19 (4.8)	21 (31)	1,000' Reel-in-a-Box	45
CMP	52-241-x8	0.19 (4.8)	21 (31)	1,000' POP™ Box	45

Jacket Colors

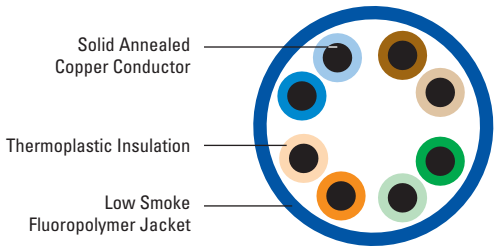
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Brown = B	Orange = D	Black = E

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical
0.772	1.8	1.8	1.6	67.0	70.0	81.1	65.2	69.3	84.0	64.0	68.0	78.7
1	2.0	2.0	1.8	65.3	68.3	79.5	63.3	67.4	77.7	62.3	66.3	77.2
4	4.1	4.0	3.6	56.3	59.3	69.9	52.2	56.4	66.4	53.3	57.3	67.5
8	5.8	5.7	5.1	51.8	54.8	65.1	46.0	50.3	60.0	48.8	52.8	62.7
10	6.5	6.4	5.8	50.3	53.3	63.6	43.8	48.2	57.9	47.3	51.3	61.2
16	8.2	8.1	7.4	47.2	50.3	60.4	39.0	43.4	53.1	44.2	48.3	58.0
20	9.3	9.2	8.3	45.8	48.8	59.0	36.5	41.0	50.9	42.8	46.8	56.6
25	10.4	10.3	9.3	44.3	47.3	57.5	33.9	38.5	48.3	41.3	45.3	55.1
31.25	11.7	11.6	10.4	42.9	45.9	56.0	31.2	35.8	45.7	39.9	43.9	53.5
62.5	17.0	16.8	14.9	38.4	41.4	51.7	21.4	26.2	36.8	35.4	39.4	49.2
100	22.0	21.7	19.1	35.3	38.3	48.5	13.3	21.0	29.5	32.3	36.3	46.0
155		27.7	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	37.9
350		44.4	37.7		26.2	39.3			1.7		24.2	36.8

Frequency MHz	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT Minimum dB/100 m			PSELFEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex	
	Calculated	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical	Specified	Guaranteed	Typical
0.772	62.2	66.3	86.0	19.4	19.4	26.0	66.0	66.0	77.4	63.0	63.0	79.2
1	60.3	64.4	75.4	20.0	20.0	28.5	63.8	63.8	72.6	60.8	60.8	70.8
4	49.2	53.4	64.0	23.0	23.0	35.6	51.8	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	36.0	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	37.8	37.7	47.0	34.7	34.7	45.2
25	30.9	35.5	46.0	24.3	24.3	35.3	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	27.9	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	20.8	20.8	31.1
155		6.3	19.4		18.8	28.4		19.9	29.3		16.9	27.2
200		0.5	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

Cobra Category 5e+ 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. The cable is ideally suited for industrial UTP applications where severe environmental stresses would compromise standard PVC plenum or riser cables. In addition, the cable's printing process ensures a more durable print legend on the cable compared with other limited combustible cables.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring
- ATM and token ring
- High risk, high liability installations

Features	Benefits
• UL Listed: Limited Combustible FHC 25/50	• Exceptional low smoke and low flame Spread Performance
• Lower fuel load than plenum PVC	• Higher safety rating for high-risk applications
• All fluoropolymer construction	• Resistant to chemical, moisture and heat exposure
• RoHS-compliant	• No heavy metals; and no toxic components
• Exceeds CAT 5e requirements	• Insures compatibility with new protocols
• Durable cable print	• Print legend does not rub off cable like other limited combustible cables
• BrakeBox® payout control system	• Adjustable tension control on reel prevents over spin and entangling of cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments
• Color coded box labels	• Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	Low smoke flouropolymer
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	74
Performance Compliance	UL 2424 NFPA 255, 259 and 262 ANSI/TIA-568-C.2 ANSI/ICEA S-90-661-2008 RoHS-compliant
NRTL Programs	UL Verified CAT 5e

Environmental Specifications	
Operation	-40°C to +200°C
Storage/Shipping	-40°C to +200°C
Installation	-40°C to +200°C

Part Numbers and Physical Characteristics

Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
52-200-xD	0.19 (4.8)	21 (31)	1,000' BrakeBox™	27
52-272-xD	0.19 (4.8)	21 (31)	1,000' Plywood Reel	16

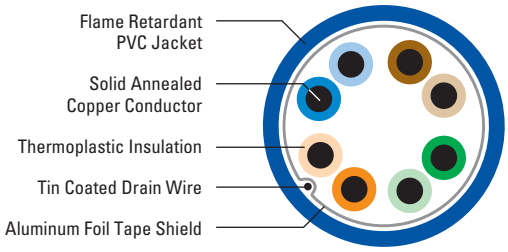
Jacket Colors		
[1]Replace "x" with:	Blue = 2	White = 4

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.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	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT Minimum dB/100 m			PSELFEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.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	20.8	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

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



Product Description

Superior Essex offers Screen Twisted Pair (ScTP) shielded Category 5e+ cables in both plenum and riser versions. The cable has guaranteed performance out to 350MHz and meets all applicable ANSI/TIA-568-C.2 requirements. The cable consists of four 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.

Applications

- ATM and token ring configurations
- 10BASE-T through 1000BASE-T ethernet
- Applications requiring secure networks or protection from EMI/RFI

Features

- Aluminum foil tape covers all 4-pair
- Exceeds ANSI/TIA-568-C.2 for CAT 5e cable performance
- Guaranteed performance to 350 MHz
- CableID™ alpha numeric code printed every 2 feet
- QuickCount® marking system in feet and meters
- ColorTip™ circuit identification system
- Color coded box labels

Benefits

- Protects against EMI/RFI and provides greater security
- Assures compliance for all current networking applications (up to 1000BASE-T)
- Assures ample bandwidth headroom
- Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
- Provides remaining length of cable on reel
- Easily identifiable conductor mates even in low light environments
- Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	CMR: Polyolefin CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Shield	Aluminum foil tape
Drain Wire	24 AWG tinned copper
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Package	1,000′ plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 67 CMP: 70
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	5F-220-x5	0.28 (7.1)	31 (46)	12
CMP	5F-220-x8	0.25 (6.4)	30 (45)	12

Jacket Colors

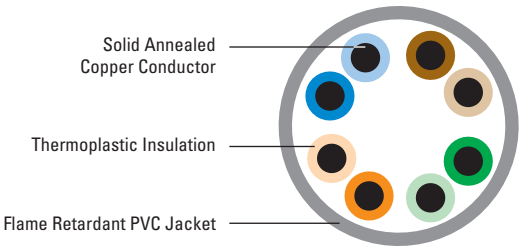
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Red = 9	Orange = D	Black = E

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m			NEXT Minimum dB/100 m			ACR Minimum dB/100 m			PSNEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.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	PSACR Minimum dB/100 m			Return Loss Minimum dB/100 m			ELFEXT Minimum dB/100 m			PSELFEXT Minimum dB/100 m		
	TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.2	Superior Essex		TIA-568-C.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

Marathon LAN® Category 5e CMR/CMP



Product Description

Marathon LAN Category 5e cable offers an exceptional value for jobs that require standards compliance at a cost-effective price. While Marathon LAN cable meets all of the ANSI/TIA-568-C.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 CAT 5e product available today.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

Features	Benefits
• Meets ANSI/TIA-568-C.2 specification	• Provides cost-effective solution
• Tested to 350 MHz	• Assures ample bandwidth headroom
• "WideMouth" POP® Box design	• Reduces tension on wire to ensure proper electrical performance after installation
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments
• Color coded box labels	• Easily identifies jacket colors

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Thermoplastic
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 71 CMP: 74
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR	51-243-x5	0.18 (4.6)	17 (25)	1,000′ Reel-in-a-Box	45
CMR	51-240-x5	0.18 (4.6)	17 (25)	1,000′ POP™ Box	45
CMP	51-243-x8	0.19 (4.8)	20 (30)	1,000′ Reel-in-a-Box	45
CMP	51-241-x8	0.19 (4.8)	20 (30)	1,000′ POP™ Box	45

Jacket Colors

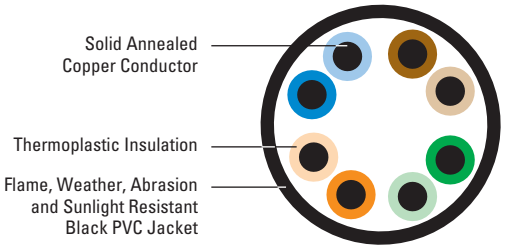
[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Pink = C	Orange = D	Black = E

Electrical Specifications

Frequency MHz	Insertion Loss @ 20°C Maximum dB/100 m		NEXT Minimum dB/100 m		ACR Minimum dB/100 m		PSNEXT Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex
	Specified	Typical	Specified	Typical	Calculated	Typical	Specified	Typical
0.772	1.8	1.5	67.0	78.5	65.2	83.0	64.0	77.0
1	2.0	1.8	65.3	76.8	63.3	81.0	62.3	75.3
4	4.1	3.7	56.3	67.8	52.2	70.1	53.3	66.3
8	5.8	5.4	51.8	63.3	46.0	63.9	48.8	61.8
10	6.5	6.0	50.3	61.8	43.8	61.8	47.3	60.3
16	8.2	7.7	47.2	58.7	39.0	57.0	44.3	57.2
20	9.3	8.6	45.8	57.3	36.5	54.7	42.8	55.8
25	10.4	9.6	44.3	55.8	33.9	52.2	41.3	54.3
31.25	11.7	10.8	42.9	54.4	31.2	49.6	39.9	52.9
62.5	17.0	15.5	38.4	49.9	21.4	40.4	35.4	48.4
100	22.0	19.8	35.3	46.8	13.3	33.0	32.3	45.3
155		24.8		43.9		25.1		42.4
200		28.2		42.3		20.1		40.8
250		31.8		40.8		15.0		39.3
300		35.0		39.6		10.6		38.1
350		38.3		38.6		6.3		37.1

Frequency MHz	PSACR Minimum dB/100 m		Return Loss Minimum dB/100 m		ELFEXT Minimum dB/100 m		PSELFEXT Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex
	Calculated	Typical	Specified	Typical	Specified	Typical	Specified	Typical
0.772	62.2	80.3	19.4	32.4	66.0	76.8	63.0	71.5
1	60.3	78.3	20.0	33.0	63.8	74.6	60.8	69.3
4	49.2	67.4	23.0	36.0	51.8	62.6	48.8	57.3
8	43.0	61.2	24.5	37.5	45.7	56.5	42.7	51.2
10	40.8	59.1	25.0	38.0	43.8	54.6	40.8	49.3
16	36.1	54.3	25.0	38.0	39.7	50.5	36.7	45.2
20	33.5	52.0	25.0	38.0	37.8	48.6	34.8	43.3
25	30.9	49.5	24.3	37.3	35.8	46.6	32.8	41.3
31.25	28.2	46.9	23.6	36.6	33.9	44.7	30.9	39.4
62.5	18.4	37.7	21.5	34.5	27.9	38.7	24.9	33.4
100	10.3	30.3	20.1	33.1	23.8	34.6	20.8	29.3
155		22.4		31.8		30.8		25.5
200		17.4		31.0		28.6		23.3
250		12.3		30.3		26.6		21.3
300		7.9		29.8		25.1		19.8
350		3.6		29.3		23.7		18.4

Category 5e CMR/CMX Outdoor Sunlight Resistant



Product Description

The Superior Essex Category 5e CMR/CMX Outdoor Sunlight Resistant cable is specifically designed for extreme sunlight and temperature applications. The cable's 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 (OSP) cable products, with the black color preventing damage from long-term UV sunlight exposure. Applications include ethernet interconnect cable for WiMAX or retrofit cable installations that employ 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.

Applications

- 10BASE-T through 1000BASE-T ethernet, WiMAX

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Polyolefin
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	Tough, flame retardant, weather, sunlight and abrasion resistant riser PVC
Jacket Color	Black
Package	1,000' POP™ Box
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	69
Performance Compliance	UL 444/UL 1581 720 hour UV/heat exposure test UL 1666 ANSI/TIA-568-C.2 ANSI/TIA/EIA-570-B 2002/95/EC RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR UL Listed CMX-Outdoor

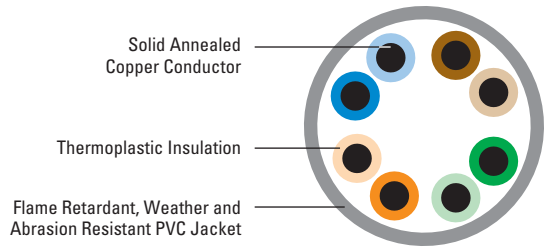
Features	Benefits
• Combines indoor/outdoor applications into one product with the added feature of Sunlight Resistant black color jacket	• Provides cost-effective solution
• Exceeds UL 444	• 720 hour sunlight resistant specification
• Meets ANSI/TIA-568-C.2 specification	• CAT 5e performance
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ Circuit Identification System	• Easily identifiable conductor mates even in low light environments
• Rip cord applied under jacket	• Facilitates easy opening
• RoHS-compliant	• No heavy metals; and no toxic components
• Combined indoor/outdoor rating	• Reduces inventory by eliminating multiple cable types
• UL 444/UL 1581 Sunlight Resistant Listed	• Increased life in direct, long term sunlight

Part Numbers and Physical Characteristics			
Part Number	**Nominal Diameter in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Packages Per Pallet**
51-240-E1	0.21 (5.3)	21 (31)	36

Category 5e CMR/CMX Outdoor

Product Description

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



Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

Features / Benefits

Features	Benefits
• Tough, weather resistant PVC jacket	• Increases life of cable by providing low temperature handling and sunlight resistance; cable jacket resists cracking over time
• Combined indoor/outdoor rating	• Reduces inventory by eliminating multiple cable types
• Meets ANSI/TIA-568-C.2 specification	• CAT 5e compliance
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ Circuit Identification System	• Easily identifiable conductor mates even in low light environments

Specifications

Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Polyolefin
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	Tough, flame retardant, weather and abrasion resistant PVC
Package	1,000′ POP™ Box
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	69
Performance Compliance	UL 444 UL 1581 UL 1666 ANSI/TIA-568-C.2 ANSI/TIA/EIA-570-B 2002/95/EC RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR UL Listed CMX-Outdoor

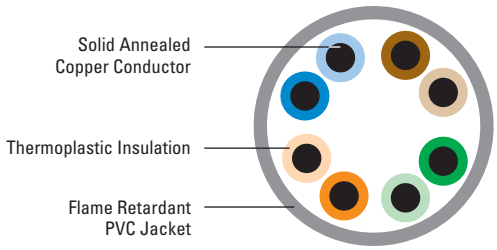
Part Numbers and Physical Characteristics

Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
51-240-x1	0.21 (5.3)	21 (31)	36

Jacket Colors

[1]Replace "x" with:	Beige = 1	Blue = 2	Gray = 3	White = 4

Category 5e CM



Product Description

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

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

Features	Benefits
• Meets ANSI/TIA-568-C.2 specification	• CAT 5e compliance
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Provides remaining length of cable on reel
• ColorTip™ Circuit Identification System	• Easily identifiable conductor mates even in low light environments

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Polyolefin
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	Flame retardant PVC
Package	1,000′ POP™ Box
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	69
Performance Compliance	UL 444 UL 1685 ANSI/TIA-568-C.2 ANSI/TIA/EIA-570-B RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CM

Part Numbers and Physical Characteristics

Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
51-240-xG	0.18 (4.6)	16 (24)	45

Jacket Colors

[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Red = 9

6-Pair Category 5e CMR

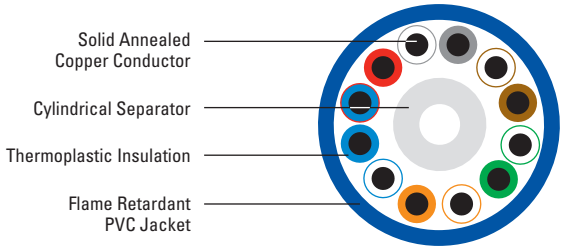
Product Description

6-pair UTP cable, with Category 5e (ANSI/TIA-568-C.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 CAT 5e cable delivers the performance expected, while offering the many features and user advantages of all our high performance premises products.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

Features	Benefits
• Two additional pairs in excess of the standard 4-pair construction	• Eliminates expense of additional cable when 6-pair are required, reduces cabling space requirements; speeds installation time
• ANSI/TIA-568-C.2 compliance	• Any of the 6-pair can be used for CAT 5e applications
• CableID™ alpha numeric code printed every 2 feet	• Allows both ends of a cable run to be easily identifiable without the need to seperately label or tone the cable
• QuickCount® marking system in feet and meters	• Eliminates guesswork of footage on reel and reduces scrap
• Warranted with all leading connectivity manufacturers	• Offers flexibility in selection of connectivity solutions



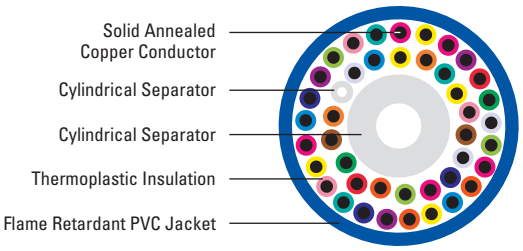
Specifications	
Pair Count	6
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Polyolefin
Separator	Round filler
Jacket	Flame retardant PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	69
Performance Compliance	UL 444 UL 1666 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR

Part Numbers and Physical Characteristics

Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
51-347-x5	0.26 (6.6)	32 (48)	1,000' Reel-in-a-Box	27
51-372-x5	0.26 (6.6)	32 (48)	1,000' Plywood Reel	16

Jacket Colors		
[1]Replace "x" with:	Blue = 2	Gray = 3

25-Pair Power Sum Category 5e 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 ANSI/TIA-568-C.2.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

Features

- Small outside diameter
- Vibrant insulation colors
- Flexible jacket material
- Marked in feet and meters

Benefits

- Handles tight installations
- Easier identification of conductors
- Ease of use during installation
- Dual length marking complies with government, military and international requirements

Specifications	
Pair Count	25
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	CMR: Thermoplastic CMP: FEP
Separator	Cylindrical
Jacket	CMR: Flame retardant PVC CMP: Fluoropolymer
Package	1,000′ plywood reel
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 69 CMP: 72
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

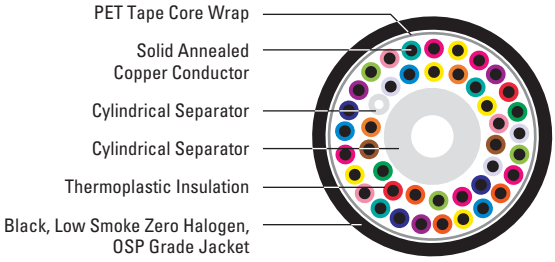
Listing	Part Number[1]	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Packages Per Pallet
CMR	51-478-x5	0.57 (14.5)	144 (214)	4
CMP	51-478-x8	0.48 (12.2)	148 (220)	4

Jacket Colors			
[1]**Replace "x" with:**	Blue = 2	Gray = 3	White = 4

25-Pair Category 5e Indoor/Outdoor

Product Description

With its CM fire rating and UV resistant black jacket, this 25-pair, 24 gauge, Category 5e tight twisted copper conductor cable can be installed in both premises and outside plant (OSP) environments. The CAT 5e tight twist lays provide superior crosstalk performance, supporting digital subscriber line (xDSL) and IPTV broadband technologies in both the OSP pedestal and customer premises. In addition, the cable jacket is fungus resistant which is important in OSP pedestal environments. The cable meets or exceeds ANSI/TIA-568-C.2 for CAT 5e backbone cables and is able to support up to 1000BASE-T Ethernet technologies.



Applications

- ADSL, VDSL, VDSL+ and VDSL+2
- 10BASE-T through 1000BASE-T Ethernet, ATM and token ring

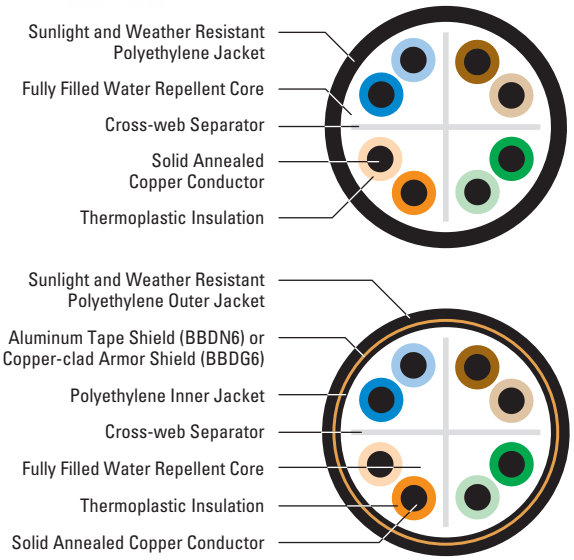
Features	Benefits
• Small outside diameter	• Handles tight installations
• Vibrant insulation colors	• Easy identification of conductors
• Black, CM rated, non-haolgen, OSP grade jacket material	• Provides full sunlight resistance and fire protection in a flexible jacket
• Fungus resistance	• Non-nutritive to fungus and ideal for installation in humid environments
• Compliant to ANSI/TIA-568-C.2 for CAT 5e	• Capable of 1000BASE-T
• Specially designed tight twist lays	• Provides superior Alien Crosstalk performance for xDSL applications
• Low temperature bend performance	• Allows installation at -20°C temperatures

Specifications	
Pair Count	25
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Thermoplastic
Separators	Cylindrical, flame retardant thermoplastic
Core Wrap	PET Tape
Jacket	Black, CM rated, non-halogen OSP grade
Input Impedance (Ohms) Guaranteed @ 1-100 MHz	100 ± 15
Delay Skew (ns/100 m)	Maximum: 45 Typical: 30
Nominal Velocity of Propagation (%)	69
DC Resistance (Ohms/100 m)	Maximum: 9.38 Typical: 9.0
Resistance Unbalance (%)	Maximum: 5.0 Typical: 0.7
Performance Compliance	UL 444 ANSI/TIA-568-C.2 RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
51-499-EL	0.59 (15)	148 (221)	1,000' Plywood Reel

OSP Broadband Category 6



Product Description

BBD6 is an Outside Plant (OSP) unshielded Broadband Category 6 cable. BBD6 has guaranteed transmission performance out to 250 MHz. The cable consists of a core of four 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. Shielded designs feature dry water block between the shield and the core jacket to prevent water ingress. All designs are suitable for buried applications.

Applications

- 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- BBDN6: Lashed aerial, underground conduit or low-risk direct burial
- BBDG6: Direct burial where additional mechanical protection is required

Features

- Filled core
- CAT 6 transmission performance characterized to 500 MHz
- Black polyethylene outer jacket
- BBD6: Unshielded
- BBDN6: Aluminum tape shield
- BBDG6: Copper-clad armor shield
- ColorTip™ circuit identification system
- Dry water block between shield and core

Benefits

- Prevents water ingress that can affect electrical performance
- OSP rated cable provides connections for work area and extension of the LAN
- Sunlight and weather resistant
- Small, robust design for unshielded applications
- Protection against EMI/RFI
- Protection against EMI/RFI and provides rodent resistance
- Easily identifiable conductor mates even in low light environments
- Prevents water ingress, yet easy to clean

Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	Polyolefin
Separator	Polyolefin cross-web
Shield	BBD6: Unshielded BBDN6: Electrically continuous 0.008 inch (0.20 mm) polymer coated smooth aluminum tape, applied with an overlap BBDG6: Electrically continuous 0.005 inch (0.13 mm) corrugated copper-clad armor, applied with an overlap
Dry Water Block	BBDN6: SAP powder BBDG6: SAP yarn
Jacket	Black, sunlight and weather resistant polyethylene
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	57
Performance Compliance	ANSI/TIA-C.2 ANSI/ICEA S-107-704-2006 RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Product Code	Shield	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
04-001-68	BBD6	None	0.30 (7.6)	39 (58)	1,000′ Plywood Reel
04-002-68	BBD6	None	0.30 (7.6)	39 (58)	2,500′ Plywood Reel
04-003-68	BBD6	None	0.30 (7.6)	39 (58)	5,000′ Plywood Reel
04-601-68	BBD6	None	0.30 (7.6)	39 (58)	Cut to Length
04-001-64	BBDN6	Coated Aluminum	0.40 (10.0)	67 (100)	1,000′ Plywood Reel
04-002-64	BBDN6	Coated Aluminum	0.40 (10.0)	67 (100)	2,500′ Plywood Reel
04-003-64	BBDN6	Coated Aluminum	0.40 (10.0)	67 (100)	5,000′ Plywood Reel
04-601-64	BBDN6	Coated Aluminum	0.40 (10.0)	67 (100)	Cut to Length
04-001-65	BBDG6	Copper Clad	0.40 (10.0)	80 (119)	1,000′ Plywood Reel
04-002-65	BBDG6	Copper Clad	0.40 (10.0)	80 (119)	2,500′ Plywood Reel
04-003-65	BBDG6	Copper Clad	0.40 (10.0)	80 (119)	5,000′ Plywood Reel
04-601-65	BBDG6	Copper Clad	0.40 (10.0)	80 (119)	Cut to Length

OSP Broadband Category 5e

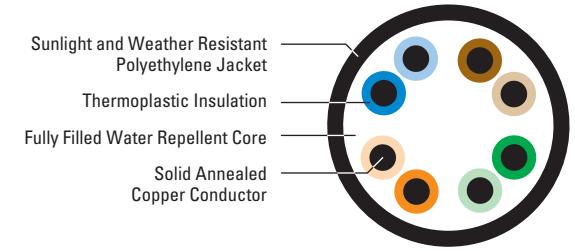
Product Description

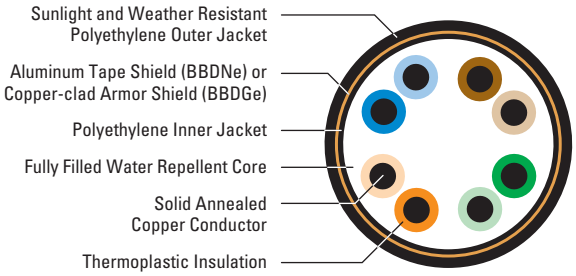
BBD Category 5e Outside Plant (OSP) cables are designed to provide extension of the LAN beyond the premises. The core is filled wih PFM™ thixotropic filling compund to prevent water ingress. PFM™ gel will not drip even in cell tower applications at elevated temperatures. A variety of constructions are available to suit multiple environmental needs. Shielded designs feature dry water block between the shield and the core jacket to prevent water ingress. All designs are suitable for buried applications.

Applications

- 10BASE-T through 1000BASE-T ethernet
- ATM and token ring
- WiMAX cell towers
- BBDNe: Lashed aerial, underground conduit or low-risk direct burial
- BBDGe: Direct burial where additional mechanical protection is required

Features	Benefits
• CAT 5e transmission performance characterized to 350 MHz	• OSP rated cable connections for work area and backbone LAN
• Metallic shield tapes (Aluminum for BBDNe and Copper-clad armor for BBDGe)	• Provides additional protection against EMI/RFI and rodents
• Fully filled with PFM™ thixotropic gel	• Prevents intrusion of moisture that can degrade transmission quality • Easy to clean and non-dripping
• UV/Sunlight resistant black jacket	• Confidence that cable will last even with long-term exposure to direct sunlight
• 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
• ColorTip™ circuit identification system	• Easily identifiable conductor mates even in low light environments
• Dry water block between shield and core	• Prevents water ingress, yet easy to clean



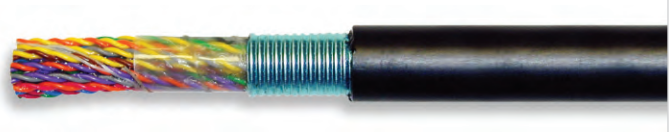


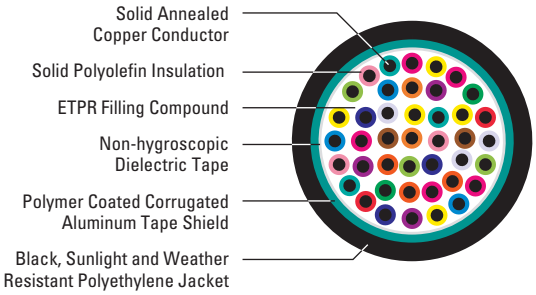
Specifications	
Pair Count	4
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Filling Compound	PFM™ thixotropic gel
Insulation	Solid polyolefin
Shield	BBDe: Unshielded BBDNe: Electrically continuous 0.008 in (0.20 mm) polymer coated smooth aluminum tape, applied with an overlap BBDGe: Electrically continuous 0.005 in (0.13 mm) corrugated copper-clad armor, applied with an overlap
Dry Water Block	BBDNe: SAP powder BBDGe: SAP yarn
Jacket	Black, sunlight and weather resistant polyethylene
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	62
Performance Compliance	ANSI/TIA-568-C.2 ANSI/ICEA S-107-704-2006 RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Product Code	Shield	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
04-001-58	BBDe	None	0.26 (6.6)	30 (45)	1,000′ Plywood Reel
04-002-58	BBDe	None	0.26 (6.6)	30 (45)	2,500′ Plywood Reel
04-003-58	BBDe	None	0.26 (6.6)	30 (45)	5,000′ Plywood Reel
04-601-58	BBDe	None	0.26 (6.6)	30 (45)	Cut to Length
04-001-54	BBDNe	Coated Aluminum	0.36 (9.1)	55 (82)	1,000′ Plywood Reel
04-002-54	BBDNe	Coated Aluminum	0.36 (9.1)	55 (82)	2,500′ Plywood Reel
04-003-54	BBDNe	Coated Aluminum	0.36 (9.1)	55 (82)	5,000′ Plywood Reel
04-601-54	BBDNe	Coated Aluminum	0.36 (9.1)	55 (82)	Cut to Length
04-001-55	BBDGe	Copper Clad	0.36 (9.1)	64 (95)	1,000′ Plywood Reel
04-002-55	BBDGe	Copper Clad	0.36 (9.1)	64 (95)	2,500′ Plywood Reel
04-003-55	BBDGe	Copper Clad	0.36 (9.1)	64 (95)	5,000′ Plywood Reel
04-601-55	BBDGe	Copper Clad	0.36 (9.1)	64 (95)	Cut to Length

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.

Applications

- 10BASE-T
- ATM and token ring
- MEGAPIC-NF: Higher pair count shielded distribution cable for use in lashed 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

Features

- Transmission performance characterized to 100 MHz
- 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

Specifications	
Pair Count	Available in 25-pair and 100-pair
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Filling Compound	80°C ETPR (extended thermoplastic rubber)
Core Wrap	Non-hygroscopic dielectric tape
Shield	MEGAPIC-NF: Electrically continuous 0.008 in (0.20 mm) polymer coated corrugated aluminum tape, applied with an overlap and shield interface is flooded MEGAPIC-GF: ASP sheath consisting of an inner electrically continuous 0.008 in (0.20 mm) polymer coated corrugated aluminum tape applied with a gap and covered with an outer electrically continuous 0.006 in (0.15 mm) polymer coated corrugated steel tape applied with an overlap; interfaces of both tapes are flooded
Jacket	Black, sunlight and weather resistant polyethylene
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	62
Package	Wood reel
Performance Compliance	ANSI/TIA-568-C.2 ANSI/ICEA S-99-689-2006 RoHS-compliant

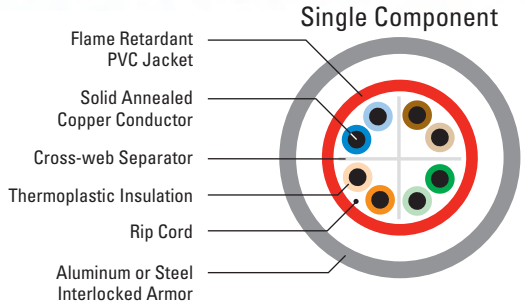
Part Numbers and Physical Characteristics

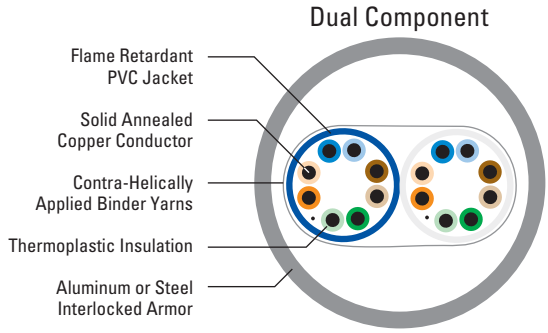
Part Number	Name	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
04-097-31	MEGAPIC-NF	25	0.68 (17.3)	208 (310)	5,000 (1524)
04-104-31	MEGAPIC-NF	100	1.22 (31.0)	696 (1,037)	1,000 (305)
04-097-37	MEGAPIC-GF	25	0.71 (18.0)	258 (385)	5,000 (1524)
04-104-37	MEGAPIC-GF	100	1.26 (32.0)	801 (1,195)	1,000 (305)

Product Description

Interlocked Armor Category 6, Category 5e, Category 3 and/or RG6 Quad Coax Riser cables provide significant mechanical protection. Interlocked armor cables with two or more components of the same type can have either different colored components or uniquely labeled components with the same color. Multiple cables can be constructed in either aluminum or steel interlocked armor; and the final cable is available in bare metal or with an overall jacket. Each component cable is tested after interlocked armoring to ensure that it meets all applicable industry requirements. Cable configurations that include optical fiber distribution cables are also available.

Features	Benefits
• Aluminum or steel interlocked armor	• Protects against mechanical stresses • Protects against EMI/RFI for reliable performance • Provides additional fire protection over riser rating • Installs faster and easier than EMT conduit and conventional wire
• Category components meets ANSI/TIA-568-C.2 for CAT 3, CAT 5e and CAT 6	• Supports applications up to 1000BASE-T
• CMR rated components	• Maintains the fire rating with interlocked armor removed





Specifications	
Overall Cable Configuration	Single to multiple component riser cables surrounded by aluminum or steel interlocked armor
Armor	Interlocked aluminum or interlocked steel
Armor Jacket Options	Unjacketed or jacketed (matches component color)
Armor/Component Jacket	Riser grade PVC
Component Fire Listings	UL 1666, UL CMR, c(UL) CMR
Package	1,000' wood reel
Performance Compliance	UL 444 UL 1569 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Listed CMR

Part Numbers and Physical Characteristics

Part Number[1]	Configuration	Component	Number of Components	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)
K4-199-xA	Aluminum interlocked armor, no outer jacket	4-pair CAT 6	1	0.48 (12.2)	66 (98)
L4-199-xA	Aluminum interlocked armor, with outer jacket*	4-pair CAT 6	1	0.55 (14.0)	104 (155)
K4-299-yA	Aluminum interlocked armor, no outer jacket	4-pair CAT 6	2	0.83 (21.1)	117 (174)
L4-299-yA	Aluminum interlocked armor, with outer jacket*	4-pair CAT 6	2	1.33 (33.8)	176 (281)
K2-199-x5	Aluminum interlocked armor, no outer jacket	4-pair CAT 5e	1	0.44 (11.2)	55 (82)
L2-199-x5	Aluminum interlocked armor, with outer jacket*	4-pair CAT 5e	1	0.48 (12.2)	78 (116)
K2-299-y5	Aluminum interlocked armor, no outer jacket	4-pair CAT 5e	2	0.80 (28.2)	105 (156)
L2-299-y5	Aluminum interlocked armor, with outer jacket*	4-pair CAT 5e	2	1.26 (32.0)	151 (225)
KC-919-x5	Aluminum interlocked armor, no outer jacket	RG6 Quad**	1	0.53 (13.5)	73 (109)
K8-A99-33	Aluminum interlocked armor, no outer jacket	25-pair CAT 3	1	0.79 (20.1)	159 (237)

**For single unit cables, the outer jacket color matches the internal component jacket color. For multi-unit cables, the outer jacket standard color is blue. Additional cable combinations are available. **Coaxial available with component jacket color in black or white.*

Single Component Jacket Colors

[1]Replace "x" with:	Blue = 2	Gray = 3	White = 4	Green = 5	Yellow = 6	Purple = 7	Red = 9	Orange = D	Black = E

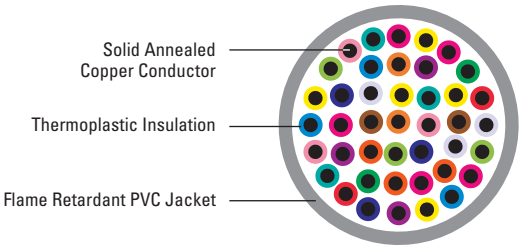
Dual Component Jacket Colors

[1]Replace "y" with "S"		[1]Replace "y" with "T"	
Blue	White	Blue	Gray

Other color sequences are available upon request.

Category 3 CMR/CMP

2-Pair – 400-Pair



Specifications	
Pair Count	Available in 2-pair up to 400-pair
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Thermoplastic
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 ANSI/ICEA S-90-661-2008 RoHS-compliant
NRTL Programs	UL Listed CMR UL Listed CMP

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.

Applications

- 4 Mbps token ring (IEEE 802.5)
- Analog voice
- 10 Mbps 10BASE-T ethernet (IEEE 802.3)
- Telecommunications closet wiring

Features

- CMR and CMP constructions use extremely flexible, FR-PVC jacket
- Jacket color options
- Band marked or striped insulated conductors

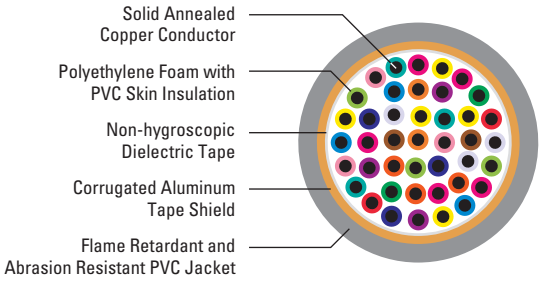
Benefits

- 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

Part Numbers and Physical Characteristics							
Listing	Part Number	Pair Count	Jacket Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR	18-042-13	2	Beige	0.12 (3.1)	9 (13)	1,000′ POP™ Box	45
CMR	18-042-33	2	Gray	0.12 (3.1)	9 (13)	1,000′ POP™ Box	45
CMR	18-141-13	3	Beige	0.14 (3.5)	12 (18)	1,000′ POP™ Box	45
CMR	18-141-33	3	Gray	0.14 (3.5)	12 (18)	1,000′ POP™ Box	45
CMR	18-241-13	4	Beige	0.16 (3.9)	15 (22)	1,000′ POP™ Box	45
CMR	18-241-23	4	Blue	0.16 (3.9)	15 (22)	1,000′ POP™ Box	45
CMR	18-241-33	4	Gray	0.16 (3.9)	15 (22)	1,000′ POP™ Box	45
CMR	18-241-43	4	White	0.16 (3.9)	15 (22)	1,000′ POP™ Box	45
CMR	18-341-13	6	Beige	0.19 (4.8)	22 (32)	1,000′ POP™ Box	45
CMR	18-341-33	6	Gray	0.19 (4.8)	22 (32)	1,000′ POP™ Box	45
CMR	18-872-13	12	Beige	0.27 (6.9)	47 (71)	1,000′ Plywood Reel	16
CMR	18-872-33	12	Gray	0.27 (6.9)	47 (71)	1,000′ Plywood Reel	16
CMR	18-475-13	25	Beige	0.38 (9.6)	92 (137)	1,000′ Plywood Reel	12
CMR	18-499-13	25	Beige	0.38 (9.6)	92 (137)	Cut to Length	1
CMR	18-475-33	25	Gray	0.38 (9.6)	92 (137)	1,000′ Plywood Reel	12
CMR	18-499-33	25	Gray	0.38 (9.6)	92 (137)	Cut to Length	1
CMR	18-579-13	50	Beige	0.56 (14.2)	187 (279)	1,000′ Plywood Reel	4
CMR	18-599-13	50	Beige	0.56 (14.2)	187 (279)	Cut to Length	1
CMR	18-579-33	50	Gray	0.56 (14.2)	187 (279)	1,000′ Plywood Reel	4
CMR	18-599-33	50	Gray	0.56 (14.2)	187 (279)	Cut to Length	1
CMR	18-789-13	100	Beige	0.74 (18.7)	361 (538)	Cut to Length	1
CMR	18-789-33	100	Gray	0.74 (18.7)	361 (538)	Cut to Length	1
CMR	18-D99-33	150	Gray	0.92 (23.4)	541 (807)	Cut to Length	1
CMR	18-A99-33	200	Gray	1.05 (26.6)	711 (1,060)	Cut to Length	1
CMR	18-B99-33	300	Gray	1.27 (32.2)	1,049 (1,564)	Cut to Length	1
CMR	18-C99-33	400	Gray	1.45 (36.9)	1,386 (2,067)	Cut to Length	1
CMP	18-041-36	2	Gray	0.13 (3.3)	10 (15)	1,000′ POP™ Box	45
CMP	18-141-36	3	Gray	0.15 (3.7)	14 (20)	1,000′ POP™ Box	45
CMP	18-241-26	4	Blue	0.16 (4.2)	17 (26)	1,000′ POP™ Box	45
CMP	18-241-36	4	Gray	0.16 (4.2)	17 (26)	1,000′ POP™ Box	45
CMP	18-241-46	4	White	0.16 (4.2)	17 (26)	1,000′ POP™ Box	45
CMP	18-241-56	4	Green	0.16 (4.2)	17 (26)	1,000′ POP™ Box	45
CMP	18-341-36	6	Gray	0.20 (5.0)	24 (37)	1,000′ POP™ Box	45
CMP	18-341-46	6	White	0.20 (5.0)	24 (37)	1,000′ POP™ Box	45
CMP	18-872-46	12	White	0.30 (7.6)	49 (73)	1,000′ Plywood Reel	16
CMP	18-475-36	25	Gray	0.43 (10.9)	114 (171)	1,000′ Plywood Reel	12
CMP	18-499-36	25	Gray	0.43 (10.9)	114 (171)	Cut to Length	1
CMP	18-475-46	25	White	0.43 (10.9)	114 (171)	1,000′ Plywood Reel	12
CMP	18-499-46	25	White	0.43 (10.9)	114 (171)	Cut to Length	1
CMP	18-579-36	50	Gray	0.60 (15.3)	227 (339)	1,000′ Plywood Reel	4
CMP	18-599-36	50	Gray	0.60 (15.3)	227 (339)	Cut to Length	1
CMP	18-799-36	100	Gray	0.84 (21.3)	446 (665)	Cut to Length	1
CMP	18-799-46	100	White	0.84 (21.3)	446 (666)	Cut to Length	1
CMP	18-A99-36	200	Gray	1.16 (29.4)	850 (1,268)	Cut to Length	1
CMP	18-B99-36	300	Gray	1.44 (36.7)	1,315 (1,960)	Cut to Length	1
CMP	18-B99-46	300	White	1.44 (36.7)	1,315 (1,961)	Cut to Length	1
CMP	18-C99-36	400	Gray	1.64 (41.7)	1,720 (2,565)	Cut to Length	1

AR Series Riser

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 (OSP) cable designs. The cable consists of solid soft bare copper that's insulated with foam polyethylene and a skin of PVC. Cores through 900-pair are color coded to match the standard PIC color code. Cables 1,200-pair and larger have a "Mirror Image" color code. Spare pairs are offered in cables of 1,200-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
- 10BASE-T ethernet

Features

- CMR rating
- Shielded design

Benefits

- Meets NFPA code for riser applications
- Provides EMI/RFI shielding

Specifications	
Pair Count	Available in 25-pair up to 2,400-pair
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64) and 24 (0.51)
Insulation	Polyethylene foam with PVC skin
Shield	Corrugated 8 mil aluminum tape
Jacket	Gray, flame retardant and abrasion resistant PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	60
Package	Cut to length
Performance Compliance	UL 444 UL 1666 Telcordia GR-111 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Listed CMR

Part Numbers and Physical Characteristics

Part Number	Product Code	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)
02-062-03	ARAM	25	22 (0.64)	0.61 (15)	203 (303)
02-065-03	ARAM	50	22 (0.64)	0.77 (20)	347 (517)
02-069-03	ARAM	100	22 (0.64)	1.05 (27)	644 (960)
02-073-03	ARAM	200	22 (0.64)	1.41 (36)	1,184 (1,766)
02-075-03	ARAM	300	22 (0.64)	1.68 (43)	1,699 (2,533)
02-077-03	ARAM	400	22 (0.64)	1.94 (49)	2,200 (3,280)
02-081-03	ARAM	600	22 (0.64)	2.30 (58)	3,196 (4,766)
02-097-03	ARMM	25	24 (0.51)	0.51 (13)	146 (218)
02-100-03	ARMM	50	24 (0.51)	0.64 (16)	241 (360)
02-104-03	ARMM	100	24 (0.51)	0.89 (23)	447 (667)
02-106-03	ARMM	150	24 (0.51)	1.02 (26)	618 (922)
02-108-03	ARMM	200	24 (0.51)	1.14 (29)	788 (1,175)
02-110-03	ARMM	300	24 (0.51)	1.35 (34)	1,129 (1,684)
02-112-03	ARMM	400	24 (0.51)	1.53 (39)	1,427 (2,128)
02-116-03	ARMM	600	24 (0.51)	1.85 (47)	2,106 (3,140)
02-118-03	ARMM	900	24 (0.51)	2.20 (56)	3,060 (4,563)
02-120-03	ARMM	1,200	24 (0.51)	2.50 (63)	4,008 (5,977)
02-121-03	ARMM	1,500	24 (0.51)	2.80 (71)	5,013 (7,476)
02-124-03	ARMM	1,800	24 (0.51)	3.05 (77)	5,958 (8,884)
02-125-03	ARMM	2,100	24 (0.51)	3.30 (84)	6,908 (10,302)
02-126-03	ARMM	2,400	24 (0.51)	3.52 (89)	7,852 (11,709)

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 a combination. Two levels of Outdoor Protection are available CMR/CMX Outdoor and Extreme CMR/CMX Outdoor. The Extreme Series meets the -40°C anvil test.

Applications

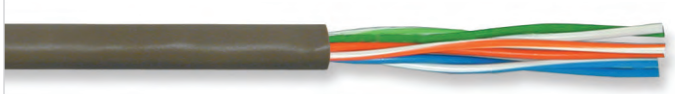
- CMR/CMX Outdoor
- Extreme CMR/CMX Outdoor

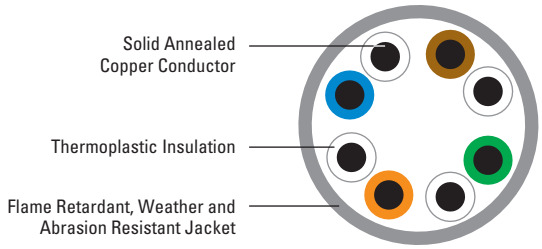
Features

- CMR/CMX Outdoor combination
- Extreme CMR/CMX Outdoor combination
- Beige, gray and ivory jacket colors
- Various conductor colors

Benefits

- Indoor/outdoor use
- Indoor/outdoor use with extreme cold temperature feature
- Enhances appearance on outdoor siding
- Customer preference





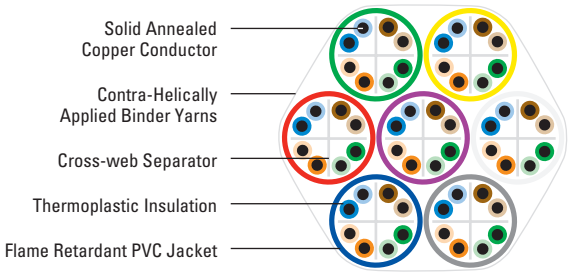
Specifications	
Pair Count	Available in 2-pair, 3-pair, 4-pair, 6-pair and 12-pair
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64) and 24 (0.51)
Insulation	Thermoplastic
Jacket	Tough, flame retardant, weather and abrasion resistant PVC
Performance Compliance	UL 444 Extreme CMR/CMX Outdoor Includes ICEA -40°C Anvil Test ANSI/TIA-568-C.2 ANSI/ICEA S-100-685 2002/95/EC RoHS-compliant
NRTL Programs	UL Listed CMR/CMX Outdoor

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Jacket Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CMR/CMX Outdoor							
12-202-37	2	22 (0.64)	Beige	0.18 (4.7)	17 (26)	1,000′ POP™ Box	45
12-203-37	3	22 (0.64)	Beige	0.22 (5.5)	24 (36)	1,000′ POP™ Box	45
12-204-37	4	22 (0.64)	Beige	0.22 (5.6)	29 (43)	1,000′ POP™ Box	36
12-214-37	4	22 (0.64)	Gray	0.22 (5.6)	29 (43)	1,000′ POP™ Box	36
12-402-37	2	24 (0.51)	Beige	0.15 (3.7)	12 (18)	1,000′ POP™ Box	45
12-403-37	3	24 (0.51)	Beige	0.17 (4.3)	16 (24)	1,000′ POP™ Box	45
12-404-37	4	24 (0.51)	Beige	0.20 (5.0)	20 (30)	1,000′ POP™ Box	45
The above products use a tubed jacket design with the following color code: Blue/White, Orange/White, Green/White, Brown/White.							
12-212-32	2	22 (0.64)	Beige	0.18 (4.7)	17 (26)	1,000′ POP™ Box	45
12-213-32	3	22 (0.64)	Beige	0.22 (5.5)	24 (36)	1,000′ POP™ Box	45
12-206-32	4	22 (0.64)	Beige	0.22 (5.6)	29 (43)	500′ POP™ Box	45
12-412-32	2	24 (0.51)	Beige	0.15 (3.7)	12 (18)	1,000′ POP™ Box	45
12-414-32	4	24 (0.51)	Beige	0.20 (5.0)	20 (30)	1,000′ POP™ Box	45
The above products use a tubed jacket design with the following color code: Red/Green, Yellow/Black, Blue/White, Orange/Brown.							
Extreme CMR/CMX Outdoor							
11-002-89	2	22 (0.64)	Gray	0.17 (4.3)	19 (29)	125′ Coil Pack	128
11-002-88	2	22 (0.64)	Ivory	0.17 (4.3)	19 (29)	125′ Coil Pack	256
11-002-87	2	22 (0.64)	Ivory	0.17 (4.3)	19 (29)	1,000′ POP™ Box	45
11-003-12	2	24 (0.51)	Ivory	0.15 (3.7)	12 (18)	1,000′ POP™ Box	45
11-003-13	2	24 (0.51)	Gray	0.15 (3.7)	12 (18)	1,000′ POP™ Box	45
11-003-91	4	24 (0.51)	White	0.20 (5.0)	20 (30)	1,000′ POP™ Box	45
11-003-92	4	24 (0.51)	Ivory	0.20 (5.0)	20 (30)	1,000′ POP™ Box	45
12-303-62*	6	24 (0.51)	Gray	0.21 (5.3)	27 (41)	1,000′ POP™ Box	36
12-805-62*	12	24 (0.51)	Gray	0.28 (7.2)	49 (74)	1,000′ Plywood Reel	16
12-825-62*	12	24 (0.51)	Ivory	0.28 (7.2)	49 (74)	1,000′ Plywood Reel	16
The above products use a tubed jacket design with the following color code: Blue/White, Orange/White, Green/White and Brown/White. 2-pair 22 AWG products are a pressure extruded design.							
12-414-52	3	22 (0.64)	Beige	0.22 (5.5)	24 (36)	1,000′ POP™ Box	45
12-415-52	2	24 (0.51)	Beige	0.15 (3.7)	12 (18)	1,000′ POP™ Box	45
12-416-52	3	24 (0.51)	Beige	0.17 (4.3)	16 (24)	1,000′ POP™ Box	45
12-417-52	4	24 (0.51)	Beige	0.20 (5.0)	20 (30)	1,000′ POP™ Box	45
The above products use a tubed jacket design with the following color code: Red/Green, Yellow/Black, Blue/White, Orange/Brown.							

**Copper conductors are PVC insulated.*

Bundled 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.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

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

Specifications	
Conductor	Solid annealed copper
AWG (mm)	23 (0.57)
Insulation	CMR: Thermoplastic CMP: FEP
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Separator	Cross-web
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 68 CMP: 71
Package F x T x D (in)	30 x 18 x 12 plywood reel
Component Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 ANSI/ICEA S-90-661-2008 RoHS-compliant
Component NRTL Programs	UL Verified CAT 6 UL Listed CMR UL Listed CMP

Part Numbers and Physical Characteristics

Listing	Part Number	Cable Sub-units	Jacket Colors*	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
CMR	56-202-2A	2	Blue, Gray	0.45 (11)	47 (70)	2,500 (762)
CMR	56-202-3A	3	Blue, Gray, White	0.49 (12)	73 (109	2,500 (762)
CMR	56-202-4A	4	Blue, Gray, White, Yellow	0.55 (13)	98 (146)	2,500 (762)
CMR	56-201-5A	5	Blue, Gray, White, Yellow, Green	0.59 (15)	122 (182)	2,500 (762)
CMR	56-201-6A	6	Blue, Gray, White, Yellow, Green, Red	0.68 (17)	147 (219)	2,500 (762)
CMR	56-201-7A	7	Blue, Gray, White, Yellow, Green, Red, Purple	0.68 (17)	171 (255)	1,000 (305)
CMP	56-202-2B	2	Blue, Gray	0.41 (10)	49 (74)	2,500 (762)
CMP	56-202-3B	3	Blue, Gray, White	0.44 (11)	74 (110)	2,500 (762)
CMP	56-202-4B	4	Blue, Gray, White, Yellow	0.49 (12)	98 (147)	2,500 (762)
CMP	56-201-5B	5	Blue, Gray, White, Yellow, Green	0.63 (16)	131 (195)	2,500 (762)
CMP	56-201-6B	6	Blue, Gray, White, Yellow, Green, Red	0.79 (20)	161 (240)	2,500 (762)
CMP	56-201-7B	7	Blue, Gray, White, Yellow, Green, Red, Purple	0.79 (20)	187 (279)	1,000 (305)

**Other jacket color combinations available.*

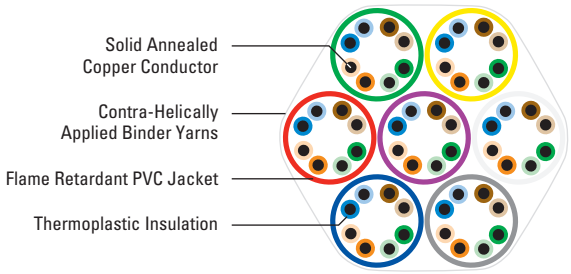
Jacket Colors

Blue	Gray	White	Yellow	Green	Red	Purple

Bundled 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 breakout and offers greater flexibility compared to a composite overjacket design. Contrasting jacket colors allow easy identification.



Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring

Features	Benefits
• Binding of multiple UTP cables	• Reduces installation time
• Multiple construction options (2 to 7 cable sub-units)	• Improves cable management
• Warranted with numerous connectivity manufacturers	• Sizes available for small and large projects
• ColorTip™ circuit identification system	• Easily identifiable conductor mates, even in low light environment
• Flexible, dual binder yarns, contra-helically applied	• Maintains maximum flexibility and allows for easy breakout

Specifications	
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
Insulation	Thermoplastic
Insulation Colors	Pair 1: ColorTip™ Light Blue, Blue Pair 2: ColorTip Light Orange, Orange Pair 3: ColorTip Light Green, Green Pair 4: ColorTip Light Brown, Brown
Jacket	CMR: Flame retardant (FR) PVC CMP: FR, low smoke PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	CMR: 69 CMP: 72
Package F x T x D (in)	30 x 18 x 12 plywood reel
Component Performance Compliance	UL 444 UL 1666 NFPA 262 ANSI/TIA-568-C.2 ANSI/ICEA S-90-661-2008 RoHS-compliant
Component NRTL Programs	UL Verified CAT 5e UL Listed CMP UL Listed CMR

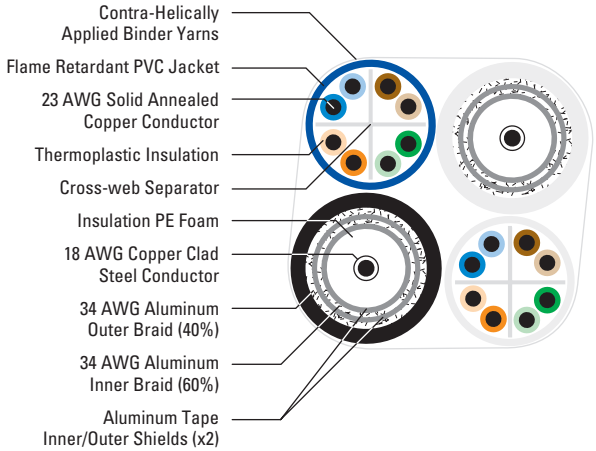
Part Numbers and Physical Characteristics

Listing	Part Number	Cable Sub-units	Jacket Colors*	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
CMR	56-202-25	2	Blue, Gray	0.41 (10)	45 (67)	2,500 (762)
CMR	56-202-35	3	Blue, Gray, White	0.43 (11)	65 (97)	2,500 (762)
CMR	56-202-45	4	Blue, Gray, White, Yellow	0.48 (12)	86 (128)	2,500 (762)
CMR	56-201-55	5	Blue, Gray, White, Yellow, Green	0.56 (14)	117 (175)	2,500 (762)
CMR	56-201-65	6	Blue, Gray, White, Yellow, Green, Red	0.67 (17)	143 (213)	2,500 (762)
CMR	56-201-75	7	Blue, Gray, White, Yellow, Green, Red, Purple	0.67 (17)	154 (229)	1,000 (305)
CMP	56-202-28	2	Blue, Gray	0.41 (10)	46 (69)	2,500 (762)
CMP	56-202-38	3	Blue, Gray, White	0.44 (11)	69 (103)	2,500 (762)
CMP	56-202-48	4	Blue, Gray, White, Yellow	0.50 (13)	92 (137)	2,500 (762)
CMP	56-201-58	5	Blue, Gray, White, Yellow, Green	0.54 (14)	115 (171)	2,500 (762)
CMP	56-201-68	6	Blue, Gray, White, Yellow, Green, Red	0.62 (16)	137 (205)	2,500 (762)
CMP	56-201-78	7	Blue, Gray, White, Yellow, Green, Red, Purple	0.62 (16)	160 (239)	1,000 (305)

**Other jacket color combinations available.*

Jacket Colors						
Blue	Gray	White	Yellow	Green	Red	Purple

Bundled Composite Category 6 CMR



Product Description

Superior Essex offers multiple configurations of skip-wrapped or bundled riser-rated (CMR) composite cables to support 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. This product is also available with an optical fiber cable.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring
- HDTV, CATV, CCTV and DBS

Features	Benefits
• All-in-one cable design	• Reduces installation time, provides additional protection to the individual cables
• Series 6 Quad Shield coaxial cable with typical bandwidth that exceeds 3 GHz	• "Future-Proofing" the installation. Supports extended bandwidth satellite service and high-definition TV signals
• Multiple constructions available	• Customized flexibility for the application
• Optional optical fiber premises cable	• Integrated fiber reduces the need to install separate cables for home interior optical networks
• Flexible, dual binder yarns, contra-helically applied	• Maintains maximum flexibility and allows for easy breakout

Specifications	
CAT 6 UTP Component	Pair Count: 4 Conductor: Solid annealed copper AWG (mm): 23 (0.57) Insulation: Thermoplastic Separator: Cross-web Jacket: Flame retardant PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	68
Fiber Component*	62.5/125 µm duplex, 5 mm round, 900 µm tight buffered
Coax Series 6 Quad Shield Component	Conductor: Copper clad steel AWG (mm): 18 (1.02) Insulation: Polyethylene Inner Shield: 2.8 mil aluminum foil Inner Braid: 34 AWG aluminum (60%) Outer Shield: 1.8 mil aluminum foil Outer Braid: 34 AWG aluminum (40%) Jacket: PVC Electrical: See "Coax Series 6 Quad Shield" on page A-45
Binder Yarn	Flexible, dual binder yarns, contra-helically applied
Package	Cut to length on plywood reel

Specifications (continued)	
Performance Compliance	UL 444 UL 1666 ANSI/TIA-568-C.2 ANSI/ICEA S-83-596-2001 RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL Listed CMR

Part Numbers and Physical Characteristics

Part Number	Number of Cable Components			Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)
	CAT 6	RG 6 Quad	62.5 2-fiber*		
D3-2009SA	1	1	-	0.53 (14)	56 (124)
D3-5009SA	1	2	-	0.56 (14)	88 (195)
D3-A009SA	2	1	-	0.51 (13)	81 (178)
D3-D009SA	2	2	-	0.67 (17)	113 (248)
D3-J009SA	3	1	-	0.67 (17)	105 (232)
D3-M009SA	3	2	-	0.81 (21)	137 (302)
D3-S009SA	4	1	-	0.82 (21)	130 (286)
D3-V009SA	4	2	-	0.85 (22)	162 (356)
D3-B169SA	2	1	1	0.56 (14)	95 (210)
D3-E169SA	2	2	1	0.51 (13)	127 (280)
D3-K169SA	3	1	1	0.67 (17)	120 (263)
D3-N169SA	3	2	1	0.67 (17)	152 (334)
D3-T169SA	4	1	1	0.81 (21)	144 (317)

Other fiber types and fiber counts available upon request.

Bundled Composite Category 5e CMR

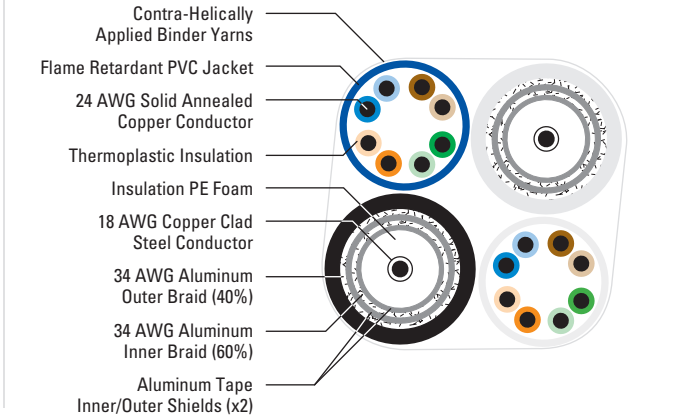
Product Description

Superior Essex offers multiple configurations of skip-wrapped or bundled riser-rated (CMR) composite cables to support 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. This product is also available with an optical fiber cable.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring
- HDTV, CATV, CCTV and DBS

Features	Benefits
• All-in-one cable design	• Reduces installation time, provides additional protection to the individual cables
• Series 6 Quad Shield coaxial cable with typical bandwidth that exceeds 3 GHz	• "Future-Proofing" the installation. Supports extended bandwidth satellite service and high-definition TV signals
• Multiple constructions available	• Customized flexibility for the application
• Optional optical fiber premises cable	• Integrated fiber reduces the need to install separate cables for home interior optical networks
• Flexible, dual binder yarns, contra-helically applied	• Maintains maximum flexibility and allows for easy breakout



Specifications	
CAT 5e UTP Component	Pair Count: 4 Conductor: Solid annealed copper AWG (mm): 24 (0.51) Insulation: Thermoplastic Jacket: Flame retardant PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	69
Fiber Component*	62.5/125 µm duplex, 5 mm round, 900 µm tight buffered
Coax Series 6 Quad Shield Component	Conductor: Copper clad steel AWG (mm): 18 (1.02) Insulation: Polyethylene Inner Shield: 2.8 mil aluminum foil Inner Braid: 34 AWG aluminum (60%) Outer Shield: 1.8 mil aluminum foil Outer Braid: 34 AWG aluminum (40%) Jacket: PVC Electrical: See "Coax Series 6 Quad Shield" on page A-45
Binder Yarn	Flexible, dual binder yarns, contra-helically applied
Package	Cut to length on plywood reel

Specifications (continued)	
Performance Compliance	UL 444 UL 1666 ANSI/TIA-568-C.2 ANSI/ICEA S-83-596-2001 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR

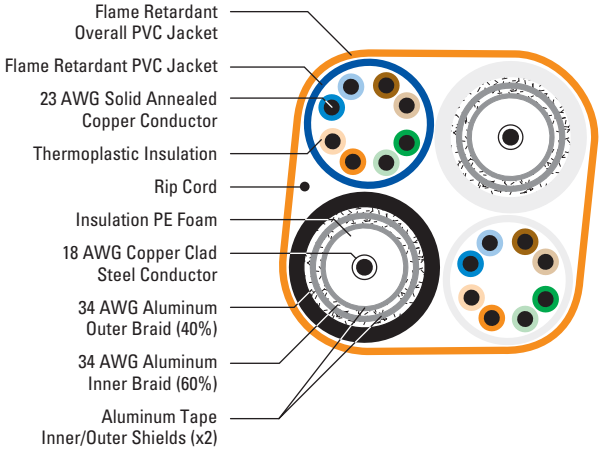
Part Numbers and Physical Characteristics

Part Number	Number of Cable Components			Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)
	CAT 5e	RG 6 Quad	62.5 2-fiber*		
D1-2009S5	1	1	-	0.49 (12)	51 (113)
D1-5009S5	1	2	-	0.53 (13)	83 (183)
D1-A009S5	2	1	-	0.45 (12)	71 (156)
D1-D009S5	2	2	-	0.61 (16)	103 (226)
D1-J009S5	3	1	-	0.58 (15)	90 (198)
D1-M009S5	3	2	-	0.73 (19)	122 (269)
D1-S009S5	4	1	-	0.71 (18)	110 (241)
D1-V009S5	4	2	-	0.85 (22)	142 (311)
D1-3169S5	1	1	1	0.53 (13)	66 (145)
D1-6169S5	1	2	1	0.45 (12)	98 (215)
D1-B169S5	2	1	1	0.61 (16)	85 (187)
D1-E169S5	2	2	1	0.58 (15)	117 (258)
D1-K169S5	3	1	1	0.73 (19)	105 (230)
D1-N169S5	3	2	1	0.71 (18)	137 (300)
D1-T169S5	4	1	1	0.85 (22)	124 (273)
D1-W169S5	4	2	1	0.85 (22)	156 (343)

**Other fiber types and fiber counts available upon request.*

Residential Broadband Riser

Coax Series 6 Quad Shield, Category 6 and Optical Fiber



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. This product is also available with a 62.5 µm duplex multimode fiber.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring
- HDTV, CATV, CCTV and DBS

Features	Benefits
• All-in-one cable design	• Reduces installation time, provides additional protection to the individual cables
• Series 6 Quad Shield coaxial cable with typical bandwidth that exceeds 3 GHz	• "Future-Proofing" the installation. Supports extended bandwidth satellite service and high-definition TV signals
• Multiple constructions available	• Customized flexibility for the application
• TeraGain® multimode optical fiber (optional)	• Integrated fiber reduces the need to install separate cables for home interior optical networks

Specifications	
CAT 6 UTP Component	Pair Count: 4 Conductor: Solid annealed copper AWG (mm): 23 (0.57) Insulation: Thermoplastic Jacket: Flame retardant PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	68
Fiber Component	62.5/125 µm duplex, 5 mm round, 900 µm tight buffered
Coax Series 6 Quad Shield Component	Conductor: Copper clad steel AWG (mm): 18 (1.02) Insulation: Polyethylene Inner Shield: 2.8 mil aluminum foil Inner Braid: 34 AWG aluminum (60%) Outer Shield: 1.8 mil aluminum foil Outer Braid: 34 AWG aluminum (40%) Jacket: PVC Electrical: See "Coax Series 6 Quad Shield" on page A-45
Overall Jacket	Orange, flame retardant PVC
Package	Plywood reel
Performance Compliance	UL 444 UL 1666 ANSI/TIA-568-C.2 ANSI/ICEA S-83-596-2001 RoHS-compliant
NRTL Programs	UL Verified CAT 6 UL Listed CMR

Part Numbers and Physical Characteristics

Part Number	Description	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Packages Per Pallet
72-512-01	1 Series 6 Quad x 1 CAT 6	0.37 x 0.54 (9.27 x 13.59)	70 (104)	1,000 (305)	4
72-621-03	2 Series 6 Quad x 2 CAT 6	0.62 x 0.54 (15.7 x 13.5)	130 (193)	500 (152)	4
7A-621-03	2 Series 6 Quad x 2 CAT 6 x 1 Duplex 62.5/125 MMF	0.62 x 0.54 (15.7 x 13.6)	144 (214)	500 (152)	4

Residential Broadband Riser

Coax Series 6 Quad Shield, Category 5e and Optical Fiber

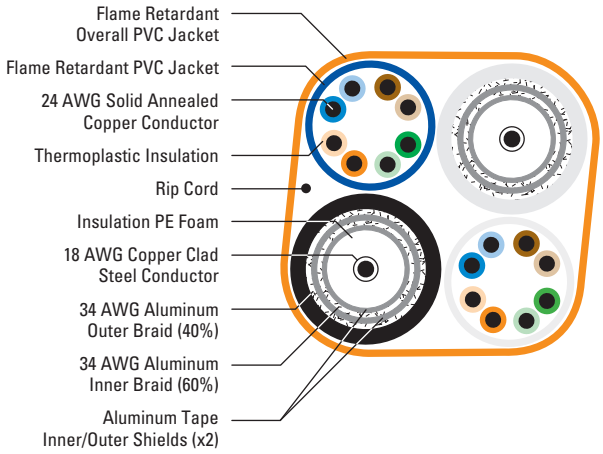
Product Description

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. This product is also available with a 62.5 µm duplex multimode fiber.

Applications

- 10BASE-T through 1000BASE-T ethernet, ATM and token ring
- HDTV, CATV, CCTV and DBS

Features	Benefits
• All-in-one cable design	• Reduces installation time, provides additional protection to the individual cables
• Series 6 Quad Shield coaxial cable with typical bandwidth that exceeds 3 GHz	• "Future-Proofing" the installation. Supports extended bandwidth satellite service and high-definition TV signals
• Multiple constructions available	• Customized flexibility for the application
• TeraGain® multimode optical fiber (optional)	• Integrated fiber reduces the need to install separate cables for home interior optical networks
• CAT 5e, 4-pair	• For high bandwidth applications



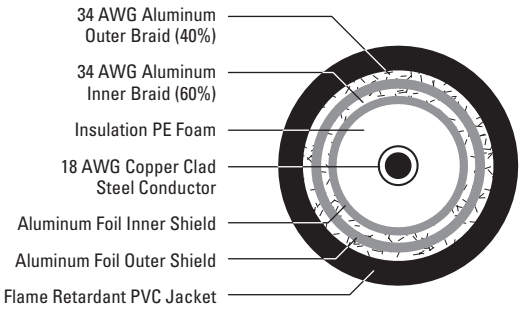
Specifications	
CAT 5e UTP Component	Pair Count: 4 Conductor: Solid annealed copper AWG (mm): 24 (0.51) Insulation: Thermoplastic Jacket: Flame retardant PVC
Characteristic Impedance (Ohms)	100 ± 15
Nominal Velocity of Propagation (%)	69
Fiber Component	62.5/125 µm duplex, 5 mm round, 900 µm tight buffered
Coax Series 6 Quad Shield Component	Conductor: Copper clad steel AWG (mm): 18 (1.02) Insulation: Polyethylene Inner Shield: 2.8 mil aluminum foil Inner Braid: 34 AWG aluminum (60%) Outer Shield: 1.8 mil aluminum foil Outer Braid: 34 AWG aluminum (40%) Jacket: PVC Electrical: See "Coax Series 6 Quad Shield" on page A-45
Overall Jacket	Orange, flame retardant PVC
Package	Plywood reel
Performance Compliance	UL 444 UL 1666 ANSI/TIA-568-C.2 ANSI/ICEA S-83-596-2001 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR

Part Numbers and Physical Characteristics

Part Number	Description	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Packages Per Pallet
72-312-01	1 Series 6 Quad x 1 CAT 5e	0.365 x 0.535 (9.27 x 13.59)	73 (109)	1,000 (305)	4
72-421-03	2 Series 6 Quad x 2 CAT 5e	0.640 x 0.535 (16.00 x 13.59)	135 (201)	500 (152)	4
7A-421-03	2 Series 6 Quad x 2 CAT 5e x 1 Duplex 62.5/125 MMF	0.660 x 0.537 (16.80 x 13.64)	149 (222)	500 (152)	4

Coax Series 6 Quad Shield

CM/CATV, CMR/CATVR and Aluminum Interlocked Armor 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 interlocked armor coax.

Applications

- HDTV, CATV and CCTV
- Two-way cable modems
- Extended bandwidth satellite service

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
- Interlocked armor 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

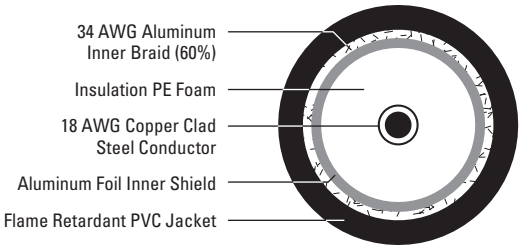
Specifications	
Conductor	Copper clad steel
AWG (mm)	18 (1.02)
Inner Shield	2.8 mil aluminum foil
Inner Braid	34 AWG aluminum (60%)
Outer Shield	1.8 mil aluminum foil
Outer Braid	34 AWG aluminum (40%)
Insulation	Polyethylene
Jacket	PVC (polyvinylchloride)
Nominal Diameter in (mm)	Dielectric: 0.18 (4.57) Shield: 0.19 (4.82)
Nominal Jacket Wall Thickness in (mm)	0.03 (0.76)
Nominal Impedance (Ohms)	75
Nominal Velocity of Propagation (%)	85
Standards Compliance	UL 444 Listed as CM (UL 1685)/CMR (UL 1666) RoHS-compliant

Part Numbers and Physical Characteristics

Listing	Part Number	Component Jacket Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package	Packages Per Pallet
CM/CATV	78-147-91	White	0.30 (7.5)	29 (43)	1,000' Plywood Reel	27
CM/CATV	79-147-91	Black	0.30 (7.5)	29 (43)	1,000' Plywood Reel	27
CM/CATV	78-147-9P	White	0.30 (7.5)	29 (43)	1,000' POP™ Box	20
CM/CATV	79-147-9P	Black	0.30 (7.5)	29 (43)	1,000' POP™ Box	20
CMR/CATVR	78-148-91	White	0.30 (7.5)	30 (45)	1,000' Plywood Reel	27
CMR/CATVR	79-148-91	Black	0.30 (7.5)	30 (45)	1,000' Plywood Reel	27
Aluminum Interlocked Armor (no outer jacket)						
CMR	KC-919-45	White	0.53 (13.5)	73 (109)	1,000' Plywood Reel	1
CMR	KC-919-E5	Black	0.53 (13.5)	73 (109)	1,000' Plywood Reel	1

Electrical Specifications			
	Attenuation Maximum		
Frequency MHz	Specification dB/100 m	Typical dB/100 m	SRL, Typical dB
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

Coax Series 6 60% Shield CM



Product Description

Superior Essex Series 6 60% shield coaxial cables are designed to support analog, digital and high-bandwidth technologies. Superior Essex maintains tight tolerances to cable diameter requirements of leading connector manufacturers.

Applications

- HDTV, CATV and CCTV
- Two-way cable modems
- Extended bandwidth satellite service

Features

- Series 6 60% Shield Coaxial cable with bandwidth that exceeds 2.2 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

Specifications	
Conductor	Copper clad steel
AWG (mm)	18 (1.0)
Inner Braid	34 AWG aluminum (60%)
Inner Shield	2.8 mil aluminum foil
Jacket	PVC (polyvinylchloride)
Nominal Diameter in (mm)	Inner Shield: 0.18 (4.6) Overall: 0.28 (7.1)
Approx. Weight lbs/kft (kg/km)	21 (13.5)
Nominal Impedance (Ohms)	75
Nominal Velocity of Propagation (%)	85
Standards Compliance	ANSI/SCTE 74-2003 UL 444 Listed as CM (UL 1685) RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Jacket Color	Package	Packages Per Pallet
78-107-9P	White	1,000' POP™ Box	20
79-107-9P	Black	1,000' POP™ Box	20
78-107-91	White	1,000' Plywood Reel	27
79-107-91	Black	1,000' Plywood Reel	27

Electrical Specifications

Frequency MHz	Attenuation Maximum, Specification dB/100 m	SRL, Typical dB
55	5.3	20
211	10.1	20
270	11.5	20
330	12.8	20
350	14.1	20
450	15.0	20
500	15.9	20
550	16.7	20
600	17.5	20
750	19.7	20
870	21.3	20
1000	23.0	20

Coax Series 6 Tri-Shield 70% CM

Product Description

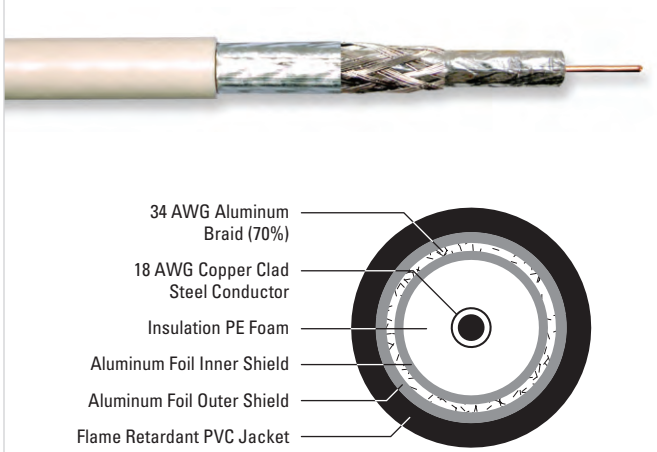
Superior Essex Series 6 Tri-Shield 70% braided coaxial cables exceed the requirements specified in ANSI/SCTE 74-2003. The shielding consists of an inner aluminum/polyester foil bonded to the insulation, an aluminum 34 AWG braid, and an outer aluminum/polyester foil. This Series 6 Tri-Shield will support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

Applications

- HDTV
- Extended bandwidth satellite service

Features / Benefits

Features	Benefits
• Series 6 (18 AWG copper clad steel center conductor)	• Standard and popular size
• Available in CM Outdoor (60°C rated jacket)	• Indoor/outdoor use
• Tri-Shield consists of inner aluminum/polyester foil, aluminum braid, outer aluminum/polyester foil	• Added shielding for higher service levels
• Bonded inner foil	• Stops moisture
• 100% coverage over the 70% (34 AWG aluminum) braiding	• Offers better shielding protection and stops interference
• Reel-in-a-Box design	• Water resistant package is easy to carry and store
• White or black outer jacket (UV rated for exterior use)	• Jacket color helps differentiate incoming versus internal cabling



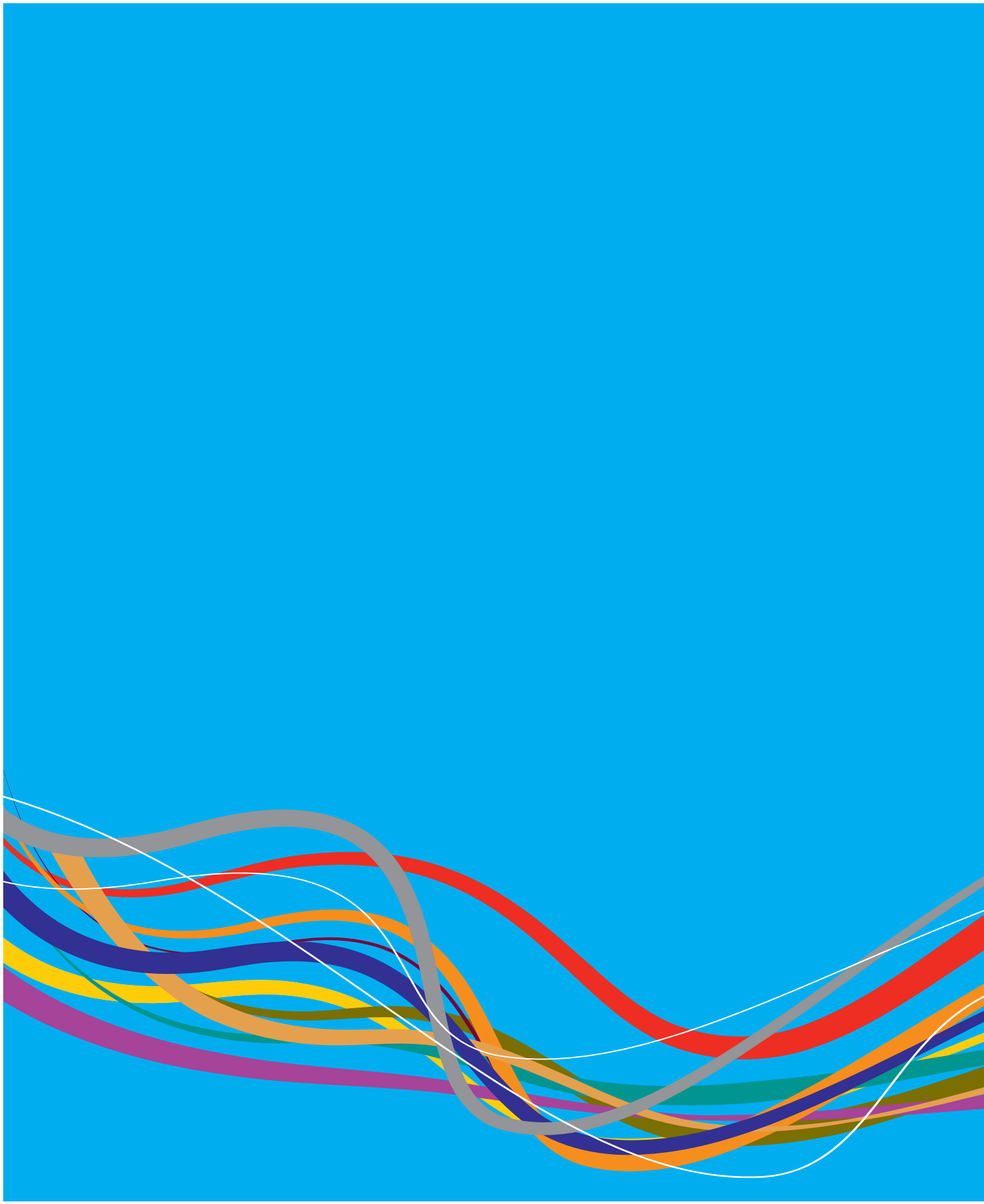
Specifications	
Conductor	Copper clad steel
AWG (mm)	18 (1.0)
Inner Shield	Aluminum/polyester foil (100%)
Center Shield	34 AWG aluminum braid (70%)
Outer Shield	Aluminum/polyester foil (100%)
Overall Nominal Diameter in (mm)	0.28 (7.1)
Nominal Impedance (Ohms)	75
Jacket	Flame retardant PVC
Package	1,000' Reel-in-a-Box
Packages Per Pallet	27
Standards Compliance	UL 444 CM rated (UL 1685) ANSI/SCTE 74-2003 Appropriate ASTM standards RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Jacket Color	Approx. Weight lbs/kft kg/km)
78-11A-9R	White	32 (48)
79-11A-9R	Black	32 (48)

Electrical Specifications

Frequency MHz	Maximum Attenuation @ 68°F (20°C) dB/100 m
55	5.2
211	10.0
250	10.8
270	11.0
330	12.2
350	12.6
450	14.4
500	15.3
550	16.1
600	16.7
750	18.5
870	20.0
1000	21.5



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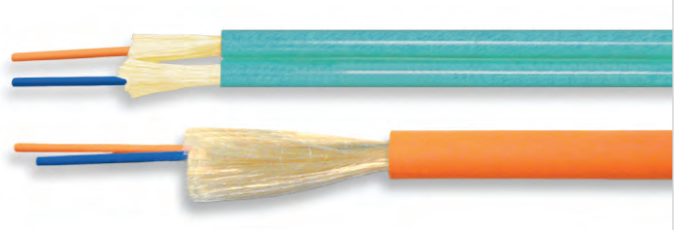
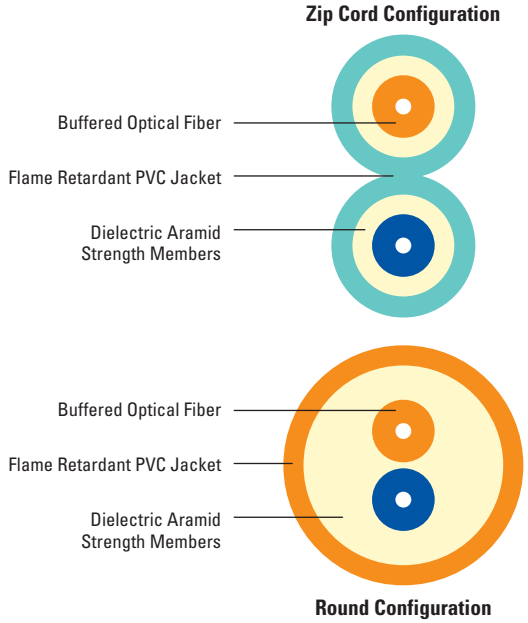
Simplex, Duplex and Quad Interconnect

OFNR/OFNP





Product Description

Simplex, Duplex and Quad Optical Fiber Interconnect Cables are typically used for patch cords and intrabuilding installations. Superior Essex designed these cables for environments where small size, flexible construction and flame resistance are required. These cables are available in both riser and plenum versions. Higher performance optical fibers are offered as standard; including Reduced Water Peak (RWP) single mode, 220/600 62.5 µm multimode and 10G/150 laser optimized 50 µm multimode.

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 retardant PVC 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.

Applications

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

Features

- Simplex and duplex zip cord designs in 2 mm and 2.9 mm diameters
- Round duplex and quad designs
- Marked in feet and meters

Benefits

- Meets all the requirements for both standard and small form factor connectors for "in-front-of-the-shelf" applications
- Perfect for in-wall and "behind-the-shelf" applications
- Meets commercial, government and international requirements for length markings

Specifications	
Configuration	Flexible tight buffered optical fibers surrounded by aramid yarns and covered by a flame retardant jacket
Fiber Count	Available in 1, 2 and 4-fiber
Strength Elements	Dielectric aramid yarns
Jacket	OFNR: Flame retardant (FR) PVC OFNP: FR, low smoke PVC
Package	Plywood reel
Standards Compliance	Listed as OFNR (UL 1666) Listed as OFNP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/ICEA S-83-596 ANSI/TIA-568-C.3 RoHS-compliant

Environmental Specifications		
	Riser	**Plenum**
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

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RoHS
Rev 7/10 Ed 10.2

Part Numbers and Physical Characteristics									
Listing	Part Number[1]	Configuration	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Maximum Tensile Loading		Minimum Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
Single Mode									
OFNR	33001x101	Round	1	0.11 (2.9)	6 (8)	50 (220)	15 (70)	1.7 (44)	1.1 (29)
OFNR	A3001x101	Round	1	0.08 (2.0)	3 (4)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNR	B3002x101	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (12)	100 (440)	30 (130)	1.7 (44)	1.1 (29)
OFNR	C3002x101	Zip	2	0.08 x 0.17 (2.0 x 4.2)	6 (9)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNR	33002x101	Round	2	0.20 (5.0)	14 (21)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNR	33004x101	Round	4	0.20 (5.0)	15 (23)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNP	34001x101	Round	1	0.11 (2.9)	6 (9)	50 (220)	15 (70)	1.7 (44)	1.1 (29)
OFNP	A4001x101	Round	1	0.08 (2.0)	3 (4)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNP	B4002x101	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (11)	100 (440)	30 (130)	1.7 (44)	1.1 (29)
OFNP	C4002x101	Zip	2	0.08 x 0.17 (2.0 x 4.2)	6 (9)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNP	34002x101	Round	2	0.17 (4.2)	12 (18)	100 (440)	30 (130)	2.5 (63)	1.7 (42)
OFNP	34004x101	Round	4	0.17 (4.2)	13 (20)	100 (440)	30 (130)	2.5 (63)	1.7 (42)
Multimode									
OFNR	33001yG01	Round	1	0.11 (2.9)	6 (8)	50 (220)	15 (70)	1.7 (44)	1.1 (29)
OFNR	A3001yG01	Round	1	0.08 (2.0)	3 (4)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNR	B3002yG01	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (12)	100 (440)	30 (130)	1.7 (44)	1.1 (29)
OFNR	C3002yG01	Zip	2	0.08 x 0.17 (2.0 x 4.2)	6 (9)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNR	33002yG01	Round	2	0.20 (5.0)	14 (21)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNR	33004yG01	Round	4	0.20 (5.0)	15 (23)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNP	34001yG01	Round	1	0.11 (2.9)	6 (9)	50 (220)	15 (70)	1.7 (44)	1.1 (29)
OFNP	A4001yG01	Round	1	0.08 (2.0)	3 (4)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNP	B4002yG01	Zip	2	0.11 x 0.24 (2.9 x 6.2)	8 (11)	100 (440)	30 (130)	1.7 (44)	1.1 (29)
OFNP	C4002yG01	Zip	2	0.08 x 0.17 (2.0 x 4.2)	6 (9)	50 (220)	15 (70)	1.2 (30)	0.8 (20)
OFNP	34002yG01	Round	2	0.17 (4.2)	12 (18)	100 (440)	30 (130)	2.5 (63)	1.7 (42)
OFNP	34004yG01	Round	4	0.17 (4.2)	13 (20)	100 (440)	30 (130)	2.5 (63)	1.7 (42)

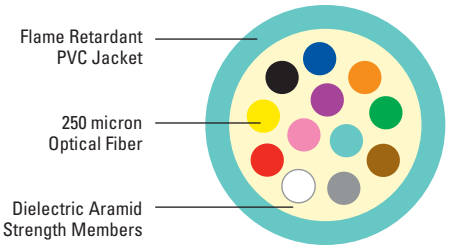
Single Mode Optical Fiber			
	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "x" with:	3	2	K
Standard Jacket Colors*	Yellow		

Multimode Optical Fiber							
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "y" with:	6	A	B	F	M	N	P
Standard Jacket Colors*	Orange	Aqua					

**Other jacket colors available.*
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Microarray Data Center Interconnect

OFNR/OFNP



Product Description

The Microarray Data Center Interconnect Cable from Superior Essex is designed for high performance in a small package. Having a nominal outer diameter of only 3.0 mm, the microarray data center cable has twelve 250 micron fibers. The cable can then be fusion spliced, connectorized to a high density 12-fiber MTP/MPO mechanical array connector or attached to standard single ferrule mechanical connectors (LC, SC, ST, etc.) via a furcation kit. The loose fibers are surrounded by aramid yarns and a low smoke PVC (LSPVC) plenum or riser-rated jacket. Its small size allows for denser fiber routing than traditional tight buffered cables; its round shape and loose-tube construction give it superior performance and installation ease compared to ribbon interconnect cable.

Applications

- Data center plug and play cable installations
- Outside Plant (OSP)-premises transitions

Features

- Twelve 250 micron fibers in 3.0 mm package
- Meets or exceeds ANSI/ICEA S-83-596 and GR-409-CORE requirements for interconnect cable
- Plenum (OFNP) and riser (OFNR) rated designs
- Available in all single mode and multimode fiber types
- Marked in feet and meters
- Designed for MTP/MPO connectors

Benefits

- Allows for higher fiber density in data center applications
- Worry-free installation and performance
- Fire-listed cables allow placement in plenum and riser spaces
- Build your network with the fiber type that you need now or for the future
- Meets commercial and government requirements for length markings
- Economical plug and play solution

Specifications	
Configuration	Twelve 250 micron optical fibers surrounded by dielectric aramid yarns in a 3.0 mm loose tube
Jacket	OFNR: Flame retardant (FR) PVC OFNP: FR, low smoke PVC
Nominal Outer Diameter in (mm)	0.12 (3.0)
Maximum Tensile Loading lbs (N)	Install: 80 (370) Long Term: 25 (110)
Minimum Bend Radius in (mm)	Install: 1.8 (45) Long Term: 1.2 (30)
Package	Plywood reel
Standards Compliance	Listed as OFNR (UL 1666) Listed as OFNP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/ICEA S-83-596 ANSI/TIA-568-C.3 RoHS-compliant

Environmental Specifications		
	Riser	**Plenum**
Operation	-20°C to +70°C	-10°C to +70°C
Storage/Shipping	-40°C to +75°C	-40°C to +75°C
Installation	10°C to +60°C	10°C to +60°C

Part Numbers and Physical Characteristics		
Listing	**Part Number[1]**	**Nominal Weight lbs/kft (kg/km)**
OFNR	P3012xx01	5 (8)
OFNP	P4012xx01	6 (9)

Single Mode Optical Fiber			
	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "xx" with:	31	21	K1
Standard Jacket Colors	Yellow		

Multimode Optical Fiber							
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG	MG	NG	PG
Standard Jacket Colors	Orange	Aqua					

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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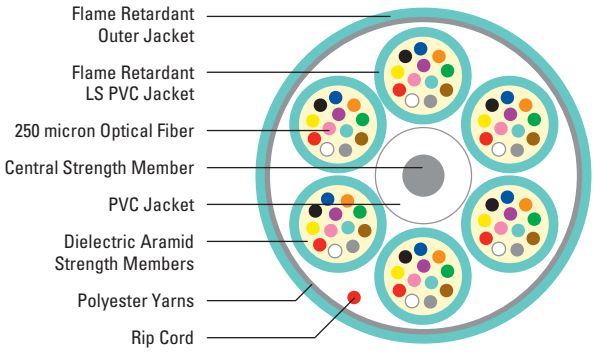
Product Description

The Microarray Breakout cable from Superior Essex is designed for high performance in a small package. The design consists of six 12-fiber 3 mm microarray interconnect cable subunits, each of which contain twelve 250 micron multimode fibers. The 3 mm subunits are stranded around a central strength element that is both flexible and robust enough to pass backbone installation requirements. The stranded subunits are held to the strength element core by polyester yarns ensuring excellent temperature performance. Finally, a RoHS compliant flexible fluoropolymer jacket protects the core from the rigors of installation while providing plenum fire protection. The cable is available in 62.5/125 micron multimode and laser-optimized 50/125 micron 10G/150 (OM2+), 10G/300 (OM3) and 10G/550 (OM4) multimode fibers.



Applications

- 10GB Ethernet and legacy speeds
- Data centers
- Trunk applications
- High density installations
- MTP/MPO array connectors

Features

- 12-fiber 3 mm interconnect subunits
- Meets or exceeds ICEA 83-596-2001 and GR-409-CORE requirements for interconnect subunits and trunk cable
- Plenum (OFNP) rated design
- Available in 62.5/125 micron and laser-optimized 50/125 micron multimode fiber types

Benefits

- Connects directly to MTP/MPO 12-fiber array connectors
- Worry-free installation and performance
- Fire-listed cables allow placement in plenum spaces
- Build your network with the fiber type that you need now or for the future

Specifications	
Cable Configuration	Six 3 mm subunits around a central strength member and surrounded by polyester yarns and an outer jacket
Subunit Configuration	3 mm Simplex cable with twelve 250 micron multimode optical fibers surrounded by dielectric aramid strength members
Subunit Marking	Unit 1, Unit 2, Unit 3, Unit 4, Unit 5, Unit 6
Central Strength Element	Glass Reinforced Plastic (GRP) covered with a PVC jacket
Subunit Jacket Material	Flame retardant, LS PVC
Outer Jacket Material	Fluoropolymer
Maximum Tensile Loading lbs (N)	Install: 150 (710) Long Term: 45 (198)
Minimum Bend Radius in (mm)	Install: 8.8 (224) Long Term: 4.4 (112)
Package	Plywood reel
Standards Compliance	Listed as OFNP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/ICEA S-83-596 RoHS-compliant

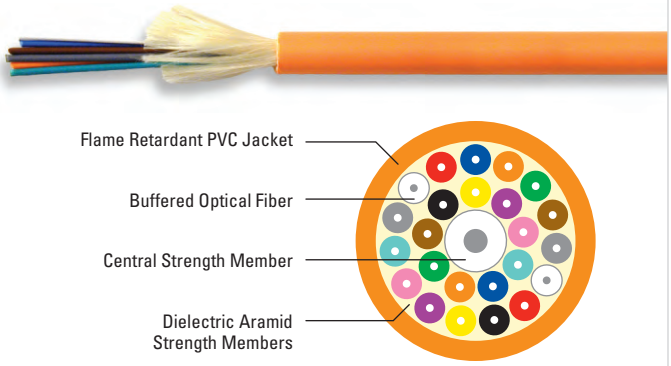
Part Numbers and Physical Characteristics			
Part Number[1]	**Fiber Count**	**Nominal Diameter in (mm)**	**Nominal Weight lbs/kft (kg/km)**
P4072xG01	72	0.44 (11.2)	89 (133)

Multimode Optical Fiber							
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F	M	N	P
Standard Jacket/ Subunit Colors	Orange	Aqua					

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Single Unit Distribution

OFNR/OFNP



Product Description

These Superior Essex premises distribution optical fiber cables are constructed using a single unit – single jacket RoHS-compliant design with fiber counts from 6 through 24. The design consists of flexible 900 µm tight buffered industry standard 250 µm fibers (900/250/125 µm) and is 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. A durable, flame resistant outer jacket is applied over the cable core using appropriate OFNR or OFNP rated materials.

Applications

- Intrabuilding backbones
- Intrabuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets
- "Behind-the-shelf" connections

Features

- Marked in feet and meters

Benefits

- Meets commercial, government and international requirements for length markings

Specifications	
6-12 Fiber Configuration	Flexible 900 µm tight buffered fibers, dielectric aramid yarns and overall jacket
18-24 Fiber Configuration	Band marked flexible 900 µm tight buffered fibers, dielectric aramid yarns, overall jacket and central strength element
Jacket	OFNR: Flame retardant (FR) PVC OFNP: FR, low smoke PVC
Standards Compliance	Listed as OFNR (UL 1666) Listed as OFNP (NFPA 262) Telcordia GR-409, Issue 2 ANSI/ICEA S-83-596 ANSI/TIA-568-C.3 RoHS-compliant

Environmental Specifications		
	Riser	**Plenum**
Operation	-40°C to +75°C	-20°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

Listing	Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Maximum Tensile Loading		Minimum Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
Single Mode								
OFNR	43006x101	6	0.20 (5.0)	17 (25)	150 (660)	45 (200)	3.0 (75)	2.0 (50)
OFNR	43008x101	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
OFNR	43012x101	12	0.26 (6.5)	25 (37)	150 (660)	45 (200)	3.8 (98)	2.6 (65)
OFNR	43018xK01	18	0.30 (7.5)	35 (51)	300 (1,320)	90 (400)	4.4 (113)	3.0 (75)
OFNR	43024xK01	24	0.33 (8.5)	44 (66)	300 (1,320)	90 (400)	5.0 (128)	3.3 (85)
OFNP	44006x101	6	0.20 (5.0)	17 (25)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNP	44008x101	8	0.21 (5.4)	19 (28)	100 (440)	30 (130)	3.2 (81)	2.1 (54)
OFNP	44012x101	12	0.24 (6.2)	24 (35)	100 (440)	30 (130)	3.7 (93)	2.4 (62)
OFNP	44018xK01	18	0.28 (7.0)	33 (49)	150 (660)	45 (200)	4.1 (105)	2.8 (70)
OFNP	44024xK01	24	0.31 (7.8)	42 (62)	150 (660)	45 (200)	4.6 (117)	3.1 (78)
Multimode								
OFNR	43006yG01	6	0.20 (5.0)	17 (25)	150 (660)	45 (200)	3.0 (75)	2.0 (50)
OFNR	43008yG01	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
OFNR	43012yG01	12	0.26 (6.5)	25 (37)	150 (660)	45 (200)	3.8 (98)	2.6 (65)
OFNR	43018yK01	18	0.30 (7.5)	35 (51)	300 (1,320)	90 (400)	4.4 (113)	3.0 (75)
OFNR	43024yK01	24	0.33 (8.5)	44 (66)	300 (1,320)	90 (400)	5.0 (128)	3.3 (85)
OFNP	44006yG01	6	0.20 (5.0)	17 (25)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNP	44008yG01	8	0.21 (5.4)	19 (28)	100 (440)	30 (130)	3.2 (81)	2.1 (54)
OFNP	44012yG01	12	0.24 (6.2)	24 (35)	100 (440)	30 (130)	3.7 (93)	2.4 (62)
OFNP	44018yK01	18	0.28 (7.0)	33 (49)	150 (660)	45 (200)	4.1 (105)	2.8 (70)
OFNP	44024yK01	24	0.31 (7.8)	42 (62)	150 (660)	45 (200)	4.6 (117)	3.1 (78)

Single Mode Optical Fiber

	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "x" with:	3	2	K
Standard Jacket Colors	Yellow		

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "y" with:	6	A	B	F	M	N	P
Standard Jacket Colors	Orange	Aqua					

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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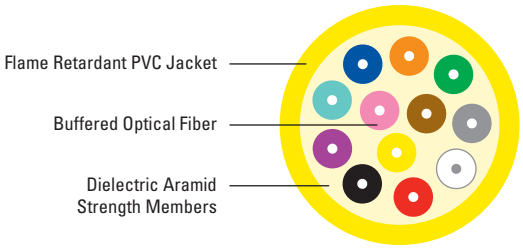
Product Description

Superior Essex offers premises fiber cable products packaged in a BrakeBox® design, which includes the innovative QuickCount® footage marking and a variable resistance system that virtually eliminates reel over-spin and tangling. The BrakeBox packaging is a true advantage for installers who are pulling fiber cable in multiple locations. It not only stacks and travels better, it also protects the fiber cable better than an open reel. The BrakeBox features two resistance mechanisms on both sides of the reel, each of which has three resistance settings. The variable brakes control back-tension preventing over-spin and tangling. The QuickCount feature provides footage marking on the cable jacket counting down from 1,000 feet.



Features

- QuickCount countdown footage markings
- Heavy-duty package design
- 1,000' packages
- Resistance brakes
- Available for fiber counts 2-12

Benefits

- Allows installer an immediate, exact view of unused cable
- Protects the fiber cable more than open reels; avoids damage to material
- Reduces cable waste due to left over short lengths
- Prevents over-spin and tangling
- Most commonly used fiber counts

Specifications	
Standards Compliance	Listed as OFNR (UL 1666) and OFNP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/ICEA S-83-596 ANSI/TIA-568-C.3 RoHS-compliant

Part Numbers and Physical Characteristics

Listing	Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Maximum Tensile Loading		Minimum Bend Radius	
					Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
Premises								
OFNR	33002xxBB	2	0.20 (5.0)	14 (21)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNR	33004xxBB	4	0.20 (5.0)	15 (23)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNR	43006xxBB	6	0.20 (5.0)	17 (25)	150 (660)	45 (200)	3.0 (75)	2.0 (50)
OFNR	43008xxBB	8	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
OFNR	43012xxBB	12	0.26 (6.5)	25 (37)	150 (660)	45 (200)	3.8 (98)	2.6 (65)
OFNP	34002xxBB	2	0.17 (4.2)	12 (18)	100 (440)	30 (130)	2.5 (63)	1.7 (42)
OFNP	34004xxBB	4	0.17 (4.2)	13 (20)	100 (440)	30 (130)	2.5 (63)	1.7 (42)
OFNP	44006xxBB	6	0.20 (5.0)	17 (25)	100 (440)	30 (130)	3.0 (75)	2.0 (50)
OFNP	44008xxBB	8	0.21 (5.4)	19 (28)	100 (440)	30 (130)	3.2 (81)	2.1 (54)
OFNP	44012xxBB	12	0.24 (6.2)	24 (35)	100 (440)	30 (130)	3.7 (93)	2.4 (62)
Indoor/Outdoor								
OFNR	W3002xxBB	2	0.20 (5.0)	15 (22)	300 (1,320)	90 (400)	3.0 (75)	2.0 (50)
OFNR	W3004xxBB	4	0.20 (5.0)	15 (23)	300 (1,320)	90 (400)	3.0 (75)	2.0 (50)
OFNR	W3006xxBB	6	0.20 (5.0)	17 (25)	300 (1,320)	90 (400)	3.0 (75)	2.0 (50)
OFNR	W3008xxBB	8	0.24 (6.0)	21 (31)	300 (1,320)	90 (400)	3.5 (90)	2.4 (60)
OFNR	W3012xxBB	12	0.26 (6.5)	25 (38)	300 (1,320)	90 (400)	3.8 (97)	2.6 (65)
OFNP	24002xxBB	2	0.17 (4.2)	11 (17)	150 (660)	45 (200)	2.5 (63)	1.7 (42)
OFNP	24004xxBB	4	0.17 (4.2)	14 (20)	150 (660)	45 (200)	2.5 (63)	1.7 (42)
OFNP	24006xxBB	6	0.20 (5.0)	17 (25)	150 (660)	45 (200)	3.0 (75)	2.0 (50)
OFNP	24008xxBB	8	0.21 (5.4)	19 (28)	150 (660)	45 (200)	3.2 (81)	2.1 (54)
OFNP	24012xxBB	12	0.24 (6.2)	24 (35)	150 (660)	45 (200)	3.7 (93)	2.4 (62)

Single Mode Optical Fiber

	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "xx" with:	31	21	K1
Premises Jacket Colors	Yellow		
I/O Jacket Color	Black		

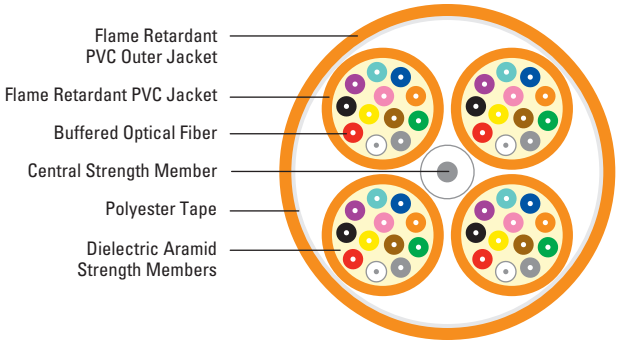
Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG	MG	NG	PG
Premises Jacket Colors	Orange	Aqua					
I/O Jacket Color	Black						

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multi-Unit Distribution

OFNR/OFNP



Specifications	
18-36 Fiber Configuration	6-fiber subunits, reverse oscillating lay (ROL) stranded around flexible high-strength glass reinforced rod
48-144 Fiber Configuration	12-fiber subunits, ROL stranded around flexible high-strength glass reinforced rod
Subunit Jacket	OFNR: Flame retardant (FR) PVC OFNP: FR, low smoke PVC
Jacket	OFNR: FR PVC OFNP: FR PVDF
Maximum Tensile Loading lbs (N)	Install: 600 (2,640) Long Term: 180 (800)
Package	Reel
Standards Compliance	Listed as OFNR (UL 1666) Listed as OFNP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/ICEA S-83-596 ANSI/TIA-568-C.3 RoHS-compliant

Environmental Specifications		
	Riser	**Plenum**
Operation	-20°C to +75°C	-20°C to +75°C
Storage/Shipping	-40°C to +75°C	-40°C to +75°C
Installation	0°C to +65°C	0°C to +65°C

Product Description

Premises Multi-unit Distribution Optical Fiber 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 144. 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.

The design consists of flexible 900 µm tight buffered industry standard 250 µm fibers (900/250/125 µm) and is 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. 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.

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets
- "Behind-the-shelf" connections

Features

- Subunits are color coded according to fiber type
- Numbered subunits

Benefits

- Easily identify fiber type
- Easily identifies correct subunit on each end

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Part Numbers and Physical Characteristics						
					Minimum Bend Radius	
Listing	Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Install in (mm)	Long Term in (mm)
Single Mode						
OFNR	43018x101	18	0.54 (13.7)	96 (143)	8.1 (206)	5.4 (137)
OFNR	43024x101	24	0.57 (14.6)	117 (174)	8.6 (218)	5.7 (146)
OFNR	43030x101	30	0.62 (15.8)	140 (210)	9.3 (236)	6.2 (158)
OFNR	43036x101	36	0.68 (17.4)	171 (255)	10.2 (260)	6.8 (174)
OFNR	43048x101	48	0.69 (17.5)	155 (232)	10.3 (262)	6.9 (175)
OFNR	43060x101	60	0.77 (19.5)	195 (291)	11.5 (292)	7.7 (195)
OFNR	43072x101	72	0.82 (21.0)	233 (348)	12.4 (314)	8.2 (210)
OFNR	43084x101	84	0.92 (23.3)	289 (431)	13.7 (349)	9.2 (233)
OFNR	43096x101	96	0.97 (24.7)	337 (503)	14.6 (370)	9.7 (247)
OFNR	43144x101	144	1.11 (28.3)	362 (540)	16.7 (425)	11.1 (283)
OFNP	44018x101	18	0.54 (13.8)	117 (175)	8.1 (206)	5.4 (138)
OFNP	44024x101	24	0.57 (14.6)	141 (211)	8.6 (219)	5.7 (146)
OFNP	44030x101	30	0.62 (15.8)	176 (262)	9.3 (237)	6.2 (158)
OFNP	44036x101	36	0.69 (17.4)	206 (307)	10.3 (261)	6.9 (174)
OFNP	44048x101	48	0.67 (17.1)	184 (275)	10.1 (257)	6.7 (171)
OFNP	44060x101	60	0.74 (18.9)	229 (341)	11.2 (284)	7.4 (189)
OFNP	44072x101	72	0.81 (20.6)	276 (412)	12.2 (309)	8.1 (206)
OFNP	44096x101	96	0.87 (22.0)	313 (467)	13.0 (330)	8.7 (220)
OFNP	44144x101	144	0.92 (23.4)	318 (474)	13.8 (351)	9.2 (234)
Multimode						
OFNR	43018yG01	18	0.54 (13.7)	96 (143)	8.1 (206)	5.4 (137)
OFNR	43024yG01	24	0.57 (14.6)	117 (174)	8.6 (218)	5.7 (146)
OFNR	43030yG01	30	0.62 (15.8)	140 (210)	9.3 (236)	6.2 (158)
OFNR	43036yG01	36	0.68 (17.4)	171 (255)	10.2 (260)	6.8 (174)
OFNR	43048yG01	48	0.69 (17.5)	155 (232)	10.3 (262)	6.9 (175)
OFNR	43060yG01	60	0.77 (19.5)	195 (291)	11.5 (292)	7.7 (195)
OFNR	43072yG01	72	0.82 (21.0)	233 (348)	12.4 (314)	8.2 (210)
OFNR	43084yG01	84	0.92 (23.3)	289 (431)	13.7 (349)	9.2 (233)
OFNR	43096yG01	96	0.97 (24.7)	337 (503)	14.6 (370)	9.7 (247)
OFNR	43144yG01	144	1.11 (28.3)	362 (540)	16.7 (425)	11.1 (283)
OFNP	44018yG01	18	0.54 (13.8)	117 (175)	8.1 (206)	5.4 (138)
OFNP	44024yG01	24	0.57 (14.6)	141 (211)	8.6 (219)	5.7 (146)
OFNP	44030yG01	30	0.62 (15.8)	176 (262)	9.3 (237)	6.2 (158)
OFNP	44036yG01	36	0.69 (17.4)	206 (307)	10.3 (261)	6.9 (174)
OFNP	44048yG01	48	0.67 (17.1)	184 (275)	10.1 (257)	6.7 (171)
OFNP	44060yG01	60	0.74 (18.9)	229 (341)	11.2 (284)	7.4 (189)
OFNP	44072yG01	72	0.81 (20.6)	276 (412)	12.2 (309)	8.1 (206)
OFNP	44096yG01	96	0.87 (22.0)	313 (467)	13.0 (330)	8.7 (220)
OFNP	44144yG01	144	0.92 (23.4)	318 (474)	13.8 (351)	9.2 (234)

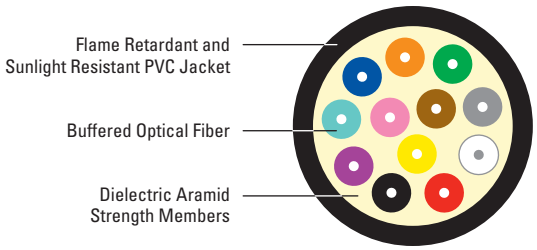
Single Mode Optical Fiber			
	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "x" with:	3	2	K
Standard Jacket Colors	Yellow		

Multimode Optical Fiber							
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "y" with:	6	A	B	F	M	N	P
Standard Jacket Colors	Orange	Aqua					

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Indoor/Outdoor Sunlight Resistant

OFNP



Product Description

Indoor/Outdoor Sunlight Resistant Tight Buffer Plenum Optical Fiber 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 Outside Plant (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.

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets

Features

- Tested and qualified to Telcordia GR-409-CORE
- Exceeds ANSI/TIA-568-C.3 optical performance
- 900 µm tight buffered fibers
- Black, UL Listed sunlight resistant outer jacket
- OFNP water resistant, indoor/outdoor design
- All dielectric
- Jacket rip cord

Benefits

- Assurance that cable investment will last
- Future-proof fiber performance for current and future networking applications
- Connect directly to mechanical connectors
- Long periods of direct sunlight exposure will not damage cable
- Eliminates the need to purchase separate cables for plenum indoor/outdoor applications
- No additional grounding materials need to be purchased
- Saves time in cable preparation

Specifications	
2-12 Fiber Single Unit Design Configuration	Flexible tight buffer material extruded over fiber to 900 µm diameter; color coded fibers are combined with dielectic aramid yarns for strength and water blocking
18-36 Fiber Multi-Unit Design Configuration	Dry water-blocked 6-fiber sub-units are grouped to form cable core; core consits of sub-units cabled with additional strength members and water blocking elements
48-72 Fiber Multi-Unit Design Configuration	Dry water-blocked 12-fiber sub-units are grouped to form cable core; core consists of sub-units cabled with additional strength members and water blocking elements
Jacket	Single unit: Black, flame retardant (FR), sunlight resistant PVC Multi-unit: Black, FR, sunlight resistant PVDF
Package	Plywood reel
Standards Compliance	UL 444 Listed Sunlight Resistant Listed as OFNP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/TIA-568-C.3 RoHS-compliant

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

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Maximum Tensile Loading		Minimum Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
24002xx01	2	0.17 (4.2)	11 (17)	150 (660)	45 (200)	2.5 (63)	1.7 (42)
24004xx01	4	0.17 (4.2)	14 (20)	150 (660)	45 (200)	2.5 (63)	1.7 (42)
24006xx01	6	0.20 (5.0)	17 (25)	150 (660)	45 (200)	3.0 (75)	2.0 (50)
24008xx01	8	0.21 (5.4)	19 (28)	150 (660)	45 (200)	3.2 (81)	2.1 (54)
24012xx01	12	0.24 (6.2)	24 (35)	150 (660)	45 (200)	3.7 (93)	2.4 (62)
24018xx01	18	0.54 (13.8)	117 (175)	600 (2,640)	180 (800)	8.1 (206)	5.4 (138)
24024xx01	24	0.57 (14.6)	141 (211)	600 (2,640)	180 (800)	8.6 (219)	5.7 (146)
24030xx01	30	0.63 (16.0)	174 (259)	600 (2,640)	180 (800)	9.4 (240)	6.3 (160)
24036xx01	36	0.69 (17.4)	206 (307)	600 (2,640)	180 (800)	10.3 (261)	6.9 (174)
24048xx01	48	0.67 (17.1)	184 (275)	600 (2,640)	180 (800)	10.1 (257)	6.7 (171)
24060xx01	60	0.74 (18.9)	231 (344)	600 (2,640)	180 (800)	11.1 (283)	7.4 (189)
24072xx01	72	0.81 (20.6)	277 (413)	600 (2,640)	180 (800)	12.2 (309)	8.1 (206)

Single Mode Optical Fiber

	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "xx" with:	31	21	K1

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG	MG	NG	PG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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Dry Block/Sunlight Resistant Indoor/Outdoor

OFNR

Product Description

The Dry Block, Sunlight Resistant Indoor/Outdoor Tight Buffer Riser Rated Cable line offers the system designer the ultimate in premises optical fiber 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 Outside Plant (OSP) cables are not required. The outer jacket is comprised of a rugged UL Listed, sunlight resistant, black 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.

Applications

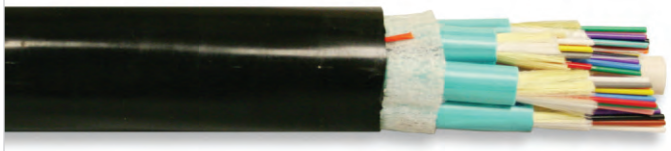
- Intra/inter-building backbones
- Trench/conduit/duct/tray pathways
- Dry or wet locations

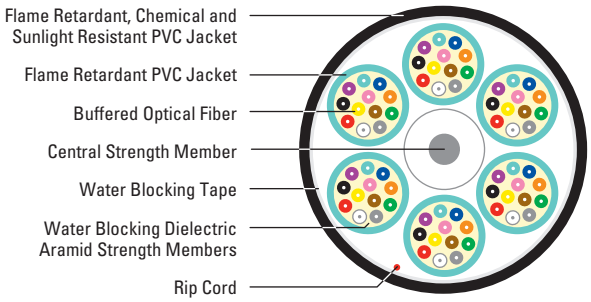
Features

- Exceeds ANSI/TIA-568-C.3 optical performance
- Dry-block design meets Telcordia GR-20-CORE water block requirements
- 900 µm tight-buffered fibers
- UL/NEC Listed OFNR
- All dielectric
- Jacket rip cord
- Black, UL Listed sunlight resistant outer jacket

Benefits

- Future-proof fiber performance for current and future multi-gigabit applications
- Cable integrity maintained even if damage occurs to protective layers
- Attaches directly to mechanical connectors
- 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
- Long periods of direct sunlight exposure will not damage cable





Specifications	
2-12 Fiber Single Unit Design Configuration	Flexible tight buffer material extruded over fiber to 900 µm diameter; color coded fibers are combined with dielectic aramid yarns for strength and water blocking
18-36 Fiber Multi-Unit Design Configuration	Dry water-blocked 6-fiber sub-units are grouped to form cable core; core consits of sub-units cabled with additional strength members and water blocking elements
48-144 Fiber Multi-Unit Design Configuration	Dry water-blocked 12-fiber sub-units are grouped to form cable core; core consists of sub-units cabled with additional strength members and water blocking elements
Jacket	Black, flame retardant, chemical and sunlight resistant PVC
Standards Compliance	UL 444 Listed Sunlight Resistant Listed as OFNR (UL 1666) Telcordia GR-20-CORE, Issue 3 ANSI/ICEA S-104-696-2001 ANSI/TIA-568-C.3 RoHS-compliant

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

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Maximum Tensile Loading		Minimum Bend Radius	
				Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
W3002xx01	2	0.20 (5.0)	15 (22)	300 (1,335)	90 (400)	3.0 (75)	2.0 (50)
W3004xx01	4	0.20 (5.0)	15 (23)	300 (1,335)	90 (400)	3.0 (75)	2.0 (50)
W3006xx01	6	0.20 (5.0)	17 (25)	300 (1,335)	90 (400)	3.0 (75)	2.0 (50)
W3008xx01	8	0.24 (6.0)	21 (31)	300 (1,335)	90 (400)	3.5 (90)	2.4 (60)
W3012xx01	12	0.26 (6.5)	25 (38)	300 (1,335)	90 (400)	3.8 (97)	2.6 (65)
W3018xx01	18	0.55 (14.1)	102 (152)	600 (2,640)	180 (800)	8.3 (211)	5.5 (141)
W3024xx01	24	0.59 (14.9)	123 (184)	600 (2,640)	180 (800)	8.8 (224)	5.9 (149)
W3030xx01	30	0.63 (16.1)	150 (223)	600 (2,640)	180 (800)	9.5 (242)	6.3 (161)
W3036xx01	36	0.70 (17.7)	179 (267)	600 (2,640)	180 (800)	10.5 (266)	7.0 (177)
W3048xx01	48	0.70 (17.8)	162 (242)	600 (2,640)	180 (800)	10.5 (267)	7.0 (178)
W3060xx01	60	0.78 (19.8)	204 (304)	600 (2,640)	180 (800)	11.7 (297)	7.8 (198)
W3072xx01	72	0.84 (21.3)	243 (362)	600 (2,640)	180 (800)	12.6 (320)	8.4 (213)
W3084xx01	84	0.91 (23.2)	294 (439)	600 (2,640)	180 (800)	13.7 (347)	9.1 (232)
W3096xx01	96	0.98 (25.0)	345 (515)	600 (2,640)	180 (800)	14.8 (375)	9.8 (250)
W3144xx01	144	1.11 (28.3)	375 (559)	600 (2,640)	180 (800)	16.7 (425)	11.1 (283)

Single Mode Optical Fiber

	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "xx" with:	31	21	K1

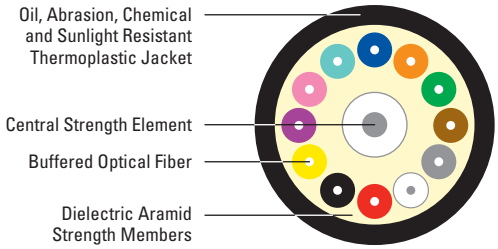
Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG	MG	NG	PG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Dry Block/Sunlight Resistant Indoor/Outdoor

OFNP



Product Description

The Superior Essex Indoor/Outdoor Plenum Single Mode Fiber cable is designed to survive the toughest installation and environmental conditions. Not only does the cable exceed the rigorous Indoor/Outdoor plenum cable performance requirements of ICEA 696, but its proprietary thermoplastic jacket makes the cable resistant to mechanical abrasion, chemicals, oil and sunlight. The cable core consists of 6, 8 or 12 single mode fibers. GRP and aramid yarn dielectric strength elements give the cable both strength and flexibility and the core is fully water-blocking using dry SAP technology. The cable is available in all single mode fiber types, including Zero Water Peak single mode and Non-Zero Dispersion Shifted single mode fibers.

Applications

- Intra/inter-building backbones
- Conduit/duct/tray pathways
- Dry or wet locations

Features

- 900 micron tight buffered optical fibers
- Full water blocking with SAP DryBlock
- Tough, thermoplastic jacket
- Meets or exceeds ANSI/ICEA S-104-696-2001
- Plenum (OFNP) rated designs
- Available in all single mode optical fiber types

Benefits

- Allows for either fusion or mechanical connectors
- Prevents water ingress from OSP splice enclosures
- Abrasion, chemical, oil and sunlight resistant
- Worry-free installation and performance
- Plenum listing allows for cable placement in both plenum and riser spaces
- Choose the single mode fiber you need for long distance and short-haul FTTx applications

Specifications	
Configuration	6, 8 or 12 optical fibers surrounding dielectric strength elements with an overall jacket
Fiber Type	900 micron tight buffered 250 micron optical fiber
Dielectric Strength Elements	Glass Reinforced Plastic (GRP) and aramid yarns
Water-Blocking	SAP Dry Block
Jacket Material	Oil, chemical, abrasion and UV resistant plenum grade thermoplastic
Jacket Color	Standard OSP black
Maximum Tensile Loading lbs (N)	Install: 300 (1335) Long Term: 90 (400)
Maximum Attenuation dB/km	@ 1300 nm: 0.7 @ 1380 nm: 0.7 @ 1550 nm: 0.7
Package	Plywood reel
Standards Compliance	UL 444 Listed Sunlight Resistant Listed as OFNP (NFPA 262) ANSI/ICEA S-104-696-2001 ANSI/TIA-568-C.3 RoHS-compliant

Environmental Specifications	
Operation	-40°C to +70°C
Storage/Shipping	-40°C to +70°C
Installation	0°C to +60°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius in (mm)	
				Install	Long Term
W4006xx01	6	0.23 (5.9)	26 (39)	9.3 (236)	4.6 (118)
W4008xx01	8	0.26 (6.7)	32 (47)	10.6 (268)	5.3 (134)
W4012xx01	12	0.30 (7.5)	41 (62)	11.8 (300)	5.9 (150)

Single Mode Optical Fiber			
	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
[1]Replace "xx" with:	31	21	K1
Standard Jacket Colors	Yellow		

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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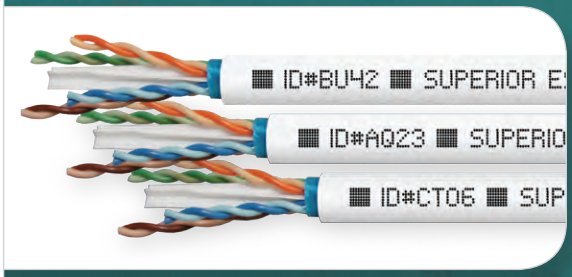
Product Features



CableID™ Alpha Numeric Coding

- Unique 4-character printed code, every 2 feet, on the cable jacket for each 1000-foot box and reel of copper data cable
- Both ends of each cable run are easily identifiable without the need to separately label or tone the cable
- Reduces installation time and cost for initial installations and for moves, adds and changes

ColorTip™ Circuit Identification

- Circumferentially colors 100% of the conductor for easily identifiable tip and ring mates
- Distinct colors reduces termination time and errors, even in low light environments
- Permanent, environmentally friendly color that doesn't rub or wear off

QuickCount® Feet/Meters Marking

- Jacket marking in feet and meters
- Provides remaining length of cable on reel removing the guesswork for cable installers
- Saves installation time and money

Standard Jacket Colors

- Extensive, in-stock jacket color offering in many of the premises copper products
- Most colors available with no minimum quantity and custom colors available upon request with minimum order quantities

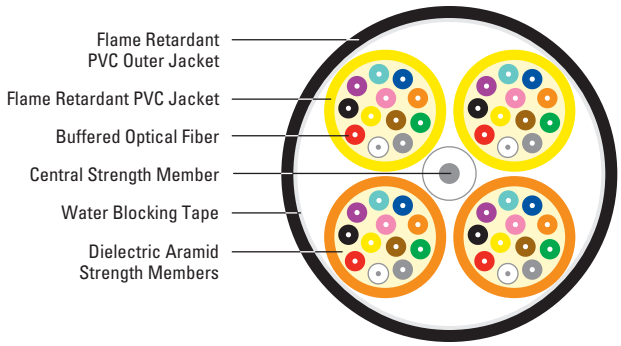
BrakeBox® Payout Control

The BrakeBox packaging is a true advantage for installers who are pulling cable in multiple locations.

- Stacks, travels and protects cable better than an open reel
- Two resistance mechanisms on both sides of the box, each with three variable resistance settings
- Controls back-tension preventing over-spin and tangling

Hybrid

Premises Fiber OFNR/OFNP



Product Description

Superior Essex offers a broad line of products including multimode and single mode fibers within the same optical fiber cable. The use of hybrid fiber designs have proven useful to network systems designers because they offer the flexibility to run diverse applications upgrades without the need to install new cables. Superior Essex hybrid optical fiber 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.

Single mode fibers are assigned first in the color and/or sub-unit scheme. Multimode fibers are assigned remaining colors and/or sub-units.

Applications

- Intrabuilding backbones
- Interbuilding backbone (in conduit)
- Conduit pathways
- Service entrance to communication closets

Features

- Telcordia GR-409-CORE and GR-20-CORE qualified designs
- TeraGain® multimode and single mode under one jacket
- Compliant with ANSI/TIA-568-C.3
- Design options include: interlocked armor, indoor/outdoor, tight buffered riser and plenum
- Subunits are color coded according to fiber type

Benefits

- Most cost-effective cables for the varied applications
- Eliminates the need for additional pathway space for different cable types
- Assures compliance for all current networking applications
- Cable designs available for every application
- Easily identify fiber type

Specifications	
Tight Buffer Configuration	Flexible tight buffer material extruded over the fiber to a diameter of 900 µm for use with standard connectors; dielectric aramid yarns are applied for additional strength and covered with a flame retardant PVC jacket
Outer Jacket	Premises: Flame retardant (FR), chemical resistant PVC Indoor/Outdoor: Black, FR, chemical resistant and sunlight resistant PVC
Package	Reel
Standards Compliance	Listed as OFNR (UL 1666) Listed as OFNP (NFPA 262) Premises: Telcordia GR-409-CORE, Issue 2 and ANSI/ICEA S-83-596 Indoor/Outdoor: Telcordia GR-20-CORE, Issue 3 and ANSI/ICEA S-104-696 ANSI/TIA-568-C.3 RoHS-compliant

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

Single Mode Optical Fiber			
	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant
Premises Jacket Colors	Yellow		
I/O Jacket Color	Black		

Multimode Optical Fiber							
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
Premises Jacket Colors	Orange	Aqua					
I/O Jacket Color	Black						

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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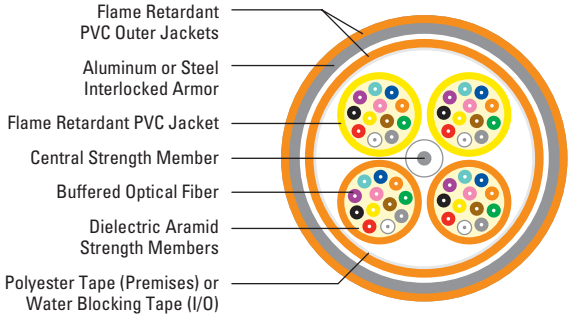
Part Numbers and Physical Characteristics										
		Fiber Count					Maximum Tensile Loading		Minimum Bend Radius	
Listing	Part Number	RWP SMF	TeraGain® 62.5/125	TeraGain® 10G/300	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
Single Unit Premises Distribution										
OFNR	43008HGA1	4	-	4	0.24 (6.0)	20 (30)	150 (660)	45 (200)	3.5 (90)	2.4 (60)
OFNR	43012HGA1	6	6	-	0.26 (6.5)	25 (37)	150 (660)	45 (200)	3.8 (98)	2.6 (65)
OFNR	43012HGC1	6	-	6	0.26 (6.5)	25 (37)	150 (660)	45 (200)	3.8 (98)	2.6 (65)
OFNR	43024HK1Q	12	12	-	0.33 (8.5)	44 (66)	300 (1,320)	90 (400)	5.0 (128)	3.3 (85)
OFNR	43024HKB1	12	-	12	0.33 (8.5)	44 (66)	300 (1,320)	90 (400)	5.0 (128)	3.3 (85)
OFNP	44008HGA1	2	6	-	0.21 (5.4)	19 (28)	100 (440)	30 (130)	3.2 (81)	2.1 (54)
OFNP	44008HGB1	4	-	4	0.21 (5.4)	19 (28)	100 (440)	30 (130)	3.2 (81)	2.1 (54)
OFNP	44012HGA1	6	6	-	0.24 (6.2)	24 (35)	100 (440)	30 (130)	3.7 (93)	2.4 (62)
OFNP	44012HGC1	6	-	6	0.24 (6.2)	24 (35)	100 (440)	30 (130)	3.7 (93)	2.4 (62)
OFNP	44012HKA1	6	-	6	0.24 (6.2)	24 (35)	100 (440)	30 (130)	3.7 (93)	2.4 (62)
OFNP	44024HKA1	12	12	-	0.31 (7.8)	42 (62)	300 (1,320)	90 (400)	4.6 (117)	3.1 (78)
Multi-Unit Premises Distribution										
OFNR	43018HGA1	6	12	-	0.54 (13.7)	96 (143)	300 (1,320)	90 (400)	8.1 (206)	5.4 (137)
OFNR	43024HGA1	12	12	-	0.57 (14.6)	117 (174)	300 (1,320)	90 (400)	8.6 (218)	5.7 (146)
OFNR	43024HGB1	6	18	-	0.57 (14.6)	117 (174)	300 (1,320)	90 (400)	8.6 (218)	5.7 (146)
OFNR	43036HG01	12	24	-	0.68 (17.4)	171 (255)	300 (1,320)	90 (400)	10.2 (260)	6.8 (174)
OFNR	43036HGB1	24	12	-	0.68 (17.4)	171 (255)	300 (1,320)	90 (400)	10.2 (260)	6.8 (174)
OFNR	43036HGC1	18	18	-	0.68 (17.4)	171 (255)	300 (1,320)	90 (400)	10.2 (260)	6.8 (174)
OFNR	43048HGB1	24	24	-	0.69 (17.5)	155 (232)	300 (1,320)	90 (400)	10.3 (262)	6.9 (175)
OFNR	43048HGD1	12	36	-	0.69 (17.5)	155 (232)	300 (1,320)	90 (400)	10.3 (262)	6.9 (175)
OFNR	43048HGC1	24	-	24	0.69 (17.5)	155 (232)	300 (1,320)	90 (400)	10.3 (262)	6.9 (175)
OFNR	43060HGA1	12	48	-	0.77 (19.5)	195 (291)	300 (1,320)	90 (400)	11.5 (292)	7.7 (195)
OFNR	43060HGC1	24	36	-	0.77 (19.5)	195 (291)	300 (1,320)	90 (400)	11.5 (292)	7.7 (195)
OFNR	43072HGA1	24	48	-	0.82 (21.0)	233 (348)	300 (1,320)	90 (400)	12.4 (314)	8.2 (210)
OFNR	43072HGC1	36	36	-	0.82 (21.0)	233 (348)	300 (1,320)	90 (400)	12.4 (314)	8.2 (210)
OFNR	43096HGA1	48	-	48	0.97 (24.7)	337 (503)	300 (1,320)	90 (400)	14.6 (370)	9.7 (247)
OFNP	44018HGA1	6	12	-	0.54 (13.8)	117 (175)	150 (660)	45 (200)	8.1 (206)	5.4 (138)
OFNP	44024HGC1	12	12	-	0.57 (14.6)	141 (211)	150 (660)	45 (200)	8.6 (219)	5.7 (146)
OFNP	44024HGD1	6	18	-	0.57 (14.6)	141 (211)	150 (660)	45 (200)	8.6 (219)	5.7 (146)
OFNP	44024HGG1	12	-	12	0.57 (14.6)	141 (211)	150 (660)	45 (200)	8.6 (219)	5.7 (146)
OFNP	44036HGA1	12	24	-	0.69 (17.4)	206 (307)	150 (660)	45 (200)	10.3 (261)	6.9 (174)
OFNP	44036HGC1	18	18	-	0.69 (17.4)	206 (307)	150 (660)	45 (200)	10.3 (261)	6.9 (174)
OFNP	44048HGA1	12	36	-	0.67 (17.1)	184 (275)	150 (660)	45 (200)	10.1 (257)	6.7 (171)
OFNP	44048HGC1	24	24	-	0.67 (17.1)	184 (275)	150 (660)	45 (200)	10.1 (257)	6.7 (171)
OFNP	44060HGA1	12	48	-	0.74 (18.9)	229 (341)	150 (660)	45 (200)	11.2 (284)	7.4 (189)
OFNP	44060HGC1	24	36	-	0.74 (18.9)	229 (341)	150 (660)	45 (200)	11.2 (284)	7.4 (189)
OFNP	44072HGA1	24	48	-	0.81 (20.6)	276 (412)	150 (660)	45 (200)	12.2 (309)	8.1 (206)
OFNP	44072HGC1	36	36	-	0.81 (20.6)	276 (412)	150 (660)	45 (200)	12.2 (309)	8.1 (206)
Single Unit Indoor/Outdoor Tight Buffer										
OFNR	W3012HGB1	6	6	-	0.26 (6.5)	25 (38)	300 (1,335)	90 (400)	3.8 (97)	2.6 (65)
OFNR	W3012HGD1	6	-	6	0.26 (6.5)	25 (38)	300 (1,335)	90 (400)	3.8 (97)	2.6 (65)
Multi-Unit Indoor/Outdoor Tight Buffer										
OFNR	W3018HGA1	6	12	-	0.55 (14.1)	102 (152)	600 (2,640)	180 (800)	8.3 (211)	5.5 (141)
OFNR	W3024HGA1	6	18	-	0.59 (14.9)	123 (184)	600 (2,640)	180 (800)	8.8 (224)	5.9 (149)
OFNR	W3024HGC1	12	12	-	0.59 (14.9)	123 (184)	600 (2,640)	180 (800)	8.8 (224)	5.9 (149)
OFNR	W3024HGE1	12	-	12	0.59 (14.9)	123 (184)	600 (2,640)	180 (800)	8.8 (224)	5.9 (149)
OFNR	W3036HGA1	12	24	-	0.70 (17.7)	179 (267)	600 (2,640)	180 (800)	10.5 (266)	7.0 (177)
OFNR	W3036HGC1	18	18	-	0.70 (17.7)	179 (267)	600 (2,640)	180 (800)	10.5 (266)	7.0 (177)
OFNR	W3036HGE1	24	12	-	0.70 (17.7)	179 (267)	600 (2,640)	180 (800)	10.5 (266)	7.0 (177)
OFNR	W3048HGE1	12	36	-	0.70 (17.8)	162 (242)	600 (2,640)	180 (800)	10.5 (267)	7.0 (178)
OFNR	W3048HGC1	24	24	-	0.70 (17.8)	162 (242)	600 (2,640)	180 (800)	10.5 (267)	7.0 (178)
OFNR	W3048HGB1	24	-	24	0.70 (17.8)	162 (242)	600 (2,640)	180 (800)	10.5 (267)	7.0 (178)
OFNR	W3060HGA1	12	48	-	0.78 (19.8)	204 (304)	600 (2,640)	180 (800)	11.7 (297)	7.8 (198)
OFNR	W3072HGA1	24	48	-	0.84 (21.3)	243 (362)	600 (2,640)	180 (800)	12.6 (320)	8.4 (213)
OFNR	W3072HGC1	36	36	-	0.84 (21.3)	243 (362)	600 (2,640)	180 (800)	12.6 (320)	8.4 (213)
OFNR	W3096HGA1	48	48	-	0.98 (25.0)	345 (515)	600 (2,640)	180 (800)	14.8 (375)	9.8 (250)
OFNR	W3096HGB1	48	-	48	0.98 (25.0)	345 (515)	600 (2,640)	180 (800)	14.8 (375)	9.8 (250)
OFNR	W3144HGC1	72	72	-	1.11 (28.3)	375 (559)	600 (2,640)	180 (800)	16.7 (425)	11.1 (283)

Other configurations available upon request. See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Interlocked Armor

Premises Fiber OFCR/OFCP



Product Description

Interlocked Armor Optical Fiber Cables provide for an extremely well protected cable package ideally suited for harsh environments. The armor is available in aluminum or steel and comes with either an OFCR (riser) or OFCP (plenum) rating. This 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 armor cable design is also popular for retrofit applications and eliminates the need to install rigid conduit while still meeting building code guidelines.

Applications

- Intrabuilding backbones
- Conduit pathways
- Service entrance to communication closets

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

Specifications	
Core Configuration	Available using 33, 34, 43, 44 and W3 series products
Interlocked Armor	Flexible, heavy duty interlocking aluminum or steel tape helically applied over the inner cable core; further protection is provided by an optional flame retardant outer jacket
Outer Jacket	Premises: Flame retardant (FR), chemical resistant PVC Indoor/Outdoor: Black, FR, chemical resistant and sunlight resistant PVC
Applicable Standards	Listed as OFCR (UL 1666) Listed as OFCP (NFPA 262) Telcordia GR-409-CORE, Issue 2 ANSI/ICEA S-83-596 ANSI/ICEA S-104-696 ANSI/TIA-568-C.3 RoHS-compliant

Environmental Specifications		
	Riser	**Plenum**
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

Listing	Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Maximum Compression lbf/in (N/cm)	Maximum Tensile Loading		Minimum Bend Radius	
						Install lbs (N)	Long Term lbs (N)	Install in (mm)	Long Term in (mm)
Single Unit Tight Buffer									
OFCR	L3002x301	2	0.54 (13.8)	89 (133)	286 (500)	150 (660)	45 (200)	8 (207)	5 (138)
OFCR	L3004x301	4	0.54 (13.8)	91 (135)	286 (500)	150 (660)	45 (200)	8 (207)	5 (138)
OFCR	L3006x401	6	0.54 (13.8)	92 (138)	286 (500)	150 (660)	45 (200)	8 (207)	5 (138)
OFCR	L3012x401	12	0.62 (15.7)	112 (167)	286 (500)	150 (660)	45 (200)	9 (236)	6 (157)
OFCR	L3018xK1Ω	18	0.66 (16.8)	131 (196)	228 (400)	300 (1,320)	90 (400)	10 (251)	7 (168)
OFCR	L3024xK1Ω	24	0.70 (17.8)	151 (225)	228 (400)	300 (1,320)	90 (400)	11 (267)	7 (178)
OFCP	L4002x301	2	0.50 (12.7)	82 (123)	286 (500)	150 (660)	30 (130)	8 (191)	5 (127)
OFCP	L4004x301	4	0.50 (12.7)	84 (125)	286 (500)	150 (660)	30 (130)	8 (191)	5 (127)
OFCP	L4006x401	6	0.50 (12.7)	87 (130)	286 (500)	150 (660)	30 (130)	8 (191)	5 (127)
OFCP	L4012x401	12	0.55 (13.9)	104 (154)	286 (500)	150 (660)	30 (130)	8 (209)	5 (139)
OFCP	L4018xK1Ω	18	0.60 (15.2)	88 (131)	228 (400)	150 (660)	45 (200)	9 (229)	6 (152)
OFCP	L4024xK1Ω	24	0.60 (15.2)	87 (130)	228 (400)	150 (660)	45 (200)	9 (229)	6 (152)
Multi-Unit Tight Buffer									
OFCR	L3018x401	18	0.95 (24.1)	240 (358)	228 (400)	300 (1,320)	90 (400)	14 (362)	9 (241)
OFCR	L3024x401	24	0.95 (24.1)	284 (423)	228 (400)	300 (1,320)	90 (400)	14 (362)	9 (241)
OFCR	L3036x401	36	1.05 (26.7)	352 (525)	171 (300)	300 (1,320)	90 (400)	16 (400)	10 (267)
OFCR	L3048x401	48	1.05 (26.8)	341 (508)	171 (300)	300 (1,320)	90 (400)	16 (401)	11 (268)
OFCR	L3072x401	72	1.23 (31.2)	470 (700)	171 (300)	600 (2,640)	90 (400)	18 (468)	12 (312)
OFCR	L3096x401	96	1.38 (35.1)	611 (912)	171 (300)	600 (2,640)	90 (400)	21 (527)	14 (351)
OFCR	L3144x401	144	1.73 (44.0)	883 (1317)	171 (300)	600 (2,640)	90 (400)	26 (660)	17 (440)
OFCP	L4018x401	18	0.90 (22.8)	228 (340)	228 (400)	300 (1,320)	90 (400)	13 (342)	9 (228)
OFCP	L4024x401	24	0.90 (22.8)	278 (414)	228 (400)	300 (1,320)	90 (400)	13 (343)	9 (228)
OFCP	L4036x401	36	1.02 (25.8)	376 (561)	171 (300)	300 (1,320)	90 (400)	15 (387)	10 (258)
OFCP	L4048x401	48	1.02 (25.8)	353 (526)	171 (300)	300 (1,320)	90 (400)	15 (387)	10 (258)
OFCP	L4072x401	72	1.19 (30.3)	494 (737)	171 (300)	600 (2,640)	90 (400)	18 (455)	12 (303)
Single Unit Indoor/Outdoor Tight Buffer									
OFCR	L3002xW01	2	0.54 (13.8)	89 (133)	286 (500)	150 (660)	45 (200)	8 (207)	5 (138)
OFCR	L3004xW01	4	0.54 (13.8)	91 (135)	286 (500)	150 (660)	45 (200)	8 (207)	5 (138)
OFCR	L3006xW01	6	0.54 (13.8)	92 (138)	286 (500)	150 (660)	45 (200)	8 (207)	5 (138)
OFCR	L3012xW01	12	0.62 (15.7)	112 (167)	286 (500)	150 (660)	45 (200)	9 (236)	6 (157)
OFCP	L4002x201	2	0.50 (12.7)	82 (123)	286 (500)	150 (660)	45 (200)	8 (191)	5 (127)
OFCP	L4004x201	4	0.50 (12.7)	84 (125)	286 (500)	150 (660)	45 (200)	8 (191)	5 (127)
OFCP	L4006x201	6	0.50 (12.7)	87 (130)	286 (500)	150 (660)	45 (200)	8 (191)	5 (127)
OFCP	L4012x201	12	0.55 (13.9)	104 (154)	286 (500)	150 (660)	45 (200)	8 (209)	5 (139)
Multi-Unit Indoor/Outdoor Tight Buffer									
OFCR	L3018xW01	18	0.95 (24.1)	248 (370)	228 (400)	300 (1,335)	90 (400)	14 (362)	9 (241)
OFCR	L3024xW01	24	0.95 (24.1)	284 (423)	228 (400)	300 (1,335)	90 (400)	14 (362)	9 (241)
OFCR	L3036xW01	36	1.05 (26.7)	352 (525)	171 (300)	300 (1,335)	90 (400)	16 (400)	10 (267)
OFCR	L3048xW01	48	1.05 (26.8)	341 (508)	171 (300)	300 (1,335)	90 (400)	16 (401)	11 (268)
OFCR	L3072xW01	72	1.23 (31.2)	470 (700)	171 (300)	600 (2,640)	90 (400)	18 (468)	12 (312)
OFCR	L3096xW01	96	1.38 (35.1)	611 (912)	171 (300)	600 (2,640)	90 (400)	21 (527)	14 (351)
OFCR	L3144xW01	144	1.73 (44.0)	915 (1364)	171 (300)	600 (2,640)	90 (400)	26 (660)	17 (440)
OFCP	L4018x201	18	0.91 (23.0)	228 (340)	228 (400)	300 (1,335)	90 (400)	14 (345)	9 (230)
OFCP	L4024x201	24	0.90 (22.8)	278 (414)	228 (400)	300 (1,335)	90 (400)	13 (343)	9 (228)
OFCP	L4036x201	36	1.02 (25.8)	376 (561)	171 (300)	300 (1,335)	90 (400)	15 (387)	10 (258)
OFCP	L4048x201	48	1.02 (25.8)	353 (526)	171 (300)	300 (1,335)	90 (400)	15 (387)	10 (258)
OFCP	L4072x201	72	1.19 (30.3)	494 (737)	171 (300)	600 (2,640)	90 (400)	18 (455)	12 (303)

Single Mode Optical Fiber

	Reduced Water Peak	Zero Water Peak	TeraFlex® Zero Water Peak
[1]Replace "x" with:	3	2	K
Premises Jacket Colors	Yellow		
I/O Jacket Color	Black		

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125			TeraFlex Bend Resistant Laser Optimized 50/125		
		10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F	M	N	P
Premises Jacket Colors	Orange	Aqua					
I/O Jacket Color	Black						

[1]Part numbers listed above include aluminum interlocked armor. Steel interlocked armor available upon request.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

RoHS

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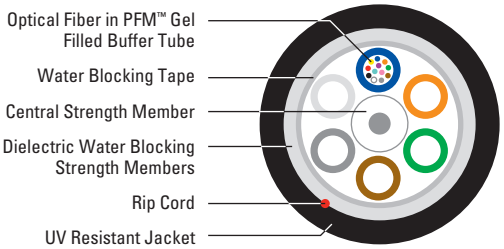
Loose Tube Single Jacket All Dielectric

Series 11



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). The core is wrapped with flexible strength members covered with a water blocking tape, then encased with a black jacket. A rip cord is included under the jacket for ease of entry.

Applications

- Underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 288-fiber
- Multiple fiber types including hybrids
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- 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
- Non-sticky gel speeds fiber access and cleanup

Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
11006xx01	6	0.43 (10.9)	50 (75)	8.6 (218)	4.3 (109)
11012xx01	12	0.43 (10.9)	50 (75)	8.6 (218)	4.3 (109)
11024xx01	24	0.43 (10.9)	50 (75)	8.6 (218)	4.3 (109)
11036xx01	36	0.43 (10.9)	50 (75)	8.6 (218)	4.3 (109)
11048xx01	48	0.43 (10.9)	50 (75)	8.6 (218)	4.3 (109)
11072xx01	72	0.47 (12.0)	66 (99)	9.4 (239)	4.7 (119)
11096xx01	96	0.55 (13.9)	87 (130)	11.0 (279)	5.5 (140)
11144xx01	144	0.69 (17.5)	142 (211)	13.8 (351)	6.9 (175)
11216xx01	216	0.72 (18.3)	141 (209)	14.4 (366)	7.2 (183)
11288xx01	288	0.81 (20.5)	183 (272)	16.2 (411)	8.1 (206)

Part Number Designators

1	1	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)		fiber type		internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

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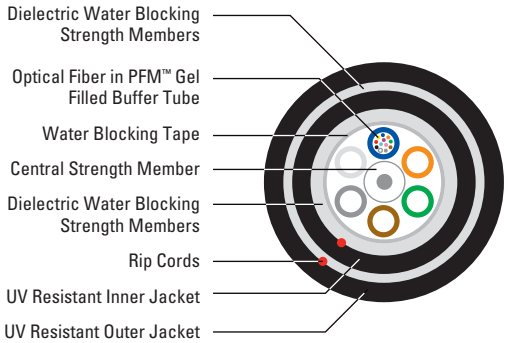
RoHS
Rev 7/10 Ed 10.2

Loose Tube Double Jacket Non-Armor

Series 1G

Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). The core is wrapped with flexible strength members covered with a water blocking tape, then encased with a black inner jacket. Water blocking yarns and a black outer jacket are applied. Rip cords are included under each jacket for ease of entry.



Applications

- Underground duct and lashed aerial
- Trunk, distribution and feeder cables
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 288-fiber	• High fiber density
• Multiple fiber types including hybrids	• Multiple network applications
• Central strength members available in metallic or dielectric	• Metallic option offers ease of location, dielectric design eliminates grounding issues
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Standard tube size for all fiber counts	• Reduces the number of tools required
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1G006xx01	6	0.53 (13.5)	84 (124)	10.6 (269)	5.3 (135)
1G012xx01	12	0.53 (13.5)	84 (124)	10.6 (269)	5.3 (135)
1G024xx01	24	0.53 (13.5)	84 (124)	10.6 (269)	5.3 (135)
1G036xx01	36	0.53 (13.5)	84 (124)	10.6 (269)	5.3 (135)
1G048xx01	48	0.53 (13.5)	84 (124)	10.6 (269)	5.3 (135)
1G072xx01	72	0.57 (14.6)	99 (147)	11.4 (290)	5.7 (145)
1G096xx01	96	0.64 (16.3)	121 (181)	12.8 (325)	6.4 (163)
1G144xx01	144	0.78 (19.9)	185 (275)	15.6 (396)	7.8 (198)
1G216xx01	216	0.81 (20.7)	216 (321)	16.2 (411)	8.1 (206)
1G288xx01	288	0.90 (22.9)	283 (421)	18.0 (457)	9.0 (229)

Part Number Designators

1	G	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

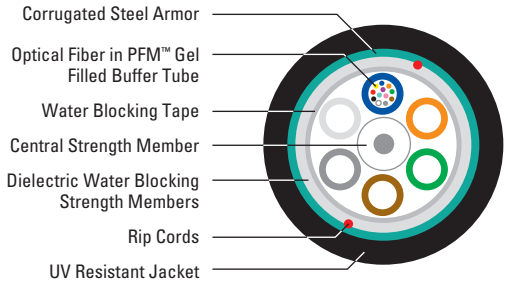
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

Loose Tube Single Jacket Single Armor

Series 12



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). 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 jacket. Rip cords are included under the armor for ease of entry.

Applications

- Direct bury, underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 288-fiber
- Multiple fiber types including hybrids
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Reduces cable prep and installation time
- Reduces the number of tools required
- Improves compressive strength and rodent protection
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
12006xx01	6	0.48 (12.2)	91 (136)	9.6 (244)	4.8 (122)
12012xx01	12	0.48 (12.2)	91 (136)	9.6 (244)	4.8 (122)
12024xx01	24	0.48 (12.2)	91 (136)	9.6 (244)	4.8 (122)
12036xx01	36	0.48 (12.2)	91 (136)	9.6 (244)	4.8 (122)
12048xx01	48	0.48 (12.2)	91 (136)	9.6 (244)	4.8 (122)
12072xx01	72	0.53 (13.3)	108 (161)	10.6 (269)	5.3 (135)
12096xx01	96	0.63 (16.0)	148 (220)	12.6 (320)	6.3 (160)
12144xx01	144	0.77 (19.7)	220 (328)	15.4 (391)	7.7 (196)
12216xx01	216	0.81 (20.5)	228 (339)	16.2 (411)	8.1 (206)
12288xx01	288	0.89 (22.7)	274 (408)	17.0 (452)	8.9 (226)

Part Number Designators

1	2	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

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RoHS

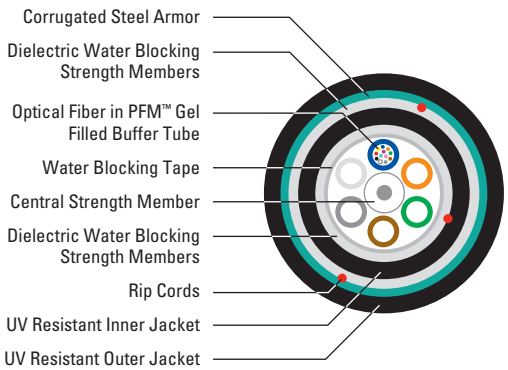
Rev 7/10 Ed 10.2

Loose Tube Double Jacket Single Armor

Series 1A

Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). The core is wrapped with flexible strength members covered with a water blocking tape then encased with a black inner jacket. Water blocking yarns and a corrugated steel armor are applied and a black outer jacket completes the cable construction. Rip cords are included under the inner jacket and armor for ease of entry.



Applications

- Direct bury, underground duct and lashed aerial
- Trunk, distribution and feeder cables
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 288-fiber
- Multiple fiber types including hybrids
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Reduces cable prep and installation time
- Reduces the number of tools required
- Improves compressive strength and rodent protection
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1A006xx01	6	0.57 (14.5)	129 (192)	11.4 (290)	5.7 (145)
1A012xx01	12	0.57 (14.5)	129 (192)	11.4 (290)	5.7 (145)
1A024xx01	24	0.57 (14.5)	129 (192)	11.4 (290)	5.7 (145)
1A036xx01	36	0.57 (14.5)	129 (192)	11.4 (290)	5.7 (145)
1A048xx01	48	0.57 (14.5)	129 (192)	11.4 (290)	5.7 (145)
1A072xx01	72	0.66 (16.7)	164 (245)	13.2 (335)	6.6 (168)
1A096xx01	96	0.72 (18.4)	196 (291)	14.4 (365)	7.2 (183)
1A144xx01	144	0.87 (22.0)	274 (408)	17.4 (442)	8.7 (221)
1A216xx01	216	0.87 (22.0)	267 (397)	17.4 (442)	8.7 (221)
1A288xx01	288	0.98 (25.0)	334 (497)	19.6 (498)	9.8 (249)

Part Number Designators

1	A	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

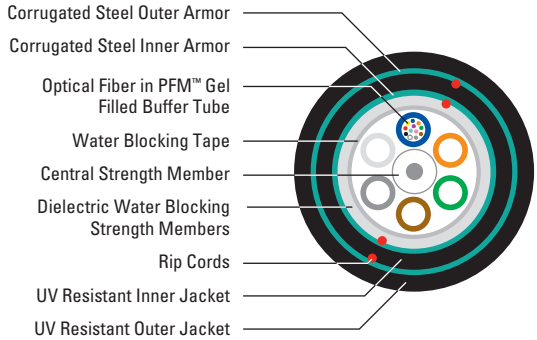
Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

RoHS

Loose Tube Double Jacket Double Armor

Series 1D



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). The core is wrapped with flexible strength members and covered with a water blocking tape. A corrugated steel armor is applied and encased with a black inner jacket. More water blocking yarns, a corrugated steel armor and a black outer jacket complete the cable construction. Rip cords are included under each armor for ease of entry.

Applications

- Direct bury, underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 216-fiber	• High fiber density
• Multiple fiber types including Hybrids	• Multiple network applications
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Standard tube size for all fiber counts	• Reduces the number of tools required
• Corrugated steel armor	• Improves compressive strength and rodent protection
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 216-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1D006xx01	6	0.70 (17.5)	207 (308)	14.0 (356)	7.0 (178)
1D012xx01	12	0.70 (17.5)	207 (308)	14.0 (356)	7.0 (178)
1D024xx01	24	0.70 (17.5)	207 (308)	14.0 (356)	7.0 (178)
1D036xx01	36	0.70 (17.5)	207 (308)	14.0 (356)	7.0 (178)
1D048xx01	48	0.70 (17.5)	207 (308)	14.0 (356)	7.0 (178)
1D072xx01	72	0.73 (18.6)	227 (339)	14.6 (371)	7.3 (185)
1D096xx01	96	0.80 (20.3)	270 (402)	16.0 (406)	8.0 (203)
1D144xx01	144	0.94 (24.0)	360 (535)	18.8 (477)	9.4 (239)
1D216xx01	216	1.01 (25.6)	403 (600)	20.2 (512)	10.1 (256)

Part Number Designators

1	D	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-216)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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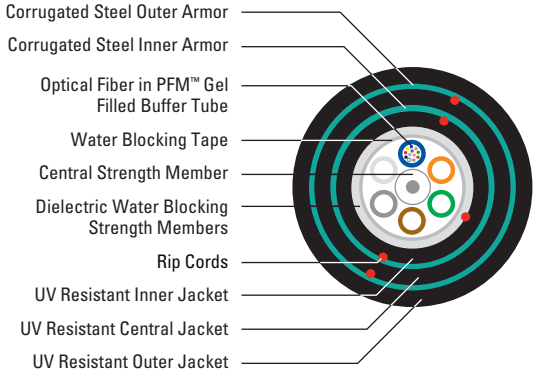
Loose Tube Triple Jacket Double Armor

Series 1C

Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). The core is wrapped with flexible strength members covered with a water blocking tape, then encased in a black inner jacket. Flexible strength members are applied with a corrugated steel armor and an intermediate black jacket. Another layer of flexible strength members with a corrugated steel armor and a black outer jacket completes the cable construction. Rip cords are included under the inner jacket and each armor for ease of entry.



Applications

- Direct bury, underground duct and lashed aerial
- Trunk, distribution and feeder cables
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 216-fiber
- Multiple fiber types including hybrids
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- Corrugated steel armor
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Reduces cable prep and installation time
- Reduces the number of tools required
- Improves compressive strength and rodent protection
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 216-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1C006xx01	6	0.80 (20.3)	265 (394)	16.0 (406)	8.0 (203)
1C012xx01	12	0.80 (20.3)	265 (394)	16.0 (406)	8.0 (203)
1C024xx01	24	0.80 (20.3)	265 (394)	16.0 (406)	8.0 (203)
1C036xx01	36	0.80 (20.3)	265 (394)	16.0 (406)	8.0 (203)
1C048xx01	48	0.80 (20.3)	265 (394)	16.0 (406)	8.0 (203)
1C072xx01	72	0.84 (21.4)	293 (436)	16.8 (427)	8.4 (213)
1C096xx01	96	0.96 (24.4)	339 (505)	19.2 (488)	9.6 (244)
1C144xx01	144	1.05 (26.7)	432 (643)	21.0 (533)	10.5 (267)
1C216xx01	216	1.06 (27.0)	439 (655)	21.2 (540)	10.6 (270)

Part Number Designators

1	C	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-216)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

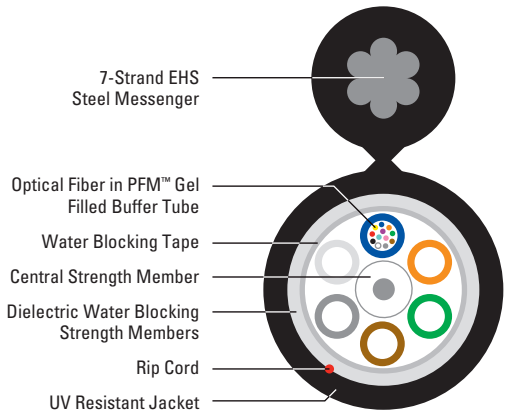
Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Loose Tube Single Jacket Self Support

Series 11M



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. 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 oscillating lay (ROL). The core is wrapped with flexible strength members, a water blocking tape and then encased with a black jacket and an integrated EHS steel messenger. A rip cord is included under the jacket for ease of entry.

Applications

- Aerial self support
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 120-fiber
- Multiple fiber types including hybrids
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- Conforms to standard pole attachment hardware
- PFM™ gel

Benefits

- High fiber density
- Multiple network applications
- Reduces cable prep and installation time
- Reduces the number of tools required
- Standard installation practices
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 120-fiber
Fiber Cable Component Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Support Messenger Breaking Strength lbs	6,650
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT-8 ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Minor Dimension in (mm)	Major Dimension in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
					Install in (mm)	Long Term in (mm)
11006xxM1	6	0.43 (10.9)	0.89 (23.0)	208 (310)	8.6 (218)	4.3 (109)
11012xxM1	12	0.43 (10.9)	0.89 (23.0)	208 (310)	8.6 (218)	4.3 (109)
11024xxM1	24	0.43 (10.9)	0.89 (23.0)	208 (310)	8.6 (218)	4.3 (109)
11036xxM1	36	0.43 (10.9)	0.89 (23.0)	208 (310)	8.6 (218)	4.3 (109)
11048xxM1	48	0.43 (10.9)	0.89 (23.0)	208 (310)	8.6 (218)	4.3 (109)
11072xxM1	72	0.47 (12.0)	0.93 (24.0)	224 (333)	9.4 (239)	4.7 (119)
11096xxM1	96	0.55 (13.9)	1.01 (26.0)	245 (365)	11.0 (279)	5.5 (140)
11120xxM1	120	0.69 (17.5)	1.15 (29.0)	300 (446)	13.8 (351)	6.9 (175)

Part Number Designators

1	1	_	_	_	x	x	M	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-120)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain®	TeraGain Laser Optimized 50/125		
	62.5/125	10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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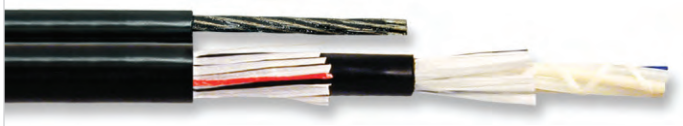
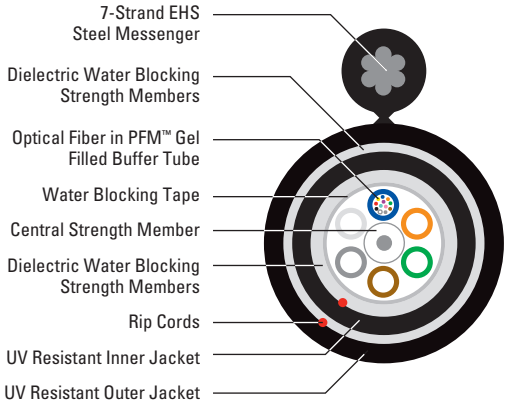
Loose Tube Double Jacket Self Support

Series 1GM



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL) and wrapped with flexible strength members, a water blocking tape and then encased with a black inner jacket. Flexible strength members are applied and a black outer jacket with integrated EHS steel messenger completes the cable construction. Rip cords are included under each jacket for ease of entry.



Applications

- Aerial self support
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 120-fiber	• High fiber density
• Multiple fiber types including hybrids	• Multiple network applications
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Conforms to standard pole attachment hardware	• Standard installation practices
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Specifications	
Fiber Count	Available in 6-fiber up to 120-fiber
Fiber Cable Component Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Support Messenger Breaking Strength lbs	6,650
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT-8 ICEA S-87-640-2006 RoHS-compliant

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Minor Dimension in (mm)	Major Dimension in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
					Install in (mm)	Long Term in (mm)
1G006xxM1	6	0.53 (13.5)	0.99 (25.0)	242 (360)	10.6 (269)	5.3 (135)
1G012xxM1	12	0.53 (13.5)	0.99 (25.0)	242 (360)	10.6 (269)	5.3 (135)
1G024xxM1	24	0.53 (13.5)	0.99 (25.0)	242 (360)	10.6 (269)	5.3 (135)
1G036xxM1	36	0.53 (13.5)	0.99 (25.0)	242 (360)	10.6 (269)	5.3 (135)
1G048xxM1	48	0.53 (13.5)	0.99 (25.0)	242 (360)	10.6 (269)	5.3 (135)
1G072xxM1	72	0.57 (14.6)	1.03 (26.0)	257 (382)	11.4 (290)	5.7 (145)
1G096xxM1	96	0.64 (16.3)	1.10 (28.0)	279 (415)	12.8 (325)	6.4 (163)
1G120xxM1	120	0.78 (19.9)	1.26 (32.0)	343 (510)	15.6 (396)	7.8 (198)

Part Number Designators

1	G	_	_	_	x	x	M	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-120)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

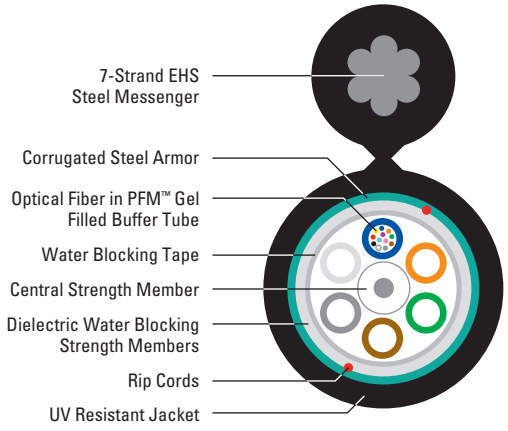
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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 (OSP) 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. 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 oscillating lay (ROL) and wrapped with flexible strength members covered with a water blocking tape. A corrugated steel armor is applied and then encased in a black jacket with an integrated EHS steel messenger. Rip cords are included under the armor for ease of entry.

Applications

- Aerial self support
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 120-fiber	• High fiber density
• Multiple fiber types including hybrids	• Multiple network applications
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Corrugated steel armor	• Improves compressive strength and rodent protection
• Utilizes standard pole attachment hardware	• Standard installation practices
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 120-fiber
Fiber Cable Component Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Support Messenger Breaking Strength lbs	6,650
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT-8 ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Minor Dimension in (mm)	Major Dimension in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
					Install in (mm)	Long Term in (mm)
12006xxM1	6	0.48 (12.2)	0.94 (24.0)	249 (371)	9.6 (244)	4.8 (122)
12012xxM1	12	0.48 (12.2)	0.94 (24.0)	249 (371)	9.6 (244)	4.8 (122)
12024xxM1	24	0.48 (12.2)	0.94 (24.0)	249 (371)	9.6 (244)	4.8 (122)
12036xxM1	36	0.48 (12.2)	0.94 (24.0)	249 (371)	9.6 (244)	4.8 (122)
12048xxM1	48	0.48 (12.2)	0.94 (24.0)	249 (371)	9.6 (244)	4.8 (122)
12072xxM1	72	0.53 (13.3)	0.99 (25.0)	266 (396)	10.6 (269)	5.3 (135)
12096xxM1	96	0.63 (16.0)	1.09 (28.0)	306 (455)	12.6 (320)	6.3 (160)
12120xxM1	120	0.77 (19.7)	1.23 (31.0)	378 (562)	15.4 (391)	7.7 (196)

Part Number Designators

1	2	_	_	_	x	x	M	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-120)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain®	TeraGain Laser Optimized 50/125		
	62.5/125	10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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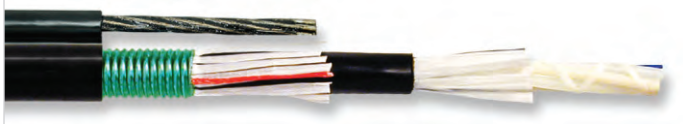
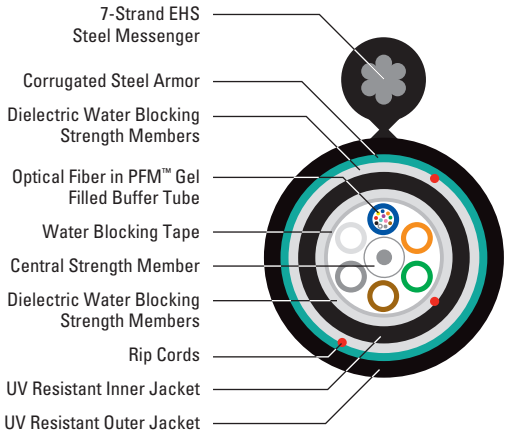
Loose Tube Double Jacket Single Armor Self Support

Series 1AM

Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). 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 outer jacket with an integrated EHS steel messenger completes the cable construction. Rip cords are included under the armor and inner jacket for ease of entry.





Applications

- Aerial self support
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 120-fiber	• High fiber density
• Multiple fiber types including hybrids	• Multiple network applications
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Corrugated steel armor	• Improves compressive strength and rodent protection
• Utilizes standard pole attachment hardware	• Standard installation practices
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Specifications	
Fiber Count	Available in 6-fiber up to 120-fiber
Fiber Cable Component Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Support Messenger Breaking Strength lbs	6,650
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT-8 ICEA S-87-640-2006 RoHS-compliant

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Minor Dimension in (mm)	Major Dimension in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
					Install in (mm)	Long Term in (mm)
1A006xxM1	6	0.57 (14.5)	1.03 (26.0)	287 (427)	11.4 (290)	5.7 (145)
1A012xxM1	12	0.57 (14.5)	1.03 (26.0)	287 (427)	11.4 (290)	5.7 (145)
1A024xxM1	24	0.57 (14.5)	1.03 (26.0)	287 (427)	11.4 (290)	5.7 (145)
1A036xxM1	36	0.57 (14.5)	1.03 (26.0)	287 (427)	11.4 (290)	5.7 (145)
1A048xxM1	48	0.57 (14.5)	1.03 (26.0)	287 (427)	11.4 (290)	5.7 (145)
1A072xxM1	72	0.66 (16.7)	1.12 (28.0)	322 (479)	13.2 (335)	6.6 (168)
1A096xxM1	96	0.72 (18.4)	1.18 (30.0)	354 (527)	14.4 (365)	7.2 (183)
1A120xxM1	120	0.89 (22.0)	1.35 (34.0)	432 (643)	17.4 (442)	8.7 (221)

Part Number Designators

1	A	_	_	_	x	x	M	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-120)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

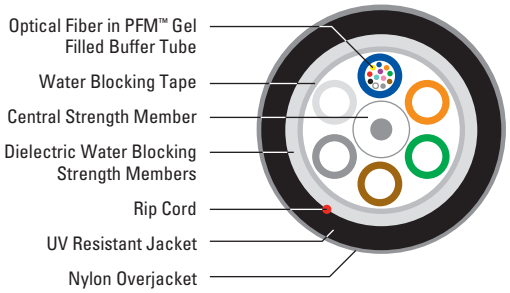
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Loose Tube Single Jacket All Dielectric Nylon

Series 1NY



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) environments. The rugged loose tube design offers reliable transmission performance over a broad temperature range. Optical fibers are placed inside filled buffer tubes containing PFM™ gel. The core is constructed by stranding the buffer tubes around a central member using a reverse oscillating lay (ROL). The core is wrapped with flexible strength members covered with a water blocking tape, then encased with a black jacket. A rip cord is included under the jacket for ease of entry. The nylon overjacket completes the cable.

Applications

- Underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 288-fiber
- Multiple fiber types including hybrids
- Central strength members available in metallic or dielectric
- Dry (SAP) core standard
- Standard tube size for all fiber counts
- PFM™ gel
- Nylon overjacket

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
- Non-sticky gel speeds fiber access and cleanup
- Rodent and chemical resistant

Specifications	
Fiber Count	Available in 2-fiber up to 288-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation MLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
11006xN01	6	0.49 (12.4)	70 (105)	9.8 (248)	4.9 (124)
11012xN01	12	0.49 (12.4)	70 (105)	9.8 (248)	4.9 (124)
11024xN01	24	0.49 (12.4)	70 (105)	9.8 (248)	4.9 (124)
11036xN01	36	0.49 (12.4)	70 (105)	9.8 (248)	4.9 (124)
11048xN01	48	0.49 (12.4)	70 (105)	9.8 (248)	4.9 (124)
11072xN01	72	0.53 (13.5)	86 (129)	10.6 (270)	5.3 (135)
11096xN01	96	0.61 (15.4)	107 (160)	12.2 (308)	6.1 (154)
11144xN01	144	0.75 (19.0)	162 (241)	15.0 (380)	7.5 (190)
11216xN01	216	0.78 (19.8)	161 (239)	15.6 (396)	7.8 (198)
11288xN01	288	0.87 (22.0)	203 (302)	17.4 (440)	8.7 (220)

Part Number Designators

1	1	_	_	_	x	N	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)		fiber type	internal designator			water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

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Product Description

All Dielectric Self Supporting (ADSS) cables are suitable for aerial applications with a maximum span of 100 meters. This black, PE jacketed cable is UV-stabilized and water blocked for outdoor aerial applications. The loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications. The high modulus aramid yarns provide high tensile strength and long term reliability.

Applications

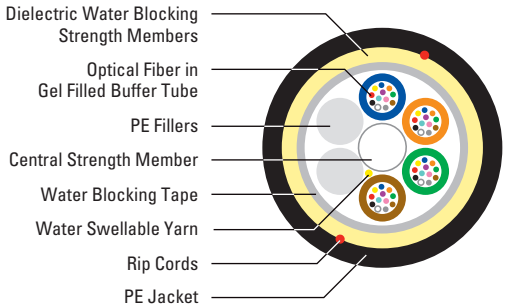
- Low-voltage transmission and distribution system (space potential ≤12 kV)
- Railways and telecommunications pole route
- Suitable for all type of aerial lines

Features

- Available with up to 288-fiber
- Dry core standard
- Lower cost than Figure 8
- Energized installation

Benefits

- High fiber density
- Reduces cable prep time
- Reduced network cost
- No system turn off



Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Compressive Strength lbs/in (N/cm)	Install: 125 (220) Long Term: 63 (110)

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1F006x111	6	0.44 (11.3)	64 (96)	8.8 (226)	4.4 (113)
1F012x111	12	0.44 (11.3)	64 (96)	8.8 (226)	4.4 (113)
1F024x111	24	0.44 (11.3)	64 (96)	8.8 (226)	4.4 (113)
1F048x111	48	0.47 (12.0)	70 (105)	9.4 (240)	4.7 (120)
1F096x111	96	0.55 (13.9)	91 (136)	11.0 (278)	5.5 (139)
1F144x111	144	0.69 (17.5)	146 (217)	13.8 (350)	6.9 (175)
1F288x111	288	0.81 (20.5)	187 (278)	16.2 (410)	8.1 (205)

Part Number Designators

1	F	_	_	_	x	1	1	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)			fiber type	internal designator	100 meter span	water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

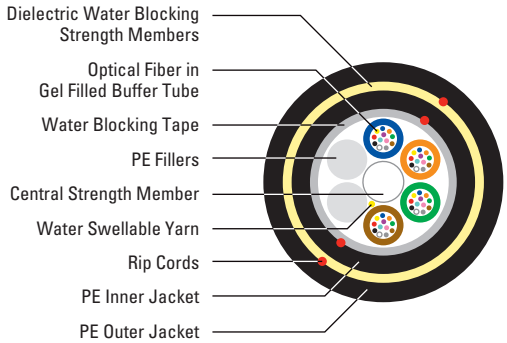
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

ADSS 200

Series 1F200



Product Description

All Dielectric Self Supporting (ADSS) cables are suitable for aerial applications with a maximum span of 200 meters. This black, PE jacketed cable is UV-stabilized and water blocked for outdoor aerial applications. The loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications. The high modulus aramid yarns provide high tensile strength and long term reliability.

Applications

- Low-voltage transmission and distribution system (space potential ≤12 kV)
- Railways and telecommunications pole route
- Suitable for all type of aerial lines

Features

- Available with up to 288-fiber
- Dry core standard
- Lower cost than Figure 8
- Energized installation

Benefits

- High fiber density
- Reduces cable prep time
- Reduced network cost
- No system turn off

Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Compressive Strength lbs/in (N/cm)	Install: 125 (220) Long Term: 63 (110)

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1F006x121	6	0.50 (12.8)	84 (125)	10.0 (256)	5.0 (128)
1F012x121	12	0.50 (12.8)	84 (125)	10.0 (256)	5.0 (128)
1F024x121	24	0.50 (12.8)	84 (125)	10.0 (256)	5.0 (128)
1F048x121	48	0.52 (13.3)	91 (135)	10.4 (266)	5.2 (133)
1F096x121	96	0.57 (14.6)	107 (160)	11.4 (292)	5.7 (146)
1F144x121	144	0.69 (17.5)	154 (230)	13.8 (350)	6.9 (175)
1F288x121	288	0.80 (20.4)	201 (300)	16.0 (408)	8.0 (204)

Part Number Designators

1	F	_	_	_	x	1	2	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)			fiber type	internal designator	200 meter span	water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Product Description

All Dielectric Self Supporting (ADSS) cables are suitable for aerial applications with a maximum span of 400 meters. This black, PE jacketed cable is UV-stabilized and water blocked for outdoor aerial applications. The loose tube design provides stable and highly reliable transmission parameters for a variety of voice, data, video and imaging applications. The high modulus aramid yarns provide high tensile strength and long term reliability.

Applications

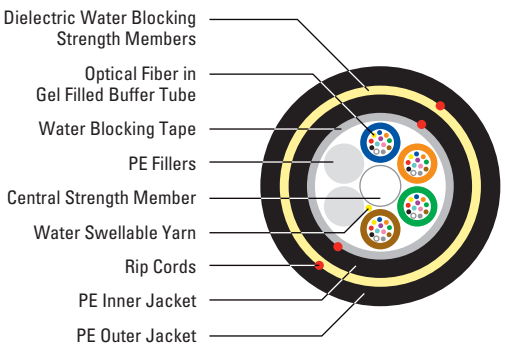
- Low-voltage transmission and distribution system
- Space potential ≤12 kV with PE jacket
- Railways and telecommunications pole route
- Suitable for all type of aerial lines

Features

- Available with up to 288-fiber
- Dry core standard
- Lower cost than Figure 8
- Energized installation

Benefits

- High fiber density
- Reduces cable prep time
- Reduced network cost
- No system turn off



Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Compressive Strength lbs/in (N/cm)	Install: 125 (220) Long Term: 63 (110)

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
1F006x141	6	0.55 (14.0)	101 (150)	11.0 (280)	5.5 (140)
1F012x141	12	0.55 (14.0)	101 (150)	11.0 (280)	5.5 (140)
1F024x141	24	0.55 (14.0)	101 (150)	11.0 (280)	5.5 (140)
1F048x141	48	0.55 (14.0)	101 (150)	11.0 (280)	5.5 (140)
1F096x141	96	0.61 (15.4)	121 (180)	12.2 (308)	6.1 (154)
1F144x141	144	0.74 (18.7)	171 (255)	14.8 (374)	7.4 (187)
1F288x141	288	0.85 (21.6)	218 (325)	17.0 (432)	8.5 (216)

Part Number Designators

1	F	_	_	_	x	1	4	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)			fiber type	internal designator	400 meter span	water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

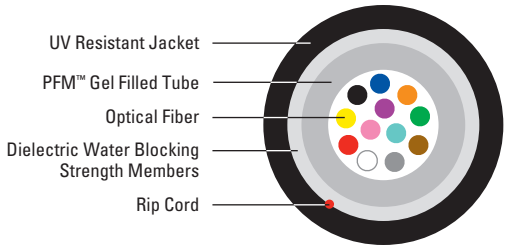
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Single Loose Tube All Dielectric

Series 51



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. 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 optical fibers bound within a color coded binder. The core tube is then helically wrapped with water blocking strength members, then encased with a black jacket. A rip cord is included under the jacket to provide ease of access to the core tube.

Applications

- Underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 96-fiber
- Multiple fiber types
- 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
- Reduces cost
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 96-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation SLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
51006xx01	6	0.31 (7.9)	36 (54)	6.2 (158)	3.1 (79)
51012xx01	12	0.31 (7.9)	36 (54)	6.2 (158)	3.1 (79)
51024xx01	24	0.39 (9.8)	51 (75)	7.8 (196)	3.9 (98)
51036xx01	36	0.39 (9.8)	51 (75)	7.8 (196)	3.9 (98)
51048xx01	48	0.39 (9.8)	51 (75)	7.8 (196)	3.9 (98)
51072xx01	72	0.46 (11.6)	68 (102)	9.2 (232)	4.6 (116)
51096xx01	96	0.46 (11.6)	68 (102)	9.2 (232)	4.6 (116)

Part Number Designators

5	1	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-096)		fiber type	internal designator			water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

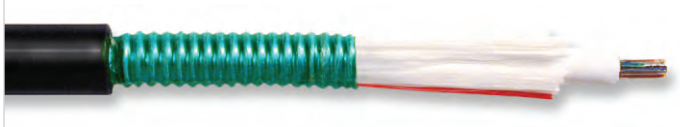
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	91	31	21	K1	81

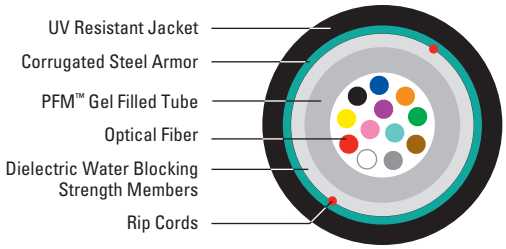
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. 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 optical fibers bound with a color coded binder. The core is wrapped with flexible strength members and covered with a water blocking tape. A corrugated steel armor is applied and then encased with a black jacket. Rip cords are included under the armor for ease of access to the core tube.





Applications

- Direct bury
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 96-fiber	• High fiber density
• Multiple fiber types	• Multiple network applications
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Highly flexible	• Easy handling
• Fewer cable components	• Reduces cost
• Corrugated Armor	• Improves compressive strength and rodent protection
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 96-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation SLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
52006xx01	6	0.36 (9.1)	62 (92)	7.2 (183)	3.6 (91)
52012xx01	12	0.36 (9.1)	62 (92)	7.2 (183)	3.6 (91)
52024xx01	24	0.44 (11.0)	83 (124)	8.8 (224)	4.4 (112)
52036xx01	36	0.44 (11.0)	83 (124)	8.8 (224)	4.4 (112)
52048xx01	48	0.44 (11.0)	83 (124)	8.8 (224)	4.4 (112)
52072xx01	72	0.50 (12.8)	111 (165)	10.0 (254)	5.0 (127)
52096xx01	96	0.50 (12.8)	111 (165)	10.0 (254)	5.0 (127)

Part Number Designators

5	2	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-096)		fiber type	internal designator			water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

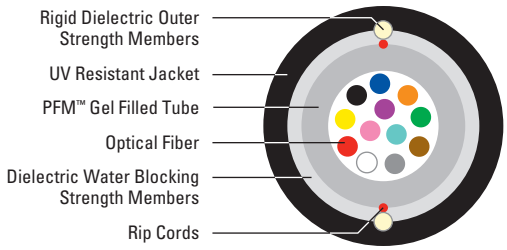
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Single Flex Tube All Dielectric

Series F1



Product Description

Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. 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 optical fibers bound with a color coded binder. The core is wrapped with water blocking tape and then encased with a black jacket containing rigid strength rods. A rip cord is included under the jacket for ease of access to the core tube.

Applications

- Underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 96-fiber
- Multiple fiber types
- 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
- Reduces cost
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 96-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation SLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
F1006xx01	6	0.47 (11.9)	75 (112)	9.4 (238)	4.7 (119)
F1012xx01	12	0.47 (11.9)	75 (112)	9.4 (238)	4.7 (119)
F1024xx01	24	0.47 (11.9)	75 (112)	9.4 (238)	4.7 (119)
F1036xx01	36	0.47 (11.9)	75 (112)	9.4 (238)	4.7 (119)
F1048xx01	48	0.47 (11.9)	75 (112)	9.4 (238)	4.7 (119)
F1072xx01	72	0.55 (14.0)	101 (150)	11.0 (279)	5.5 (139)
F1096xx01	96	0.55 (14.0)	101 (150)	11.0 (279)	5.5 (139)

Part Number Designators

F	1	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-096)		fiber type		internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 12 fibers replace "xx" with:	96	36	26	K6	86
[1]For > 12 fibers replace "xx" with:	91	31	21	K1	81

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

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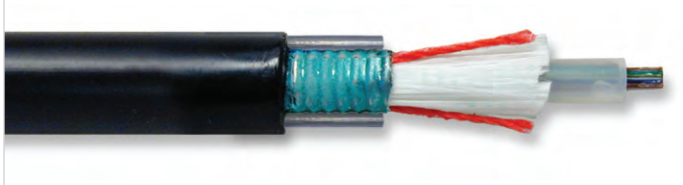
RoHS
Rev 7/10 Ed 10.2

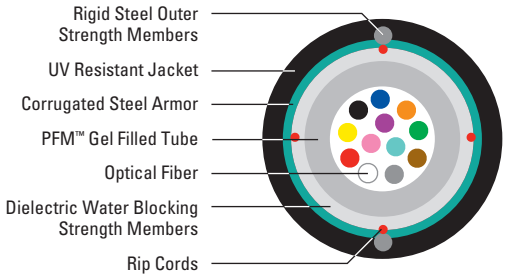
Single Flex Tube Single Armor

Series F2

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. 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 optical 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 jacket containing rigid steel rods. Rip cords are included under the armor for ease of access to the core tube.





Applications

- Direct bury, underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features	Benefits
• Available with up to 96-fiber	• High fiber density
• Multiple fiber types	• Multiple network applications
• Metallic outer strength members	• Offers ease of location
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Highly flexible	• Easy handling
• Small cable diameter	• Installation of more fibers in less space
• Fewer cable components	• Reduces cost
• Corrugated Armor	• Improves compressive strength and rodent protection
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 96-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation SLT ICEA S-87-640-2006 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
F2006xxS1	6	0.51 (13.0)	117 (174)	10.2 (259)	5.1 (129)
F2012xxS1	12	0.51 (13.0)	117 (174)	10.2 (259)	5.1 (129)
F2024xxS1	24	0.51 (13.0)	117 (174)	10.2 (259)	5.1 (129)
F2036xxS1	36	0.51 (13.0)	117 (174)	10.2 (259)	5.1 (129)
F2048xxS1	48	0.51 (13.0)	117 (174)	10.2 (259)	5.1 (129)
F2072xxS1	72	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)
F2096xxS1	96	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)

Part Number Designators

F	2	_	_	_	x	x	S	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-096)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 12 fibers replace "xx" with:	96	36	26	K6	86
[1]For > 12 fibers replace "xx" with:	91	31	21	K1	81

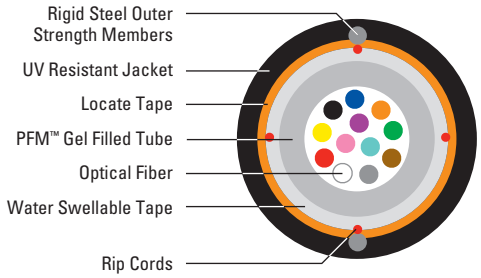
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

Flex Tube Locate

Series FM



Product Description

Flex Tube Locate cables are designed to offer low resistivity (less than 10 Ohms per mile) and are for use in long distance remote location systems. These cables make use of a highly flexible tube that contains up to 8 loose optical fiber bundles, each containing 12 optical fibers. PFM™ gel is used inside the tube to reduce the time needed to access the fibers. The core is wrapped with a water swellable tape to block water flow. A metallic locatable tape is applied and then encased in a black, UV resistant outer jacket of HDPE. Ripcords are included under the tape for ease of access to the core tube.

Applications

- Direct bury, underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 96-fiber
- Multiple fiber types
- Metallic outer strength members
- Dry (SAP) core standard
- Highly flexible
- Small cable diameter
- Fewer cable components
- Less than 10 Ohms/mile resistivity
- 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
- Reduces cost
- Remote locate system
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 96-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
FM006x1S1	6	0.59 (15.0)	117 (174)	11.8 (300)	5.9 (150)
FM012x1S1	12	0.59 (15.0)	117 (174)	11.8 (300)	5.9 (150)
FM024x1S1	24	0.59 (15.0)	117 (174)	11.8 (300)	5.9 (150)
FM036x1S1	36	0.59 (15.0)	117 (174)	11.8 (300)	5.9 (150)
FM048x1S1	48	0.59 (15.0)	117 (174)	11.8 (300)	5.9 (150)
FM072x1S1	72	0.59 (15.0)	143 (212)	11.8 (300)	5.9 (150)
FM096x1S1	96	0.59 (15.0)	143 (212)	11.8 (300)	5.9 (150)

Part Number Designators

F	M	_	_	_	x	1	S	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-096)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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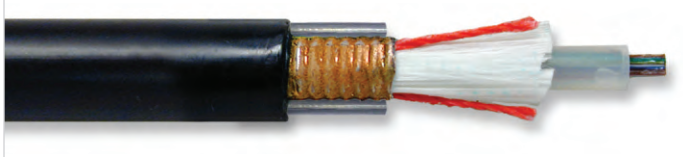
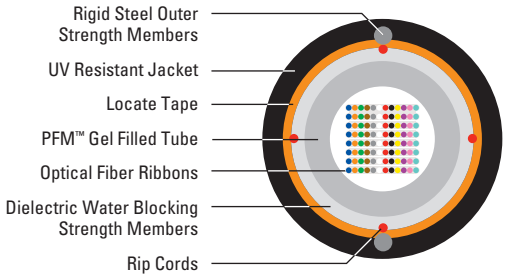
Product Description

Ribbon Locate cables are designed to offer low resistivity (less than 10 Ohms per mile) and are for use in long distance remote location systems. These cables make use of a highly flexible tube that contains up to 18 ribbons, each containing 12 optical fibers. PFM™ gel is used in the tube to reduce the time needed to access the fibers. The core is wrapped with a water swellable yarns to block water flow. A metallic locatable tape is applied and then encased in a black UV resistant outer jacket of HDPE. Ripcords are included under the tape for ease of access to the core tube.





Applications

- Direct bury
- Broadband network
- Local loop
- Trunk, distribution and feeder cables

Features	Benefits
• Available with up to 216-fiber	• High fiber density
• Multiple fiber types available	• Multiple network applications
• Metallic outer strength members	• Metallic design offers easy location
• Highly flexible tube	• Easy handling and easy tube access
• Less than 10 Ohms/mile resistivity	• Remote locate system
• Ribbon fiber	• Saves labor cost by offering mass fusion splicing
• Meets or exceeds Telcordia specifications	• Industry approved
• PFM™ gel	• Non-sticky gel allows for easier and faster clean up

Specifications	
Fiber Count	Available in 60-fiber up to 216-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
RM060x1S1	60	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)
RM072x1S1	72	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)
RM096x1S1	96	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)
RM144x1S1	144	0.66 (17.0)	187 (279)	13.2 (335)	6.0 (152)
RM192x1S1	192	0.66 (17.0)	195 (290)	13.6 (345)	6.8 (173)
RM216x1S1	216	0.66 (17.0)	195 (290)	13.6 (345)	6.8 (173)

Part Number Designators

R	M	_	_	_	x	1	S	_
1	2	3	4	5	6	7	8	9
product family		fiber count (060-216)			fiber type	internal designator		water block/ marking (1-8)

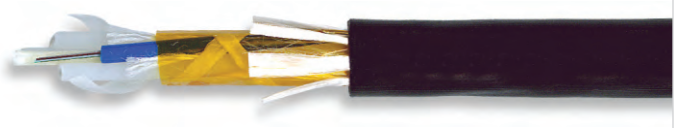
Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

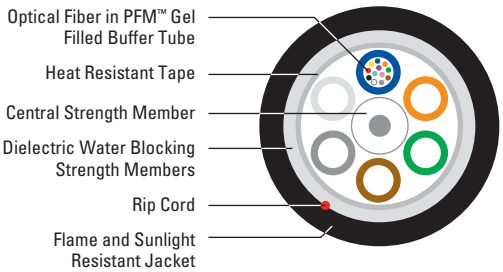
Single Mode Optical Fiber				
	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Loose Tube Indoor/Outdoor OFNR

Series 13





Product Description

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 faster. These cables comply with the standards for both Outside Plant (OSP) and indoor riser applications. The loose tube design offers reliable transmission performance over a broad temperature range. 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 oscillating lay (ROL). It is wrapped with flexible strength members, covered with a heat resistant, water blocking tape and then encased with a black, flame and sunlight resistant jacket. A rip cord is included under the jacket for ease of entry.

Applications

- Underground duct and lashed aerial
- Trunk, distribution and feeder cable
- Local loop, metro, long-haul and broadband network

Features

- Available with up to 288-fiber
- Multiple fiber types including hybrids
- UL Listed, sunlight resistant
- Dielectric 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

Benefits

- High fiber density
- Multiple network applications
- Longer cable life
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Reduces the number of tools required
- Reduces labor cost
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 288-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE OFNR (UL 1666) RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-10°C to +65°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
13006xx01	6	0.48 (12.2)	93 (138)	9.6 (244)	4.8 (122)
13012xx01	12	0.48 (12.2)	93 (138)	9.6 (244)	4.8 (122)
13024xx01	24	0.48 (12.2)	93 (138)	9.6 (244)	4.8 (122)
13036xx01	36	0.48 (12.2)	93 (138)	9.6 (244)	4.8 (122)
13048xx01	48	0.48 (12.2)	93 (138)	9.6 (244)	4.8 (122)
13072xx01	72	0.53 (13.0)	109 (163)	10.6 (269)	5.3 (135)
13096xx01	96	0.59 (15.0)	139 (206)	11.8 (300)	5.9 (150)
13144xx01	144	0.74 (18.7)	215 (320)	14.8 (316)	7.4 (188)
13216xx01	216	0.75 (19.1)	199 (297)	15.0 (381)	7.5 (191)
13288xx01	288	0.84 (21.0)	257 (382)	16.8 (427)	8.4 (213)

Part Number Designators

1	3	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-288)		fiber type		internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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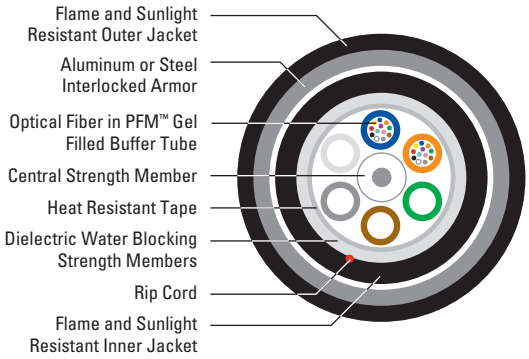
RoHS
Rev 7/10 Ed 10.2

Interlocked Armor OSP Fiber OFCR

Series 13I

Product Description

Interlocked Armor Optical Fiber Cables provide for an extremely well protected cable package ideally suited for harsh environments. The armor is available in aluminum or steel and comes with an OFCR (riser) rating. This 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 armor cable design is also popular for retrofit applications and eliminates the need to install rigid conduit while still meeting building code guidelines.



Applications

- Intrabuilding backbones
- Conduit pathways
- Service entrance to communication closets

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

Specifications	
Fiber Count	Available in 6-fiber up to 144-fiber
Core Configuration	Loose Tube Indoor/Outdoor OFNR Series 13 cable
Interlocked Armor	Flexible, heavy duty interlocking aluminum or steel tape helically applied over the inner cable core; further protection is provided by an optional outer jacket
Outer Jacket	Black, flame retardant, chemical resistant and sunlight resistant PVC
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE OFCR (UL 1666) RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +75°C
Installation	-10°C to +65°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
L3006x101	6	0.96 (24.3)	301 (448)	14.5 (367)	9.6 (243)
L3012x101	12	0.96 (24.3)	301 (448)	14.5 (367)	9.6 (243)
L3024x101	24	0.96 (24.3)	301 (448)	14.5 (367)	9.6 (243)
L3048x101	48	0.96 (24.3)	301 (448)	14.5 (367)	9.6 (243)
L3072x101	72	1.01 (25.5)	316 (470)	15.2 (383)	10.1 (255)
L3096x101	96	1.07 (27.1)	346 (515)	16.1 (406)	10.7 (271)
L3144x101	144	1.20 (30.8)	424 (631)	18.3 (463)	12.2 (308)

Part Number Designators

L	3	_	_	_	x	1	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-144)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

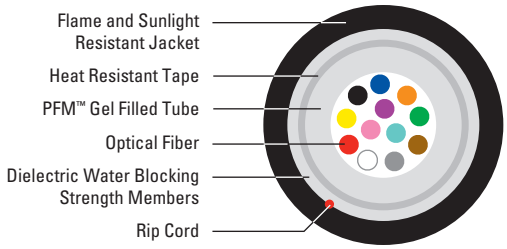
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Single Loose Tube Indoor/Outdoor OFNR

Series 53



Product Description

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. Loose tube cables are the product of choice as the backbone in Outside Plant (OSP) 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. 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 optical fibers bound with a color coded binder. The core tube is then helically wrapped with water blocking strength members, then encased with a black, flame resistant jacket. A rip cord is included under the jacket to provide ease of access to the core tube.

Applications

- UL Listed sunlight resistant indoor/outdoor
- Lashed aerial, duct or riser
- Inter-building connection
- Campus environments

Features

- Available with up to 96-fiber
- Multiple fiber types
- UL Listed, sunlight resistant
- 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

Benefits

- High fiber density
- Multiple network applications
- Longer cable life
- Eliminates grounding or bonding problems
- Reduces cable prep and installation time
- Easy handling
- Installation of more fibers in less space
- Reduces cost
- Reduces labor cost
- Non-sticky gel speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 96-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE OFNR (UL 1666) RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-10°C to +65°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
53006xx01	6	0.30 (7.0)	39 (57)	6.0 (152)	3.0 (75)
53012xx01	12	0.30 (7.0)	39 (57)	6.0 (152)	3.0 (75)
53024xx01	24	0.37 (10.0)	57 (85)	7.4 (188)	3.7 (94)
53036xx01	36	0.37 (10.0)	57 (85)	7.4 (188)	3.7 (94)
53048xx01	48	0.37 (10.0)	57 (85)	7.4 (188)	3.7 (94)
53072xx01	72	0.50 (13.0)	106 (157)	10.0 (254)	5.0 (127)
53096xx01	96	0.50 (13.0)	106 (157)	10.0 (254)	5.0 (127)

Part Number Designators

5	3	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-096)		fiber type	internal designator			water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	91	31	21	K1	81

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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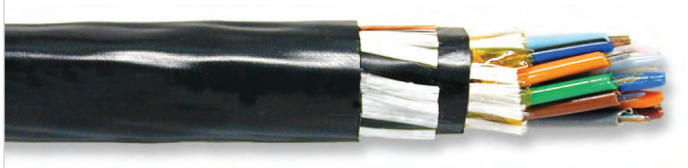
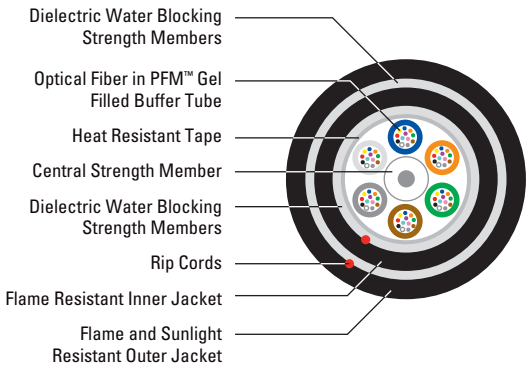
Product Description

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 a double layer of rugged flame retardant and sunlight resistant jackets, this cable design possesses features ideal for environmentally demanding applications. 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 oscillating lay (ROL). The core is wrapped with flexible strength members and covered by a water blocking tape, then encased in a black flame resistant jacket. A second layer of flexible strength members is applied and then encased in a black, flame and sunlight resistant jacket. Rip cords are included under each jacket for ease of entry.





Applications

- IEEE networks from 10 Mbps to 10 Gbps
- Long vertical runs
- Cable trays
- Outdoor/indoor pathways

Features

- Multiple fiber types including hybrids
- 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 speeds fiber access and clean-up

Specifications	
Fiber Count	Available in 6-fiber up to 216-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Crush lbs/in (N/cm)	260 (450)
Standards Compliance	Telcordia GR-20-CORE OFNR (UL 1666) RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-10°C to +65°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Impact n*m	Minimum Bend Radius		Vertical Rise ft (m)
					Install in (mm)	Long Term in (mm)	
1H006xx01	6	0.53 (13.4)	119 (176)	4.41	10.6 (269)	5.3 (135)	2,200 (671)
1H012xx01	12	0.53 (13.4)	119 (176)	4.41	10.6 (269)	5.3 (135)	2,200 (671)
1H024xx01	24	0.53 (13.4)	119 (176)	4.41	10.6 (269)	5.3 (135)	2,200 (671)
1H036xx01	36	0.53 (13.4)	119 (176)	4.41	10.6 (269)	5.3 (135)	2,200 (671)
1H048xx01	48	0.53 (13.4)	119 (176)	4.41	10.6 (269)	5.3 (135)	2,200 (671)
1H072xx01	72	0.57 (14.6)	137 (205)	5.15	11.4 (289)	5.7 (145)	1,840 (560)
1H096xx01	96	0.64 (16.3)	168 (250)	5.88	12.8 (326)	6.4 (163)	1,450 (443)
1H144xx01	144	0.78 (19.9)	250 (372)	6.62	15.6 (396)	7.8 (198)	1,050 (320)
1H216xx01	216	0.79 (20.3)	256 (383)	6.62	15.8 (406)	7.9 (203)	1,050 (320)

Part Number Designators

1	H	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (006-216)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

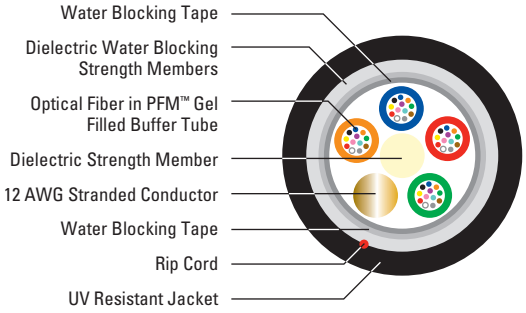
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

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 12 AWG stranded conductor, which provides long distance tone for location. A rip cord is included under the jacket to provide ease of entry.

Applications

- Underground duct and lashed aerial
- Broadband network

Features	Benefits
• Available with up to 48-fiber	• High fiber density
• Multiple fiber types	• Multiple network applications
• PFM™ gel	• Non-sticky gel speeds fiber access and clean-up
• Dry (SAP) core standard	• Reduces cable prep and installation time
• Multiple fiber vendors	• Meets customer preferences
• 12 AWG stranded conductor	• Meets 10 Ohms/mile standard

Specifications	
Fiber Count	Available in 12-fiber up to 48-fiber
Nominal Diameter in (mm)	0.43 (10.8)
Approx. Weight lbs/kft (kg/km)	76 (113)
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Minimum Bend Radius in (mm)	Install: 8.6 (216) Long Term: 4.3 (108)
Standards Compliance	Telcordia GR-20-CORE RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics	
Part Number[1]	**Fiber Count**
1N012xx01	12
1N024xx01	24
1N036xx01	36
1N048xx01	48

Part Number Designators								
1	N	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (012-048)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

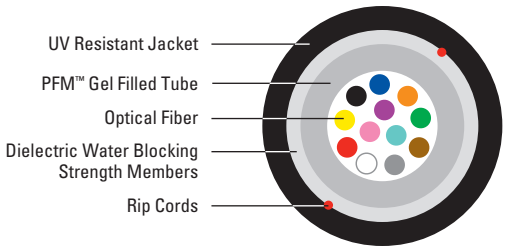
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]For ≤ 36 fibers replace "xx" with:	9T	3T	2T	KT	8T
[1]For > 36 fibers replace "xx" with:	91	31	21	K1	81

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

Product Description

UG FTTP are all dielectric cables designed for Outside Plant (OSP) 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. The single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube contains up to 12 optical fibers. The core tube is then helically wrapped with water blocking strength members and encased with a black jacket. A rip cord is included to provide ease of access to the cable core.



Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Available with up to 12-fiber
- Multiple fiber types including TeraFlex® bend resistant
- Dielectric outer strength members
- Highly flexible
- Small cable diameter
- 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
- Reduces cable prep and installation time
- Non-sticky gel allows for easier and faster clean up

Specifications	
Fiber Count	Available in 2-fiber up to 12-fiber
Nominal Diameter in (mm)	0.26 (6.7)
Nominal Weight lbs/kft (kg/km)	26 (38)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 100 (445)
Minimum Bend Radius in (mm)	Install: 5.2 (132) Long Term: 2.6 (66)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 513 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count
51002xx01	2
51004xx01	4
51006xx01	6
51008xx01	8
51012xx01	12

Part Number Designators

5	1	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (002-012)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	93	33	23	K3	83

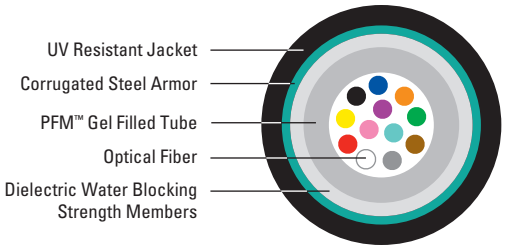
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber

	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

Buried FTTP Steel Armor

Series 52S



Product Description

Buried FTTP cables are designed for Outside Plant (OSP) 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. The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube contains up to 12 optical fibers. The core tube is then helically wrapped with water blocking strength members. A corrugated steel armor is applied and encased with a black jacket.

Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Corrugated steel armor
- Multiple fiber types including TeraFlex® bend resistant
- 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

Specifications	
Fiber Count	Available in 2-fiber up to 12-fiber
Nominal Diameter in (mm)	0.32 (8.2)
Nominal Weight lbs/kft (kg/km)	51 (77)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 100 (445)
Minimum Bend Radius in (mm)	Install: 6.4 (163) Long Term: 3.2 (82)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 52S RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics	
Part Number[1]	**Fiber Count**
52002xx01	2
52004xx01	4
52006xx01	6
52008xx01	8
52012xx01	12

Part Number Designators								
5	2	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (002-012)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

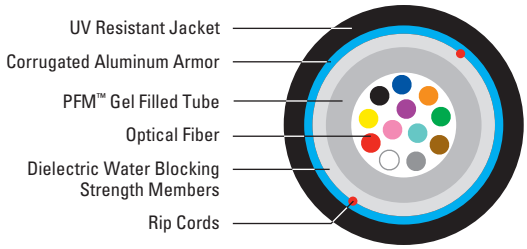
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	9S	3S	2S	KS	8S

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Product Description

Buried FTTP cables are designed for Outside Plant (OSP) 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. The rugged single loose tube design features optical fibers placed inside a single PFM™ gel filled tube. The core tube contains up to 12 optical fibers. The core tube is then helically wrapped with water blocking strength members. A corrugated aluminum armor is applied and encased with a black jacket. Rip cords are included under the armor for ease of access to the core tube.



Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Corrugated aluminum armor
- Multiple fiber types including TeraFlex® bend resistant
- 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

Specifications	
Fiber Count	Available in 2-fiber up to 12-fiber
Nominal Diameter in (mm)	0.33 (8.4)
Nominal Weight lbs/kft (kg/km)	42 (62)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 100 (445)
Minimum Bend Radius in (mm)	Install: 6.6 (168) Long Term: 3.3 (84)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 523 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Part Numbers and Physical Characteristics	
Part Number[1]	**Fiber Count**
52002xx01	2
52004xx01	4
52006xx01	6
52008xx01	8
52012xx01	12

Part Number Designators								
5	2	_	_	_	x	x	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (002-012)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

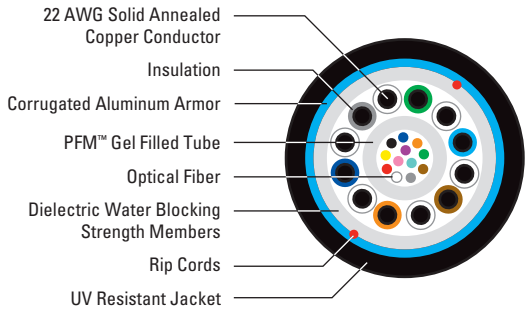
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	93	33	23	K3	83

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

Buried Drop Composite Aluminum Armor

Series 72



Product Description

Series 72 is the underground cable solution for the situation that requires both optical fiber and twisted pairs. This product is available in fiber counts up to 12 with 2-pair, 3-pair or 6-pair 22 AWG copper pairs. Series 72 serves the need for communications or power over copper pairs with optical fiber available for the future. The core is constructed with a single tube containing up to 12 optical fibers and up to 6 copper pairs. A corrugated aluminum armor and longitudinal strength elements are applied over the core tube and encased within a black, weather resistant jacket. Rip cords are included under the armor for ease of access to the core.

Applications

- Fiber to the premise
- Broadband network
- Buried, underground

Features

- Composite fiber/copper design
- Round shape
- Corrugated aluminum armor
- Dry (SAP) core standard
- PFM™ gel
- Insulation of tip conductors are marked with a stripe of the mating ring's insulation color

Benefits

- Multiple Network applications
- Conforms to standard practices and hardware
- Improves flexibility
- Reduces cable prep and installation time
- Non-sticky gel allows for easier and faster clean up
- Reduces the possibility of splitting pairs during installation

Specifications	
Fiber Components	Available in 2-fiber up to 12-fiber loose inside a PFM™ gel filled buffer tube
Copper Components	Available with 2, 3 or 6-pair 22 AWG solid annealed copper conductors each insulated with solid polyolefin in distinctive colors
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 100 (445)
Copper Maximum Amperage and Voltage	Amperage: 1.0 A Voltage: 150 vDC
Package	Reel
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 72 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Electrical Specifications

Conductor AWG (mm)	Conductor DC Resistance @ 68°F Maximum Individual Ohms/mile (Ohms/km)	Resistance Unbalance Maximum Individual Pair %	Minimum Dielectric Strength DC Potential Volts Conductor to Conductor
22 (0.64)	91.0 (56.4)	5.0	7,200

Part Numbers and Physical Characteristics

Part Number[1]	Copper Pair Count	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
					Install in (mm)	Long Term in (mm)
72002xx21	2	2	0.39 (9.8)	61 (91)	7.8 (198)	3.9 (99)
72004xx21	2	4	0.39 (9.8)	61 (91)	7.8 (198)	3.9 (99)
72006xx21	2	6	0.39 (9.8)	61 (91)	7.8 (198)	3.9 (99)
72002xx61	6	2	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)
72004xx61	6	4	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)
72006xx61	6	6	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)
72012xx61	6	12	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)

Part Number Designators

7	2	_	_	_	x	x	2, 3 or 6	_
1	2	3	4	5	6	7	8	9
product family		fiber count (002-012)			fiber type	internal designator	copper pairs	water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	93	33	23	K3	83

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

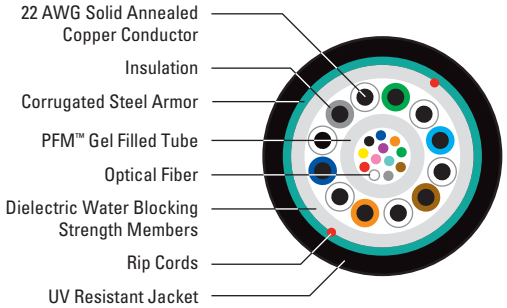
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Buried Drop Composite Steel Armor

Series 72S

Product Description

Series 72S is the underground cable solution for the situation that requires both optical fiber and twisted pairs. This product is available in fiber counts up to 12 with 2-pair, 3-pair or 6-pair 22 AWG copper pairs. Series 72S serves the need for communications or power over copper pairs with optical fiber available for the future. The core is constructed with a single tube containing up to 12 optical fibers and up to 6 copper pairs. A corrugated steel armor and longitudinal strength elements are applied over the core tube and encased within a black, weather resistant jacket. Rip cords are included under the armor for ease of access to the core.



Applications

- Fiber to the premise
- Broadband network
- Buried, underground

Features and Benefits

Features	Benefits
• Composite fiber/copper design	• Multiple Network applications
• Round shape	• Conforms to standard practices and hardware
• Corrugated steel armor	• Improves compressive strength and rodent protection
• Dry (SAP) core standard	• Reduces cable prep and installation time
• PFM™ gel	• Non-sticky gel allows for easier and faster clean up
• Insulation of tip conductors are marked with a stripe of the mating ring's insulation color	• Reduces the possibility of splitting pairs during installation

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +75°C

Specifications	
Fiber Components	Available in 2-fiber up to 12-fiber loose inside a PFM™ gel filled buffer tube
Copper Components	Available with 2, 3 or 6-pair 22 AWG solid annealed copper conductors each insulated with solid polyolefin in distinctive colors
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 100 (445)
Copper Maximum Amperage and Voltage	Amperage: 1.0 A Voltage: 150 vDC
Package	Reel
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 72S RoHS-compliant

Electrical Specifications

Conductor AWG (mm)	Conductor DC Resistance @ 68°F Maximum Individual Ohms/mile (Ohms/km)	Resistance Unbalance Maximum Individual Pair %	Minimum Dielectric Strength DC Potential Volts Conductor to Conductor
22 (0.64)	91.0 (56.4)	5.0	7,200

Part Numbers and Physical Characteristics

Part Number[1]	Copper Pair Count	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
					Install in (mm)	Long Term in (mm)
72002xx2S	2	2	0.39 (9.8)	61 (91)	7.8 (198)	3.9 (99)
72004xx2S	2	4	0.39 (9.8)	61 (91)	7.8 (198)	3.9 (99)
72006xx2S	2	6	0.39 (9.8)	61 (91)	7.8 (198)	3.9 (99)
72002xx6S	6	2	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)
72004xx6S	6	4	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)
72006xx6S	6	6	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)
72012xx6S	6	12	0.43 (10.8)	338 (504)	8.6 (218)	4.3 (109)

Part Number Designators

7	2	_	_	_	x	x	2, 3 or 6	S
1	2	3	4	5	6	7	8	9
product family		fiber count (002-012)			fiber type	internal designator	copper pairs	steel armor

Contact Customer Service for availability of non-standard offerings.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "xx" with:	9S	3S	2S	KS	8S

Multimode Optical Fiber

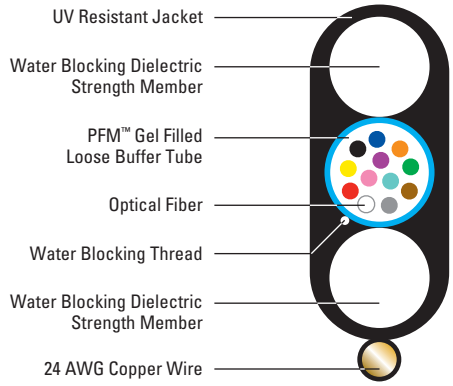
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "xx" with:	6G	AG	BG	FG

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

RoHS

Toneable Drop FTTP

Series 571Q



Product Description

Toneable Drop FTTP offers the most flexible solution for fiber to the premise 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 12 optical fibers and PFM™ gel. This is a water-blocked design, using a "dry" water absorbing thread to prevent the migration of moisture.

Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Available with up to 12-fiber
- Universal design
- Toneable element
- PFM™ gel
- Dielectric rods
- Dry (SAP) core standard
- Multiple fiber types including TeraFlex® bend resistant

Benefits

- Maximum bandwidth
- Aerial or direct bury
- Ease of location
- Non-sticky gel reduces installation time and labor cost
- Excellent crush resistance
- Reduces cable prep and installation time
- Multiple network applications

Specifications	
Fiber Count	Available with up to 12-fiber inside a PFM™ gel filled loose buffer tube
Strength Members	Water blocking dielectric strength members placed parallel to single loose tube, to provide necessary longitudinal strength
Toneable Element	24 AWG copper wire encased in jacket
Jacket	Black, UV resistant jacket
Nominal Dimensions in (mm)	0.40 (10.2) x 0.18 (4.5)
Weight lbs/kft	28
Minor Dimension Bend Radius in (mm)	3.15 (76)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 90 (405)
Maximum Span Length at 1% Sag ft (m)	Light Loading: 330 (101) Medium Loading: 225 (69) Heavy Loading: 150 (46)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 571Q RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Package
57002x11Q	2	2,500 (762)	138 (304)	2,500' Reel
57002x1BQ	2	1,000 (305)	37 (81)	1,000' Reel-in-a-Box
57004x11Q	4	2,500 (762)	138 (304)	2,500' Reel
57004x1BQ	4	1,000 (305)	37 (81)	1,000' Reel-in-a-Box
57006x11Q	6	2,500 (762)	138 (304)	2,500' Reel
57006x1BQ	6	1,000 (305)	37 (81)	1,000' Reel-in-a-Box
57012x11Q	12	2,500 (762)	138 (304)	2,500' Reel
57012x1BQ	12	1,000 (305)	37 (81)	1,000' Reel-in-a-Box

Part Number Designators

5	7	_	_	_	x	1	1 or B	Q
1	2	3	4	5	6	7	8	9
product family		fiber count (001-012)			fiber type	internal designator	package type	internal designator

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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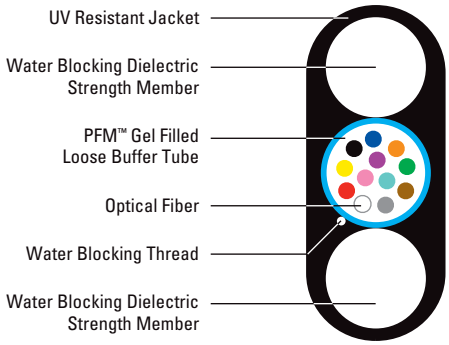
RoHS
Rev 7/10 Ed 10.2

Product Description

Universal Drop FTTP offers the most flexible solution for fiber to the premise 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 12 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.



Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Available with up to 12-fiber
- Universal design
- Dielectric
- PFM™ gel
- Dielectric Rods
- Multiple fiber types including TeraFlex® bend resistant

Benefits

- Offers the maximum bandwidth for FTTP business, etc.
- Aerial or direct bury
- Eliminates bonding and grounding
- Non-sticky gel reduces installation time and labor cost
- Excellent crush resistance
- Multiple network applications

Specifications	
Fiber Count	Available with up to 12-fiber inside a PFM™ gel filled loose buffer tube
Strength Members	Water blocking dielectric strength members placed parallel to single loose tube, one on each side, to provide necessary longitudinal strength
Jacket	Black, UV resistant jacket
Nominal Dimensions in (mm)	0.33 (8.2) x 0.18 (4.5)
Weight lbs/kft	24
Minor Dimension Bend Radius in (mm)	3.15 (76)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 90 (405)
Maximum Span Length at 1% Sag ft (m)	Light Loading: 330 (101) Medium Loading: 225 (69) Heavy Loading: 150 (46)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 570Q RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +70°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Package
57002x01Q	2	2,500 (762)	128 (282)	2,500' Reel
57002x0BQ	2	1,000 (305)	33 (73)	1,000' Reel-in-a-Box
57004x01Q	4	2,500 (762)	128 (282)	2,500' Reel
57004x0BQ	4	1,000 (305)	33 (73)	1,000' Reel-in-a-Box
57006x01Q	6	2,500 (762)	128 (282)	2,500' Reel
57006x0BQ	6	1,000 (305)	33 (73)	1,000' Reel-in-a-Box
57012x01Q	12	2,500 (762)	128 (282)	2,500' Reel

Part Number Designators

5	7	_	_	_	x	0	1 or B	Q
1	2	3	4	5	6	7	8	9
product family		fiber count (001-012)		fiber type	internal designator	package type	internal designator	

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

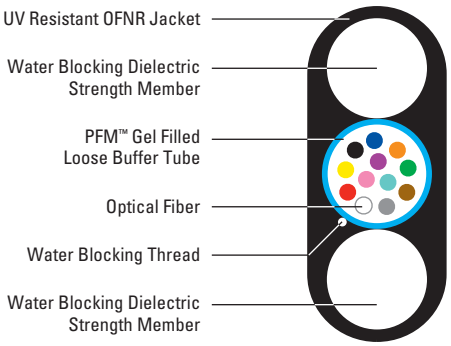
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Universal FTTP OFNR

Series 57R



Product Description

Universal FTTP OFNR offers the most complete solution for the fiber to the premise 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 available with TeraFlex® optical fiber which complies with ITU G.652D and provides increased bend performance.

Universal FTTP OFNR is offered as a bulk reel with a standard length of 2,500' or in a Reel-in-a-Box (weather resistant package containing 1,000 ft and weighing only 35 lbs). QuickCount® print is standard on the Reel-in-a-Box and reduces scrap by identifying the length of cable remaining in the box.

Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Available with up to 12-fiber
- Multiple fiber types including TeraFlex® bend resistant
- Universal design
- PFM™ gel
- OFNR rating
- UL Listed, sunlight resistant
- Reel-in-a-Box package option

Benefits

- Offers the maximum bandwidth for FTTP business, etc.
- Multiple network applications
- Aerial, direct bury, conduit, indoor riser
- Non-sticky gel reduces installation time and labor cost
- Indoor/outdoor use
- Longer cable life
- QuickCount® countdown footage marking feature reduces scrap
- Easy to carry and store

Specifications	
Fiber Count	Available with up to 12-fiber inside a PFM™ gel filled loose buffer tube
Strength Members	Water blocking dielectric strength members placed parallel to single loose tube, one on each side, to provide necessary longitudinal strength
Jacket	Black, UV resistant PVC jacket
Nominal Dimensions in (mm)	0.33 (8.2) x 0.18 (4.5)
Weight lbs/kft	24
Minor Dimension Bend Radius in (mm)	3.19 (81)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 90 (405)
Maximum Span Length at 1% Sag ft (m)	Light Loading: 330 (101) Medium Loading: 225 (69) Heavy Loading: 150 (46)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation Universal FTTP OFNR RoHS-compliant

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

Part Numbers and Physical Characteristics		
Part Number[1]	**Fiber Count**	**Package**
57002x02Q	2	2,500' Reel
57002x0CQ	2	1,000' Reel-in-a-Box
57004x02Q	4	2,500' Reel
57004x0CQ	4	1,000' Reel-in-a-Box
57012x02Q	12	2,500' Reel
57012x0CQ	12	1,000' Reel-in-a-Box

Part Number Designators								
5	7	_	_	_	x	0	2 or C	Q
1	2	3	4	5	6	7	8	9
product family		fiber count (001-012)			fiber type	internal designator	package type	internal designator

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

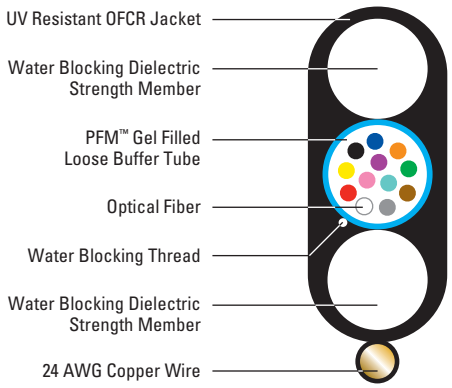
Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Product Description

Toneable FTTP OFCR offers the most complete solution for the fiber to the premise 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 copper 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.

Toneable FTTP OFCR is offered as a bulk reel with a standard length of 2,500' or in a Reel-in-a-Box (weather resistant package containing 1,000 ft and weighing only 35 lbs). QuickCount® print is standard on the Reel-in-a-Box and reduces scrap by identifying the length of cable remaining in the box.



Applications

- Drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Available with up to 12-fiber
- Multiple fiber types including TeraFlex® bend resistant
- Universal design
- PFM™ gel
- OFCR rating
- Reel-in-a-Box package option
- Toneable element

Benefits

- Offers the maximum bandwidth for FTTP business, etc.
- Multiple network applications
- Aerial, direct bury, conduit, indoor riser
- Non-sticky gel reduces installation time and labor cost
- Indoor/outdoor use
- QuickCount® countdown footage marking feature reduces scrap
- Easy to carry and store
- Ease of location

Specifications	
Fiber Count	Available with up to 12-fiber inside a PFM™ gel filled loose buffer tube
Strength Members	Water blocking dielectric strength members placed parallel to single loose tube, one on each side, to provide necessary longitudinal strength
Toneable Element	24 AWG copper wire encased in a jacket
Jacket	Black, UV resistant PVC jacket
Nominal Dimensions in (mm)	0.40 (10.2) x 0.18 (4.5)
Weight lbs/kft	35
Minor Dimension Bend Radius in (mm)	3.19 (81)
Maximum Tensile Loading lbs (N)	Install: 300 (1,335) Long Term: 90 (405)
Maximum Span Length at 1% Sag ft (m)	Light Loading: 330 (101) Medium Loading: 225 (69) Heavy Loading: 150 (46)
Standards Compliance	Telcordia GR-20-CORE PE-90 Designation Toneable FTTP OFCR RoHS-compliant

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

Part Numbers and Physical Characteristics		
Part Number[1]	**Fiber Count**	**Package**
57002x12Q	2	2,500' Reel
57002x1CQ	2	1,000' Reel-in-a-Box
57004x12Q	4	2,500' Reel
57004x1CQ	4	1,000' Reel-in-a-Box
57012x12Q	12	2,500' Reel
57012x1CQ	12	1,000' Reel-in-a-Box

Part Number Designators								
5	7	_	_	_	x	1	2 or C	Q
1	2	3	4	5	6	7	8	9
product family		fiber count (001-012)			fiber type	internal designator	package type	internal designator

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

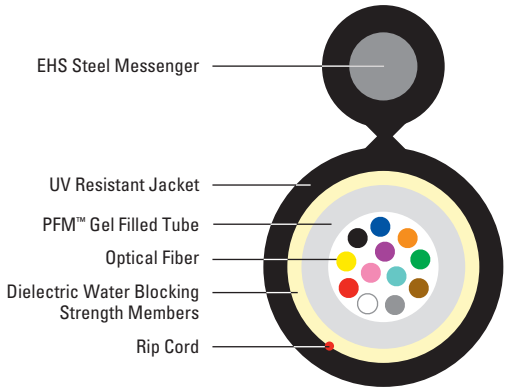
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Figure 8 FTTP

Series 573Q



Product Description

Figure 8 FTTP offers an aerial solution for fiber to the premise applications. This small profile aerial cable incorporates a 2.1 mm solid steel strand supporting a single enhanced loose tube containing up to 12 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.

Applications

- Aerial self support drop cables
- Broadband network
- Local loop
- Fiber to the premise

Features

- Available with1-fiber up to 12-fiber
- Multiple fiber types including TeraFlex® bend resistant
- PFM™ gel
- Dry (SAP) core standard
- PVC jacket
- Steel messenger

Benefits

- Offers the maximum bandwidth for FTTP business, etc.
- Multiple network applications
- Non-sticky gel reduces installation time and labor cost
- Reduces cable prep and installation time
- Improves flexibility
- Allows use of standard hardware

Specifications	
Fiber Count	Available in 1-fiber up to 12-fiber inside a PFM™ gel filled loose buffer tube
Strength Members	2.1 mm solid steel strand
Jacket	Black, weather resistant PVC jacket
Nominal Diameter in (mm)	0.18 (4.5)
Major Dimension in (mm)	0.35 (8.9)
Nominal Weight lbs/kft (kg/km)	341 (507)
Maximum Tensile Loading lbs (N)	Install: 300 (1,334) Long Term: 90 (400)
Minimum Bend Radius in (mm)	Install: 3.6 (91) Long Term: 1.8 (46)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation 573Q RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-10°C to +60°C

Part Numbers and Physical Characteristics	
Part Number[1]	**Fiber Count**
57001x23Q	1
57002x23Q	2
57004x23Q	4
57006x23Q	6
57008x23Q	8
57012x23Q	12

Part Number Designators								
5	7	_	_	_	x	2	3	Q
1	2	3	4	5	6	7	8	9
product family		fiber count (001-012)			fiber type	internal designator		internal designator

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Multimode Optical Fiber				
	TeraGain® 62.5/125	TeraGain Laser Optimized 50/125		
		10G/150	10G/300	10G/550
[1]Replace "x" with:	6	A	B	F

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RoHS
Rev 7/10 Ed 10.2

FTTP Tight Buffered Indoor/Outdoor Drop

Series W7

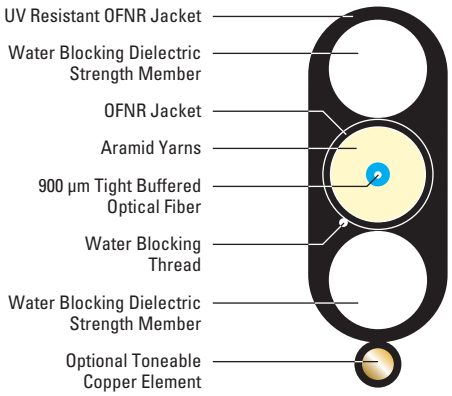
Product Description

Series W7 FTTP is the first indoor/outdoor drop cable that is rugged enough for outdoor environments and flexible enough for tight bends within residences. The patent-pending design utilizes a fully functional 2.9 mm OFNR rated simplex tight buffer cable as the core of a GR-20 OSP rated FTTP small flat cable. The key benefit of this cable is that it can be installed from the pedestal to the indoor ONT (Optical Network Terminal) with no intermediate termination. Significant installation savings can be realized by avoiding splicing or termination on the outside or inside wall of the residence. Further savings are realized by using an indoor ONT that does not require an electrician to install. This completely dry, flat drop cable is available in universal and toneable designs that are suitable for aerial, direct bury or conduit installation. A water blocking thread is used to prevent water penetration.

Applications

- Drop cables for aerial, direct bury or conduit installations
- Fiber to the premise for single family residences

Features	Benefits
• Universal design	• Aerial, direct bury or conduit, all dielectric
• Toneable design	• Copper element allows for toneable location
• Dielectric rods	• Excellent crush resistance
• Indoor/outdoor design	• Tight Buffered cable can be placed in a riser environment and is UL listed
• Meets GR-20 specifications	• Industry accepted standard for OSP installations
• Cable in a cable	• Eliminates splice at premises wall
• TeraFlex® fiber in a flexible tight buffer cable design	• Inner cable can be wrapped around corners and stapled with no attenuation issues



Specifications	
Simplex OFNR Nominal Diameter in (mm)	0.11 (2.9)
Simplex OFNR Bend Radius in (mm)	Install: 2.2 (56) Long Term: 1.1 (28)
Cable Bend Radius in (mm)	Install: 3.6 (91) Long Term: 1.8 (46)
Cable Tensile Load lbs (N)	Install: 300 (1,350) Long Term: 90 (405)
Maximum Span Length at 1% Sag ft (m)	Light Loading: 350 (101) Medium Loading: 275 (84) Heavy Loading: 150 (46)
Standards Compliance	Telcordia GR-20-CORE Telcordia GR-409-CORE RoHS-compliant

Macro Bending Performance		
10 Turns on 15 mm Radius Mandrel	**ITU G 657 A**	**TeraFlex®**
Macro bending loss @ 1550 nm	0.25 dB Max.	≤ 0.20 dB
Macro bending loss @ 1625 nm	1.00 dB Max.	≤ 0.50 dB
1 Turn on 10 mm Radius Mandrel	**ITU G 657 A**	**TeraFlex®**
Macro bending loss @ 1550 nm	0.75 dB Max.	≤ 0.20 dB
Macro bending loss @ 1625 nm	1.50 dB Max.	≤ 0.20 dB

TeraFlex® is an ITU G 657 A optical fiber that is completely compatible with ITU G 652 D optical fibers. TeraFlex exceeds the performance standards of ITU G 657 A as listed above.

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

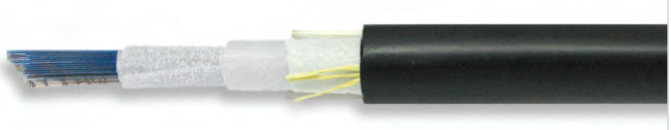
Part Numbers and Physical Characteristics			
Part Number[1]	**Description**	**Nominal Dimensions in (mm)**	**Weight lbs/kft (kg/km)**
W7001KU01	Universal Indoor/Outdoor FTTP	0.33 (8.2) x 0.18 (4.5)	29 (44)
W7001K101	Toneable Indoor/Outdoor FTTP	0.40 (10.2) x 0.18 (4.5)	31 (47)

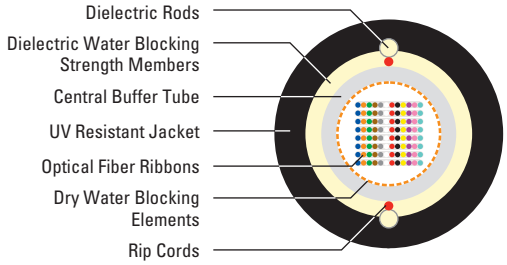
Part Number Designators								
W	7	0	0	1	K	1 or U	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (001)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Dri-Lite® Ribbon

Series R1D





Product Description

Dri-Lite® Ribbon Cable is a totally gel free cable. The cable is designed for Outside Plant (OSP) application, specifically lashed aerial and underground duct applications. Our industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion splicing. The Dri-Lite Ribbon cable features optical ribbons inside a gel free tube which contains dry water blocking elements. The core tube contains up to eighteen 12-fiber 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 jacket. A rip cord is included under the jacket for easy access to the core tube.

Applications

- Lashed aerial
- Underground duct
- Broadband network

Features

- Gel free water blocking technology
- Available in 12-fiber up to 432-fiber
- Multiple fiber types available
- Highly flexible tube
- Meets or exceeds Telcordia and RDUP specifications
- Small outer diameter
- Industry leading planarity

Benefits

- Reduces preparation time and labor cost
- High fiber density
- Multiple network applications
- Easier handling and reduced loss
- Industry approved
- Up to 432 optical fibers in less than a 1 inch nominal diameter
- Excellent mass splicing results

Specifications	
Fiber Count	Available in 12-fiber up to 432-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation R1D

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +60°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
R1012xD01	12	0.51 (13.0)	69 (103)	10.2 (260)	5.1 (130)
R1024xD01	24	0.51 (13.0)	69 (103)	10.2 (260)	5.1 (130)
R1048xD01	48	0.59 (15.0)	91 (136)	11.8 (300)	5.9 (150)
R1072xD01	72	0.59 (15.0)	91 (136)	11.8 (300)	5.9 (150)
R1096xD01	96	0.67 (17.0)	115 (171)	13.4 (340)	6.7 (170)
R1144xD01	144	0.67 (17.0)	115 (171)	13.4 (340)	6.7 (170)
R1192xD01	192	0.71 (18.0)	147 (219)	14.2 (360)	7.1 (180)
R1216xD01	216	0.71 (18.0)	147 (219)	14.2 (360)	7.1 (180)
R1288xD01	288	0.78 (19.8)	173 (258)	15.6 (396)	7.8 (198)
R1360xD01	360	0.78 (19.8)	173 (258)	15.6 (396)	7.8 (198)
R1432xD01	432	0.78 (19.8)	173 (258)	15.6 (396)	7.8 (198)

Part Number Designators

R	1	_	_	_	x	D	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (012-432)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber

	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

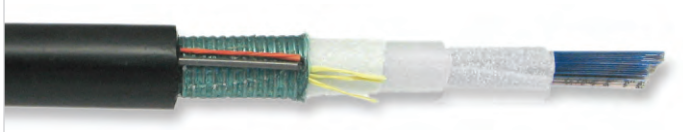
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

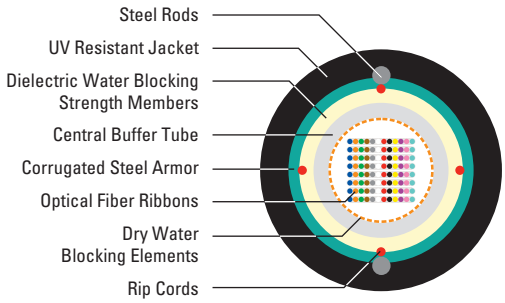
Dri-Lite® Ribbon Single Armor

Series R2D

Product Description

Dri-Lite® Ribbon Single Armor Cable is a totally gel free cable. The cable is designed for Outside Plant (OSP) application, specifically direct buried, lashed aerial and underground duct applications. Our industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion splicing. The Dri-Lite Ribbon Single Armor cable features optical ribbons inside a gel free tube which contains dry water blocking elements. The core tube contains up to eighteen 12-fiber 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 jacket. Rip cords are included under the armor for easy access to the core tube.





Applications

- Direct bury
- Lashed aerial
- Underground duct
- Broadband network

Features

- Gel free water blocking technology
- Available in 12-fiber up to 432-fiber
- Multiple fiber types available
- Highly flexible tube
- Meets or exceeds Telcordia and RDUP specifications
- Small outer diameter
- Industry leading planarity

Benefits

- Reduces preparation time and labor cost
- High fiber density
- Multiple network applications
- Easier handling and reduced loss
- Industry approved
- Up to 432 optical fibers in less than a 1 inch nominal diameter
- Excellent mass splicing results

Specifications	
Fiber Count	Available in 12-fiber up to 432-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation R2D

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +60°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
R2012xDS1	12	0.51 (13.0)	110 (164)	10.2 (260)	5.1 (130)
R2024xDS1	24	0.51 (13.0)	110 (164)	10.2 (260)	5.1 (130)
R2048xDS1	48	0.58 (15.0)	135 (201)	11.6 (295)	5.8 (147)
R2072xDS1	72	0.58 (15.0)	137 (203)	11.6 (295)	5.8 (147)
R2096xDS1	96	0.66 (17.0)	163 (242)	13.2 (340)	6.6 (170)
R2144xDS1	144	0.66 (17.0)	166 (247)	13.2 (340)	6.6 (170)
R2192xDS1	192	0.71 (18.0)	172 (256)	14.2 (360)	7.1 (180)
R2216xDS1	216	0.71 (18.0)	172 (256)	14.2 (360)	7.1 (180)
R2288xDS1	288	0.84 (21.3)	226 (337)	16.8 (437)	8.4 (219)
R2360xDS1	360	0.84 (21.3)	226 (337)	16.8 (437)	8.4 (219)
R2432xDS1	432	0.84 (21.3)	226 (337)	16.8 (437)	8.4 (219)

Part Number Designators

R	2	_	_	_	x	D	S	_
1	2	3	4	5	6	7	8	9
product family		fiber count (012-432)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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Stranded Tube Ribbon Single Armor

Series S2

Product Description

Stranded Tube Ribbon Single Armor Cable is designed for Outside Plant (OSP) 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. The stranded tube design features optical fibers ribbons placed inside gel filled tubes. Each tube contains up to 12 discretely identified, 12-fiber ribbons for maximum design load capacity of 1,008 optical 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 outer jacket completes the construction. Rip cords are included under the armor for ease of entry.

Applications

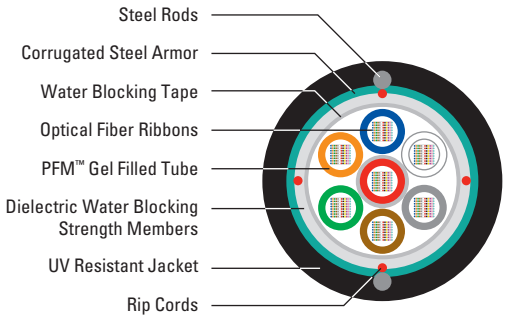
- Direct bury
- Broadband network
- Local loop
- Trunk, distribution and feeder cables

Features

- Available with up to 1,008-fiber
- Multiple fiber types available
- Multiple stranded tubes
- Corrugated steel armor
- Ribbon 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



Specifications	
Fiber Count	Available in 360-fiber up to 1,008-fiber
Nominal Diameter in (mm)	1.25 (31.8)
Nominal Weight lbs/kft (kg/km)	552 (821)
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 180 (800)
Minimum Bend Radius in (mm)	Install: 25.0 (635) Long Term: 12.5 (318)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designtaion S2 RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +60°C

Part Numbers and Physical Characteristics	
Part Number[1]	**Fiber Count**
S2360x101	360
S2432x101	432
S2576x101	576
S2864x101	864
S2A08x101	1,008

Part Number Designators								
S	2	_	_	_	x	1	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (360-A08)		fiber type	internal designator			water block/ marking (1-8)

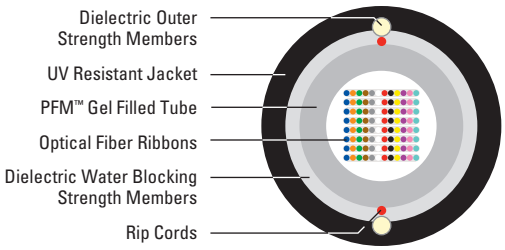
Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Single Tube Ribbon

Series R1



Product Description

Single Tube Ribbon Cable is designed for Outside Plant (OSP) applications, specifically lashed aerial and underground duct installations. Our industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion spicing. The Single Tube Ribbon Cable features optical ribbons inside a single PFM™ gel filled tube. The core tube includes up to eighteen 12-fiber 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 jacket. A rip cord is included under the jacket for easy access to the core tube.

Applications

- Lashed aerial, underground duct
- Broadband network
- Local loop
- Trunk, distribution and feeder cables

Features

- Available with up to 432-fiber
- Multiple fiber types available
- Dielectric strength members
- Highly flexible tube
- Ribbon 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

Specifications	
Fiber Count	Available in 12-fiber up to 432-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation SLT-R RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +60°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
R1012x101	12	0.47 (12.0)	76 (113)	9.4 (239)	4.7 (119)
R1048x101	48	0.47 (11.9)	76 (113)	9.4 (239)	4.7 (119)
R1072x101	72	0.55 (13.9)	101 (149)	11.0 (279)	5.5 (140)
R1096x101	96	0.55 (13.9)	101 (149)	11.0 (279)	5.5 (140)
R1144x101	144	0.63 (15.9)	131 (195)	12.6 (320)	6.3 (160)
R1192x101	192	0.67 (17.0)	150 (223)	13.4 (340)	6.7 (170)
R1216x101	216	0.67 (17.0)	150 (223)	13.4 (340)	6.7 (170)
R1288x101	288	0.79 (20.0)	188 (280)	15.8 (401)	7.9 (201)
R1360x101	360	0.79 (20.0)	188 (280)	15.8 (401)	7.9 (201)
R1432x101	432	0.79 (20.0)	188 (280)	15.8 (401)	7.9 (201)

Part Number Designators

R	1	_	_	_	x	1	0	_
1	2	3	4	5	6	7	8	9
product family		fiber count (012-432)			fiber type	internal designator		water block/ marking (1-8)

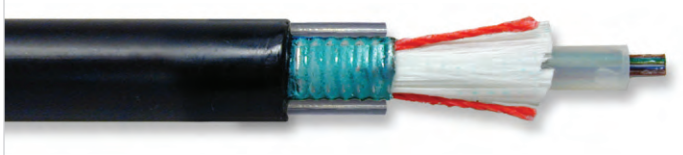
Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

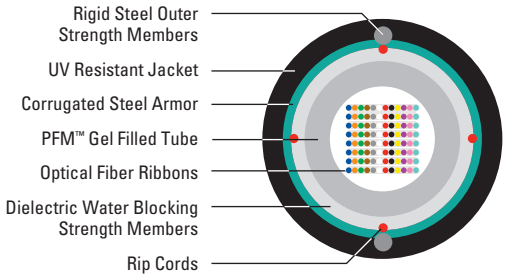
Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Single Tube Ribbon Single Armor

Series R2





Product Description

Single Tube Ribbon Single Armor Cable is designed for Outside Plant (OSP) applications, specifically lashed aerial and underground duct installations. Our industry leading optical ribbons are manufactured with high dimensional precision and low planarity, which equates to low losses during mass fusion spicing. The Single Tube Ribbon Single Armor cable features optical ribbons inside a single PFM™ gel filled tube. The core tube includes up to eighteen 12-fiber 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 jacket. Rip cords are included under the armor for easy access to the core tube.

Applications

- Direct bury
- Broadband network
- Local loop
- Trunk, distribution and feeder cables

Features

- Available with up to 432-fiber
- Multiple fiber types available
- Metallic outer strength members
- Highly flexible tube
- Corrugated steel armor
- Ribbon 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

Specifications	
Fiber Count	Available in 12-fiber up to 432-fiber
Maximum Tensile Loading lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Telcordia GR-20-CORE RDUP PE-90 Designation SLT-R RoHS-compliant

Environmental Specifications	
Operation/Storage	-40°C to +70°C
Installation	-30°C to +60°C

Part Numbers and Physical Characteristics

Part Number[1]	Fiber Count	Nominal Diameter in (mm)	Nominal Weight lbs/kft (kg/km)	Minimum Bend Radius	
				Install in (mm)	Long Term in (mm)
R2012x1S1	12	0.51 (13.0)	118 (175)	10.2 (259)	5.1 (130)
R2024x1S1	24	0.51 (13.0)	118 (175)	10.2 (259)	5.1 (130)
R2036x1S1	36	0.51 (13.0)	118 (175)	10.2 (259)	5.1 (130)
R2048x1S1	48	0.51 (13.0)	118 (175)	10.2 (259)	5.1 (130)
R2072x1S1	72	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)
R2096x1S1	96	0.58 (15.0)	150 (223)	11.6 (295)	5.8 (147)
R2144x1S1	144	0.66 (17.0)	187 (279)	13.2 (335)	6.0 (152)
R2192x1S1	192	0.66 (17.0)	195 (290)	13.6 (345)	6.8 (173)
R2216x1S1	216	0.66 (17.0)	195 (290)	13.6 (345)	6.8 (173)
R2288x1S1	288	0.84 (21.0)	256 (381)	16.8 (420)	8.4 (210)
R2360x1S1	360	0.84 (21.0)	256 (381)	16.8 (420)	8.4 (210)
R2432x1S1	432	0.84 (21.0)	256 (381)	16.8 (420)	8.4 (210)

Part Number Designators

R	2	_	_	_	x	1	S	_
1	2	3	4	5	6	7	8	9
product family		fiber count (012-432)			fiber type	internal designator		water block/ marking (1-8)

Contact Customer Service for availability of non-standard offerings.
See "Optical Fiber Cable" options in the "TECHNICAL INFO" section for flooding and jacket marking options.

Single Mode Optical Fiber					
	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
[1]Replace "x" with:	9	3	2	K	8

See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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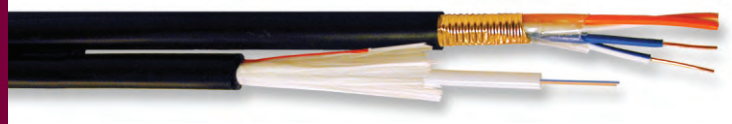

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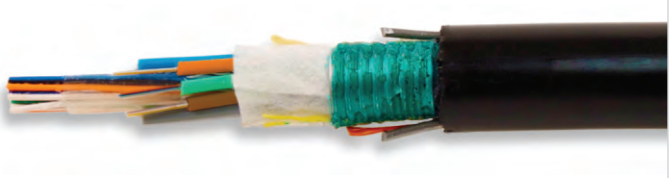
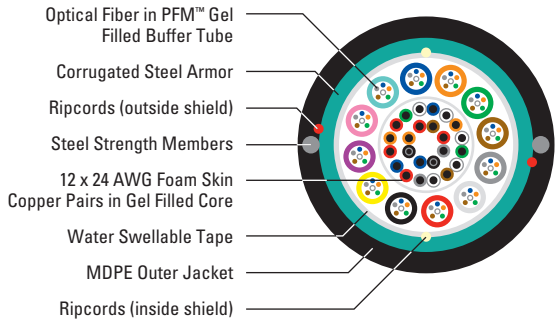
Composite Right of Way

Series MR





Product Description

The Composite Right of Way Series MR cable is designed to meet the network requirements for both twisted copper pair and optical fiber. The small 0.65 inch (16.6 mm) profile of this design easily fits into a 1-inch conduit. The cable operates within a temperature range of -40˚C to +70˚C, provides a maximum tensile strength of 600 lbs, and incorporates 12, 24 AWG twisted copper pairs and up to 72 strands of optical fiber. The core, 12 pairs of 24 AWG gel-filled copper, is surrounded by 12 gel-filled tubes each containing 6 optical fibers. The core is water-blocked with super absorbant polymers and then encased in a steel armor. Two steel rods for anti-buckling are included in the outer jacket.

Applications

- Small conduits

Features

- Fiber and twisted copper pair
- Single unit construction
- Available with up to 72-fiber
- Small nominal diameter

Benefits

- Offers the maximum bandwidth for FTTP business, etc.
- Lower installation costs
- High capacity
- Suitable for small (1 inch) conduit applications

OSP Copper Specifications	
Conductor	12-pair 24 AWG (0.51 mm) solid annealed copper
Core Filling	Thixotropic gel

Stranded Loose Tube Optical Fiber Specifications	
Construction	Loose tubes design features optical fibers placed inside a PFM™ gel filled tube
Fiber Type	RWP SMF (other fiber types available)
Fiber Count	Up to 72 optical fibers

Composite Specifications	
Construction	Copper pairs at center of cable surrounded by stranded loose tubes of optical fiber
Water Block	Super absorbent polymer tape
Shield	Corrugated steel armor
Strength Members	Two steel strength members embedded in jacket
Jacket	MDPE
Standards Compliance	Telcordia GR-20-CORE ICEA S-84-608-2007

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

Part Numbers and Physical Characteristics

Part Number	Fiber Count	Fiber Type	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Install Bend Radius in (mm)	Maximum Tensile Load	
						Install lbs (N)	Long Term lbs (N)
MR0723011	72	RWP SMF	0.65 (16.6)	160 (237)	13 (332)	600 (2700)	200 (890)

Part number listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

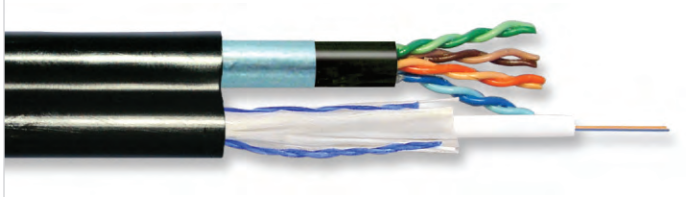
Product Description

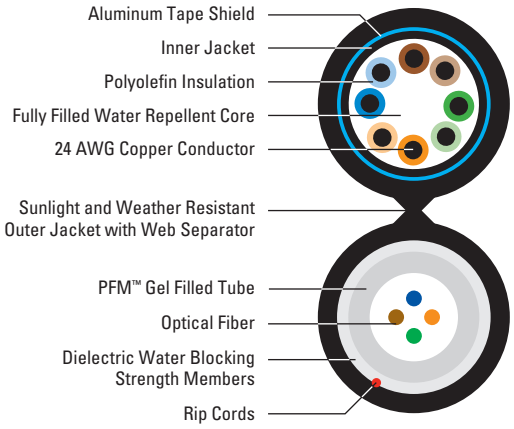
Series 5F combines the broadband performance of CAT 5e with the unlimited capacity of optical fiber. A BBDNE CAT 5e Outside Plant (OSP) cable and a Series 513 optical fiber cable are overjacketed into one cable in order to offer flexibility and ease of installation.

Applications

- Drop cables
- Broadband network
- Fiber to the premise

Features	Benefits
• Fiber and CAT 5e	• Offers the maximum bandwidth for FTTP business, etc.
• Overjacket design	• Ease of use
• Single unit construction	• Lower installation costs
• Available with 1-fiber up to 12-fiber	• High capacity
• PFM™ gel	• Non-sticky gel reduces installation time and labor cost





CAT 5e OSP Copper Specifications	
Conductor	4-pair 24 AWG solid annealed copper
Core Filling	Thixotropic gel
Shield	Coated smooth aluminum tape
Water Block	Super absorbent polymer

Series 513 Optical Fiber Specifications	
Construction	Single loose tube design features optical fibers placed inside a PFM™ gel filled tube
Fiber Type	RWP SMF (other fiber types available)
Fiber Count	Up to 12 optical fibers
Strength Members	Core is helically wrapped with dielectric water blocking strength members
Water Block	Super absorbent polymer

Composite Specifications	
Single Jacket Design	Copper and fiber independent cables are jacketed into one cable in order to offer flexibility and ease of installation
Standards Compliance	Copper and fiber cables meet applicable Telcordia and TIA standards

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

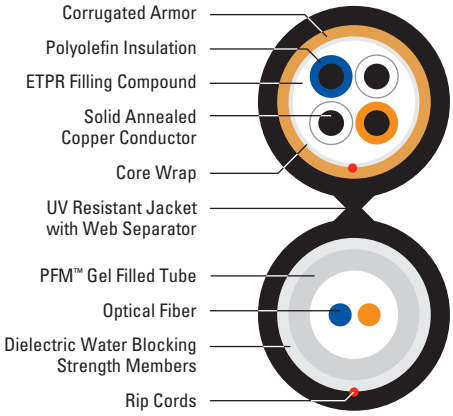
Part Numbers and Physical Characteristics

Part Number	Fiber Count	Fiber Type	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Bend Radius in (mm)	Maximum Tensile Load		Standard Quantity ft (m)
						Install lbs (N)	Long Term lbs (N)	
11-003-30	4	RWP SMF	0.63 (16) x 0.43 (10.9)	100 (148.8)	5.5 (139.7)	300 (136)	100 (45)	5,000 (1,524)

Part number listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Composite Drop Web

Series 71 W



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 Series 513 optical fiber cable and the BSW Outside Plant (OSP) copper cable 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 rip cord.

Applications

- Network power and FTTP
- Drop cables

Features

- Independent fiber and copper cables combined in a web design
- Web design
- Combined transport technologies in one cable
- Optical/electrical technology
- Multiple fiber types available
- PFM™ gel

Benefits

- Reduces cost of cable and labor
- Easy separation of technologies
- Cost-effective installation
- Ideal for multiple projects, voice, video, data and powering
- Multiple applications
- Non-sticky gel reduces installation time and labor cost

BSW OSP Copper Specifications	
Conductor	Solid annealed copper
Insulation	Solid polyolefin
Core Wrap	Non-hygroscopic
Filling Compound	80°C ETPR compound for water blocking protection
Shield	Corrugated armor

Series 513 Optical Fiber Specifications	
Construction	Single loose tube design features optical fibers placed inside a PFM™ gel filled tube
Fiber Type	RWP SMF (other fiber types available)
Fiber Count	Up to 12 optical fibers
Strength Members	Core is helically wrapped with dielectric water blocking strength members

Composite Specifications	
Single Jacket Design	Copper and fiber jackets joined by a web separator that can be split to direct the cables to separate locations
Standard Package	8,000′ Reel
Standards Compliance	Copper and fiber cables meet applicable Telcordia, RDUP and ICEA specifications RoHS-compliant

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

Part Numbers and Physical Characteristics

Part Number	Copper Pair Count x AWG	Fiber Count	Fiber Type	Copper Component Nominal Diameter in (mm)	Fiber Component Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)
71-024-12	2 x 19	2	RWP SMF	0.31 (7.9)	0.26 (6.7)	131 (195)
71-202-12	5 x 19	2	RWP SMF	0.36 (9.1)	0.26 (6.7)	179 (266)
71-055-12	2 x 22	2	RWP SMF	0.27 (6.9)	0.26 (6.7)	114 (170)
71-402-12	5 x 22	2	RWP SMF	0.32 (8.1)	0.26 (6.7)	136 (202)

Part numbers listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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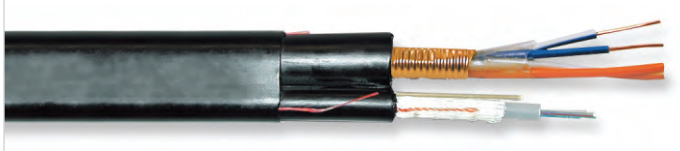


Product Description

Series 71 OJ Composite Drop Cables combine fiber and copper technologies in an overjacket design. The independent Series 513 optical fiber cable and the BSW Outside Plant (OSP) copper cable are combined into one overjacketed cable. The composite design provides a cost benefit compared to installing separate fiber and copper cables.

This design allows great flexibility regarding the independent cables used in the overall construction. These independent cables are encased in an outer jacket with a rip cord included for ease of entry.

Applications

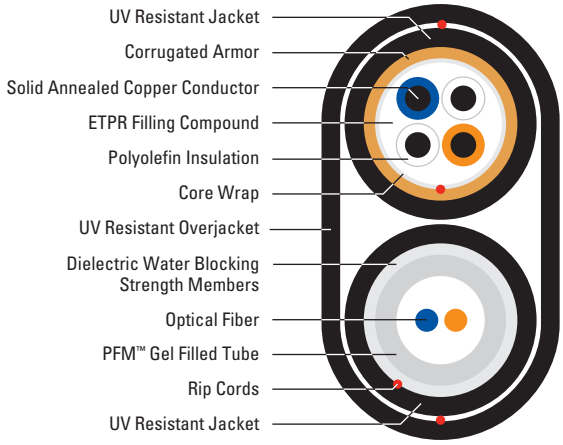
- Network power and FTTP
- Drop cables

Features

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

Benefits

- Lightweight, flexible construction
- Easy separation of technologies
- Cost-effective installation
- Ideal for multiple projects
- Non-sticky gel reduces installation time and labor cost



Composite Specifications	
Single Jacket Design	Independent copper and fiber cables are encased in a outer jacket with a rip cord
Standard Package	8,000' Reel
Standards Compliance	Copper and fiber cables meet applicable Telcordia, RDUP and ICEA specifications RoHS-compliant

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

BSW OSP Copper Specifications	
Conductor	Solid annealed copper
Insulation	Solid polyolefin
Core Wrap	Non-hygroscopic
Filling Compound	80°C ETPR compound for water blocking protection
Shield	Corrugated armor

Series 513 Optical Fiber Specifications	
Construction	Single loose tube design features optical fibers placed inside a PFM™ gel filled tube
Fiber Type	RWP SMF (other fiber types available)
Fiber Count	Up to 12 optical fibers
Strength Members	Core is helically wrapped with dielectric water blocking strength members

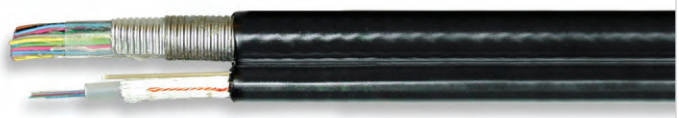
Part Numbers and Physical Characteristics

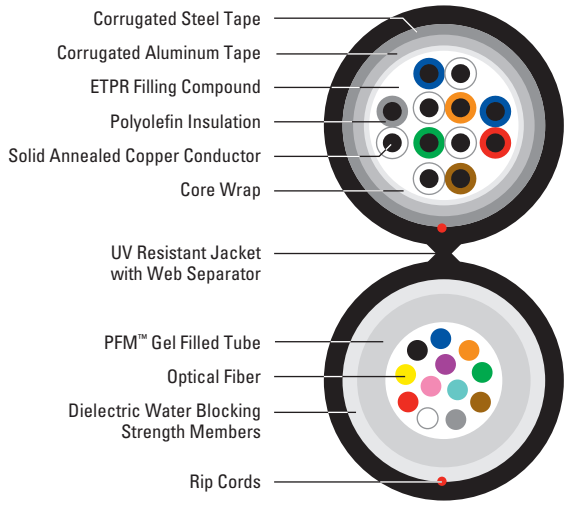
Part Number	Copper Pair Count x AWG	Fiber Count	Fiber Type	Copper Component Nominal Diameter in (mm)	Fiber Component Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)
71-055-02	2 x 22	2	RWP SMF	0.27 (6.9)	0.26 (6.7)	114 (170)
71-402-02	5 x 22	2	RWP SMF	0.32 (8.1)	0.26 (6.7)	136 (202)
71-057-14	6 x 22	4	RWP SMF	0.36 (9.1)	0.26 (6.7)	149 (222)

Part numbers listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Composite OSP Web

Series 5V





Product Description

Series 5V Cables are designed for Outside Plant (OSP) broadband applications. These cables combine copper and optical fiber 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.

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

Applications

- Direct bury, conduit, lashed aerial

Features	Benefits
• Independent fiber and copper cables under one jacket	• Reduces labor cost
• Web design	• Easy separation to different locations
• Optical/electrical technology	• Ideal for voice, video and data
• Web design	• Lower cost
• PFM™ gel	• Non-sticky gel reduces installation time and labor cost

ANAW OSP Copper Specifications	
Conductor	22 AWG solid annealed copper
Insulation	Inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin
Core Wrap	Non-hygroscopic
Filling Compound	80°C ETPR compound for water blocking protection
Shield	Corrugated 8 mil aluminum tape covered by a corrugated bare 6 mil steel tape; both inner and outer surfaces of the tapes are flooded to provide a moisture barrier and inhibit corrosion

Series 51 Optical Fiber Specifications	
Construction	Single loose tube design features optical fibers placed inside a PFM™ gel filled tube
Fiber Type	RWP SMF (other fiber types available)
Fiber Count	Up to 8 optical fiber bundles, each containing up to 12-fiber within a color coded binder
Strength Members	Core is helically wrapped with dielectric water blocking strength members

Composite Specifications	
Single Jacket Design	Copper and fiber independent cables are simultaneously jacketed in a polyethylene outer jacket with a rip cord included for ease of entry Web connects the cables and can be easily split to direct the cables to different locations
Standards Compliance	Copper and fiber cables meet applicable Telcordia Specifications (GR-421-Core, GR-20 Core)

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

Part Numbers and Physical Characteristics

Part Number	Copper Pair Count	Fiber Count	Fiber Type	Copper Component Nominal Diameter in (mm)	Fiber Component Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Quantity ft
5V0063061	6	6	RWP SMF	0.45 (11)	0.37 (9)	176 (262)	14,800′ Reel
5V0063121	12	6	RWP SMF	0.56 (14)	0.37 (9)	234 (348)	14,800′ Reel
5V0123121	12	12	RWP SMF	0.56 (14)	0.37 (9)	234 (348)	14,800′ Reel
5V0183181	18	18	RWP SMF	0.61 (15)	0.37 (9)	285 (425)	14,800′ Reel
5V0123251	25	12	RWP SMF	0.72 (18)	0.37 (9)	355 (528)	12,700′ Reel
5V0243251	25	24	RWP SMF	0.72 (18)	0.37 (9)	355 (528)	12,700′ Reel

Part numbers listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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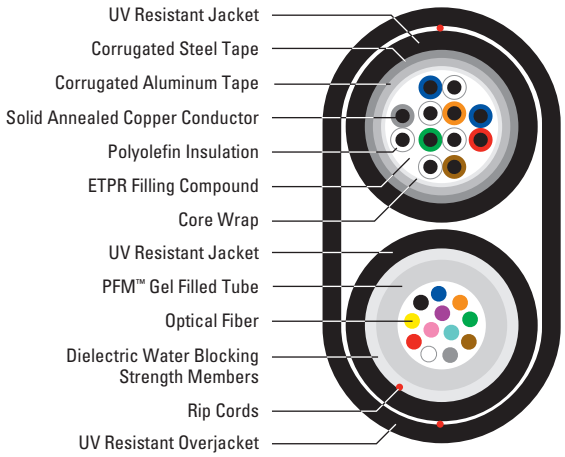
Composite OSP Overjacket

Series 70 OJ



Product Description

Series 70 OJ Cables are designed for Outside Plant (OSP) broadband applications. These cables combine copper and optical fiber 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.

The construction of this product combines an ANAW OSP copper cable and a Series 51 optical fiber cable. These independent cables are encased in an outer jacket with a rip cord included for ease of use.

Applications

- Direct bury, conduit, lashed aerial

Features	Benefits
• Independent fiber and copper cables under one jacket	• Reduces labor cost
• Overjacket design	• Easy separation to different locations
• Optical/Electrical Technology	• Ideal for voice, video and data
• PFM™ gel	• Non-sticky gel reduces installation time and labor cost

Composite Specifications	
Single Jacket Design	Copper and fiber independent cables are encased in an overjacket with a rip cord included for ease of use
Standards Compliance	Copper and fiber cables meet applicable Telcordia Specifications (GR-421-Core, GR-20 Core)

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

ANAW OSP Copper Specifications	
Conductor	22 AWG solid annealed copper
Insulation	Inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin
Core Wrap	Non-hygroscopic
Filling Compound	80°C ETPR compound provides water blocking protection
Shield	Corrugated 8 mil aluminum tape covered by a corrugated bare 6 mil steel tape; both inner and outer surfaces of the tapes are flooded to provide a moisture barrier and inhibit corrosion

Series 51 Optical Fiber Specifications	
Construction	Single loose tube design features optical fibers placed inside a PFM™ gel filled tube
Fiber Type	RWP SMF (other fiber types available)
Fiber Count	Up to 8 optical fiber bundles, each containing up to 12-fiber within a color coded binder
Strength Members	Core is helically wrapped with dielectric water blocking strength members

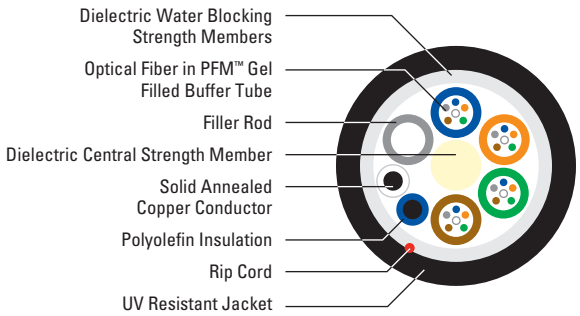
Part Numbers and Physical Characteristics

Part Number	Copper Pair Count	Fiber Count	Fiber Type	Copper Component Nominal Diameter in (mm)	Fiber Component Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Quantity ft
70-425-18	36	18	RWP SMF	0.76 (19)	0.37 (9)	443 (658)	11,100' Reel
70-425-36	36	36	RWP SMF	0.76 (19)	0.37 (9)	443 (658)	11,100' Reel
70-065-24	50	24	RWP SMF	0.88 (22)	0.37 (9)	546 (811)	8,900' Reel
70-065-48	50	48	RWP SMF	0.88 (22)	0.37 (9)	546 (811)	8,900' Reel
70-067-36	75	36	RWP SMF	1.00 (25)	0.37 (9)	724 (1,077)	6,000' Reel
70-067-72	75	72	RWP SMF	1.00 (25)	0.51 (13)	734 (1,092)	6,000' Reel
70-069-48	100	48	RWP SMF	1.15 (29)	0.37 (9)	895 (1,331)	6,000' Reel
70-069-72	100	72	RWP SMF	1.15 (29)	0.51 (13)	924 (1,374)	6,000' Reel
70-071-72	150	72	RWP SMF	1.34 (34)	0.51 (13)	1,260 (1,874)	3,000' Reel
70-071-96	150	96	RWP SMF	1.34 (34)	0.51 (13)	1,260 (1,874)	3,000' Reel
70-073-96	200	96	RWP SMF	1.50 (38)	0.51 (13)	1,615 (2,403)	2,500' Reel

Part numbers listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

Composite Round CF

Series L



Product Description

Series L Cables combine the attributes of optical fiber and copper technologies in a single cable. Designed for Outside Plant (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 twisted pairs
- Various cable designs
- PFM™ gel

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
- Non-sticky gel reduces installation time and labor cost

Specifications	
Construction	Loose tube, single jacket
Fiber Type	RWP SMF (other fiber types available)
Maximum Tensile Load lbs (N)	Install: 600 (2,700) Long Term: 200 (890)
Standards Compliance	Copper and fiber cables meet applicable Telcordia and RDUP specifications RoHS-compliant

Note

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

Electrical Specifications

Conductor Size AWG (mm)	Conductor DC Resistance @ 68°F Maximum Individual Ohms/mile (Ohms/km)	Resistance Unbalance Maximum Individual Pair %	Dielectric Strength DC Potential – Volts Minimum Conductor to Conductor	Maximum Voltage	Maximum Amperage/ Conductor
22 (0.64)	91.0 (56.6)	5.0	5,000	150 vDC	1.0 A

Part Numbers and Physical Characteristics

Part Number	Copper Pair Count	Fiber Count	Fiber Type	Optional Shield	Filling Compound	Length Marking	Nominal O.D. in (mm)	Appox. Weight lbs/kft (kg/km)
11024C02Q	1	24	RWP SMF	-	dry	feet	0.43 (10.85)	58 (86)
11024D01Q	2	24	RWP SMF	-	flood	meters	0.43 (10.85)	69 (103)
12024D01Q	6	24	RWP SMF	Single Armor	dry	feet	0.60 (16.05)	156 (232)
12024D02Q	2	24	RWP SMF	Single Armor	flood	meters	0.48 (12.20)	107 (160)

Part number listed are RWP single mode optical fiber only. Other fiber types are available.
See the "Optical Fiber Selection Chart" in the "TECHNICAL INFO" section for detailed fiber type specifications.

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ABAM (600B) and ABMM Series Central Office

Product Description

The ABAM (600B) and ABMM Series Central Office (CO) Cables are designed for use between switching and transmission equipment for distances up to 650 feet. The ABAM (600B) 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 Electromagnetic Interference (EMI) reduction.

Applications

- T1/DS1
- T1C/DS1C
- DS2
- 4 Mbps token ring (IEEE 802.5)
- 10 Mbps 10BASE-T ethernet (IEEE 802.3)

Specifications	
Conductor	Tinned copper
AWG (mm)	ABAM: 22 (0.6) ABMM: 24 (0.5)
Insulation	PE/PVC
Shield	Corrugated 8 mil aluminum bonded to the outer jacket
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Package	Reel
Performance Compliance	Telcordia GR-137 (select sections) Telcordia GR-111 UL 444 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 3 UL Listed CMR

Features	Benefits
• 22 and 24 AWG tinned copper conductors	• Low attenuation, enabling longer run length; tinned copper conductors minimize change in wire-wrap joint resistance
• 100 Ohm nominal Impedance	• Impedance mismatch with Outside Plant (OSP) cables is minimized
• 0.008 inch corrugated aluminum shield	• Higher EMI isolation over foil shields; great mechanical strength
• CMR listed	• Suitable for horizontal and vertical installations
• CAT 3 compliant	• Suitable for network applications
• Band marked conductors	• Easy identification of conductor ring mates
• Rip cord	• Added ease of jacket removal

Part Numbers and Physical Characteristics

Part Number	Product Code	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
ABAM					
55-399-25	606B	6	0.42 (11)	87 (129)	10,000 (3,048)
55-499-25	607B	12	0.50 (13)	132 (196)	7,000 (2,135)
55-599-25	608B	16	0.55 (14)	159 (237)	7,000 (2,135)
55-799-25	609B	25	0.65 (17)	224 (333)	5,000 (1,524)
55-899-25	616B	28	0.68 (17)	244 (363)	7,500 (2,285)
55-999-25	613B	30	0.69 (18)	257 (382)	5,000 (1,524)
55-A99-25	615B	32	0.71 (18)	270 (402)	5,000 (1,524)
55-B99-25	610B	50	0.84 (21)	383 (570)	7,500 (2,285)
55-C99-25	618B	56	0.88 (22)	420 (625)	3,000 (915)
55-D99-25	612B	75	1.02 (26)	561 (835)	3,000 (915)
55-E99-25	611B	100	1.14 (29)	711 (1,058)	7,500 (2,285)
ABMM					
55-799-24	-	25	0.57 (15)	164 (244)	10,000 (3,048)
55-B99-24	-	50	0.73 (19)	276 (411)	10,000 (3,048)
55-E99-24	-	100	0.99 (25)	505 (725)	10,000 (3,048)
55-V99-24	-	600	2.10 (53)	2,378 (3,539)	1,000 (305)
55-W99-24	-	900	2.51 (64)	3,456 (5,143)	1,000 (305)

Electrical Specifications

Frequency MHz	Attenuation @ 68˚F (20˚C) Maximum Guaranteed dB/100 m	PSNEXT Minimum Guaranteed dB/100 m	Minimum SRL dB/100 m
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 Maximum ns/100 m	DC Resistance Maximum Ohms/100 m	Resistance Unbalance Maximum %
100 ± 15	45	9.38	5

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Product Description

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

Applications

- T1/DS1
- T1C/DS1C
- DS2

Features	Benefits
• 26 AWG tinned copper conductors	• Small diameter and light weight result in smaller cable bundles and easier handling; tinned copper conductors minimize change in wire-wrap joint resistance
• Solid Polyolefin insulation	• Greater crush resistance and improved transmission characteristics
• 100 Ohm nominal Impedance	• Impedance mismatch with Outside Plant (OSP) cables is minimized
• Short pair lays/tight twists	• Improved crosstalk performance and pair identification
• Dual aluminum foil shields	• Higher EMI isolation over a single foil shield
• Tinned copper drain wire	• Easier termination and superior grounding
• CMR listed	• Suitable for horizontal and riser installations
• Rip cord	• Added ease of jacket removal
• Solid color insulation	• Easy identification of conductor ring mates

Specifications	
Conductor	Tinned copper
AWG (mm)	26 (0.4)
Insulation	Solid polyolefin
Shield	Dual aluminum foil
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Package	Reel
Standards Compliance	Telcordia GR-137-CORE Telcordia GR-499-CORE (Pulse shape compliance at 450 feet) UL 444 CMR 2002/95/EC RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
55-299-20	4	0.24 (6.1)	27 (40)	10,000 (3,048)
55-399-20	6	0.27 (6.9)	33 (49)	10,000 (3,048)
55-499-20	12	0.33 (8.4)	50 (74)	7,000 (2,133)
55-599-20	16	0.37 (9.4)	65 (97)	7,000 (2,133)
55-699-20	20	0.40 (10)	75 (112)	5,000 (1,524)
55-799-20	25	0.43 (11)	88 (131)	5,000 (1,524)
55-899-20	28	0.42 (11)	93 (138)	5,000 (1,524)
55-999-20	30	0.45 (11)	101 (150)	4,000 (1,219)
55-A99-20	32	0.46 (12)	105 (156)	4,000 (1,219)
55-B99-20	50	0.55 (14)	153 (228)	3,000 (914)
55-E99-20	100	0.73 (19)	277 (412)	3,000 (914)

Electrical Specificatons

Frequency MHz	PSNEXT Mean dB		PSNEXT Worst Pair dB	
	Minimum	Typical	Minimum	Typical
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)				Conductor DC Resistance @ 68˚F (20˚C) Maximum Individual Ohms/kft (Ohms/km)	Mutual Capacitance Nominal pF/ft (pF/m)	Characteristic Impedance @ 0.772 MHz Ohms
Bit Rate Mb/s	Frequency MHz	Maximum Average* dB/kft (dB/100 m)	Typical dB/kft (dB/100 m)			
1.544	0.772	7.8 (2.6)	6.4 (2.1)	46.1 (151)	16 (52)	102 ± 15.3

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

1161A Series Category 3 Central Office

Product Description

The 1161A Series Central Office (CO) Cables are designed for use between switching and transmission equipment, spanning distances up to 565 feet. With short twist lays, 1161A series offers superior crosstalk performance over standard telephone cable. It is manufactured with a foil shield for Electromagnetic Interference (EMI) reduction. The 1161A series meets or exceeds all applicable requirements of Telcordia GR-137 specifications.

Applications

- T1/DS1
- T1C/DS1C
- DS2

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

- Small diameter and light weight 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 (OSP) 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

Specifications	
Conductor	Tinned copper
AWG (mm)	24 (0.5)
Insulation	Polyolefin
Shield	Aluminum foil
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Package	Reel
Performance Compliance	Telcordia GR-137-CORE Telcordia GR-499-CORE (Pulse shape compliance at 565 feet) UL 444 ANSI/TIA-568-C.2 2002/95/EC RoHS-compliant
NRTL Programs	UL Verified CAT 3 UL Listed CMR

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
55-299-21	4	0.26 (6.6)	27 (40)	10,000 (3,048)
55-399-21	6	0.27 (6.9)	35 (52)	10,000 (3,048)
55-F99-21	8	0.35 (8.9)	45 (67)	10,000 (3,048)
55-499-21	12	0.35 (8.9)	58 (86)	7,000 (2,133)
55-L99-21	14	0.38 (9.7)	70 (104)	7,000 (2,133)
55-599-21	16	0.41 (10)	77 (115)	7,000 (2,133)
55-699-21	20	0.44 (11)	93 (139)	20,000 (6,096)
55-799-21	25	0.48 (12)	112 (167)	5,000 (1,524)
55-899-21	28	0.51 (13)	123 (183)	5,000 (1,524)
55-999-21	30	0.53 (14)	135 (201)	5,000 (1,524)
55-A99-21	32	0.55 (14)	143 (213)	4,000 (1,219)
55-B99-21	50	0.66 (17)	210 (313)	3,000 (914)
55-E99-21	100	0.89 (23)	389 (579)	1,000 (305)

Electrical Specificatons

Frequency MHz	PSNEXT Mean dB		PSNEXT Worst Pair dB	
	Minimum	Typical	Minimum	Typical
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)				Conductor DC Resistance @ 68˚F (20˚C) Maximum Individual Ohms/kft (Ohms/km)	Mutual Capacitance Nominal pF/ft (pF/m)	Characteristic Impedance @ 0.772 MHz Ohms
Bit Rate Mb/s	Frequency MHz	Maximum Average* dB/kft (dB/100 m)	Typical dB/kft (dB/100 m)			
1.544	0.772	6.3 (2.1)	5.4 (1.8)	28.6 (93.8)	16 (52)	102 ± 15.3

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

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Product Description

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

Applications

- T1/DS1
- T1C/DS1C
- DS2

Features	Benefits
• 22 AWG tinned copper conductors	• Low attenuation, enabling longer run length; tinned copper conductors minimize change in wire-wrap joint resistance
• Solid Polyolefin insulation	• Greater crush resistance and improved transmission characteristics; smaller cable over dual insulated type
• 100 Ohm nominal Impedance	• Impedance mismatch with Outside Plant (OSP) cables is minimized
• Dual aluminum foil shield	• Higher EMI isolation over a single foil shield; smaller cable diameter than 600B Series cables
• Tinned copper drain wire	• Easier termination and superior grounding
• CMR listed	• Suitable for horizontal and riser installations
• Rip cord	• Added ease of jacket removal
• Band marked	• Easy identification of conductor ring mates

Specifications	
Conductor	Tinned copper
AWG (mm)	22 (0.6)
Insulation	Polyolefin
Shield	Dual aluminum foil
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Package	Reel
Standards Compliance	Telcordia GR-137-CORE Telcordia GR-499-CORE (Pulse shape compliance at 650 feet) UL 444 CMR 2002/95/EC RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Product Code	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
55-299-38	605C	4	0.29 (7.4)	40 (60)	10,000 (3,048)
55-399-38	606C	6	0.32 (8.1)	52 (77)	10,000 (3,048)
55-499-38	607C	12	0.41 (10)	89 (132)	7,000 (2,133)
55-599-38	608C	16	0.47 (12)	118 (176)	7,000 (2,133)
55-699-38	617C	20	0.50 (13)	141 (210)	5,000 (1,524)
55-799-38	609C	25	0.55 (14)	172 (256)	5,000 (1,524)
55-899-38	616C	28	0.58 (15)	189 (281)	5,000 (1,524)
55-999-38	613C	30	0.60 (15)	201 (299)	5,000 (1,524)
55-A99-38	615C	32	0.61 (16)	213 (317)	5,000 (1,524)
55-B99-38	610C	50	0.74 (19)	324 (482)	3,000 (914)
55-C99-38	618C	56	0.78 (20)	359 (534)	3,000 (914)

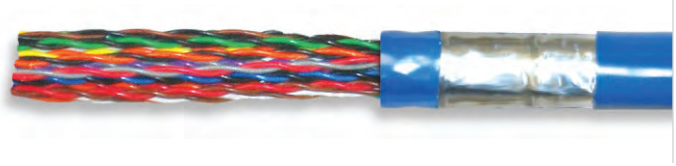
Electrical Specificatons

Frequency MHz	PSNEXT Mean dB		PSNEXT Worst Pair dB	
	Minimum	Typical	Minimum	Typical
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)				Conductor DC Resistance @ 68˚F (20˚C) Maximum Individual Ohms/kft (Ohms/km)	Mutual Capacitance Nominal pF/ft (pF/m)	Characteristic Impedance @ 0.772 MHz Ohms
Bit Rate Mb/s	Frequency MHz	Maximum Average* dB/kft (dB/100 m)	Typical dB/kft (dB/100 m)			
1.544	0.772	5.0 (1.6)	4.0 (1.3)	18 (59.1)	16 (52)	102 ± 15.3

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

25-Pair Category 5e Shielded CMR



Product Description

This 25-pair, 24 AWG, Category 5e Tin Copper Shielded Cable is utilized to connect equipment within a remote terminal cabinet or within a Central Office (CO). 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, the combination 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 Electromagnetic Interference (EMI) reduction and added protection for the twisted pairs.

Applications

- Remote terminal connecting cable
- Central Office cable

Features

- Small outside diameter
- Vibrant insulation colors
- Performance compliance with ANSI/TIA-568-C.2 specification

Benefits

- Facilitates routing within a remote terminal
- Easier identification of conductors
- Provides cost-effective solution

Specifications	
Conductor	Tinned copper
AWG (mm)	24 (0.5)
Insulation	Polyolefin
Shield	Aluminum foil
Jacket	Flame retardant PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Input Impedance (Ohms)	100 ± 15 @ 1-100 MHz
Nominal Velocity of Propagation (%)	69
Performance Compliance	UL 444 ANSI/TIA-568-C.2 RoHS-compliant
NRTL Programs	UL Verified CAT 5e UL Listed CMR

Part Numbers and Physical Characteristics

Part Number	Pair Count	Jacket Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
55-779-19	25	Green	0.57 (15)	145 (216)	5,000' Reel
55-789-19	25	Gray	0.57 (15)	145 (216)	5,000' Reel
55-799-19	25	Blue	0.57 (15)	145 (216)	5,000' Reel

Electrical Specifications

Frequency MHz	Attenuation @ 68°F (20°C) Maximum dB/100 m		NEXT Minimum dB/100 m		ACR Minimum dB/100 m		PSNEXT Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.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	PSACR Minimum dB/100 m		Return Loss Minimum dB/100 m		ELFEXT Minimum dB/100 m		PSELFEXT Minimum dB/100 m	
	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.2	Superior Essex	TIA-568-C.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

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Switchboard 100 Ohm Central Office

Product Description

Switchboard 100 Central Office (CO) Cables are designed for indoor use in CO exchanges, or in premises telephone rooms. These cables are 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 or 26 AWG tinned insulated copper wires that are twisted into pairs. The pairs are stranded together utilizing a standard color code scheme.

Applications

- T1/DS1
- T1C/DS1C
- 4 Mbps token ring (IEEE 802.5)
- 10 Mbps 10BASE-T ethernet (IEEE 802.3)

Specifications	
Conductor	Tinned copper
AWG (mm)	Available in 24 (0.5) and 26 (0.4)
Insulation	PVC
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Standards Compliance	Telcordia GR-137-CORE (select sections) RoHS-compliant

Features	Benefits
• 100 Ohm nominal Impedance	• Impedance mismatch with Outside Plant (OSP) cables is minimized
• Tinned copper conductors	• Minimize change in wire-wrap joint resistance
• CMR listed	• Suitable for horizontal and riser installations
• Rip cord	• Added ease of jacket removal
• Band marked	• Easy identification of conductor ring mates

Electrical Specifications

Conductor Size AWG (mm)	Conductor DC Resistance @ 68°F (20°C) Maximum Individual Ohms/kft (Ohms/km)	Mutual Capacitance Nominal pF/ft (pF/m)	Characteristic Impedance @ 1 MHz Ohms	Maximum Average Attenuation* @ 0.772 MHz @ 68°F (20°C) dB/kft (dB/km)
24 (0.5)	28.6 (93.8)	20 (66)	100 ± 15	6.3 (20)
26 (0.4)	46.1 (151)	20 (66)	100 ± 15	7.8 (25)

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

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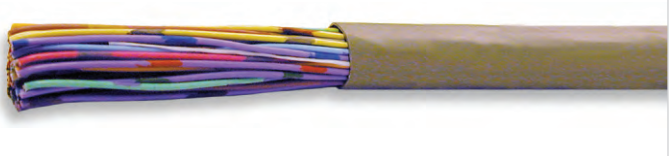
Part Numbers and Physical Characteristics							
Part Number	Product Code	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
55-041-23	TIW 2/24	2	24 (0.5)	0.14 (4)	10 (15)	1,000 (305)	POP™ Box
55-021-23	TIW 2/24	2	24 (0.5)	0.14 (4)	10 (15)	5,000 (1,524)	Reel
55-141-23	TIW 3/24	3	24 (0.5)	0.17 (4)	14 (21)	1,000 (305)	POP™ Box
55-241-23	TIW 4/24 or 286A	4	24 (0.5)	0.18 (5)	18 (27)	1,000 (305)	POP™ Box
55-341-23	TIW 6/24 or 252A	6	24 (0.5)	0.22 (6)	26 (39)	1,000 (305)	POP™ Box
55-F31-23	294A	8	24 (0.5)	0.24 (7)	33 (49)	1,000 (305)	Reel
55-G99-23	TIW 10/24 or 253A	10	24 (0.5)	0.25 (7)	40 (60)	7,000 (2,133)	Reel
55-499-23	TIW 12/24 or 265A	12	24 (0.5)	0.28 (7)	49 (73)	7,000 (2,133)	Reel
55-599-23	TIW 16/24	16	24 (0.5)	0.32 (8)	64 (95)	7,000 (2,133)	Reel
55-699-23	255A	20	24 (0.5)	0.35 (9)	78 (116)	5,000 (1,524)	Reel
55-N99-23	266A	24	24 (0.5)	0.38 (10)	92 (137)	5,000 (1,524)	Reel
55-799-23	TIW 25/24	25	24 (0.5)	0.39 (10)	96 (143)	5,000 (1,524	Reel
55-899-23	TIW 28/24	28	24 (0.5)	0.41 (10)	107 (159)	5,000 (1,524)	Reel
55-A99-23	TIW 32/24	32	24 (0.5)	0.43 (11)	121 (180)	5,000 (1,524)	Reel
55-P99-23	269A	36	24 (0.5)	0.46 (12)	135 (201)	5,000 (1,524)	Reel
55-Q99-23	257A	40	24 (0.5)	0.48 (12)	149 (222)	5,000 (1,524)	Reel
55-B99-23	TIW 50/24 or 270A	50	24 (0.5)	0.53 (13)	184 (274)	3,000 (914)	Reel
11-003-55*	-	50	24 (0.5)	0.53 (13)	184 (274)	3,000 (914)	Reel
55-S99-23	267A	72	24 (0.5)	0.65 (17)	276 (411)	3,000 (914)	Reel
55-D99-23	TIW 75/24	75	24 (0.5)	0.67 (17)	286 (426)	2,000 (609)	Reel
55-E99-23	TIW 100/24 or 262A	100	24 (0.5)	0.77 (20)	374 (557)	1,000 (305)	Reel
11-003-47*	-	100	24 (0.5)	0.77 (20)	374 (557)	1,000 (305)	Reel
55-U99-23	287A	120	24 (0.5)	0.83 (21)	445 (662)	1,000 (305)	Reel
55-M99-23	TIW 125/24	125	24 (0.5)	0.85 (22)	462 (688)	1,000 (305)	Reel
55-275-26	812A	4	26 (0.4)	0.15 (4)	13 (19)	5,000 (1,524)	Reel
55-399-26	816A	6	26 (0.4)	0.18 (5)	17 (25)	5,000 (1,524)	Reel
55-F99-26	811A	8	26 (0.4)	0.19 (5)	22 (33)	5,000 (1,524)	Reel
55-G99-26	820A	10	26 (0.4)	0.20 (6)	27 (40)	5,000 (1,524)	Reel
55-599-26	807A	16	26 (0.4)	0.25 (7)	41 (61)	5,000 (1,524)	Reel
55-699-26	800A	20	26 (0.4)	0.29 (7)	53 (79)	5,000 (1,524)	Reel
55-799-26	824A	25	26 (0.4)	0.31 (8)	65 (97)	5,000 (1,524)	Reel
55-A99-26	808A	32	26 (0.4)	0.35 (9)	81 (121)	5,000 (1,524)	Reel
55-Q99-26	803A	40	26 (0.4)	0.39 (10)	100 (149)	5,000 (1,524)	Reel
55-P99-26	822A	48	26 (0.4)	0.42 (11)	118 (176)	5,000 (1,524)	Reel
55-B99-26	813A	50	26 (0.4)	0.43 (11)	123 (183)	5,000 (1,524)	Reel
55-R99-26	809A	64	26 (0.4)	0.48 (12)	154 (229)	5,000 (1,524)	Reel
55-K99-26	823A	96	26 (0.4)	0.58 (15)	228 (339)	5,000 (1,524)	Reel
55-E99-26	806A	100	26 (0.4)	0.61 (16)	236 (351)	5,000 (1,524)	Reel
55-H99-26	810A	128	26 (0.4)	0.69 (18)	316 (470)	5,000 (1,524)	Reel
55-L99-26	814A	144	26 (0.4)	0.73 (19)	353 (525)	5,000 (1,524)	Reel

**25-pair unit design*
Note: Standard USA Color Code Scheme

Switchboard 100 Ohm Central Office

200A/800A Series (Canadian Color Code)



Product Description

The 200A and 800A Series Central Office (CO) Cables are designed for indoor use in central offices or in premises 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, the 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. Some cable sizes contain "spare pairs." The core is covered by a gray PVC jacket. The 200A and 800A series meet or exceed all applicable requirements of Telcordia GR-137.

Applications

- T1/DS1
- T1C/DS1C

Features	Benefits
• 24 and 26 AWG tinned copper conductors	• Small diameter and light weight result in smaller cable bundles and easier handling; tinned copper conductors minimize change in wire-wrap joint resistance
• Solid PVC insulation	• Greater crush resistance and improved transmission characteristics
• 100 Ohm nominal impedance	• Impedance mismatch with Outside Plant (OSP) cables is minimized
• Standard pair lays	• Improved crosstalk performance and pair identification
• CMR listed	• Suitable for horizontal and riser installations
• Non-shielded design	• Lower cost
• Rip cord	• Added ease of jacket removal

Specifications	
Conductor	Tinned copper
AWG (mm)	Available in 24 (0.5) and 26 (0.4)
Insulation	PVC
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Package	Reel
Standards Compliance	Telcordia GR-137-CORE (select sections) UL 444 CMR RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Product Code	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
55-399-46	252A	6	24 (0.5)	0.22 (5.6)	26 (39)	3,000 (915)
55-699-46	255A	20	24 (0.5)	0.35 (8.9)	78 (116)	3,000 (915)
55-E99-46	262A	101.5	24 (0.5)	0.82 (21)	383 (570)	400 (120)
55-G99-46	253A	10	24 (0.5)	0.31 (7.9)	44 (65)	3,000 (915)
55-N99-46	266A	24	24 (0.5)	0.42 (11)	94 (140)	1,200 (365)
55-P99-46	269A	36	24 (0.5)	0.44 (11)	134 (199)	1,000 (305)
55-599-47	807A	17	26 (0.4)	0.26 (6.6)	47 (70)	3,000 (915)
55-A99-47	808A	33	26 (0.4)	0.37 (9.4)	86 (128)	2,000 (610)
55-E12-47	850A	100	26 (0.4)	0.65 (17)	265 (394)	2,000 (610)
55-R99-47	809A	66	26 (0.4)	0.51 (13)	164 (244)	1,325 (405)
55-H99-47	810A	132	26 (0.4)	0.67 (17)	330 (491)	700 (215)
55-Y99-47	821A	52	26 (0.4)	0.45 (11)	131 (195)	1,100 (335)
55-N99-47	824A	25	26 (0.4)	0.32 (8.1)	66 (98)	2,400 (730)
55-E99-47	806A	103	26 (0.4)	0.65 (17)	265 (394)	1,000 (305)

Note: Standard Canadian Color Scheme

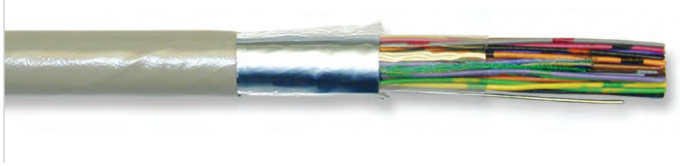
Electrical Specifications

Conductor Size AWG (mm)	Conductor DC Resistance @ 68°F (20°C) Maximum Individual Ohms/kft (Ohms/km)	Mutual Capacitance Nominal pF/ft (pF/m)	Characteristic Impedance @ 1 MHz Ohms	Maximum Average Attenuation* @ 0.772 MHz @ 68°F (20°C) dB/kft (dB/km)
24 (0.5)	28.6 (93.8)	20 (66)	100 ± 15	6.3 (20.7)
26 (0.4)	46.1 (151)	20 (66)	100 ± 15	7.8 (25.6)

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

Product Description

The T100 Series Central Office (CO) Cables are designed for use between switching and transmission equipment for distances up to 450 feet. They are manufactured with a longitudinal aluminum-polyester foil shield with aluminum facing the jacket for additional Electromagnetic Interference (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 series meets or exceeds all applicable requirements of Telcordia GR-137 specifications.



Applications

- T1/DS1
- T1C/DS1C

Features	Benefits
• 24 AWG tinned copper conductors	• Small diameter and light weight result in smaller cable bundles and easier handling; tinned copper conductors minimize change in wire-wrap joint resistance
• CMR listed	• Suitable for horizontal and riser installations
• Solid PVC insulation	• Greater crush resistance and improved transmission characteristics
• 100 Ohm nominal impedance	• Impedance mismatch with Outside Plant (OSP) cables is minimized
• Standard pair lays	• Improved crosstalk performance and pair identification
• Longitudinal aluminum/polyester foil shield with aluminum facing the jacket	• EMI isolation
• 24 AWG tinned copper drain wire	• Easier termination and superior grounding
• Rip cord	• Added ease of jacket removal
• Band marked	• Easy pair identification

Specifications	
Conductor	Tinned copper
AWG (mm)	24 (0.5)
Insulation	PVC
Shield	Aluminum/polyester foil
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Package	Reel
Standards Compliance	Telcordia GR-137-CORE (select sections) UL 444 CMR (pulse shape compliance at 450 feet) RoHS-compliant

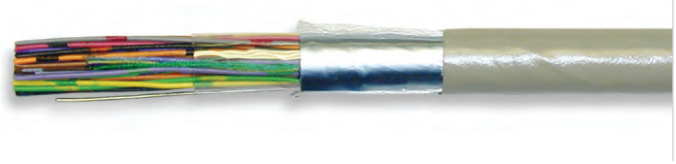
Part Numbers and Physical Characteristics

Part Number	Product Code	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
55-399-43	T106	6	0.30 (7.6)	37 (55)	6,644 (2,025)
55-F99-43	T108	8	0.31 (7.9)	45 (67)	5,578 (1,700)
55-499-43	T112	12	0.34 (8.6)	59 (88)	6,644 (2,025)
55-599-43	T116	16	0.36 (9.1)	74 (110)	6,644 (2,025)
55-699-43	T120	20	0.41 (10)	91 (135)	5,315 (1,620)
55-799-43	T125	25	0.43 (11)	106 (158)	5,315 (1,620)
55-899-43	T128	28	0.44 (11)	114 (170)	5,000 (1,524)
55-999-43	T130	30	0.44 (11)	121 (180)	4,429 (1,350)
55-A99-43	T132	32	0.47 (12)	131 (195)	3,937 (1,200)

Electrical Specifications

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

Switchboard 85 and Shielded Switchboard 85



Product Description

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

Applications

- T1/DS1
- T1C/DS1C

Features	Benefits
Shielded Switchboard (SSWBD)	
• Aluminum foil shield	• EMI isolation
• Tinned copper drain wire	• Easier termination and superior grounding
• Tinned copper conductors	• Minimize change in wire-wrap joint resistance
• CMR listed	• Suitable for horizontal and riser installations
• Rip cord	• Added ease of jacket removal
• Band marked	• Easy identification of conductor ring mates
Unshielded Switchboard (SWBD)	
• Tinned copper conductors	• Minimize change in wire-wrap joint resistance
• CMR listed	• Suitable for horizontal and riser installations
• Rip cord	• Added ease of jacket removal
• Band marked	• Easy identification of conductor ring mates

Specifications	
Conductor	Tinned copper
AWG (mm)	24 (0.5)
Insulation	PVC
Jacket	Gray PVC
Jacket Marking	Printed at 2 foot intervals on the jacket; information includes product identification, pair count, UL information and sequential lengths in feet and meters
Shield	Aluminum/polyester (if appicable)
Package	Reel
Standards Compliance	UL 444 CMR RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
Shielded Switchboard (SSWBD)				
02-201-61	25	0.35 (8.9)	88 (131)	1,000 (305)
02-097-61	25	0.35 (8.9)	88 (131)	5,000 (1,524)
02-203-61	25	0.35 (8.9)	88 (131)	2,000 (610)
02-098-61	32	0.41 (10)	113 (168)	5,000 (1,524)
02-100-61	50	0.48 (12)	167 (249)	5,000 (1,524)
02-104-61	100	0.63 (16)	314 (467)	5,000 (1,524)
Unshielded Switchboard (SWBD)				
02-840-10	6	0.18 (4.6)	22 (33)	1,000 (305)
02-810-10	6	0.18 (4.6)	22 (33)	5,000 (1,524)
02-841-10	12	0.24 (6.1)	41 (61)	1,000 (305)
02-811-10	12	0.24 (6.1)	41 (61)	5,000 (1,524)
02-431-10	25	0.31 (7.9)	79 (118)	1,000 (305)
02-815-10	25	0.31 (7.9)	79 (118)	5,000 (1,524)
02-832-10	32	0.36 (9.1)	100 (149)	5,000 (1,524)
02-813-10	50	0.45 (11)	157 (234)	5,000 (1,524)
02-820-10	100	0.60 (15)	302 (449)	5,000 (1,524)

Electrical Specifications

Product	Conductor DC Resistance @ 68°F (20°C) Maximum Individual Ohms/kft (Ohms/km)	Mutual Capacitance Nominal pF/ft (pF/m)	Characteristic Impedance @ 1 MHz Ohms	Attenuation Nominal @ 0.772 MHz @ 68°F (20°C) dB/kft (dB/km)
SSWBD	28.6 (93.8)	20 (66)	85 ± 15	11 (36)
SWBD	28.6 (93.8)	20 (66)	85 ± 15	11 (36)

Product Description

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

Applications

- Normal use

Features

- Solid tinned copper conductors in 22 AWG (0.6 mm) or 24 AWG (0.5 mm) are insulated with semi-rigid polyvinylchloride (PVC)
- Each insulated conductor is identified by a solid insulation color

Benefits

- Facilitates wire wrapping and tight connections
- Easy identification

Specifications	
Conductor	Tinned copper
AWG (mm)	Available in 22 (0.6) and 24 (0.5)
Insulation	Semi-rigid PVC
Standards Compliance	UL 444 CM GR 136 CORE (normal use) RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Number of Conductors	AWG (mm)	Insulation Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-001-11	1	22 (0.6)	Red	0.04 (1.0)	2 (3)	750 m Spool
12-002-11	1	22 (0.6)	White	0.04 (1.0)	2 (3)	750 m Spool
12-003-11	1	22 (0.6)	Green	0.04 (1.0)	2 (3)	750 m Spool
12-004-11	1	22 (0.6)	Black	0.04 (1.0)	2 (3)	750 m Spool
12-303-13	1	22 (0.6)	Green	0.04 (1.0)	2 (3)	1,000 m Spool
12-326-11	1	22 (0.6)	Brown	0.04 (1.0)	2 (3)	3,000′ Spool
12-001-12	2	22 (0.6)	Red/Green	0.08 (2.0)	5 (7)	500 m Spool
12-003-12	2	22 (0.6)	Blue/White	0.08 (2.0)	5 (7)	500 m Spool
12-004-12	2	22 (0.6)	Brown/Blue	0.08 (2.0)	5 (7)	500 m Spool
12-005-12	2	22 (0.6)	Black/White	0.08 (2.0)	5 (7)	500 m Spool
12-001-13	2	22 (0.6)	Red/White	0.08 (2.0)	5 (7)	305 m Spool
12-003-13	2	22 (0.6)	Blue/White	0.08 (2.0)	5 (7)	1,000′ Spool
12-005-13	2	22 (0.6)	Black/White	0.08 (2.0)	5 (7)	1,000′ Spool
12-101-13	2	24 (0.5)	Red/White	0.08 (2.0)	4 (6)	1,000′ Spool
12-102-13	2	24 (0.5)	Red/Yellow	0.08 (2.0)	4 (6)	1,000′ Spool
12-103-13	2	24 (0.5)	White/Blue	0.08 (2.0)	4 (6)	1,000′ Spool
12-104-13	2	24 (0.5)	Violet/Blue	0.08 (2.0)	4 (6)	305 m Spool
12-105-13	2	24 (0.5)	Black/White	0.08 (2.0)	4 (6)	1,000′ Spool
12-106-13	2	24 (0.5)	Red/White	0.08 (2.0)	4 (6)	6,000′ Spool
12-107-13	2	24 (0.5)	Black/White	0.08 (2.0)	4 (6)	6,000′ Spool
12-108-13	2	24 (0.5)	White/Blue	0.08 (2.0)	4 (6)	6,000′ Spool
12-109-13	2	24 (0.5)	Yellow/Blue	0.08 (2.0)	4 (6)	6,000′ Spool
12-112-13	2	24 (0.5)	Red/White	0.08 (2.0)	4 (6)	3,000′ Parallel Cone
12-203-13	2	22 (0.6)	Blue/White	0.08 (2.0)	5 (7)	400′ Spool
12-304-13	2	22 (0.6)	Brown/Blue	0.08 (2.0)	5 (7)	1,000 m Parallel Cone
12-305-13	2	22 (0.6)	Black/White	0.08 (2.0)	5 (7)	1,000 m Parallel Cone
12-311-13	2	22 (0.6)	Red/Green	0.08 (2.0)	5 (7)	3,000′ Spool
12-313-13	2	22 (0.6)	Blue/White	0.08 (2.0)	5 (7)	3,280′ Parallel Cone
12-318-13	2	22 (0.6)	White/Orange	0.08 (2.0)	5 (7)	3,000′ Spool
12-403-13	2	22 (0.6)	White/Blue	0.08 (2.0)	5 (7)	3,000′ Spool
12-406-13	2	22 (0.6)	Yellow/Violet	0.08 (2.0)	5 (7)	3,000′ Spool
12-501-13	2	22 (0.6)	Red/White	0.08 (2.0)	5 (7)	2,300′ Spool
12-031-12	4	22 (0.6)	Blue/White, Red/Green	0.12 (3.0)	9 (13)	1,640′ Parallel Cone
12-032-13	4	22 (0.6)	Black/White, Black/White	0.12 (3.0)	9 (13)	1,640′ Parallel Cone
12-033-13	4	22 (0.6)	Yellow/Blue, Orange/Brown	0.12 (3.0)	9 (13)	1,640′ Parallel Cone
12-034-13	5	22 (0.6)	Yellow/Blue, Orange/Brown, Green	0.17 (4.3)	13 (20)	500 m Parallel Cone
12-035-13	5	22 (0.6)	Black/White, Black/White, Green	0.17 (4.3)	13 (20)	500 m Parallel Cone

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 (CO). HD-DFW is suitable for use with either a solderless wrap or soldered terminals.

Applications

- High stress use

Features

- Solid tinned copper conductors in 22 AWG (0.6 mm) are insulated with PVC
- Each insulated conductor is identified by a solid insulation color
- Heavy duty insulation

Benefits

- Facilitates solid connections
- Easy identification
- Added protection for long runs

Specifications	
Conductor	Tinned copper
AWG (mm)	22 (0.6)
Insulation	Heavy duty, abrasion resistant PVC
Package	Parallel Cone
Standards Compliance	UL 444 CMR GR-136-CORE (high stress use) Applicable GR-136 Core requirements for high stress applications RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Number of Conductors	Insulation Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
12-201-15	2	White/Blue	0.08 (2.0)	5 (7)	3,000 (914)
12-202-15	2	White/Blue	0.08 (2.0)	5 (7)	574 (175)
12-203-15	2	White/Blue	0.08 (2.0)	5 (7)	3,281 (1,000)
12-204-15	2	White/Green	0.08 (2.0)	5 (7)	3,000 (914)
12-205-15	2	White/Orange	0.08 (2.0)	5 (7)	3,000 (914)
12-206-15	2	White/Red	0.08 (2.0)	5 (7)	3,000 (914)
12-207-15	2	Yellow/Black	0.08 (2.0)	5 (7)	3,000 (914)
12-208-15	2	Yellow/Green	0.08 (2.0)	5 (7)	3,000 (914)
12-209-15	2	Yellow/Orange	0.08 (2.0)	5 (7)	3,000 (914)
12-210-15	2	Black/Orange	0.08 (2.0)	5 (7)	3,000 (914)
12-211-15	2	Orange/Blue	0.08 (2.0)	5 (7)	3,000 (914)
12-216-15	2	Black/Green	0.08 (2.0)	5 (7)	3,000 (914)
12-301-15	3	White/Blue/Red	0.12 (3.0)	7 (10)	2,182 (665)
12-401-15	4	White/Blue, Red/Green	0.12 (3.0)	9 (13)	1,500 (457)
12-402-15	4	Yellow/Blue, Red/Green	0.12 (3.0)	9 (13)	1,500 (457)
12-403-15	4	Yellow/Blue, Red/Green	0.12 (3.0)	9 (13)	328 (100)

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 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 flame retardant PVC insulation. Heavy duty in this application means a higher level of abrasion resistance, higher cut through and a higher temperature rating. The 22 AWG product is intended for use on main distribution frames (conventional type), while the 24 AWG is intended for use on COSMIC (Modular) distributing frames. The product is available on spools.

Applications

- xDSL
- HI-CAP
- T-1/HDSL
- High stress use

Features

- 22 or 24 AWG solid tinned annealed copper
- Heavy duty, high temperature, high stress insulation
- Twisting sufficient to meet xDSL requirements

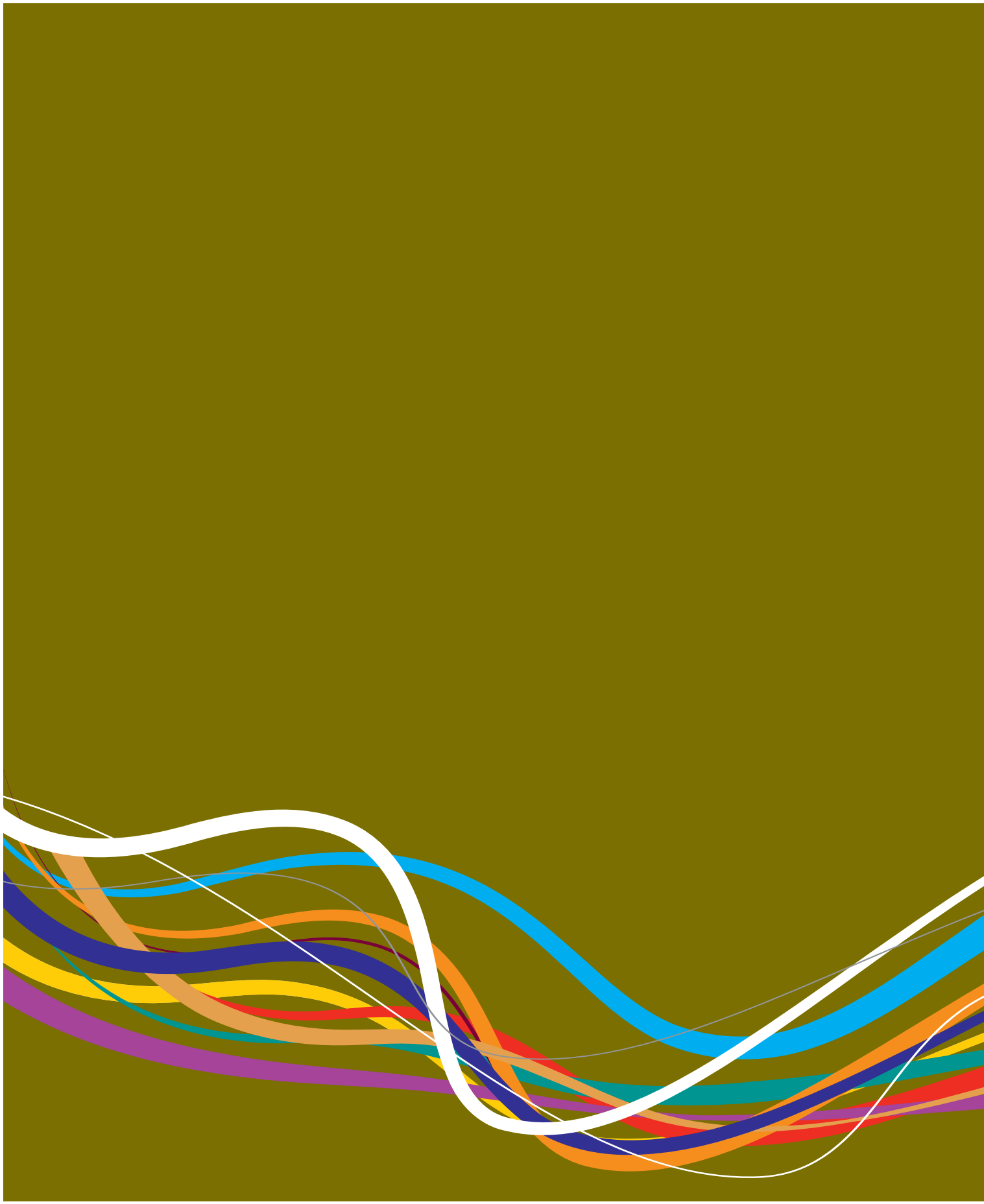
Benefits

- Facilitates solid connection
- Added protection for long wire runs
- Twist pattern sufficient for xDSL transmission level

Specifications	
Conductor	Tinned copper
AWG (mm)	Available in 22 (0.6) and 24 (0.5)
Insulation	Flame retardant PVC
Package	Spool
Standards Compliance	UL 444 CM Applicable GR-136 Core requirement for high stress applications RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	AWG (mm)	Insulation Color	Nominal Diameter in (mm)	Standard Length ft (m)
12-212-T5	22 (0.6)	White/Green	0.08 (2.0)	3,000 (915)
12-213-T5	24 (0.5)	Violet/Red	0.07 (1.8)	3,000 (915)
12-214-T5	24 (0.5)	Violet/Red	0.07 (1.8)	1,000 (305)
12-215-T5	24 (0.5)	Green/Red	0.07 (1.8)	1,000 (305)



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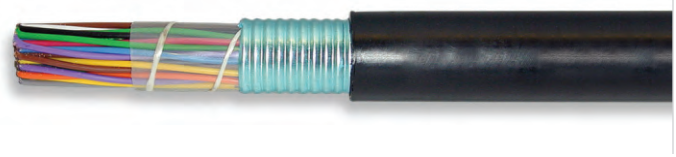
SEALPIC®



Product Description

SEALPIC® Cables have an air core design and are suited for lashed aerial installations. If used in underground conduit, pressurization is recommended. SEALPIC cables are not recommended for direct burial installations.

Applications

- Lashed aerial
- Pressurized underground conduit

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin; color coded in accordance with industry standards
Twisted Pairs	Individual insulated conductors are twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Core Wrap	Non-hygroscopic, dielectric tape
Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally with an overlap
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-85-625-2007 Formerly PE-22 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
19 (0.90)	1.0 (1.6)	3.3 (10.8)	45.0 (28.0)	1.5	5.0	5,000	10,000
22 (0.64)	1.0 (1.6)	4.7 (15.4)	91.0 (56.5)	1.5	5.0	4,000	10,000
24 (0.51)	1.0 (1.6)	5.9 (19.4)	144.0 (89.5)	1.5	5.0	3,000	10,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

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Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
01-026-40	6	19 (0.90)	0.48 (12)	105 (155)	5,000 (1,524)	635 (285)	44 x 18 x 20
01-028-40	12	19 (0.90)	0.57 (15)	170 (255)	5,000 (1,524)	1,015 (460)	46 x 25 x 20
01-031-40	25	19 (0.90)	0.76 (19)	310 (460)	5,000 (1,524)	1,755 (795)	52 x 25 x 20
01-034-40	50	19 (0.90)	1.00 (25)	575 (855)	5,000 (1,524)	3,165 (1,435)	62 x 30 x 24
01-038-40	100	19 (0.90)	1.34 (34)	1,075 (1,600)	5,000 (1,524)	6,075 (2,755)	78 x 40 x 39
01-057-40	6	22 (0.64)	0.39 (9.9)	65 (95)	5,000 (1,524)	390 (175)	36 x 18 x 14
01-059-40	12	22 (0.64)	0.46 (12)	100 (150)	5,000 (1,524)	610 (275)	44 x 18 x 20
01-062-40	25	22 (0.64)	0.60 (15)	180 (270)	5,000 (1,524)	1,065 (485)	46 x 25 x 20
01-065-40	50	22 (0.64)	0.77 (20)	315 (470)	5,000 (1,524)	1,780 (805)	52 x 25 x 20
01-069-40	100	22 (0.64)	1.02 (26)	580 (865)	5,000 (1,524)	3,190 (1,445)	62 x 30 x 24
01-073-40	200	22 (0.64)	1.38 (35)	1,095 (1,630)	5,000 (1,524)	6,175 (2,800)	78 x 40 x 39
01-075-40	300	22 (0.64)	1.66 (42)	1,605 (2,390)	2,500 (762)	4,625 (2,100)	72 x 35 x 36
01-077-40	400	22 (0.64)	1.89 (48)	2,115 (3,150)	2,500 (762)	5,,985 (2,715)	78 x 40 x 39
01-081-40	600	22 (0.64)	2.28 (58)	3,125 (4,650)	1,250 (381)	4,520 (2,050)	72 x 35 x 36
01-083-40	900	22 (0.64)	2.76 (70)	4,635 (6,900)	1,250 (381)	6,590 (2,990)	84 x 40 x 42
01-085-40	1,200	22 (0.64)	3.15 (80)	6,125 (9,115)	1,000 (305)	6,920 (3,140)	84 x 40 x 42
01-092-40	6	24 (0.51)	0.35 (8.9)	50 (75)	5,000 (1,524)	295 (135)	30 x 18 x 12
01-094-40	12	24 (0.51)	0.41 (10)	75 (110)	5,000 (1,524)	440 (200)	36 x 18 x 14
01-097-40	25	24 (0.51)	0.51 (13)	125 (185)	5,000 (1,524)	735 (330)	44 x 18 x 20
01-100-40	50	24 (0.51)	0.64 (16)	215 (320)	5,000 (1,524)	1,240 (560)	46 x 25 x 20
01-104-40	100	24 (0.51)	0.83 (21)	385 (575)	5,000 (1,524)	2,170 (985)	58 x 25 x 20
01-108-40	200	24 (0.51)	1.12 (28)	715 (1,065)	5,000 (1,524)	4,190 (1,900)	72 x 35 x 36
01-110-40	300	24 (0.51)	1.33 (34)	1,040 (1,550)	5,000 (1,524)	5,900 (2,675)	78 x 40 x 39
01-112-40	400	24 (0.51)	1.52 (39)	1,360 (2,025)	2,500 (762)	4,015 (1,820)	72 x 35 x 36
01-116-40	600	24 (0.51)	1.82 (46)	2,005 (2,985)	2,500 (762)	5,710 (2,590)	78 x 40 x 39
01-118-40	900	24 (0.51)	2.19 (56)	2,960 (4,405)	1,250 (381)	4,315 (1,955)	72 x 35 x 36
01-120-40	1,200	24 (0.51)	2.49 (63)	3,895 (5,795)	1,250 (381)	5,570 (2,525)	78 x 40 x 39
01-121-40	1,500	24 (0.51)	2.79 (71)	4,845 (7,210)	1,250 (381)	6,855 (3,110)	84 x 40 x 42
01-124-40	1,800	24 (0.51)	3.04 (77)	5,785 (8,610)	1,000 (305)	6,485 (2,940)	78 x 40 x 39
01-125-40	2,100	24 (0.51)	3.31 (84)	6,735 (10,025)	1,000 (305)	7,530 (3,415)	84 x 40 x 42
01-126-40	2,400	24 (0.51)	3.49 (89)	7,650 (11,385)	750 (229)	6,915 (3,135)	96 x 40 x 48

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

SEALPIC®–84

Product Description

SEALPIC®-84 Cables have an air core design and are suited for aerial installations. The core and support member (messenger) lay parallel to each other forming a cross-sectional "figure 8." The support messenger is an integral part of the cable sheath, yet readily available for gripping, pulling and tensioning.

Applications

- Aerial

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Fully flooded steel support member
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Inhibits corrosion
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin; color coded in accordance with industry standards
Twisted Pairs	Individual insulated conductors are twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Core Wrap	Non-hygroscopic, dielectric tape
Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally with an overlap
Support Member	0.25 inch, 7-strand Extra High Strength (EHS) galvanized steel messenger serves as support member and integral part of the sheath; messenger is flooded
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-85-625-2007 Formerly PE-38 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
19 (0.90)	1.0 (1.6)	3.3 (10.8)	45.0 (28.0)	1.5	5.0	5,000	10,000
22 (0.64)	1.0 (1.6)	4.7 (15.4)	91.0 (56.5)	1.5	5.0	4,000	10,000
24 (0.51)	1.0 (1.6)	5.9 (19.4)	144.0 (89.5)	1.5	5.0	3,000	10,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

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Part Numbers and Physical Characteristics								
Part Number	Pair Count	AWG (mm)	Nominal Diameter (cable only) in (mm)	Nominal Diameter (with messenger) in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
01-026-38	6	19 (0.90)	0.47 (12)	0.96 (24)	240 (355)	5,000 (1,524)	1,850 (839)	72 x 36 x 36
01-028-38	12	19 (0.90)	0.56 (14)	1.05 (27)	305 (455)	5,000 (1,524)	1,795 (814)	58 x 25 x 20
01-031-38	25	19 (0.90)	0.74 (19)	1.24 (31)	445 (660)	5,000 (1,524)	2,975 (1,349)	78 x 40 x 39
01-034-38	50	19 (0.90)	1.01 (26)	1.48 (38)	715 (1,065)	5,000 (1,524)	4,395 (1,993)	84 x 40 x 42
01-038-38	100	19 (0.90)	1.36 (35)	1.82 (46)	1,235 (1,840)	2,500 (762)	3,685 (1,671)	72 x 36 x 36
01-057-38	6	22 (0.64)	0.38 (9.7)	0.87 (22)	200 (300)	5,000 (1,524)	1,270 (576)	58 x 25 x 20
01-059-38	12	22 (0.64)	0.45 (11)	0.94 (24)	235 (350)	5,000 (1,524)	1,515 (687)	62 x 30 x 24
01-062-38	25	22 (0.64)	0.59 (15)	1.08 (27)	315 (470)	5,000 (1,524)	2,225 (1,009)	72 x 36 x 36
01-065-38	50	22 (0.64)	0.75 (19)	1.25 (32)	450 (670)	5,000 (1,524)	3,000 (1,361)	78 x 40 x 39
01-069-38	100	22 (0.64)	1.03 (26)	1.50 (38)	725 (1,080)	2,500 (762)	2,100 (952)	62 x 30 x 24
01-073-38	200	22 (0.64)	1.40 (36)	1.86 (47)	1,255 (1,870)	2,500 (762)	3,725 (1,689)	72 x 36 x 36
01-092-38	6	24 (0.51)	0.34 (8.6)	0.83 (21)	185 (275)	5,000 (1,524)	1,115 (506)	46 x 25 x 20
01-094-38	12	24 (0.51)	0.40 (10)	0.89 (23)	210 (315)	5,000 (1,524)	1,280 (580)	52 x 25 x 20
01-097-38	25	24 (0.51)	0.50 (13)	0.99 (25)	260 (385)	5,000 (1,524)	1,595 (723)	58 x 25 x 20
01-100-38	50	24 (0.51)	0.63 (16)	1.12 (28)	350 (520)	5,000 (1,524)	2,065 (937)	62 x 30 x 24
01-104-38	100	24 (0.51)	0.81 (21)	1.31 (33)	515 (765)	5,000 (1,524)	3,275 (1,485)	72 x 36 x 36
01-108-38	200	24 (0.51)	1.14 (29)	1.60 (41)	875 (1,300)	2,500 (762)	2,440 (1,107)	62 x 30 x 24
01-110-38	300	24 (0.51)	1.36 (35)	1.81 (46)	1,200 (1,785)	2,500 (762)	3,585 (1,626)	72 x 36 x 36

TECH TIP

Sag and Tension guidelines for these products are available online:
www.SuperiorEssex.com/techtip.aspx

SEALPIC®–FSF-84

Product Description

SEALPIC®-FSF-84 Cables are suited 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 support messenger is an integral part of the cable sheath, yet readily available for gripping, pulling and tensioning.

Applications

- Aerial

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Fully flooded shield interfaces
- Fully flooded steel support member
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Inhibits corrosion and water migration
- Inhibits corrosion
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid Annealed Copper
AWG (mm)	19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Dual insulation consisting of an inner layer of foamed, natural polyolefin over which is applied a solid (skin) layer of polyolefin colored in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape
Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally with an overlap; flooded shield interfaces
Support Member	0.25 inch, 7-strand Extra High Strength (EHS) galvanized steel messenger serves as support member and integral part of the sheath; messenger is flooded
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	SEALPIC-FSF-84 cables meet the physical and electrical requirements of RDUP specification 7 CFR 1755.890 (PE-89), except that the figure-8 sheath shall meet the requirements of ANSI/ICEA S-85-625-2007 Option A RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)*	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	3,600	10,000
24 (0.51)	1.0 (1.6)	5.6 (18.4)	144.0 (89.5)	1.5	5.0	3,000	10,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

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Part Numbers and Physical Characteristics								
Part Number	Pair Count	AWG (mm)	Nominal Diameter (cable only) in (mm)	Nominal Diameter (with messenger) in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
09-034-05	50	19 (0.90)	1.04 (26)	1.51 (38)	800 (1,190)	2,500 (762)	2,270 (1,030)	60 x 30 x 30
09-057-05	6	22 (0.64)	0.37 (9.4)	0.84 (22)	205 (305)	5,000 (1,524)	1,255 (569)	52 x 25 x 20
09-059-05	12	22 (0.64)	0.46 (12)	0.93 (24)	250 (370)	5,000 (1,524)	1,513 (687)	52 x 25 x 20
09-062-05	25	22 (0.64)	0.59 (15)	1.06 (27)	330 (490)	5,000 (1,524)	1,945 (882)	58 x 25 x 20
09-065-05	50	22 (0.64)	0.75 (19)	1.22 (31)	485 (720)	5,000 (1,524)	2,765 (1,254)	62 x 30 x 24
09-092-05	6	24 (0.51)	0.34 (8.6)	0.83 (21)	185 (275)	5,000 (1,524)	1,115 (506)	46 x 25 x 20
09-094-05	12	24 (0.51)	0.40 (10)	0.89 (23)	210 (315)	5,000 (1,524)	1,280 (580)	52 x 25 x 20
09-097-05	25	24 (0.51)	0.50 (13)	0.99 (25)	260 (385)	5,000 (1,524)	1,595 (723)	58 x 25 x 20
09-100-05	50	24 (0.51)	0.63 (16)	1.12 (28)	350 (520)	5,000 (1,524)	2,065 (937)	62 x 30 x 24
09-104-05	100	24 (0.51)	0.81 (21)	1.31 (33)	515 (765)	5,000 (1,524)	3,275 (1,485)	72 x 36 x 36
09-108-05	200	24 (0.51)	1.14 (29)	1.60 (41)	875 (1,300)	2,500 (762)	2,440 (1,107)	62 x 30 x 24
09-110-05	300	24 (0.51)	1.36 (35)	1.81 (46)	1,200 (1,785)	2,500 (762)	3,585 (1,626)	72 x 36 x 36

TECH TIP

Sag and Tension guidelines for these products are available online:
www.SuperiorEssex.com/techtip.aspx

SEALPIC®–FSF (RDUP PE-89)

Product Description

SEALPIC®-FSF Cables are designed for low risk 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.

Applications

- Low risk direct burial
- Underground conduit
- Lashed aerial

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Fully flooded shield interfaces
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Inhibits corrosion and water migration
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Dual insulation consisting of an inner layer of foamed, natural polyolefin over which is applied a solid (skin) layer of polyolefin colored in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape applied over the core
Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally with an overlap; flooded shield interfaces
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-84-608-2007 RDUP 7 CFR 1755.890 (PE-89) RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	3,600	10,000
24 (0.51)	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

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz			
Conductor Size (AWG)	19	22	24	26
PSELFEXT Mean (dB/kft)	51	49	49	47
PSELFEXT Worst Pair (dB/kft)	45	43	43	43

Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
09-026-02	6	19 (0.90)	0.49 (12)	120 (180)	5,000 (1,524)	710 (320)	44 x 18 x 20
09-028-02	12	19 (0.90)	0.59 (15)	190 (285)	5,000 (1,524)	1,115 (505)	46 x 25 x 20
09-031-02	25	19 (0.90)	0.78 (20)	355 (530)	5,000 (1,524)	1,980 (895)	52 x 25 x 20
09-034-02	50	19 (0.90)	1.03 (26)	655 (975)	5,000 (1,524)	3,565 (1,615)	62 x 30 x 24
09-038-02	100	19 (0.90)	1.37 (35)	1,225 (1,825)	2,500 (762)	3,430 (1,555)	65 x 30 x 32
09-057-02	6	22 (0.64)	0.39 (9.9)	70 (105)	5,000 (1,524)	415 (190)	36 x 18 x 14
09-059-02	12	22 (0.64)	0.47 (12)	115 (170)	5,000 (1,524)	685 (310)	44 x 18 x 20
09-062-02	25	22 (0.64)	0.60 (15)	200 (300)	5,000 (1,524)	1,165 (530)	46 x 25 x 20
09-065-02	50	22 (0.64)	0.77 (20)	350 (520)	5,000 (1,524)	1,955 (885)	52 x 25 x 20
09-069-02	100	22 (0.64)	1.02 (26)	650 (965)	5,000 (1,524)	3,540 (1,605)	62 x 30 x 24
09-073-02	200	22 (0.64)	1.38 (35)	1,225 (1,825)	2,500 (762)	3,350 (1,520)	62 x 30 x 24
09-075-02	300	22 (0.64)	1.65 (42)	1,800 (2,680)	1,250 (381)	2,495 (1,130)	58 x 25 x 20
09-077-02	400	22 (0.64)	1.88 (48)	2,365 (3,520)	1,250 (381)	3,245 (1,470)	62 x 30 x 24
09-081-02	600	22 (0.64)	2.28 (58)	3,505 (5,215)	1,250 (381)	4,995 (2,265)	72 x 35 x 36
09-083-02	900	22 (0.64)	2.76 (70)	5,195 (7,730)	1,250 (381)	7,290 (3,305)	84 x 40 x 42
09-085-02	1,200	22 (0.64)	3.14 (80)	6,845 (10,185)	1,250 (381)	9,730 (4,415)	96 x 40 x 48
09-087-02	1,500	22 (0.64)	3.51 (89)	8,520 (12,680)	1,000 (305)	9,695 (4,400)	96 x 40 x 48
09-092-02	6	24 (0.51)	0.36 (9.1)	55 (80)	5,000 (1,524)	320 (145)	36 x 18 x 14
09-094-02	12	24 (0.51)	0.42 (11)	85 (125)	5,000 (1,524)	490 (220)	36 x 18 x 14
09-097-02	25	24 (0.51)	0.52 (13)	140 (210)	5,000 (1,524)	810 (365)	44 x 18 x 20
09-100-02	50	24 (0.51)	0.66 (17)	240 (355)	5,000 (1,524)	1,365 (620)	46 x 25 x 20
09-104-02	100	24 (0.51)	0.85 (22)	430 (640)	5,000 (1,524)	2,395 (1,085)	58 x 25 x 20
09-108-02	200	24 (0.51)	1.14 (29)	810 (1,205)	5,000 (1,524)	4,665 (2,115)	72 x 35 x 36
09-110-02	300	24 (0.51)	1.37 (35)	1,180 (1,755)	2,500 (762)	3,320 (1,505)	65 x 30 x 32
09-112-02	400	24 (0.51)	1.55 (39)	1,545 (2,300)	2,500 (762)	4,475 (2,030)	72 x 35 x 36
09-116-02	600	24 (0.51)	1.88 (48)	2,285 (3,400)	1,250 (381)	3,145 (1,425)	62 x 30 x 24
09-118-02	900	24 (0.51)	2.25 (57)	3,350 (4,985)	1,250 (381)	4,800 (2,180)	72 x 35 x 36
09-120-02	1,200	24 (0.51)	2.57 (65)	4,420 (6,580)	1,250 (381)	6,225 (2,825)	78 x 40 x 39
09-121-02	1,500	24 (0.51)	2.86 (73)	5,490 (8,170)	1,000 (305)	6,190 (2,805)	78 x 40 x 39
09-124-02	1,800	24 (0.51)	3.12 (79)	6,560 (9,765)	1,000 (305)	7,355 (3,335)	84 x 40 x 42
09-125-02	2,100	24 (0.51)	3.40 (86)	7,690 (11,445)	1,000 (305)	8,865 (4,020)	96 x 40 x 48
09-126-02	2,400	24 (0.51)	3.59 (91)	8,695 (12,940)	1,000 (305)	9,870 (4,475)	96 x 40 x 48
09-132-02	25	26 (0.40)	0.44 (11)	100 (150)	5,000 (1,524)	565 (255)	36 x 18 x 14
09-135-02	50	26 (0.40)	0.55 (14)	165 (245)	5,000 (1,524)	990 (450)	46 x 25 x 20
09-139-02	100	26 (0.40)	0.71 (18)	290 (430)	5,000 (1,524)	1,655 (750)	52 x 25 x 20
09-143-02	200	26 (0.40)	0.94 (24)	535 (795)	5,000 (1,524)	2,965 (1,345)	62 x 30 x 24
09-145-02	300	26 (0.40)	1.09 (28)	755 (1,125)	5,000 (1,524)	4,390 (1,990)	72 x 35 x 36
09-147-02	400	26 (0.40)	1.25 (32)	995 (1,480)	2,500 (762)	2,735 (1,240)	58 x 25 x 20
09-151-02	600	26 (0.40)	1.49 (38)	1,455 (2,165)	2,500 (762)	4,250 (1,930)	72 x 35 x 36
09-153-02	900	26 (0.40)	1.78 (45)	2,120 (3,155)	1,250 (381)	3,020 (1,370)	65 x 30 x 32
09-155-02	1,200	26 (0.40)	2.03 (52)	2,785 (4,145)	1,250 (381)	4,095 (1,860)	72 x 35 x 36
09-156-02	1,500	26 (0.40)	2.28 (58)	3,480 (5,180)	1,250 (381)	4,965 (2,250)	72 x 35 x 36
09-157-02	1,800	26 (0.40)	2.48 (63)	4,150 (6,175)	1,250 (381)	5,885 (2,670)	78 x 40 x 39
09-159-02	2,400	26 (0.40)	2.86 (73)	5,515 (8,210)	1,250 (381)	8,070 (3,660)	96 x 40 x 48
09-164-02	3,600	26 (0.40)	3.45 (88)	8,165 (12,150)	1,000 (305)	9,340 (4,235)	96 x 40 x 48

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

CASPIC®–FSF (RDUP PE-89)

Product Description

CASPIC®-FSF Cables are designed for direct burial applications. 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.

Applications

- Direct burial where additional mechanical protection is requried or desired
- Lashed aerial where additional mechanical protection is requried or desired

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Dual shield design
- Fully flooded shield interfaces
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Rodent resistant
- Inhibits corrosion and water migration
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid Annealed Copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Dual insulation consisting of an inner layer of foamed, natural polyolefin over which is applied a solid (skin) layer of polyolefin colored in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape applied over the core
Inner Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied directly over the core wrap; does not butt or overlap at any point along the length of the cable; flooded shield interface
Outer Shield	Rodent resistant, corrugated, copolymer coated, 6 mil steel tape applied directly over the aluminum and overlaps; flooded shield interface
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-84-608-2007 RDUP 7 CFR 1755.890 (PE-89) RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	3,600	10,000
24 (0.51)	1.0 (1.6)	5.6 (18.4)	144.0 (89.5)	1.5	5.0	3,000	10,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
09-026-92	6	19 (0.90)	0.52 (13)	155 (230)	5,000 (1,524)	885 (400)	44 x 18 x 20
09-028-92	12	19 (0.90)	0.62 (16)	235 (350)	5,000 (1,524)	1,340 (610)	46 x 25 x 20
09-031-92	25	19 (0.90)	0.81 (21)	415 (620)	5,000 (1,524)	2,320 (1,050)	58 x 25 x 20
09-034-92	50	19 (0.90)	1.07 (27)	740 (1,100)	5,000 (1,524)	4,315 (1,955)	72 x 35 x 36
09-038-92	100	19 (0.90)	1.41 (36)	1,345 (2,000)	5,000 (1,524)	7,425 (3,370)	78 x 40 x 39
09-057-92	6	22 (0.64)	0.42 (11)	95 (140)	5,000 (1,524)	540 (245)	36 x 18 x 14
09-059-92	12	22 (0.64)	0.50 (13)	150 (225)	5,000 (1,524)	860 (390)	44 x 18 x 20
09-062-92	25	22 (0.64)	0.63 (16)	245 (365)	5,000 (1,524)	1,390 (630)	46 x 25 x 20
09-065-92	50	22 (0.64)	0.80 (20)	410 (610)	5,000 (1,524)	2,295 (1,040)	58 x 25 x 20
09-069-92	100	22 (0.64)	1.05 (27)	730 (1,085)	5,000 (1,524)	4,265 (1,935)	72 x 35 x 36
09-073-92	200	22 (0.64)	1.42 (36)	1,345 (2,000)	2,500 (762)	3,650 (1,655)	62 x 30 x 24
09-075-92	300	22 (0.64)	1.70 (43)	1,945 (2,895)	1,250 (381)	2,720 (1,235)	62 x 30 x 24
09-077-92	400	22 (0.64)	1.92 (49)	2,535 (3,775)	1,250 (381)	3,455 (1,570)	62 x 30 x 24
09-081-92	600	22 (0.64)	2.32 (59)	3,710 (5,520)	1,250 (381)	5,250 (2,380)	72 x 35 x 36
09-083-92	900	22 (0.64)	2.81 (71)	5,455 (8,120)	1,250 (381)	7,615 (3,455)	84 x 40 x 42
09-085-92	1,200	22 (0.64)	3.19 (81)	7,140 (10,625)	1,250 (381)	10,100 (4,580)	96 x 40 x 48
09-092-92	6	24 (0.51)	0.39 (9.9)	80 (120)	5,000 (1,524)	465 (210)	36 x 18 x 14
09-094-92	12	24 (0.51)	0.45 (11)	110 (165)	5,000 (1,524)	615 (280)	36 x 18 x 14
09-097-92	25	24 (0.51)	0.55 (14)	180 (270)	5,000 (1,524)	1,065 (485)	46 x 25 x 20
09-100-92	50	24 (0.51)	0.69 (18)	290 (430)	5,000 (1,524)	1,615 (735)	46 x 25 x 20
09-104-92	100	24 (0.51)	0.88 (22)	500 (745)	5,000 (1,524)	2,745 (1,245)	58 x 25 x 20
09-108-92	200	24 (0.51)	1.18 (30)	905 (1,345)	2,500 (762)	2,510 (1,135)	58 x 25 x 20
09-110-92	300	24 (0.51)	1.41 (36)	1,300 (1,935)	2,500 (762)	3,540 (1,605)	62 x 30 x 24
09-112-92	400	24 (0.51)	1.59 (40)	1,680 (2,500)	2,500 (762)	4,815 (2,185)	72 x 35 x 36
09-116-92	600	24 (0.51)	1.92 (49)	2,450 (3,645)	1,250 (381)	3,350 (1,520)	62 x 30 x 24
09-118-92	900	24 (0.51)	2.29 (58)	3,555 (5,290)	1,250 (381)	5,060 (2,295)	72 x 35 x 36
09-120-92	1,200	24 (0.51)	2.62 (67)	4,660 (6,935)	1,250 (381)	6,525 (2,960)	78 x 40 x 39
09-121-92	1,500	24 (0.51)	2.91 (74)	5,755 (8,565)	1,000 (305)	6,455 (2,930)	78 x 40 x 39
09-124-92	1,800	24 (0.51)	3.17 (81)	6,855 (10,200)	1,000 (305)	7,650 (3,470)	84 x 40 x 42
09-125-92	2,100	24 (0.51)	3.45 (88)	8,015 (11,930)	1,000 (305)	9,190 (4,170)	96 x 40 x 48
09-126-92	2,400	24 (0.51)	3.64 (93)	9,035 (13,445)	750 (229)	7,950 (3,605)	96 x 40 x 48

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

SEALPIC®–F (RDUP PE-39)

Product Description

SEALPIC-F Cables are designed for low risk direct burial or duct applications. SEALPIC-F may be used aerially, but must be attached to a support strand.

Applications

- Low risk direct burial
- Underground conduit
- Lashed aerial

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Fully flooded shield interfaces
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Inhibits corrosion and water migration
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin; color coded in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape applied over the core
Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally with an overlap; flooded shield interfaces
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-84-608-2007 RDUP 7 CFR 1755.390 (PE-39) RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	5,000	15,000
24 (0.51)	1.0 (1.6)	5.0 (16.4)	144.0 (89.5)	1.5	5.0	4,000	15,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

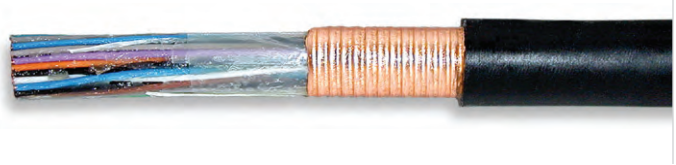
	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
04-026-21	6	19 (0.90)	0.54 (14)	140 (210)	5,000 (1,524)	810 (365)	44 x 18 x 20
04-028-21	12	19 (0.90)	0.69 (18)	235 (350)	5,000 (1,524)	1,340 (610)	46 x 25 x 20
04-031-21	25	19 (0.90)	0.92 (23)	440 (655)	5,000 (1,524)	2,570 (1,165)	65 x 30 x 32
04-034-21	50	19 (0.90)	1.22 (31)	810 (1,205)	5,000 (1,524)	4,750 (2,155)	78 x 40 x 39
04-038-21	100	19 (0.90)	1.69 (43)	1,565 (2,330)	2,500 (762)	4,525 (2,055)	72 x 35 x 36
04-057-21	6	22 (0.64)	0.43 (11)	85 (125)	5,000 (1,524)	490 (220)	36 x 18 x 14
04-059-21	12	22 (0.64)	0.53 (14)	135 (200)	5,000 (1,524)	785 (355)	44 x 18 x 20
04-062-21	25	22 (0.64)	0.68 (17)	240 (355)	5,000 (1,524)	1,365 (620)	46 x 25 x 20
04-065-21	50	22 (0.64)	0.89 (23)	425 (630)	5,000 (1,524)	2,370 (1,075)	58 x 25 x 20
04-069-21	100	22 (0.64)	1.19 (30)	780 (1,160)	5,000 (1,524)	4,515 (2,050)	72 x 35 x 36
04-073-21	200	22 (0.64)	1.63 (41)	1,500 (2,230)	2,500 (762)	4,365 (1,980)	72 x 35 x 36
04-075-21	300	22 (0.64)	1.96 (50)	2,205 (3,280)	2,500 (762)	6,210 (2,820)	78 x 40 x 39
04-077-21	400	22 (0.64)	2.23 (57)	2,890 (4,300)	1,250 (381)	4,225 (1,915)	72 x 35 x 36
04-081-21	600	22 (0.64)	2.72 (69)	4,295 (6,390)	1,250 (381)	6,165 (2,795)	84 x 40 x 42
04-083-21	900	22 (0.64)	3.30 (84)	6,380 (9,495)	1,250 (381)	7,975 (3,615)	96 x 40 x 48
04-092-21	6	24 (0.51)	0.38 (9.7)	60 (90)	5,000 (1,524)	365 (165)	36 x 18 x 14
04-094-21	12	24 (0.51)	0.46 (12)	95 (140)	5,000 (1,524)	585 (265)	44 x 18 x 20
04-097-21	25	24 (0.51)	0.58 (15)	165 (245)	5,000 (1,524)	990 (450)	46 x 25 x 20
04-100-21	50	24 (0.51)	0.74 (19)	285 (425)	5,000 (1,524)	1,630 (740)	52 x 25 x 20
04-104-21	100	24 (0.51)	0.98 (25)	520 (775)	5,000 (1,524)	2,970 (1,345)	65 x 30 x 32
04-108-21	200	24 (0.51)	1.32 (34)	975 (1,450)	5,000 (1,524)	5,575 (2,530)	78 x 40 x 39
04-110-21	300	24 (0.51)	1.58 (40)	1,420 (2,115)	2,500 (762)	4,165 (1,890)	72 x 35 x 36
04-112-21	400	24 (0.51)	1.79 (46)	1,850 (2,755)	2,500 (762)	5,325 (2,415)	78 x 40 x 39
04-116-21	600	24 (0.51)	2.18 (55)	2,745 (4,085)	1,250 (381)	4,045 (1,835)	72 x 35 x 36
04-118-21	900	24 (0.51)	2.63 (67)	4,050 (6,025)	1,250 (381)	5,760 (2,615)	78 x 40 x 39
04-120-21	1,200	24 (0.51)	3.00 (76)	5,325 (7,925)	1,000 (305)	6,025 (2,730)	78 x 40 x 39
04-121-21	1,500	24 (0.51)	3.35 (85)	6,625 (9,860)	1,000 (305)	7,800 (3,540)	96 x 40 x 48
04-124-21	1,800	24 (0.51)	3.63 (92)	7,870 (11,710)	1,000 (305)	9,045 (4,105)	96 x 40 x 48

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

CUPIC®–F (RDUP PE-39)



Product Description

CUPIC®-F Cables are designed for use in low risk duct or direct burial applications. CUPIC-F may be used aerially, but must be attached to a support strand.

Applications

- Low risk direct burial
- Underground conduit
- Lashed aerial

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Fully flooded shield interfaces
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Inhibits corrosion and water migration
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin; color coded in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape applied over the core
Shield	Corrugated, 5 mil copper tape is applied longitudinally with an overlap; shield interfaces are flooded
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-84-608-2007 RDUP 7 CFR 1755.390 (PE-39) RoHS-compliant

Electrical Specifications					
		Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
Number of Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**	**Maximum Individual pF/kft (pF/km)**	**Maximum RMS pF/kft (pF/km)**	**Maximum Individual pF/kft (pF/km)**	**Maximum Average pF/kft (pF/km)**
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	5,000	15,000
24 (0.51)	1.0 (1.6)	5.0 (16.4)	144.0 (89.5)	1.5	5.0	4,000	15,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
04-026-04	6	19 (0.90)	0.54 (14)	150 (225)	5,000 (1,524)	860 (390)	44 x 18 x 20
04-028-04	12	19 (0.90)	0.69 (18)	255 (380)	5,000 (1,524)	1,440 (655)	46 x 25 x 20
04-031-04	25	19 (0.90)	0.92 (23)	470 (700)	5,000 (1,524)	2,720 (1,235)	65 x 30 x 32
04-034-04	50	19 (0.90)	1.22 (31)	845 (1,260)	5,000 (1,524)	4,925 (2,235)	78 x 40 x 39
04-038-04	100	19 (0.90)	1.69 (43)	1,620 (2,410)	2,500 (762)	4,750 (2,155)	78 x 40 x 39
04-057-04	6	22 (0.64)	0.43 (11)	95 (140)	5,000 (1,524)	540 (245)	36 x 18 x 14
04-059-04	12	22 (0.64)	0.53 (14)	145 (215)	5,000 (1,524)	835 (380)	44 x 18 x 20
04-062-04	25	22 (0.64)	0.68 (17)	255 (380)	5,000 (1,524)	1,440 (655)	46 x 25 x 20
04-065-04	50	22 (0.64)	0.89 (23)	450 (670)	5,000 (1,524)	2,495 (1,130)	58 x 25 x 20
04-069-04	100	22 (0.64)	1.19 (30)	815 (1,215)	5,000 (1,524)	4,690 (2,125)	72 x 35 x 36
04-073-04	200	22 (0.64)	1.63 (41)	1,550 (2,305)	2,500 (762)	4,490 (2,035)	72 x 35 x 36
04-075-04	300	22 (0.64)	1.97 (50)	2,270 (3,380)	2,500 (762)	6,375 (2,890)	78 x 40 x 39
04-077-04	400	22 (0.64)	2.23 (57)	2,960 (4,405)	1,250 (381)	4,315 (1,955)	72 x 35 x 36
04-081-04	600	22 (0.64)	2.72 (69)	4,385 (6,525)	1,250 (381)	6,280 (2,850)	84 x 40 x 42
04-083-04	900	22 (0.64)	3.30 (84)	6,490 (9,660)	1,250 (381)	9,290 (4,215)	96 x 40 x 48
04-092-04	6	24 (0.51)	0.38 (9.7)	70 (105)	5,000 (1,524)	415 (190)	36 x 18 x 14
04-094-04	12	24 (0.51)	0.46 (12)	110 (165)	5,000 (1,524)	660 (300)	44 x 18 x 20
04-097-04	25	24 (0.51)	0.58 (15)	180 (270)	5,000 (1,524)	1,065 (485)	46 x 25 x 20
04-100-04	50	24 (0.51)	0.74 (19)	305 (455)	5,000 (1,524)	1,730 (785)	52 x 25 x 20
04-104-04	100	24 (0.51)	0.98 (25)	550 (820)	5,000 (1,524)	3,120 (1,415)	65 x 30 x 32
04-108-04	200	24 (0.51)	1.32 (34)	1,015 (1,510)	5,000 (1,524)	5,775 (2,620)	78 x 40 x 39
04-110-04	300	24 (0.51)	1.59 (40)	1,470 (2,190)	2,500 (762)	4,290 (1,945)	72 x 35 x 36
04-112-04	400	24 (0.51)	1.79 (46)	1,905 (2,835)	2,500 (762)	5,460 (2,475)	78 x 40 x 39
04-116-04	600	24 (0.51)	2.18 (55)	2,815 (4,190)	1,250 (381)	4,135 (1,875)	72 x 35 x 36
04-118-04	900	24 (0.51)	2.63 (67)	4,135 (6,155)	1,250 (381)	5,870 (2,660)	78 x 40 x 39
04-120-04	1,200	24 (0.51)	3.00 (76)	5,420 (8,065)	1,000 (305)	6,120 (2,775)	78 x 40 x 39
04-121-04	1,500	24 (0.51)	3.35 (85)	6,730 (10,015)	1,000 (305)	7,905 (3,585)	96 x 40 x 48
04-124-04	1,800	24 (0.51)	3.63 (92)	7,990 (11,890)	1,000 (305)	9,165 (4,155)	96 x 40 x 48

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

GOPIC®–F (RDUP PE-39)

Product Description

GOPIC®-F Cables are designed for use in direct burial applications where additional mechanical or rodent protection is required. GOPIC-F may be used aerially, but must be attached to a support strand.

Applications

- Direct burial where additional mechanical protection is required or desired
- Lashed aerial where additional mechanical protection is required or desired

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Corrugated, copper bearing armor
- Fully flooded shield interfaces
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Rodent resistant
- Inhibits corrosion and water migration
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin; color coded in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape applied over the core
Shield	Corrugated, rodent resistant, copper bearing armor applied longitudinally with an overlap; flooded shield interfaces
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-84-608-2007 RDUP 7 CFR 1755.390 (PE-39) RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	5,000	15,000
24 (0.51)	1.0 (1.6)	5.0 (16.4)	144.0 (89.5)	1.5	5.0	4,000	15,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
04-026-27	6	19 (0.90)	0.54 (14)	155 (230)	5,000 (1,524)	885 (400)	44 x 18 x 20
04-028-27	12	19 (0.90)	0.69 (18)	255 (380)	5,000 (1,524)	1,440 (655)	46 x 25 x 20
04-031-27	25	19 (0.90)	0.92 (23)	470 (700)	5,000 (1,524)	2,720 (1,235)	65 x 30 x 32
04-034-27	50	19 (0.90)	1.22 (31)	850 (1,265)	5,000 (1,524)	4,950 (2,245)	78 x 40 x 39
04-038-27	100	19 (0.90)	1.69 (43)	1,620 (2,410)	2,500 (762)	4,665 (2,115)	72 x 35 x 36
04-057-27	6	22 (0.64)	0.43 (11)	95 (140)	5,000 (1,524)	540 (245)	36 x 18 x 14
04-059-27	12	22 (0.64)	0.53 (14)	150 (225)	5,000 (1,524)	860 (390)	44 x 18 x 20
04-062-27	25	22 (0.64)	0.68 (17)	260 (385)	5,000 (1,524)	1,465 (665)	46 x 25 x 20
04-065-27	50	22 (0.64)	0.89 (23)	450 (670)	5,000 (1,524)	2,495 (1,130)	58 x 25 x 20
04-069-27	100	22 (0.64)	1.19 (30)	820 (1,220)	5,000 (1,524)	4,715 (2,140)	72 x 35 x 36
04-073-27	200	22 (0.64)	1.63 (41)	1,555 (2,315)	2,,500 (762)	4,500 (2,040)	72 x 35 x 36
04-075-27	300	22 (0.64)	1.96 (50)	2,275 (3,385)	2,500 (762)	6,385 (2,895)	78 x 40 x 39
04-077-27	400	22 (0.64)	2.23 (57)	2,965 (4,415)	1,250 (381)	4,320 (1,960)	72 x 35 x 36
04-081-27	600	22 (0.64)	2.72 (69)	4,395 (6,540)	1,250 (381)	6,290 (2,855)	84 x 40 x 42
04-083-27	900	22 (0.64)	3.30 (84)	6,505 (9,680)	1,250 (381)	8,130 (3,690)	96 x 40 x 48
04-092-27	6	24 (0.51)	0.38 (9.7)	70 (105)	5,000 (1,524)	415 (190)	36 x 18 x 14
04-094-27	12	24 (0.51)	0.46 (12)	110 (165)	5,000 (1,524)	660 (300)	44 x 18 x 20
04-097-27	25	24 (0.51)	0.58 (15)	180 (270)	5,000 (1,524)	1,065 (485)	46 x 25 x 20
04-100-27	50	24 (0.51)	0.74 (19)	310 (460)	5,000 (1,524)	1,755 (795)	52 x 25 x 20
04-104-27	100	24 (0.51)	0.98 (25)	550 (820)	5,000 (1,524)	3,120 (1,415)	65 x 30 x 32
04-108-27	200	24 (0.51)	1.32 (34)	1,020 (1,520)	5,000 (1,524)	5,800 (2,630)	78 x 40 x 39
04-110-27	300	24 (0.51)	1.58 (40)	1,475 (2,195)	2,500 (762)	4,300 (1,950)	72 x 35 x 36
04-112-27	400	24 (0.51)	1.79 (46)	1,910 (2,845)	2,500 (762)	5,475 (2,485)	78 x 40 x 39
04-116-27	600	24 (0.51)	2.18 (55)	2,825 (4,205)	1,250 (381)	4,145 (1,880)	72 x 35 x 36
04-118-27	900	24 (0.51)	2.63 (67)	4,145 (6,170)	1,250 (381)	5,880 (2,665)	78 x 40 x 39
04-120-27	1,200	24 (0.51)	3.00 (76)	5,435 (8,090)	1,000 (305)	6,135 (2,780)	78 x 40 x 39
04-121-27	1,500	24 (0.51)	3.35 (85)	6,745 (10,040)	1,000 (305)	7,920 (3,590)	96 x 40 x 48
04-124-27	1,800	24 (0.51)	3.63 (92)	8,005 (11,915)	1,000 (305)	9,180 (4,165)	96 x 40 x 48

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

CASPIC®–F (RDUP PE-39)

Product Description

CASPIC®-F Cables are designed for use in direct burial applications where additional mechanical or rodent protection is required. CASPIC-F may be used aerially, but must be attached to a support strand.

Applications

- Direct burial where additional mechanical protection is required or desired
- Lashed aerial where additional mechanical protection is required or desired

Features

- Twisted into pairs with varying lay lengths
- Core wrap
- Filled core
- Dual shield design
- Fully flooded shield interfaces
- Black, polyethylene jacket

Benefits

- Minimizes crosstalk
- Provides thermal protection
- Moisture resistant
- Rodent resistant
- Inhibits corrosion and water migration
- Provides a tough, protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin; color coded in accordance with industry standards
Twisted Pairs	Individual insulated conductors; twisted into pairs with varying lay lengths; specific color combinations provide pair identification
≤ 25-Pair Core	Pairs are assembled into a cylindrical core
> 25-Pair Core	Cables larger than 25-pair are assembled into units, which are then used to assemble the core; units are identifiable using color-coded binders
Filling Compound	80°C ETPR compound, completely filling the interstices between the pairs and under the core wrap
Core Wrap	Non-hygroscopic, dielectric tape applied over the core
Inner Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied directly over the core wrap that does not butt or overlap at any point along the length of the cable; flooded shield interfaces
Outer Shield	Rodent resistant, corrugated, copolymer coated, 6 mil steel tape applied directly over the aluminum and overlaps; flooded shield interfaces
Jacket	Black, polyethylene
Jacket Marking	Identifying information includes a telephone handset, cable code, pair count, AWG, date of manufacture and sequential length markings at 2 foot intervals
Standards Compliance	ANSI/ICEA S-84-608-2007 RDUP 7 CFR 1755.390 (PE-39) RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation* 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.5)	1.5	5.0	5,000	15,000
24 (0.51)	1.0 (1.6)	5.0 (16.4)	144.0 (89.5)	1.5	5.0	4,000	15,000

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	19	22	24
PSELFEXT Mean (dB/kft)	51	49	49
PSELFEXT Worst Pair (dB/kft)	45	43	43

Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
04-026-94	6	19 (0.90)	0.57 (15)	175 (260)	5,000 (1,524)	1,040 (470)	46 x 25 x 20
04-028-94	12	19 (0.90)	0.72 (18)	285 (425)	5,000 (1,524)	1,630 (740)	52 x 25 x 20
04-031-94	25	19 (0.90)	0.95 (24)	515 (765)	5,000 (1,524)	2,865 (1,300)	62 x 30 x 24
04-034-94	50	19 (0.90)	1.26 (32)	915 (1,360)	5,000 (1,524)	5,275 (2,390)	78 x 40 x 39
04-038-94	100	19 (0.90)	1.73 (44)	1,715 (2,550)	2,500 (762)	4,985 (2,260)	78 x 40 x 39
04-057-94	6	22 (0.64)	0.46 (12)	110 (165)	5,000 (1,524)	660 (300)	44 x 18 x 20
04-059-94	12	22 (0.64)	0.56 (14)	170 (255)	5,000 (1,524)	1,015 (460)	46 x 25 x 20
04-062-94	25	22 (0.64)	0.71 (18)	290 (430)	5,000 (1,524)	1,655 (750)	52 x 25 x 20
04-065-94	50	22 (0.64)	0.93 (24)	495 (735)	5,000 (1,524)	2,845 (1,290)	65 x 30 x 32
04-069-94	100	22 (0.64)	1.22 (31)	880 (1,310)	5,000 (1,524)	5,100 (2,315)	78 x 40 x 39
04-073-94	200	22 (0.64)	1.67 (42)	1,645 (2,450)	2,500 (762)	4,725 (2,145)	72 x 35 x 36
04-092-94	6	24 (0.51)	0.41 (10)	90 (135)	5,000 (1,524)	515 (235)	36 x 18 x 14
04-094-94	12	24 (0.51)	0.49 (12)	130 (195)	5,000 (1,524)	760 (345)	44 x 18 x 20
04-097-94	25	24 (0.51)	0.61 (16)	205 (305)	5,000 (1,524)	1,190 (540)	46 x 25 x 20
04-100-94	50	24 (0.51)	0.77 (20)	340 (505)	5,000 (1,524)	1,905 (865)	52 x 25 x 20
04-104-94	100	24 (0.51)	1.01 (26)	600 (895)	5,000 (1,524)	3,290 (1,490)	62 x 30 x 24
04-108-94	200	24 (0.51)	1.36 (35)	1,090 (1,620)	5,000 (1,524)	6,150 (2,790)	78 x 40 x 39
04-110-94	300	24 (0.51)	1.63 (41)	1,560 (2,320)	2,500 (762)	4,515 (2,050)	72 x 35 x 36
04-112-94	400	24 (0.51)	1.84 (47)	2,015 (3,000)	2,500 (762)	5,735 (2,600)	78 x 40 x 39
04-116-94	600	24 (0.51)	2.22 (56)	2,945 (4,385)	1,250 (381)	4,295 (1,950)	72 x 35 x 36
04-118-94	900	24 (0.51)	2.68 (68)	4,300 (6,400)	1,250 (381)	6,170 (2,800)	84 x 40 x 42

TECH TIP

Product FAQs for OSP copper cables are available online:
www.SuperiorEssex.com/comm/productFAQs.aspx

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ALPETH

BHBA, BHAA, BKMA and BKTA

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Solid polyolefin in distinctive colors to facilitate pair identification
≤ 25-Pair Core	Pairs are combined into a cylindrical core
> 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, the color code is a Mirror Image design
Core Wrap	Non-hygroscopic dielectric material protects the core and helps provide core-to-shield dielectric strength
Shield	Corrugated bare 8 mil aluminum tape is applied longitudinally over the core wrap
Jacket	Black polyethylene
Shield/Jacket Options	If extra mechanical protection is desired, an additional outer steel armor and polyethylene jacket (UM) can be requested
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Product Description

ALPETH Cable is a solid insulated, single jacket air core 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.

Applications

- Lashed aerial

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects core and provides improved mechanical and electrical characteristics
• Bare aluminum tape shield	• Assures good electrical contact with non-piercing bonding clamps
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses expected in standard installations

Electrical Specifications					
		Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
Number of Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**	**Maximum Individual pF/kft (pF/km)**	**Maximum RMS pF/kft (pF/km)**	**Maximum Individual pF/kft (pF/km)**	**Maximum Average pF/kft (pF/km)**
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (0.51)	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) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz			
Conductor Size (AWG)	19	22	24	26
PSELFEXT Mean (dB/kft)	51	49	49	47
PSELFEXT Worst Pair (dB/kft)	45	43	43	43

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Part Numbers and Physical Characteristics						
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
BHBA						
20-031-42	25	19 (0.90)	0.76 (19)	310 (460)	10,000 (3,048)	3,895 (1,765)
20-034-42	50	19 (0.90)	1.00 (25)	570 (850)	10,000 (3,048)	6,495 (2,945)
20-038-42	100	19 (0.90)	1.34 (34)	1,070 (1,590)	5,000 (1,524)	6,145 (2,785)
20-042-42	200	19 (0.90)	1.85 (47)	2,075 (3,090)	2,500 (762)	5,985 (2,715)
20-044-42	300	19 (0.90)	2.23 (57)	3,065 (4,560)	2,000 (610)	6,925 (3,140)
20-046-42	400	19 (0.90)	2.73 (69)	4,172 (6,215)	1,260 (384)	5,997 (2,723)
BHAA						
20-062-42	25	22 (0.64)	0.60 (15)	180 (270)	15,000 (4,572)	3,495 (1,585)
20-065-42	50	22 (0.64)	0.77 (20)	315 (470)	15,000 (4,572)	5,520 (2,505)
20-069-42	100	22 (0.64)	1.02 (26)	580 (865)	10,000 (3,048)	6,595 (2,990)
20-073-42	200	22 (0.64)	1.38 (35)	1,090 (1,620)	5,000 (1,524)	6,245 (2,835)
20-075-42	300	22 (0.64)	1.66 (42)	1,600 (2,380)	3,300 (1,006)	6,075 (2,755)
20-077-42	400	22 (0.64)	1.89 (48)	2,110 (3,140)	2,500 (762)	6,070 (2,755)
20-081-42	600	22 (0.64)	2.28 (58)	3,115 (4,635)	2,000 (610)	7,025 (3,185)
20-083-42	900	22 (0.64)	2.76 (70)	4,625 (6,885)	1,100 (335)	5,885 (2,670)
BKMA						
20-097-42	25	24 (0.51)	0.51 (13)	125 (185)	20,000 (6,096)	3,295 (1,495)
20-100-42	50	24 (0.51)	0.64 (16)	215 (320)	20,000 (6,096)	5,095 (2,310)
20-104-42	100	24 (0.51)	0.83 (21)	380 (565)	13,300 (4,054)	5,850 (2,655)
20-108-42	200	24 (0.51)	1.12 (28)	710 (1,055)	8,000 (2,438)	6,475 (2,935)
20-110-42	300	24 (0.51)	1.33 (34)	1,035 (1,540)	5,700 (1,737)	6,695 (3,035)
20-112-42	400	24 (0.51)	1.52 (39)	1,355 (2,015)	4,400 (1,341)	6,755 (3,065)
20-116-42	600	24 (0.51)	1.82 (46)	1,995 (2,970)	3,100 (945)	6,980 (3,165)
20-118-42	900	24 (0.51)	2.19 (56)	2,950 (4,390)	2,200 (671)	7,285 (3,305)
20-120-42	1,200	24 (0.51)	2.50 (64)	3,905 (5,810)	1,600 (488)	7,045 (3,195)
20-121-42	1,500	24 (0.51)	2.79 (71)	4,860 (7,235)	1,250 (381)	6,870 (3,115)
20-124-42	1,800	24 (0.51)	3.05 (78)	5,810 (8,645)	1,140 (347)	7,420 (3,365)
BKTA						
20-145-42	300	26 (0.40)	1.07 (27)	675 (1,005)	8,000 (2,438)	6,195 (2,810)
20-147-42	400	26 (0.40)	1.23 (31)	875 (1,300)	6,600 (2,012)	6,570 (2,980)
20-151-42	600	26 (0.40)	1.47 (37)	1,290 (1,920)	5,000 (1,524)	7,245 (3,285)
20-153-42	900	26 (0.40)	1.75 (45)	1,890 (2,815)	3,300 (1,006)	7,030 (3,190)
20-155-42	1,200	26 (0.40)	2.00 (51)	2,495 (3,715)	2,200 (671)	6,285 (2,850)
20-156-42	1,500	26 (0.40)	2.25 (57)	3,100 (4,615)	2,000 (610)	6,995 (3,175)
20-157-42	1,800	26 (0.40)	2.45 (62)	3,695 (5,500)	1,600 (488)	6,705 (3,040)
20-158-42	2,100	26 (0.40)	2.65 (67)	4,305 (6,405)	1,140 (347)	5,705 (2,585)
20-161-42	2,700	26 (0.40)	2.97 (75)	5,495 (8,180)	1,050 (320)	6,565 (2,980)
20-162-42	3,000	26 (0.40)	3.13 (80)	6,090 (9,065)	800 (244)	5,665 (2,570)

PASP

BHBH, BHAH, BKMH and BKTH

Product Description

PASP Cable is a solid insulated, double jacket, armored air core 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.

Applications

- Pressurized direct buried installations in harsh environments

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification
≤ 25-Pair Core	Pairs are combined into a cylindrical core
> 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, the color code is a Mirror Image design
Core Wrap	Non-hygroscopic dielectric material
Inner Jacket	Polyethylene
Shield	Corrugated bare 8 mil aluminum tape applied longitudinally over the inner jacket
Armor	Corrugated, copolymer coated, 6 mil steel tape applied over the aluminum shield; armor is bonded to the outer jacket
Outer Jacket	Black polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects the core and provides core-to-shield dielectric strength
• Inner polyethylene jacket	• Provides additional protection against mechanical damage and prevents the ingress of moisture
• Aluminum tape shield	• Assures good electrical contact with non-piercing bonding clamps
• Steel tape armor bonded to outer jacket	• Protects the core from mechanical damage and reduces 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
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (0.51)	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) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz			
Conductor Size (AWG)	19	22	24	26
PSELFEXT Mean (dB/kft)	51	49	49	47
PSELFEXT Worst Pair (dB/kft)	45	43	43	43

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Part Numbers and Physical Characteristics						
Part Number	**Pair Count**	**AWG (mm)**	**Nominal Diameter in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Standard Length ft (m)**	**Approx. Shipping Weight lbs (kg)**
BHBH						
20-031-05	25	19 (0.90)	0.89 (23)	415 (620)	10,000 (3,048)	4,945 (2,245)
20-034-05	50	19 (0.90)	1.13 (29)	705 (1,050)	5,000 (1,524)	4,320 (1,960)
20-038-05	100	19 (0.90)	1.50 (38)	1,280 (1,905)	3,300 (1,006)	5,020 (2,275)
BHAH						
20-062-05	25	22 (0.64)	0.72 (18)	260 (385)	15,000 (4,572)	4,695 (2,130)
20-065-05	50	22 (0.64)	0.90 (23)	425 (630)	10,000 (3,048)	5,045 (2,290)
20-069-05	100	22 (0.64)	1.15 (29)	715 (1,065)	7,500 (2,286)	6,160 (2,795)
20-073-05	200	22 (0.64)	1.54 (39)	1,300 (1,935)	3,750 (1,143)	5,670 (2,570)
20-075-05	300	22 (0.64)	1.83 (47)	1,865 (2,775)	3,300 (1,006)	6,950 (3,150)
20-077-05	400	22 (0.64)	2.05 (52)	2,405 (3,580)	2,000 (610)	5,605 (2,540)
20-081-05	600	22 (0.64)	2.48 (63)	3,515 (5,230)	1,250 (381)	5,190 (2,355)
20-083-05	900	22 (0.64)	2.96 (75)	5,110 (7,605)	1,100 (335)	6,415 (2,910)
BKMH						
20-097-05	25	24 (0.51)	0.63 (16)	195 (290)	20,000 (6,096)	4,695 (2,130)
20-100-05	50	24 (0.51)	0.76 (19)	300 (445)	13,300 (4,054)	4,785 (2,170)
20-104-05	100	24 (0.51)	0.97 (25)	500 (745)	10,000 (3,048)	5,795 (2,630)
20-108-05	200	24 (0.51)	1.24 (32)	860 (1,280)	6,600 (2,012)	6,470 (2,935)
20-110-05	300	24 (0.51)	1.49 (38)	1,240 (1,845)	4,400 (1,341)	6,250 (2,835)
20-112-05	400	24 (0.51)	1.68 (43)	1,595 (2,375)	3,300 (1,006)	6,060 (2,750)
20-116-05	600	24 (0.51)	1.99 (51)	2,290 (3,410)	2,500 (762)	6,520 (2,955)
20-118-05	900	24 (0.51)	2.38 (61)	3,335 (4,965)	1,600 (488)	6,130 (2,780)
20-120-05	1,200	24 (0.51)	2.72 (69)	4,355 (6,480)	1,100 (335)	5,585 (2,535)
20-121-05	1,500	24 (0.51)	2.99 (76)	5,350 (7,960)	1,100 (335)	6,680 (3,030)
20-124-05	1,800	24 (0.51)	3.25 (83)	6,340 (9,435)	800 (244)	5,865 (2,660)
BKTH						
20-145-05	300	26 (0.40)	1.20 (31)	820 (1,220)	6,600 (2,012)	6,205 (2,815)
20-147-05	400	26 (0.40)	1.40 (36)	1,075 (1,600)	5,000 (1,524)	6,170 (2,800)
20-151-05	600	26 (0.40)	1.64 (42)	1,520 (2,260)	3,300 (1,006)	5,810 (2,635)
20-153-05	900	26 (0.40)	1.93 (49)	2,175 (3,235)	2,600 (792)	6,450 (2,925)
20-155-05	1,200	26 (0.40)	2.20 (56)	2,845 (4,235)	2,200 (671)	7,055 (3,200)
20-156-05	1,500	26 (0.40)	2.45 (62)	3,490 (5,195)	1,600 (488)	6,380 (2,895)
20-157-05	1,800	26 (0.40)	2.66 (68)	4,135 (6,155)	1,300 (396)	6,170 (2,800)
20-158-05	2,100	26 (0.40)	2.85 (72)	4,770 (7,100)	1,140 (347)	6,235 (2,825)
20-159-05	2,400	26 (0.40)	3.05 (80)	5,465 (8,141)	1,100 (335)	7,012 (3,183)
20-161-05	2,700	26 (0.40)	3.18 (81)	6,015 (8,950)	1,140 (347)	7,650 (3,470)

Self-Support

BHAS and BKMS

Product Description

Self-Support Cable is a solid insulated, single jacket air core 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.

Applications

- Aerial

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Undulated core assembly	• Eliminates strain on the conductors and provides sufficient slack during installation
• Core wrap	• Protects the core and helps provide core-to-shield dielectric strength
• Fully flooded steel support member	• Provides corrosion protection
• Polyethylene jacket	• Provides tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64) and 24 (0.51)
Insulation	Solid polyolefin in distinctive colors to facilitate pair identification
≤ 25-Pair Core	Pairs are combined into a cylindrical core
> 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders
Core Wrap	Non-hygroscopic dielectric material
Shield	Corrugated, 8 mil coated aluminum tape applied longitudinally over the core wrap
Support Member	0.25 inch, 7-strand Extra High-Strength (EHS) galvanized steel member, fully flooded, serves as the support member and is an integral part of the sheath
Jacket	Black polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications					
		Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
Number of Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**	**Maximum Individual pF/kft (pF/km)**	**Maximum RMS pF/kft (pF/km)**	**Maximum Individual pF/kft (pF/km)**	**Maximum Average pF/kft (pF/km)**
Over 12	83 + 4, - 5 (52 + 2, - 3)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
22 (0.64)	1.0 (1.6)	4.7 (15.4)	91 (56.5)	1.5	5.0	4,000	10,000
24 (0.51)	1.0 (1.6)	5.9 (19.4)	144 (89.5)	1.5	5.0	3,000	10,000

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz	
Conductor Size (AWG)	22	24
PSELFEXT Mean (dB/kft)	49	49
PSELFEXT Worst Pair (dB/kft)	43	43

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Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter (cable only) in (mm)	Nominal Diameter (with messenger) in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
BHAS							
20-062-43	25	22 (0.64)	0.58 (15)	1.05 (27)	310 (461)	10,000 (3,048)	3,895 (1,766)
20-065-43	50	22 (0.64)	0.74 (19)	1.20 (31)	445 (662)	7,500 (2,286)	4,135 (1,875)
20-069-43	100	22 (0.64)	1.00 (25)	1.47 (37)	705 (1,049)	6,000 (1,829)	5,025 (2,279)
BKMS							
20-097-43	25	24 (0.51)	0.49 (12)	0.96 (24)	260 (387)	13,300 (4,054)	4,255 (1,930)
20-100-43	50	24 (0.51)	0.62 (16)	1.09 (28)	345 (513)	13,300 (4,054)	5,385 (2,442)
20-104-43	100	24 (0.51)	0.80 (20)	1.27 (32)	515 (766)	8,000 (2,438)	4,915 (2,229)
20-108-43	200	24 (0.51)	1.09 (28)	1.56 (40)	840 (1,250)	5,000 (1,524)	4,995 (2,265)

TECH TIP

Sag and Tension guidelines for these products are available online:
www.SuperiorEssex.com/techtip.aspx

Reinforced Self-Support

BHAP, BKMP and BKTP

Product Description

Reinforced Self-Support Cable is a solid insulated, double jacket, armored, self-supporting air core 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.

Applications

- Aerial installations in harsh environments

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Undulated core assembly	• Eliminates strain on the conductors and provides sufficient slack during installation
• Core wrap	• Protects the core and helps provide core-to-shield dielectric strength
• Inner polyethylene jacket	• Provides additional protection against mechanic damage and prevents the ingress of moisture
• Fully flooded steel support member	• Provides corrosion protection
• Polyethylene jacket	• Provides tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Solid polyolefin in distinctive colors to facilitate pair identification
≤ 25-Pair Core	Pairs are combined into a cylindrical core
> 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders
Core Wrap	Non-hygroscopic dielectric material
Shield	Corrugated, 8 mil aluminum tape is applied longitudinally over the core wrap
Inner Jacket	Polyethylene helps protect the core and shield against mechanical damage and ingress of moisture
Armor	Corrugated bare 6 mil steel tape is applied longitudinally over the inner jacket and the inner and outer surfaces of the steel are flooded
Support Member	0.25 inch, 7-strand Extra High-Strength (EHS) galvanized steel member, fully flooded, serves as the support member and is an integral part of the sheath
Outer Jacket	Black polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
Over 12	83 + 4, - 5 (52 ± 2, - 3)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
22 (0.64)	1.0 (1.6)	4.7 (15.4)	91 (56.5)	1.5	5.0	4,000	10,000
24 (0.51)	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) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	22	24	26
PSELFEXT Mean (dB/kft)	49	49	47
PSELFEXT Worst Pair (dB/kft)	43	43	43

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Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter (cable only) in (mm)	Nominal Diameter (with messenger) in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
BHAP							
20-062-20	25	22 (0.64)	0.87 (22)	1.33 (34)	455 (675)	10,000 (3,048)	4,200 (1,905)
20-065-20	50	22 (0.64)	1.05 (27)	1.51 (38)	625 (930)	7,500 (2,286)	4,465 (2,025)
20-069-20	100	22 (0.64)	1.30 (33)	1.76 (45)	940 (1,400)	5,000 (1,524)	4,475 (2,029)
BKMP							
20-097-20	25	24 (0.51)	0.83 (21)	1.29 (33)	400 (595)	10,000 (3,048)	4,345 (1,971)
20-100-20	50	24 (0.51)	0.94 (24)	1.40 (36)	510 (760)	10,000 (3,048)	5,445 (2,469)
20-104-20	100	24 (0.51)	1.13 (29)	1.59 (40)	715 (1,065)	5,000 (1,524)	4,145 (1,880)
20-108-20	200	24 (0.51)	1.42 (36)	1.88 (48)	1,120 (1,665)	4,000 (1,220)	4,995 (2,265)
BKTP							
20-145-20	300	26 (0.40)	1.35 (34)	1.81 (46)	1,045 (1,555)	3,300 (1,010)	4,110 (1,864)

TECH TIP

Sag and Tension guidelines for these products are available online:
www.SuperiorEssex.com/techtip.aspx

Bonded STALPETH

DCAZ, DCMZ and DCTZ

Product Description

Bonded STALPETH Cable is a foam skin insulated, single jacket, armored air core design intended for use in ducts to provide more efficient duct utilization than standard PIC designs.

Applications

- Congested underground duct systems

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects the core and helps provide core-to-shield dielectric strength
• Aluminum tape shield	• Assures good electrical contact with non-piercing bonding clamps
• Steel tape armor bonded to outer jacket	• Protects the core from mechanical damage and reduces 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
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin; conductor insulation is color coded in accordance with industry standard
≥ 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, the color code is Mirror Image design
Core Wrap	Non-hygroscopic dielectric material
Shield	Corrugated bare 8 mil aluminum tape applied longitudinally over the core wrap
Armor	Corrugated, copolymer coated, 6 mil steel tape applied over the aluminum shield and bonded to the outer jacket
Jacket	Black polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification and a telephone handset printed at 2 foot intervals; sequential footage markings are printed at alternate 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
All pairs	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
22 (0.64)	1.0 (1.6)	5.0 (16.4)	91 (56.5)	1.5	5.0	1,400	5,000
24 (0.51)	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) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz		
Conductor Size (AWG)	22	24	26
PSELFEXT Mean (dB/kft)	49	49	47
PSELFEXT Worst Pair (dB/kft)	43	43	43

Part Numbers and Physical Characteristics						
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
DCAZ						
19-083-01	900	22 (0.64)	2.49 (63)	4,375 (6,510)	1,600 (488)	7,795 (3,535)
19-085-01	1,200	22 (0.64)	2.85 (72)	5,770 (8,585)	1,200 (366)	7,720 (3,500)
DCMZ						
19-116-01	600	24 (0.51)	1.70 (43)	1,960 (2,915)	3,900 (1,189)	8,440 (3,830)
19-118-01	900	24 (0.51)	2.02 (51)	2,860 (4,255)	2,616 (797)	8,275 (3,755)
19-120-01	1,200	24 (0.51)	2.30 (58)	3,755 (5,590)	2,000 (610)	8,305 (3,765)
19-121-01	1,500	24 (0.51)	2.57 (65)	4,660 (6,935)	1,600 (488)	8,250 (3,745)
19-124-01	1,800	24 (0.51)	2.81 (71)	5,545 (8,250)	1,250 (381)	7,725 (3,505)
19-125-01	2,100	24 (0.51)	3.04 (77)	6,440 (9,585)	1,150 (351)	8,200 (3,720)
19-126-01	2,400	24 (0.51)	3.22 (82)	7,320 (10,895)	876 (267)	7,205 (3,270)
DCTZ						
19-151-01	600	26 (0.40)	1.38 (35)	1,285 (1,910)	5,700 (1,737)	8,120 (3,685)
19-153-01	900	26 (0.40)	1.62 (41)	1,850 (2,755)	3,900 (1,189)	8,010 (3,635)
19-155-01	1,200	26 (0.40)	1.84 (47)	2,420 (3,600)	3,200 (975)	8,540 (3,875)
19-156-01	1,500	26 (0.40)	2.08 (53)	2,995 (4,455)	2,500 (762)	8,285 (3,755)
19-157-01	1,800	26 (0.40)	2.26 (57)	3,560 (5,300)	2,080 (634)	8,200 (3,720)
19-158-01	2,100	26 (0.40)	2.41 (61)	4,115 (6,125)	1,250 (381)	5,940 (2,695)
19-159-01	2,400	26 (0.40)	2.58 (66)	4,685 (6,970)	1,600 (488)	8,290 (3,760)
19-161-01	2,700	26 (0.40)	2.71 (69)	5,240 (7,800)	1,250 (381)	7,345 (3,330)
19-162-01	3,000	26 (0.40)	2.86 (73)	5,800 (8,630)	1,200 (366)	7,755 (3,520)
19-164-01	3,600	26 (0.40)	3.03 (77)	6,885 (10,245)	1,150 (351)	8,715 (3,950)
19-167-01	4,200	26 (0.40)	3.26 (83)	7,995 (11,900)	900 (274)	7,990 (3,625)

STEAMPETH

DKMN and DKTN

Product Description

STEAMPETH Cable is a solid insulated, single jacket, armored air core 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 (110°C).

Applications

- Steam tunnels

Features	Benefits
• Solid polypropylene insulation	• Provides higher temperature rating
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects core and helps provide core-to-shield dielectric strength
• Aluminum tape shield	• Assures good electrical contact with non-piercing bonding clamps
• Steel armor bonded to the outer jacket	• Protects the core from mechanical damage and reduces the possibility of tape buckling during installation, ingress of water to the shield and seepage of water along the cable between the armor and outer jacket
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, above-normal temperatures, ground chemicals and stresses expected during installation

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 24 (0.51) and 26 (0.40)
Insulation	Solid polypropylene insulation; standard color codes are used for pair identification
Core Assembly	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, color coding is Mirror Image
Core Wrap	Non-hygroscopic dielectric material
Shield	Corrugated bare 8 mil aluminum tape applied longitudinally over the core wrap
Armor	Corrugated, copolymer coated, 6 mil steel tape applied over the aluminum shield and bonded to the outer jacket
Jacket	Black, medium density polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, a telephone handset and sequential footage markings are printed at 2 foot intervals.
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-110-CORE

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
All pairs	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Sizes AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
24 (0.51)	1.0 (1.6)	5.9 (16.4)	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)	
	@ 150 kHz	@ 772 kHz
PSWUNEXT Mean (dB)	58	47
PSWUNEXT Worst Pair (dB)	53	42

	Minimum Far End Crosstalk			
	@ 150 kHz		@ 772 kHz	
Conductor Size (AWG)	24	26	24	26
PSELFEXT Mean (dB/kft)	63	61	49	47
PSELFEXT Worst Pair (dB/kft)	57	57	43	43

Part Numbers and Physical Characteristics

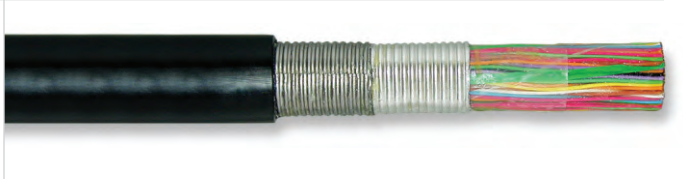
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
DKMN						
27-118-19	900	24 (0.51)	2.23 (57)	3,110 (4,630)	2,100 (640)	7,325 (3,325)
DKTN						
27-145-19	300	26 (0.40)	1.11 (28)	750 (1,115)	8,600 (2,621)	7,245 (3,285)
27-151-19	600	26 (0.40)	1.51 (38)	1,395 (2,075)	4,800 (1,463)	7,490 (3,400)
27-153-19	900	26 (0.40)	1.79 (46)	2,015 (3,000)	3,300 (1,006)	7,445 (3,375)
27-155-19	1,200	26 (0.40)	2.04 (52)	2,635 (3,920)	2,120 (646)	6,380 (2,895)
27-157-19	1,800	26 (0.40)	2.50 (64)	3,885 (5,780)	1,650 (503)	7,205 (3,270)
27-159-19	2,400	26 (0.40)	2.87 (73)	5,110 (7,605)	1,250 (381)	7,185 (3,260)
27-162-19	3,000	26 (0.40)	3.18 (81)	6,325 (9,415)	1,150 (351)	8,070 (3,660)
27-164-19	3,600	26 (0.40)	3.36 (85)	7,495 (11,155)	850 (259)	7,165 (3,250)

Power Station High Potential Filled ASP

CMAW

Product Description

High Potential Filled ASP Cable with solid insulation is a single jacket, filled, armored design intended for applications associated with power substations. This cable provides 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.



Applications

- Power sub stations

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects core and provides improved mechanical and electrical characteristics
• Inner and outer surfaces of both aluminum tape and steel tape are flooded with an adhesive compound	• Provides a moisture barrier and inhibits corrosion
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, above-normal temperatures, ground chemicals and stresses expected during installation

Specifications	
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Color coded solid high dielectric insulation; standard color codes are used for pair identification.
25-Pair Core	Pairs are combined into a cylindrical core
≥ 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color-coded non-hygroscopic binders
Filling Compound	Entire core assembly is filled with 80°C ETPR compound, filling the air space between the insulated conductors
Core Wrap	Dielectric tape applied over the core
Shields	Corrugated bare 8 mil aluminum tape covered by a corrugated bare 6 mil steel tape applied longitudinally over the core wrap
Jacket	Black polyethylene
Jacket Marking	Manufacturer's ID, pair count, AWG, product ID and telephone handset printed every 2 foot; sequential footage marking printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
All pairs	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

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

	Minimum Near End Crosstalk (NEXT) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz
PSELFEXT Mean (dB/kft)	49
PSELFEXT Worst Pair (dB/kft)	43

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
21-062-48	25	0.71 (18)	285 (425)	10,000 (3,048)	3,645 (1,655)
21-065-48	50	0.93 (24)	495 (735)	10,000 (3,048)	5,745 (2,605)
21-069-48	100	1.22 (31)	875 (1,300)	5,000 (1,524)	5,170 (2,345)
21-073-48	200	1.76 (45)	1,758 (2,619)	2,500 (762)	5,190 (2,360)
21-075-48	300	2.11 (54)	2,529 (3,767)	2,500 (762)	7,115 (3,235)

Filled ALPETH

ANBA, ANAA, ANMA and ANTA

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin; conductor insulation is color coded in accordance with industry standard
25-Pair Core	Pairs are combined into a cylindrical core
≥ 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, the color code is a Mirror Image design
Filling Compound	Entire core assembly is filled with an 80°C ETPR compound, filling the air space between the insulated conductors
Core Wrap	Dielectric tape applied over the core
Shield	Corrugated bare 8 mil aluminum tape is applied longitudinally over the core wrap; inner and outer surfaces of the aluminum shield are flooded
Jacket	Black, polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Product Description

Filled ALPETH Cable with foam skin insulation is a single jacket, 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.

Applications

- Direct burial and underground conduit

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects core and provides improved mechanical and electrical characteristics
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installation

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (0.51)	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) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz			
Conductor Size (AWG)	19	22	24	26
PSELFEXT Mean (dB/kft)	51	49	49	47
PSELFEXT Worst Pair (dB/kft)	45	43	43	43

Part Numbers and Physical Characteristics						
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
ANBA						
09-031-77	25	19 (0.90)	0.78 (20)	355 (530)	10,000 (3,048)	4,345 (1,970)
09-034-77	50	19 (0.90)	1.03 (26)	655 (975)	5,000 (1,524)	4,070 (1,845)
09-038-77	100	19 (0.90)	1.37 (35)	1,225 (1,825)	3,300 (1,006)	4,840 (2,195)
ANAA						
09-062-77	25	22 (0.64)	0.60 (15)	200 (300)	15,000 (4,572)	3,795 (1,720)
09-065-77	50	22 (0.64)	0.77 (20)	350 (520)	15,000 (4,572)	6,045 (2,740)
09-069-77	100	22 (0.64)	1.02 (26)	645 (960)	7,500 (2,286)	5,635 (2,555)
09-073-77	200	22 (0.64)	1.38 (35)	1,225 (1,825)	5,000 (1,524)	6,920 (3,140)
09-075-77	300	22 (0.64)	1.65 (42)	1,800 (2,680)	3,300 (1,006)	6,735 (3,055)
09-077-77	400	22 (0.64)	1.88 (48)	2,365 (3,520)	2,500 (762)	6,710 (3,045)
09-081-77	600	22 (0.64)	2.28 (58)	3,500 (5,210)	1,650 (503)	6,570 (2,980)
09-083-77	900	22 (0.64)	2.76 (70)	5,190 (7,725)	1,000 (305)	5,985 (2,715)
09-085-77	1,200	22 (0.64)	3.15 (80)	6,870 (10,225)	834 (254)	6,525 (2,960)
ANMA						
09-097-77	25	24 (0.51)	0.52 (13)	140 (210)	20,000 (6,096)	3,595 (1,630)
09-100-77	50	24 (0.51)	0.66 (17)	240 (355)	20,000 (6,096)	5,595 (2,540)
09-104-77	100	24 (0.51)	0.85 (22)	430 (640)	10,000 (3,048)	5,095 (2,310)
09-108-77	200	24 (0.51)	1.14 (29)	810 (1,205)	5,000 (1,524)	4,845 (2,200)
09-110-77	300	24 (0.51)	1.37 (35)	1,180 (1,755)	5,000 (1,524)	6,695 (3,035)
09-112-77	400	24 (0.51)	1.55 (39)	1,545 (2,300)	4,000 (1,219)	6,975 (3,165)
09-116-77	600	24 (0.51)	1.88 (48)	2,285 (3,400)	2,500 (762)	6,510 (2,950)
09-118-77	900	24 (0.51)	2.25 (57)	3,345 (4,980)	1,650 (503)	6,315 (2,865)
09-120-77	1,200	24 (0.51)	2.58 (66)	4,430 (6,595)	1,250 (381)	6,335 (2,870)
09-121-77	1,500	24 (0.51)	2.87 (73)	5,510 (8,200)	1,000 (305)	6,305 (2,860)
09-124-77	1,800	24 (0.51)	3.13 (80)	6,590 (9,805)	840 (256)	6,330 (2,870)
09-125-77	2,100	24 (0.51)	3.40 (86)	7,725 (11,495)	750 (229)	6,590 (2,990)
ANTA						
09-132-77	25	26 (0.40)	0.44 (11)	100 (150)	20,000 (6,096)	2,795 (1,270)
09-135-77	50	26 (0.40)	0.55 (14)	165 (245)	20,000 (6,096)	4,095 (1,855)
09-139-77	100	26 (0.40)	0.71 (18)	290 (430)	15,000 (4,572)	5,145 (2,335)
09-143-77	200	26 (0.40)	0.94 (24)	535 (795)	10,000 (3,048)	6,145 (2,785)
09-145-77	300	26 (0.40)	1.09 (28)	755 (1,125)	6,000 (1,829)	5,325 (2,415)
09-147-77	400	26 (0.40)	1.25 (32)	995 (1,480)	5,000 (1,524)	5,770 (2,615)
09-151-77	600	26 (0.40)	1.49 (38)	1,450 (2,160)	3,300 (1,006)	5,580 (2,530)
09-153-77	900	26 (0.40)	1.78 (45)	2,120 (3,155)	2,500 (762)	6,095 (2,765)
09-155-77	1,200	26 (0.40)	2.03 (52)	2,790 (4,150)	2,000 (610)	6,375 (2,890)
09-156-77	1,500	26 (0.40)	2.28 (58)	3,490 (5,195)	1,300 (396)	5,330 (2,420)
09-157-77	1,800	26 (0.40)	2.49 (63)	4,165 (6,200)	1,250 (381)	6,000 (2,720)
09-158-77	2,100	26 (0.40)	2.69 (68)	4,870 (7,250)	1,200 (366)	6,640 (3,010)
09-159-77	2,400	26 (0.40)	2.86 (73)	5,535 (8,235)	1,000 (305)	6,330 (2,870)

Filled ASP

ANBW, ANAW, ANMW and ANTW

Product Description

FILLED ASP Cable with foam skin insulation is a single jacket, 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.

Applications

- Direct burial

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Inner and outer surfaces of both aluminum tape and steel tape are flooded	• Provides a barrier to moisture and inhibits corrosion
• Core wrap	• Protects core and provides improved mechanical and electrical characteristics
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installation

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin; conductor insulation is color coded in accordance with industry standard
25-Pair Core	Pairs are combined into a cylindrical core
≥ 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, the color code is a Mirror Image design
Filling Compound	Core assembly is completely filled with an 80°C ETPR compound, filling the air space between the insulated conductors
Core Wrap	Dielectric tape applied over the core
Shields	Corrugated bare 8 mil aluminum tape covered by a corrugated bare 6 mil steel tape applied longitudinally over the core wrap
Jacket	Black, polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (0.51)	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) @ 772 kHz
PSWUNEXT Mean (dB)	47
PSWUNEXT Worst Pair (dB)	42

	Minimum Far End Crosstalk (FEXT) @ 772 kHz			
Conductor Size (AWG)	19	22	24	26
PSELFEXT Mean (dB/kft)	51	49	49	47
PSELFEXT Worst Pair (dB/kft)	45	43	43	43

Part Numbers and Physical Characteristics						
Part Number	Pair Count	AWG (mm)	Nomnal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
ANBW						
22-031-83	25	19 (0.90)	0.81 (21)	410 (610)	10,000 (3,048)	4,895 (2,220)
22-034-83	50	19 (0.90)	1.07 (27)	735 (1,095)	5,000 (1,524)	4,470 (2,030)
22-038-83	100	19 (0.90)	1.41 (36)	1,340 (1,995)	5,000 (1,524)	7,495 (3,400)
22-042-83	200	19 (0.90)	1.96 (50)	2,570 (3,825)	2,000 (610)	5,935 (2,690)
22-044-83	300	19 (0.90)	2.35 (60)	3,740 (5,565)	1,650 (503)	6,965 (3,160)
ANAW						
22-062-83	25	22 (0.64)	0.63 (16)	240 (355)	18,000 (5,486)	5,115 (2,320)
22-065-83	50	22 (0.64)	0.80 (20)	405 (605)	15,000 (4,572)	6,870 (3,115)
22-069-83	100	22 (0.64)	1.05 (27)	730 (1,085)	7,500 (2,286)	6,270 (2,845)
22-073-83	200	22 (0.64)	1.42 (36)	1,340 (1,995)	5,000 (1,524)	7,495 (3,400)
22-075-83	300	22 (0.64)	1.69 (43)	1,940 (2,885)	3,300 (1,006)	7,195 (3,265)
22-077-83	400	22 (0.64)	1.92 (49)	2,530 (3,765)	2,500 (762)	7,120 (3,230)
22-081-83	600	22 (0.64)	2.32 (59)	3,705 (5,515)	1,650 (503)	6,910 (3,135)
22-083-83	900	22 (0.64)	2.81 (71)	5,445 (8,105)	1,100 (335)	6,785 (3,075)
22-085-83	1,200	22 (0.64)	3.20 (81)	7,160 (10,655)	834 (254)	6,765 (3,070)
ANMW						
22-097-83	25	24 (0.51)	0.55 (14)	175 (260)	20,000 (6,096)	4,295 (1,950)
22-100-83	50	24 (0.51)	0.69 (18)	290 (430)	20,000 (6,096)	6,595 (2,990)
22-104-83	100	24 (0.51)	0.88 (22)	500 (745)	13,300 (4,054)	7,445 (3,375)
22-108-83	200	24 (0.51)	1.18 (30)	900 (1,340)	6,600 (2,012)	6,735 (3,055)
22-110-83	300	24 (0.51)	1.41 (36)	1,295 (1,925)	5,000 (1,524)	7,270 (3,300)
22-112-83	400	24 (0.51)	1.59 (40)	1,680 (2,500)	4,000 (1,219)	7,515 (3,410)
22-116-83	600	24 (0.51)	1.92 (49)	2,445 (3,640)	2,500 (762)	6,910 (3,135)
22-118-83	900	24 (0.51)	2.29 (58)	3,545 (5,275)	2,000 (610)	7,885 (3,575)
22-120-83	1,200	24 (0.51)	2.63 (67)	4,670 (6,950)	1,250 (381)	6,635 (3,010)
22-121-83	1,500	24 (0.51)	2.92 (74)	5,775 (8,595)	1,000 (305)	6,570 (2,980)
22-124-83	1,800	24 (0.51)	3.18 (81)	6,880 (10,240)	950 (290)	7,330 (3,325)
22-125-83	2,100	24 (0.51)	3.45 (88)	8,045 (11,975)	940 (287)	8,960 (4,065)
ANTW						
22-132-83	25	26 (0.40)	0.47 (12)	130 (195)	20,000 (6,096)	3,395 (1,540)
22-135-83	50	26 (0.40)	0.58 (15)	205 (305)	20,000 (6,096)	4,895 (2,220)
22-139-83	100	26 (0.40)	0.74 (19)	340 (505)	15,000 (4,572)	5,895 (2,675)
22-143-83	200	26 (0.40)	0.98 (25)	610 (910)	10,000 (3,048)	6,895 (3,130)
22-145-83	300	26 (0.40)	1.13 (29)	840 (1,250)	6,000 (1,829)	5,835 (2,645)
22-147-83	400	26 (0.40)	1.29 (33)	1,100 (1,635)	6,000 (1,829)	7,395 (3,355)
22-151-83	600	26 (0.40)	1.53 (39)	1,580 (2,350)	4,000 (1,219)	7,115 (3,225)
22-153-83	900	26 (0.40)	1.83 (47)	2,275 (3,385)	2,500 (762)	6,485 (2,940)
22-155-83	1,200	26 (0.40)	2.07 (53)	2,965 (4,415)	2,000 (610)	6,725 (3,050)
22-156-83	1,500	26 (0.40)	2.33 (59)	3,695 (5,500)	1,600 (488)	6,705 (3,040)
22-157-83	1,800	26 (0.40)	2.54 (65)	4,400 (6,550)	1,250 (381)	6,295 (2,855)
22-158-83	2,100	26 (0.40)	2.74 (70)	5,120 (7,620)	1,200 (366)	6,940 (3,150)
22-159-83	2,400	26 (0.40)	2.91 (74)	5,805 (8,640)	1,000 (305)	6,600 (2,995)
22-161-83	2,700	26 (0.40)	3.08 (78)	6,485 (9,650)	740 (226)	5,595 (2,535)
22-162-83	3,000	26 (0.40)	3.24 (82)	7,185 (10,695)	750 (229)	6,185 (2,805)

Tight Twist 200-Pair

ANMW

Specifications	
Conductor	Solid annealed copper
AWG (mm)	24 (0.51)
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 OSP standards.
Core Assembly	Groups of 25-pair are identified by appropriate binder strings consistent with OSP standards. The entire core assembly is completely filled with an 80°C ETPR compound, filling the air spaces between the insulated conductors.
Core Wrap	Non-hydroscopic
Shield	A corrugated bare 8-mil aluminum shield covered by a corrugated bare 6-mil steel shield is applied longitudinally over the core wrap. The inner and outer surfaces of the aluminum and steel shields are flooded with an adhesive compound.
Jacket	Black polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification, sequential footage and a telephone handset printed at 2 foot intervals
Standards Compliance	GR-421-CORE, Issue 2 (selected physical sections) RoHS-compliant

Product Description

The Tight Twist (TT) 200-pair ANMW is an Outside Plant (OSP) copper cable designed with tightly twisted pairs to enhance the performance of xDSL technologies such as ADSL2+, VDSL2 and IPTV. Deployed on the launch circuits between the Remote Terminal (RT) cabinet and the (SAC) cross connect cabinet, this cable significantly improves broadband services at the customer premises. The xDSL and IPTV equipment within the RT are organized in bays of 192-pair groupings. One 200-pair cable will facilitate one bay and will be utilized for the 192 outgoing pairs. Large RT cabinets can have multiple bays with each requiring a 200-pair cable. The TT 200-Pair ANMW cable design is modeled after the traditional ANMW series.

Features	Benefits
• Enhanced pair twist patterns	• Improves NEXT Mean performance by 10 dB over GR-421-CORE • Offers greater capabilities for higher technologies
• Core wrap	• Protects core and provides improved mechanical and electrical characteristics
• Flooded shield surfaces	• Provides a moisture barrier and inhibits corrosion
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
07-024-74	200	1.32 (33.5)	99 (148)	Cut to Length

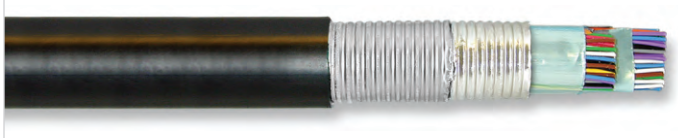
Product Description

T-SCREEN® Filled ASP Cable with foam skin insulation is a single jacket, 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.

Applications

- Bi-directional, T Carrier digital systems in direct buried installations

Features	Benefits
• Core wrap	• Protects core and provides improved mechanical and electrical characteristics
• Internal screen	• Separates bi-directional conductors to transmit and receive T1 pairs
• Inner and outer surfaces of both tape shields are flooded with an adhesive compound	• Provides a moisture barrier and inhibits corrosion
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses of standard installations



Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64) and 24 (0.51)
Insulation	Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer coating of solid, colored polyolefin; conductor insulation is color coded in accordance with industry standard
Core Assembly	Twisted pairs assembled and equally placed on either side of the T-SCREEN®, dividing the core into two electrically isolated compartments
Core Wrap	Dielectric tape applied over the core
Screen	Coated 4-mil aluminum tape to separate the cable into two halves
Shields	Corrugated bare 8-mil aluminum tape covered by a corrugated bare 6 mil steel tape applied longitudinally over the core wrap; inner and outer surfaces of the aluminum shield and steel tape are flooded
Jacket	Black polyethylene
Jacket Marking	Manufacturer's ID, pair count, AWG, product ID, sequential footage and a telephone handset printed at 2-foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
All pairs	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts		
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield	Conductor to Screen
22 (0.64)	1.0 (1.6)	4.5 (14.8)	91 (56.5)	1.5	5.0	3,600	10,000	5,000
24 (0.51)	1.0 (1.6)	5.6 (18.4)	144 (89.5)	1.5	5.0	3,000	10,000	5,000

	Minimum Near End Crosstalk (NEXT)	
	@ 772 kHz	@ 1600 kHz
PSWUNEXT Mean (dB)	47	-
PSWUNEXT Worst Pair (dB)	42	-
P.S.NEXT Between Compartments (dB)	-	78

	Minimum Far End Crosstalk (FEXT) @ 772 kHz	
Conductor Size (AWG)	22	24
PSELFEXT Mean (dB/kft)	49	49
PSELFEXT Worst Pair (dB/kft)	43	43

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
KNAW						
24-417-83	28	22 (0.64)	0.69 (18)	280 (415)	10,000 (3,048)	3,595 (1,630)
24-440-83	54	22 (0.64)	0.95 (24)	510 (760)	10,000 (3,048)	5,895 (2,675)
24-456-83	106	22 (0.64)	1.10 (28)	785 (1,170)	7,500 (2,286)	6,685 (3,030)
24-472-83	158	22 (0.64)	1.29 (33)	1,105 (1,645)	5,000 (1,524)	6,320 (2,865)
24-493-83	210	22 (0.64)	1.46 (37)	1,420 (2,115)	4,280 (1,305)	6,875 (3,115)
24-586-83	616	22 (0.64)	2.40 (61)	3,875 (5,765)	1,650 (503)	7,190 (3,260)
KNMW						
24-618-83	28	24 (0.51)	0.63 (16)	220 (325)	10,000 (3,048)	2,995 (1,360)
24-642-83	54	24 (0.51)	0.79 (20)	350 (520)	10,000 (3,048)	4,295 (1,950)
24-657-83	106	24 (0.51)	0.92 (23)	540 (805)	5,000 (1,524)	3,495 (1,585)
KHAH* (T-SCREEN® Air Core Design)						
24-440-05	54	22 (0.64)	0.98 (25)	475 (705)	7,500 (2,286)	4,360 (1,975)
24-456-05	106	22 (0.64)	1.20 (31)	780 (1,160)	5,000 (1,524)	4,695 (2,130)
24-472-05	158	22 (0.64)	1.44 (37)	1,095 (1,630)	4,250 (1,295)	5,450 (2,470)
24-493-05	210	22 (0.64)	1.60 (41)	1,395 (2,075)	3,300 (1,006)	5,400 (2,450)
24-564-05	418	22 (0.64)	2.12 (54)	2,550 (3,795)	2,000 (610)	5,895 (2,675)
24-586-05	616	22 (0.64)	2.54 (65)	3,660 (5,445)	1,250 (381)	5,370 (2,435)

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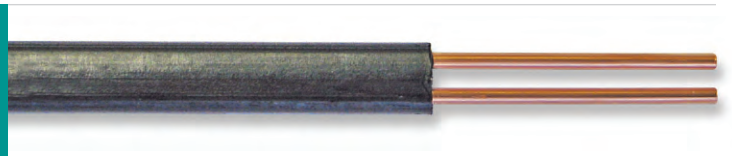

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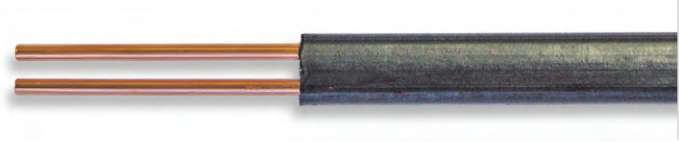
C-Rural Wire



Product Description

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

Specifications	
Conductor	Solid 30% conductivity copper-covered steel
AWG (mm)	14 (1.63)
Insulation	Black polyolefin compound extruded over the two conductors in parallel to form an integrated oval configuration
Dimensions in (mm)	Minor: 0.15 (3.8) Major: 0.28 (7.1)
Approx. Weight lbs/kft (kg/km)	36 (54)
Standards Compliance	Telcordia TA-TSY-000125 RoHS-compliant

Part Numbers and Physical Characteristics		
Part Number	**Standard Length ft (m)**	**Package**
10-026-06	1,000 (305)	Coil
10-016-06	5,500 (1676)	Wooden Reel
10-116-06	22,000 (6,705)	Four 5,500' Reels on a Pallet
10-096-06	19,000 (5791)	Steel Reel

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RoHS
Rev 6/10 Ed 10.1

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.

Specifications	
Conductor	Solid bare copper
Insulation	Polyolefin
Core Assembly	Twisted into pairs to minimize resistance unbalance; in multi-pair constructions, pair twist lays vary to minimize crosstalk and meet capacitance unbalance requirements; twisted pairs are formed into firm, round core
Core Wrap	Non-hygroscopic, dielectric wrap
Jacket	Black polyethylene
Support Wire	Single 0.109 inch solid, extra-high strength steel, jacketed in an integral extrusion with the core
Standard Length ft (m)	5,000 (1,524)
Package	Reel
Standards Compliance	RDUP PE-27 and PE-28 deactivated by RDUP ICEA S-89-648 as applicable RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Individual	94 (58)
12 or less	83 ± 7 (52 ± 4)
Over 12	83 ± 4 (52 ± 2)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Dielectric Strength Minimum Volts DC
19 (0.90)	1,000 (1,600)	3.6 (11.8)	45 (28.0)	5.0	7,200
22 (0.64)	1,000 (1,600)	5.1 (16.7)	91 (56.4)	5.0	7,200
24 (0.51)	1,000 (1,600)	6.5 (21.3)	144 (89.5)	5.0	7,200

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Pair to Pair	80 (262)

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Minor Dimension in (mm)	Major Dimension in (mm)	Approx. Weight lbs/kft (kg/km)
10-001-15	1	19 (0.90)	0.20 (5.1)	0.48 (12.2)	60 (90)
10-002-15	2	19 (0.90)	0.25 (6.4)	0.53 (13.5)	70 (105)
10-003-15	3	19 (0.90)	0.30 (7.6)	0.59 (15.0)	85 (125)
10-006-15	6	19 (0.90)	0.39 (9.9)	0.68 (17.2)	120 (180)
10-012-15	12	19 (0.90)	0.48 (12.2)	0.77 (19.5)	180 (270)
10-002-17	2	22 (0.64)	0.20 (5.1)	0.48 (12.2)	60 (90)
10-003-17	3	22 (0.64)	0.23 (5.8)	0.51 (12.9)	65 (95)
10-004-17	4	22 (0.64)	0.24 (6.0)	0.52 (13.2)	70 (104)
10-006-17	6	22 (0.64)	0.29 (7.5)	0.58 (14.8)	85 (125)
10-012-17	12	22 (0.64)	0.36 (9.2)	0.65 (16.5)	115 (170)
10-018-17	18	22 (0.64)	0.43 (11.0)	0.72 (18.3)	150 (225)
10-006-19	6	24 (0.51)	0.25 (6.4)	0.54 (13.7)	70 (105)
10-012-19	12	24 (0.51)	0.32 (8.2)	0.61 (15.4)	95 (140)

TECH TIP

Sag and Tension guidelines for these products are available online:
www.SuperiorEssex.com/techtip.aspx

IMRDWS

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, 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.

Specifications	
Conductor	Solid bare copper
Insulation	Polyolefin
Core Assembly	Individual conductors carefully twisted into pairs to minimize resistance unbalance and cross-talk
Shield	3 mil foil shield with drain wire
Jacket	Black polyethylene
Rip cord	Placed parallel to the core
Support Wire	"Figure 8" configuration utilizing a 0.109 inch, solid, extra high strength, steel support wire
Package	Reel
Standards Compliance	ICEA S-89-648 as applicable RoHS-compliant

Features	Benefits
• 3 mil foil shield with drain wire	• Provides high quality digital transmission medium for xDSL technologies and, when properly grounded, removes spectrum interferences
• Black, polyethylene jacket	• Provides tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses encountered in standard installations
• Rip cord	• Facilitates jacket removal

Electrical Specifications

All Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Individual	94 (58)
Wire Average	83 ± 7 (52 ± 4)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Dielectric Strength Minimum Volts DC	
					Conductor to Conductor	Conductor to Shield
22 (0.64)	1,000 (1,600)	5.1 (16.7)	91 (56.4)	5.0	7,200	3,600

Crosstalk Loss	dB/kft (dB/km)
Minimum FEXT @ 150 kHz	63 (207)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics

Part Number	Pair Count	Minor Dimension in (mm)	Major Dimension in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
10-061-29	6	0.32 (8.1)	0.60 (15.3)	95 (142)	2,133 (650)
10-040-29	6	0.32 (8.1)	0.60 (15.3)	95 (142)	5,000 (1,524)

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RoHS
Rev 6/10 Ed 10.1

Product Description

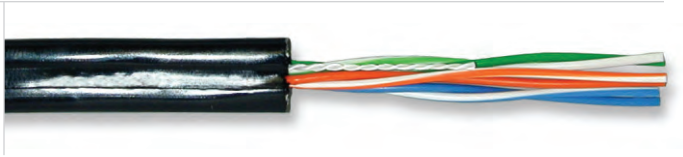
ADP NMS is a PVC-jacketed Aerial Service Wire offered in 1, 2, 3, 5 or 6-pair. It is designed for use in extending telephone service to subscriber premises from the distribution cable or cable terminal. Major features include small size and light weight coupled with abrasion resistant jacket. Standard hardware and installation procedures are directly applicable to this product. 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. A black, weather resistant, polyvinylchloride jacket is extruded over the strength members and rip cord 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.

Features

- Non-metallic or fiberglass strength members
- Rip cord

Benefits

- Provide necessary longitudinal strength
- Facilitates jacket removal



Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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 placed in jacket parallel to core assembly
Rip cord	Placed parallel to the core
Jacket	Weather-resistant PVC
Standards Compliance	Telecordia GR-3163-CORE RDUP PE 7 ANSI/ICEA S-89-648-2006 UL Listed Subject 523 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Pair	94 (58)
Maximum Average	90 (56)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Conductor to Conductor Dielectric Strength Volts DC 3 secs, no breakdown
22 (0.64)	1,000 (1,600)	5.1 (17)	91 (56.5)	5.0	4,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair	80 (262)

Part Numbers and Physical Characteristics

Part Number	Pair Count	Minor Dimension in (mm)	Major Dimension in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
12-031-08	1	0.18 (4.8)	0.36 (9.1)	34 (51)	750 (229)	POP™ Box
12-032-08	1	0.18 (4.8)	0.36 (9.1)	34 (51)	1,000 (305)	Reel
12-004-08	2	0.18 (4.8)	0.36 (9.1)	39 (58)	750 (229)	POP™ Box
12-010-08	2	0.18 (4.8)	0.36 (9.1)	39 (58)	1,000 (305)	Coil
12-023-08	2	0.18 (4.8)	0.36 (9.1)	39 (58)	5,000 (1,524)	Reel
12-019-08	3	0.21 (5.3)	0.39 (9.9)	45 (67)	600 (183)	POP™ Box
12-022-08	3	0.21 (5.3)	0.39 (9.9)	45 (67)	750 (229)	Coil
12-519-08	5	0.27 (7.0)	0.48 (12.0)	76 (113)	400 (122)	POP™ Box
12-024-08	5	0.27 (7.0)	0.48 (12.0)	76 (113)	2,500 (762)	Reel
12-025-08	5	0.27 (7.0)	0.48 (12.0)	76 (113)	1,000 (305)	Reel
12-026-08	5	0.27 (7.0)	0.48 (12.0)	76 (113)	700 (213)	IPL Coil
12-006-08	6	0.27 (7.0)	0.48 (12.0)	70 (104)	400 (122)	Coil
12-007-08	6	0.27 (7.0)	0.48 (12.0)	70 (104)	2,500 (762)	Reel
12-008-08	6	0.27 (7.0)	0.48 (12.0)	70 (104)	3,500 (1,068)	Reel
12-009-08	6	0.27 (7.0)	0.48 (12.0)	70 (104)	1,000 (305)	Reel

TECH TIP

Sag and Tension guidelines for these products are available online:
www.SuperiorEssex.com/techtip.aspx

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 6-pair in the size and shape of the traditional 3-pair product. 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. A black, weather resistant, polyvinylchloride jacket is extruded over the strength members and rip cord to protect the core from mechanical damage. The jacket bonds to the fiber glass strength members to provide the required strength characteristics.

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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 placed in jacket parallel to core assembly
Rip cord	Placed parallel to the core
Jacket	Weather-resistant PVC
Standards Compliance	GR-3163-CORE as applicable ANSI/ICEA S-89-648-2006 UL Listed Subject 523 RoHS-compliant

Features

- Non-metallic or fiberglass strength members
- Rip cord

Benefits

- Provide necessary longitudinal strength
- Facilitates jacket removal

Electrical Specifications	
Number of Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**
Maximum Individual	94 (58)
Wire Average	83 ± 7 (52 ± 4)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair
24 (0.51)	1,000 (1,600)	5.8 (19.0)	144 (89.5)	5.0

Crosstalk Loss	dB/kft (dB/km)
Minimum FEXT @ 150 kHz	63 (207)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair	80 (262)

Part Numbers and Physical Characteristics						
Part Number	**Pair Count**	**Minor Dimension in (mm)**	**Major Dimension in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Standard Length 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)	1,000 (305)	Reel

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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. 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. A black, weather resistant, polyvinylchloride 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	Benefits
• 3 mil metallic foil shield with drain wire	• Provides high quality digital transmission medium for xDSL technologies and, when properly grounded, removes spectrum interferences
• Non-metallic or fiberglass strength members	• Provide necessary longitudinal strength
• Rip cord	• Facilitates jacket removal

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
Core Assembly	Individual conductors are carefully twisted into pairs in a manner designed to minimize resistance unbalance
Shield	3 mil metallic foil shield with drain wire
Strength Members	Non-metallic or fiberglass strength members placed in jacket parallel to core assembly
Rip cord	Placed parallel to the core
Jacket	Weather-resistant PVC
Standards Compliance	Applicable sections of both GR-3163-CORE and ANSI/ICEA S-89-648-2006 UL Listed Subject 523 RoHS-compliant

Electrical Specifications	
Number of Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**
Maximum Pair	94 (58)
Maximum Average	90 (56)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Conductor to Conductor Dielectric Strength Volts DC 3 secs, no breakdown
22 (0.64)	1,000 (1,600)	5.1 (17)	91 (56.5)	5.0	4,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair	80 (262)

Part Numbers and Physical Characteristics						
Part Number	**Pair Count**	**Minor Dimension in (mm)**	**Major Dimension in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Standard Length ft (m)**	**Package**
12-301-07	3	0.27 (6.8)	0.45 (11.4)	55 (82)	1,000 (305)	Reel
12-302-07	3	0.27 (6.8)	0.45 (11.4)	55 (82)	400 (122)	POP™ Box
12-303-07	3	0.27 (6.8)	0.45 (11.4)	55 (82)	750 (229)	Reel
12-304-07	3	0.27 (6.8)	0.45 (11.4)	55 (82)	750 (229)	Coil
12-305-07	3	0.27 (6.8)	0.45 (11.4)	55 (82)	500 (152)	Reel-in-a-Box
12-501-07	5	0.28 (7.1)	0.49 (12.0)	78 (116)	1,000 (305)	Reel

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Sag and Tension guidelines for these products are available online:
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Integrated Messenger Wire

IM/F, IM/H and 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. A black, fire retardant, polyvinylchloride 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.

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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
Jacket	Fire retardant PVC
Standards Compliance	Telcordia GR-3163-CORE ANSI/ICEA S-89-648-2006 UL Listed RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Pair	94 (58)
Maximum Average	90 (56)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Conductor to Conductor Dielectric Strength Minimum Volts DC 3 secs, no breakdown
19 (0.90)	1,000 (1,600)	3.6 (11.8)	45 (28.0)	5.0	-
22 (0.64)	1,000 (1,600)	5.1 (17.0)	91 (56.5)	5.0	4,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics

Part Number	Support Size	Pair Count	AWG (mm)	Minor Dimension in (mm)	Major Dimension in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
10-921-38	IM/G 0.095	2	19 (0.90)	0.27 (6.8)	0.51 (12.9)	73 (109)	656 (200)	Coil
10-923-38	IM/G 0.095	2	19 (0.90)	0.27 (6.8)	0.51 (12.9)	73 (109)	4,921 (1,500)	Reel
10-002-34	IM/F 0.083	2	22 (0.64)	0.22 (5.7)	0.46 (11.7)	55 (82)	600 (183)	Coil
10-102-34	IM/F 0.083	2	22 (0.64)	0.22 (5.7)	0.46 (11.7)	55 (82)	5,000 (1,524)	Reel
10-503-34	IM/F 0.083	3	22 (0.64)	0.24 (6.2)	0.48 (12.3)	72 (107)	1,000 (305)	Coil
10-106-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	3,500 (1,067)	Reel
10-206-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	1,000 (305)	Reel
10-306-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	400 (122)	Coil
10-261-38	IM/G 0.095	6	22 (0.64)	0.30 (7.6)	0.55 (13.9)	80 (119)	492 (150)	Coil
10-262-38	IM/G 0.095	6	22 (0.64)	0.30 (7.6)	0.55 (13.9)	80 (119)	2,461 (750)	Reel
10-265-38	IM/G 0.095	6	22 (0.64)	0.30 (7.6)	0.55 (13.9)	80 (119)	5,000 (1,562)	Reel
10-281-38	IM/G 0.095	12	22 (0.64)	0.38 (7.6)	0.65 (16.6)	114 (170)	410 (125)	Coil
10-284-38	IM/G 0.095	12	22 (0.64)	0.38 (7.6)	0.65 (16.6)	114 (170)	2,460 (750)	Reel
10-285-38	IM/G 0.095	12	22 (0.64)	0.38 (7.6)	0.65 (16.6)	114 (170)	8,202 (2,500)	Reel
10-102-35	IM/H 0.109	12	22 (0.64)	0.38 (7.6)	0.66 (16.7)	130 (193)	1,000 (305)	Reel
10-012-35	IM/H 0.109	12	22 (0.64)	0.38 (7.6)	0.66 (16.7)	130 (193)	250 (76)	Coil
10-212-35	IM/H 0.109	12	22 (0.64)	0.38 (7.6)	0.66 (16.7)	130 (193)	5,000 (1,524)	Reel

Contact Superior Essex for additional configurations and AWG sizes.

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RoHS
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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. 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.

Applications

- Direct burial
- Distribution circuits and service entrance wires

Features	Benefits
• Polyethylene inner jacket	• Provides additional mechanical and moisture protection
• Polyethylene outer jacket	• Provides tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations
• Dual rip cords	• Facilitates jacket removal

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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	Wire core is completely filled with 80°C ETPR compound, filling the air spaces between insulated conductors
Inner Jacket	Polyethylene
Shield	Smooth, copolymer-coated, 8 mil aluminum tape applied longitudinally over inner jacket and bonded to outer jacket; space under the tape is flooded to eliminate all air space
Outer Jacket	Black, polyethylene
Package	Reel
Standards Compliance	ANSI/ICEA S-86-634-2004 RoHS-compliant

Electrical Specifications

All Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Individual	94 (58)
Wire Average	83 ± 7 (52 ± 4)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Dielectric Strength Minimum Volts DC	
					Conductor to Conductor	Conductor to Shield
19 (0.90)	1,000 (1,600)	3.1 (10.2)	45 (28.0)	5.0	7,000	20,000
22 (0.64)	1,000 (1,600)	4.4 (14.4)	91 (56.4)	5.0	5,000	20,000
24 (0.51)	1,000 (1,600)	5.5 (18.0)	144 (89.5)	5.0	4,000	20,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
04-023-85	2	19 (0.90)	0.38 (9.7)	65 (97)	5,000 (1,524)
04-025-85	3	19 (0.90)	0.42 (11)	85 (125)	5,000 (1,524)
04-052-84	2	22 (0.64)	0.32 (8.1)	45 (65)	1,000 (305)
04-053-84	2	22 (0.64)	0.32 (8.1)	45 (65)	2,500 (762)
04-055-84	2	22 (0.64)	0.32 (8.1)	45 (65)	5,000 (1,524)
04-056-84	3	22 (0.64)	0.33 (8.4)	50 (75)	1,000 (305)
04-062-84	3	22 (0.64)	0.33 (8.4)	50 (75)	2,500 (762)
04-058-84	3	22 (0.64)	0.33 (8.4)	50 (75)	5,000 (1,524)
04-061-85	6	22 (0.64)	0.41 (10)	80 (120)	1,000 (305)
04-058-85	6	22 (0.64)	0.41 (10)	80 (120)	2,500 (762)
04-057-85	6	22 (0.64)	0.41 (10)	80 (120)	5,000 (1,524)
04-098-85	2	24 (0.51)	0.27 (6.9)	30 (45)	5,000 (1,524)
04-101-85	3	24 (0.51)	0.29 (7.4)	40 (60)	5,000 (1,524)
04-097-85	6	24 (0.51)	0.35 (8.9)	55 (80)	5,000 (1,524)

BDW G

Product Description

BDW G is a filled, double-jacketed buried wire 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 G also provides protection from rodents or harsh environments. 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.

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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	Wire core is completely filled with 80°C ETPR compound, filling the air spaces between insulated conductors
Inner Jacket	Polyethylene
Shield	Corrugated, 5 mil gopher resistant armor applied longitudinally over the inner jacket and flooded
Outer Jacket	Black polyethylene
Package	Reel
Standards Compliance	*RDUP 7 CFR 1755.860 (PE-86) ANSI/ICEA S-86-634-2004 RoHS-compliant

Features	Benefits
• Polyethylene inner jacket	• Provides additional mechanical and moisture protection
• Corrugated armor	• Gopher resistant • Provides excellent mechanical protection
• Polyethylene outer jacket	• Provides tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Electrical Specifications	
All Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**
Maximum Individual	94 (58)
Wire Average	83 ± 7 (52 ± 4)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Dielectric Strength Minimum Volts DC	
					Conductor to Conductor	Conductor to Shield
19 (0.90)	1,000 (1,600)	3.1 (10.2)	45 (28.0)	5.0	7,000	20,000
22 (0.64)	1,000 (1,600)	4.4 (14.4)	91 (56.4)	5.0	5,000	20,000
24 (0.51)	1,000 (1,600)	5.5 (18.0)	144 (89.5)	5.0	4,000	20,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics					
Part Number	**Pair Count**	**AWG (mm)**	**Nominal Diameter in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Standard Length ft (m)**
04-022-16*	2	19 (0.90)	0.37 (9.4)	70 (105)	5,000 (1,524)
04-025-16*	3	19 (0.90)	0.41 (10)	90 (135)	5,000 (1,524)
04-052-17	2	22 (0.64)	0.32 (8.1)	55 (80)	1,000 (305)
04-053-17	2	22 (0.64)	0.32 (8.1)	55 (80)	2,500 (762)
04-055-17	2	22 (0.64)	0.32 (8.1)	55 (80)	5,000 (1,524)
04-056-17	3	22 (0.64)	0.33 (8.4)	60 (90)	1,000 (305)
04-057-17	3	22 (0.64)	0.33 (8.4)	60 (90)	2,500 (762)
04-058-17	3	22 (0.64)	0.33 (8.4)	60 (90)	5,000 (1,524)
04-067-16*	6	22 (0.64)	0.40 (10)	90 (135)	1,000 (305)
04-062-16*	6	22 (0.64)	0.40 (10)	90 (135)	2,500 (762)
04-057-16*	6	22 (0.64)	0.40 (10)	90 (135)	5,000 (1,524)
04-094-16	2	24 (0.51)	0.27 (6.9)	40 (60)	5,000 (1,524)
04-091-16	3	24 (0.51)	0.29 (7.4)	45 (65)	5,000 (1,524)

Product Description

BW CF 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 can also be used for distribution circuits and service entrance wires. 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. black, weather-resistant polyvinylchloride jacket is extruded over the shield and rip cord to protect the core from minor mechanical damage, degradation by sunlight and ingress of moisture and water.

Features

- Non-hygroscopic core wrap
- Adhesive compound floods shield's outer surface
- Rip cord

Benefits

- Protects the core and provides improved mechanical and electrical characteristics
- Provides a moisture barrier and inhibits corrosion
- Facilitates jacket removal

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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
Core Covering	Non-hygroscopic core wrap
Filling Compound	Wire core is completely filled with 80°C ETPR compound, filling the air spaces between insulated conductors
Shield	Corrugated copper clad steel or bronze tape longitudinally applied over the core wrap
Rip cord	Rip cord applied over shield and beneath jacket
Jacket	Weather-resistant PVC
Standards Compliance	Telcordia GR-3163-CORE ANSI/ICEA S-86-634-2004 RoHS-compliant

Electrical Specifications

All Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Pair	94 (58)
Maximum Average	90 (56)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Dielectric Strength Minimum Volts DC	
					Conductor to Conductor	Conductor to Shield
22 (0.64)	1,000 (1,600)	4.4 (14)	91 (56.5)	5.0	5,000	15,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
25-722-80	2	19 (0.90)	0.32 (8.1)	62 (92)	1,600 (488)	Reel
25-759-80	2	19 (0.90)	0.32 (8.1)	62 (92)	5,000 (1,524)	Reel
25-063-80	2	22 (0.64)	0.27 (6.9)	43 (64)	250 (76)	Coil
25-069-80	2	22 (0.64)	0.27 (6.9)	43 (64)	1,300 (396)	Reel
25-078-80	2	22 (0.64)	0.27 (6.9)	43 (64)	8,250 (2,514)	Reel
25-062-80	2	22 (0.64)	0.27 (6.9)	43 (64)	700 (214)	Coil
25-061-80	2	22 (0.64)	0.27 (6.9)	43 (64)	1,500 (457)	Reel
25-064-80	2	22 (0.64)	0.27 (6.9)	43 (64)	3,000 (915)	Reel
25-351-80	3	22 (0.64)	0.30 (7.6)	53 (79)	500 (152)	Coil
25-360-80	3	22 (0.64)	0.30 (7.6)	53 (79)	1,200 (366)	Reel
25-353-80	3	22 (0.64)	0.30 (7.6)	53 (79)	3,000 (915)	Reel
25-358-80	3	22 (0.64)	0.30 (7.6)	53 (79)	5,000 (1,524)	Reel
25-530-80	5	22 (0.64)	0.33 (8.4)	67 (100)	300 (92)	Reel
25-154-80	5	22 (0.64)	0.33 (8.4)	67 (100)	500 (152)	Coil
25-527-80	5	22 (0.64)	0.33 (8.4)	67 (100)	900 (274)	Reel
25-549-80	5	22 (0.64)	0.33 (8.4)	67 (100)	5,500 (1,676)	Reel
25-525-80	5	22 (0.64)	0.33 (8.4)	67 (100)	925 (282)	Reel
25-526-80	5	22 (0.64)	0.33 (8.4)	67 (100)	1,200 (366)	Reel
25-565-80	5	22 (0.64)	0.33 (8.4)	67 (100)	2,500 (762)	Reel
25-667-80	6	22 (0.64)	0.37 (9.4)	81 (121)	600 (183)	Coil
25-680-80	6	22 (0.64)	0.37 (9.4)	81 (121)	700 (214)	Reel
25-685-80	6	22 (0.64)	0.37 (9.4)	81 (121)	1,200 (366)	Reel
25-654-80	6	22 (0.64)	0.37 (9.4)	81 (121)	2,500 (762)	Reel
25-682-80	6	22 (0.64)	0.37 (9.4)	81 (121)	4,000 (1,219)	Reel
25-681-80	6	22 (0.64)	0.37 (9.4)	81 (121)	800 (244)	Reel
25-658-80	6	22 (0.64)	0.37 (9.4)	81 (121)	5,000 (1,524)	Reel
25-684-80	6	22 (0.64)	0.37 (9.4)	81 (121)	12,000 (3,660)	Reel

BW GDJ

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. 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. A black, polyvinylchloride jacket is extruded over the armor to protect the core from minor mechanical damage, degradation by sunlight and the ingress of moisture.

Features

- Polyethylene inner jacket
- Corrugated armor
- Armor's inner and outer surfaces are flooded
- Rip cord

Benefits

- Provides additional mechanical and moisture protection
- Gopher resistant
- Prevents water flow between the shield and outer jacket
- Facilitates jacket removal

Specifications	
Conductor	Solid annealed copper
Insulation	Polyolefin
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	Wire core is completely filled with 80°C ETPR compound, filling the air spaces between insulated conductors
Inner Jacket	Polyethylene inner jacket; outer surface flooded
Armor	Corrugated armor applied longitudinally over the inner jacket; inner and outer surfaces of the armor are flooded
Rip cord	Rip cord is applied beneath the inner jacket; a second rip cord can also be applied under the outer jacket
Jacket	Weather resistant PVC
Standards Compliance	Telcordia GR-3163-CORE ANSI/ICEA S-86-634-2004 RoHS-compliant

Electrical Specifications	
All Pairs	**Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)**
Maximum Pair	94 (58)
Maximum Average	90 (56)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Dielectric Strength Minimum Volts DC	
					Conductor to Conductor	Conductor to Shield
19 (0.90)	1,000 (1,600)	3.1 (11)	45 (28.0)	5.0	7,000	20,000
22 (0.64)	1,000 (1,600)	4.4 (14)	91 (56.5)	5.0	5,000	20,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
25-020-79	2	19 (0.90)	0.37 (9.4)	80 (119)	900 (275)	Reel
25-021-79	2	19 (0.90)	0.37 (9.4)	80 (119)	7,000 (2,135)	Reel
25-063-79	2	22 (0.64)	0.37 (9.4)	80 (119)	600 (183)	Coil
25-064-79	2	22 (0.64)	0.37 (9.4)	80 (119)	5,000 (1,524)	Reel
25-351-79	3	22 (0.64)	0.33 (8.4)	70 (104)	500 (152)	Coil
25-355-79	3	22 (0.64)	0.33 (8.4)	70 (104)	600 (183)	Reel
25-360-79	3	22 (0.64)	0.33 (8.4)	70 (104)	1,200 (366)	Reel
25-354-79	3	22 (0.64)	0.33 (8.4)	70 (104)	3,000 (915)	Reel
25-361-79	3	22 (0.64)	0.33 (8.4)	70 (104)	8,000 (2,438)	Reel
25-552-79	5	22 (0.64)	0.38 (9.0)	90 (134)	500 (152)	Coil
25-555-79	5	22 (0.64)	0.38 (9.0)	90 (134)	1,000 (305)	Reel
25-547-79	5	22 (0.64)	0.38 (9.0)	90 (134)	2,000 (610)	Reel
25-553-79	5	22 (0.64)	0.38 (9.0)	90 (134)	5,000 (1,524)	Reel
25-681-79	6	22 (0.64)	0.40 (10.0)	100 (149)	800 (244)	Reel
25-654-79	6	22 (0.64)	0.40 (10.0)	100 (149)	350 (107)	Coil
25-662-79	6	22 (0.64)	0.40 (10.0)	100 (149)	1,000 (305)	Reel
25-663-79	6	22 (0.64)	0.40 (10.0)	100 (149)	2,000 (610)	Reel
25-653-79	6	22 (0.64)	0.40 (10.0)	100 (149)	3,000 (915)	Reel
25-658-79	6	22 (0.64)	0.40 (10.0)	100 (149)	5,000 (1,524)	Reel

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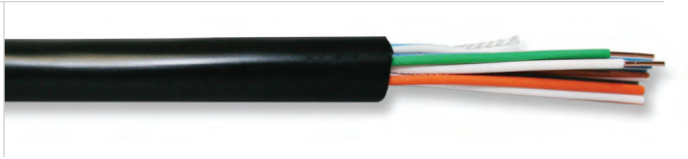
Product Description

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 rip cord 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 plow. Each conductor is insulated with polyolefin 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. A black, weather resistant, polyvinylchloride jacket is extruded around the conductors with a rip cord 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.



Features

- Super absorbent water blocking dry core technology filling compound
- Rip cord

Benefits

- Stops and blocks any moisture movement around the conductors
- Facilitates jacket removal

Specifications	
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Polyolefin
Core Assembly	Individual conductors carefully twisted into pairs, designed to minimize resistance unbalance; twist patterns are similar to those on larger Outside Plant (OSP) cables
Filling Compound	Super absorbent water blocking dry core technology
Rip cord	Placed parallel to the core
Jacket	Weather-resistant PVC
Standards Compliance	Applicable Sections of GR-3163-CORE RoHS-compliant

Electrical Specifications

All Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)
Maximum Pair	94 (58)
Maximum Average	90 (56)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/mile (Ohms/km)	DC Resistance Unbalance Maximum % Individual Pair	Conductor to Conductor Dielectric Strength Minimum Volts DC
22 (0.64)	1,000 (1,600)	5.1 (17)	91 (56.5)	5.0	4,000

Crosstalk Loss	dB/kft (dB/km)
Minimum NEXT @ 722 kHz	44 (144)

Capacitance Unbalance @ 1000 Hz	pF/kft (pF/km)
Maximum Individual Pair to Pair	80 (262)
Maximum Individual Pair to Ground	800 (2,625)

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
25-262-19	2	0.26 (6.6)	41 (61)	750 (229)	POP™ Box
25-263-19	2	0.28 (6.6)	41 (61)	1,500 (457)	Reel
25-551-19	5	0.32 (8.1)	59 (88)	500 (152)	POP™ Box
25-527-19	5	0.32 (8.1)	59 (88)	1,000 (305)	Reel

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 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	Benefits
• 24 AWG solid copper conductors	• Ideal for terminal block stubs
• Polyolefin insulation	• Greater crush resistance and improved transmission characteristics
• Pairing tight twist (CAT 5 like twists)	• Enhanced capabilities for xDSL signals
• Standard telephony solid colors	• Easy conductor identification
• No outer jacket	• Easy routing
• Binder strings	• Holds pair groups together

Specifications	
AWG (mm)	24 (0.51)
Standard Length ft (m)	5,000 (1,524)
Package	Reel
Standards Compliance	RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)
11-003-53	25	0.41 (10)	82 (122)
11-003-45	50	0.57 (14)	164 (244)
11-003-46	100	0.82 (21)	328 (488)

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.

Specifications	
Shield	4 mil aluminum tape formed longitudinally with bonded overlap
Jacket	Black, medium density polyethylene jacket extruded over and laminated to the aluminum shield
Standards Compliance	RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Outer Nominal Diameter in (mm)	Inner Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
85-019-25	0.71 (18)	0.59 (15)	56 (83)	1,980 m Reel
85-018-25	0.71 (18)	0.59 (15)	56 (83)	6,500′ Reel

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 rip cord for easy access to conductors.

Features

- PVC jacket

Benefits

- Provides a tough flexible protective covering that withstands exposure to sunlight and stresses encountered in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Color coded, solid, polyolefin tip conductors are striped with mating color for positive identification
Jacket	PVC
Standards Compliance	RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-262-01	2	0.19 (4.8)	19 (28)	600′ POP™ Box
12-642-01	6	0.27 (6.9)	42 (63)	450′ Coil
12-842-01	12	0.33 (8.4)	73 (109)	250′ Coil

Temporary Drop Wire

TDW

Product Description

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

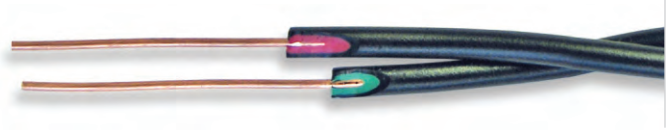
Specifications	
Conductor	Solid bare copper
Insulation	Polyolefin
Jacket	PVC
Jacket Color	Bright Orange
Standards Compliance	RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Wire Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-311-36	2	22 (0.64)	Red/Green, Black/Yellow	0.14 (3.6)	13 (19)	1,000′ POP™ Box
12-331-36	1	24 (0.51)	Red/Green	0.13 (3.3)	7 (10)	2,000′ POP™ Box
12-322-36	2*	24 (0.51)	Red/Green	0.13 (3.3)	7 (10)	2,000′ POP™ Box

**Note: 2 conductors, not a pair.*

E-Block Wire



Product Description

E-Block Wire is used for "ring wiring" of buildings and 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.

Specifications	
Conductor	Copper covered steel
AWG (mm)	20 (0.13)
Dual Insulation	Inner layer: color coded PVC Outer layer: black PVC
Package	Knock-out Box
Standards Compliance	TR-TSY-000127 UL 83 VW1 RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Style	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
12-140-03	Pair	0.20 (5.1)	14 (20)	400 (122)
12-220-03	Quad	0.24 (6.1)	32 (47)	250 (76)

Ground Wire

Bare or Jacketed

Product Description

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

Specifications	
Conductor	Solid annealed copper
Insulation	Weather-resistant PVC
Standards Compliance	UL Listed RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	AWG	Jacket Color	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Package
12-001-04	6	Black	0.22 (5.6)	91 (135)	500′ Plywood Spool
12-101-04	6	Gray	0.22 (5.6)	91 (135)	200′ Boxed Coil
12-102-04	6	Gray	0.22 (5.6)	91 (135)	200′ Coil
12-105-04	6	Gray	0.22 (5.6)	91 (135)	500′ Coil
12-106-04	6	Gray	0.22 (5.6)	91 (135)	500′ Box Coil
12-107-04	6	Gray	0.22 (5.6)	91 (135)	600′ Coil
12-104-04	6	Gray	0.22 (5.6)	91 (135)	4,000′ Reel
12-018-04	6	Green	0.22 (5.6)	91 (135)	500′ Reel
12-905-04	6	Bare	0.16 (4.1)	79 (118)	600′ Plastic Spool
12-901-04	6	Bare	0.16 (4.1)	79 (118)	200′ Boxed Coil
12-902-04	6	Bare	0.16 (4.1)	79 (118)	2,500′ Plywood Spool
12-903-04	6	Bare	0.16 (4.1)	79 (118)	300′ Plastic Spool
12-904-04	6	Bare	0.16 (4.1)	79 (118)	4,000′ Reel
12-907-04	6	Bare	0.16 (4.1)	79 (118)	500′ Coil
12-111-04	10	Gray	0.14 (3.6)	37 (55)	200′ Boxed Coil
12-112-04	10	Gray	0.14 (3.6)	37 (55)	500′ Boxed Coil
12-011-04	10	Black	0.14 (3.6)	37 (55)	500′ Knock-out Box
12-016-04	10	Green	0.14 (3.6)	37 (55)	500′ Plastic Spool
12-121-04	12	Gray	0.12 (3.0)	25 (37)	200′ Boxed Coil
12-122-04	12	Gray	0.12 (3.0)	25 (37)	300′ Boxed Coil
12-123-04	12	Gray	0.12 (3.0)	25 (37)	500′ Plywood Spool

Product Description

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

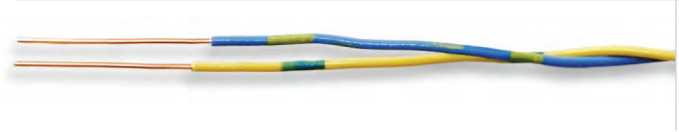
Specifications	
Conductor	Solid bare copper
Insulation	Flame retardant PVC insulated conductor each identified by a solid color
Approx. Weight lbs/kft (kg/km)	5 (7)
Standards Compliance	UL 444 Listed as CM RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Wire Color	Nominal Diameter in (mm)	Package
02-360-23	1	22 (0.64)	White/Red	0.07 (1.8)	400' Spool
02-361-23	1	22 (0.64)	White/Violet	0.07 (1.8)	400' Spool
02-362-23	1	22 (0.64)	Violet/Blue	0.07 (1.8)	400' Spool
02-011-23	1	24 (0.51)	White/Blue	0.08 (2.0)	1,000′ Spool
02-010-23	1	24 (0.51)	White/Green	0.08 (2.0)	1,000′ Spool
02-031-23	1	24 (0.51)	Yellow/Red	0.08 (2.0)	1,000′ Spool
02-032-23	1	24 (0.51)	Violet/Blue	0.08 (2.0)	1,000′ Spool
02-111-23	1	24 (0.51)	White/Blue	0.08 (2.0)	6,000′ Spool
02-131-23	1	24 (0.51)	Yellow/Red	0.08 (2.0)	6,000′ Spool
02-050-23	1	24 (0.51)	White/Orange	0.08 (2.0)	1,000′ Spool
02-006-23	1	24 (0.51)	White/Red	0.08 (2.0)	1,000′ Spool
02-211-23	1	24 (0.51)	White/Blue	0.08 (2.0)	6,000′ Spool
02-033-23	1	24 (0.51)	Yellow/Blue	0.08 (2.0)	1,000′ Spool
02-113-23	1	24 (0.51)	Yellow/Blue	0.08 (2.0)	6,000′ Spool
02-110-23	1	24 (0.51)	White/Green	0.08 (2.0)	6,000′ Spool
02-132-23	1	24 (0.51)	Violet/Blue	0.08 (2.0)	6,000′ Spool
11-005-90	1	24 (0.51)	Violet/Blue	0.08 (2.0)	500′ Spool
02-350-23	1	24 (0.51)	White/Orange	0.08 (2.0)	400′ Spool
02-311-23	1	24 (0.51)	White/Blue	0.08 (2.0)	500′ Spool
02-020-23	2	24 (0.51)	White/Blue, White/Orange	0.12 (3.0)	1,000′ Spool
02-021-23	2	24 (0.51)	Red/Blue, Red/Orange	0.12 (3.0)	1,000′ Spool
02-022-23	2	24 (0.51)	White/Orange, White/Green	0.12 (3.0)	1,000′ Spool
02-024-23	2	24 (0.51)	Violet/Blue, Violet/Orange	0.12 (3.0)	1,000′ Spool

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 Outside Plant (OSP) enclosures. Each insulated conductor is identified by a combination of solid insulation color, except as noted.

Specifications	
Conductor	Solid bare copper
Insulation	Semi-rigid PVC
Individual Nominal Diameter in (mm)	0.036 (0.9)
Package	Spool
Standards Compliance	UL 444 Listed as CM RoHS-compliant

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Wire Color	Overall Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)
02-111-13	1	22 (0.64)	White/Blue	0.07 (1.8)	4 (9)	1,000 (305)
02-102-13	1	22 (0.64)	Yellow/Blue	0.07 (1.8)	4 (9)	1,000 (305)
02-E02-13	1	22 (0.64)	Yellow/Blue	0.07 (1.8)	4 (9)	3,000 (915)
02-113-13	1	22 (0.64)	White/Red	0.07 (1.8)	4 (9)	1,000 (305)
02-114-13	1	22 (0.64)	White/Black	0.07 (1.8)	4 (9)	1,000 (305)
02-513-13*	1	22 (0.64)	White/Red	0.07 (1.8)	4 (9)	1,000 (305)
02-514-13*	1	22 (0.64)	White/Black	0.07 (1.8)	4 (9)	1,000 (305)
02-120-13	2	22 (0.64)	White/Blue, White/Orange	0.11 (2.8)	9 (20)	1,000 (305)
03-H12-13	1	22 (0.64)	White/Violet	0.07 (1.8)	3 (7)	400 (122)
02-G11-13	1	22 (0.64)	White/Blue	0.07 (1.8)	3 (7)	400 (122)
02-G50-13	1	22 (0.64)	White/Orange	0.07 (1.8)	3 (7)	400 (122)
02-H13-13	1	22 (0.64)	Red/White	0.07 (1.8)	3 (7)	400 (122)
02-G16-13	1	22 (0.64)	Violet/Blue	0.07 (1.8)	3 (7)	400 (122)
02-706-13*	1	24 (0.51)	White/Red	0.07 (1.8)	3 (7)	1,000 (305)
02-001-13	1	24 (0.51)	White/Blue	0.07 (1.8)	3 (7)	1,000 (305)
02-050-13	1	24 (0.51)	White/Orange	0.07 (1.8)	3 (7)	1,000 (305)
02-006-13	1	24 (0.51)	White/Red	0.07 (1.8)	3 (7)	1,000 (305)
02-D06-13	1	24 (0.51)	White/Red	0.07 (1.8)	3 (7)	600 (183)
02-053-13	1	24 (0.51)	Red/Blue	0.07 (1.8)	3 (7)	1,000 (305)
02-004-13	1	24 (0.51)	Red/Green	0.07 (1.8)	3 (7)	1,000 (305)
02-005-13	1	24 (0.51)	Red/Slate	0.07 (1.8)	3 (7)	1,000 (305)
02-054-13	1	24 (0.51)	Red/Black	0.07 (1.8)	3 (7)	1,000 (305)
02-702-13*	1	24 (0.51)	Red/Black	0.07 (1.8)	3 (7)	1,000 (305)
02-002-13	1	24 (0.51)	Yellow/Blue	0.07 (1.8)	3 (7)	1,000 (305)
02-409-13	1	24 (0.51)	Blue/Black	0.07 (1.8)	3 (7)	3,000 (915)
02-401-13	1	24 (0.51)	White/Blue	0.07 (1.8)	3 (7)	3,000 (915)
02-450-13	1	24 (0.51)	White/Orange	0.07 (1.8)	3 (7)	3,000 (915)
02-051-13	1	24 (0.51)	White/Green	0.07 (1.8)	3 (7)	1,000 (305)
02-052-13	1	24 (0.51)	White/Black	0.07 (1.8)	3 (7)	1,000 (305)
02-006-13	1	24 (0.51)	White/Red	0.07 (1.8)	3 (7)	1,000 (305)
02-D02-13	1	24 (0.51)	Yellow/Blue	0.07 (1.8)	3 (7)	600 (183)
11-001-02	1	24 (0.51)	White/Blue	0.07 (1.8)	3 (7)	1,000 (305)
11-001-03	1	24 (0.51)	White/Green	0.07 (1.8)	3 (7)	2,000 (610)
02-222-13	2	24 (0.51)	White/Blue, White/Orange	0.10 (2.5)	6 (13)	1,000 (305)
02-221-13	2	24 (0.51)	Red/Blue, Red/Orange	0.10 (2.5)	6 (13)	1,000 (305)
02-224-13	2	24 (0.51)	Yellow/Blue, Yellow/Orange	0.10 (2.5)	6 (13)	1,000 (305)
02-223-13	2	24 (0.51)	White/Orange, White/Green	0.10 (2.5)	6 (13)	1,000 (305)
02-032-13	3	24 (0.51)	White/Blue, White/Orange, White/Green	0.12 (3.0)	9 (20)	1,000 (305)
02-D30-13	3	24 (0.51)	White/Blue, White/Orange, White/Green	0.12 (3.0)	9 (20)	600 (183)
02-041-13	4	24 (0.51)	White/Blue, White/Orange, White/Green, White/Brown	0.15 (3.8)	13 (29)	1,000 (305)

**Solid color (not band marked)*


Product Information
http://www.superioressex.com/comm/products.aspx
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PRODUCT INFORMATION
Product Information
Resources at Your Fingertips
Our Web site is a great resource for information to help with your next installation, including technical guidelines and product FAQs – all in one convenient location.
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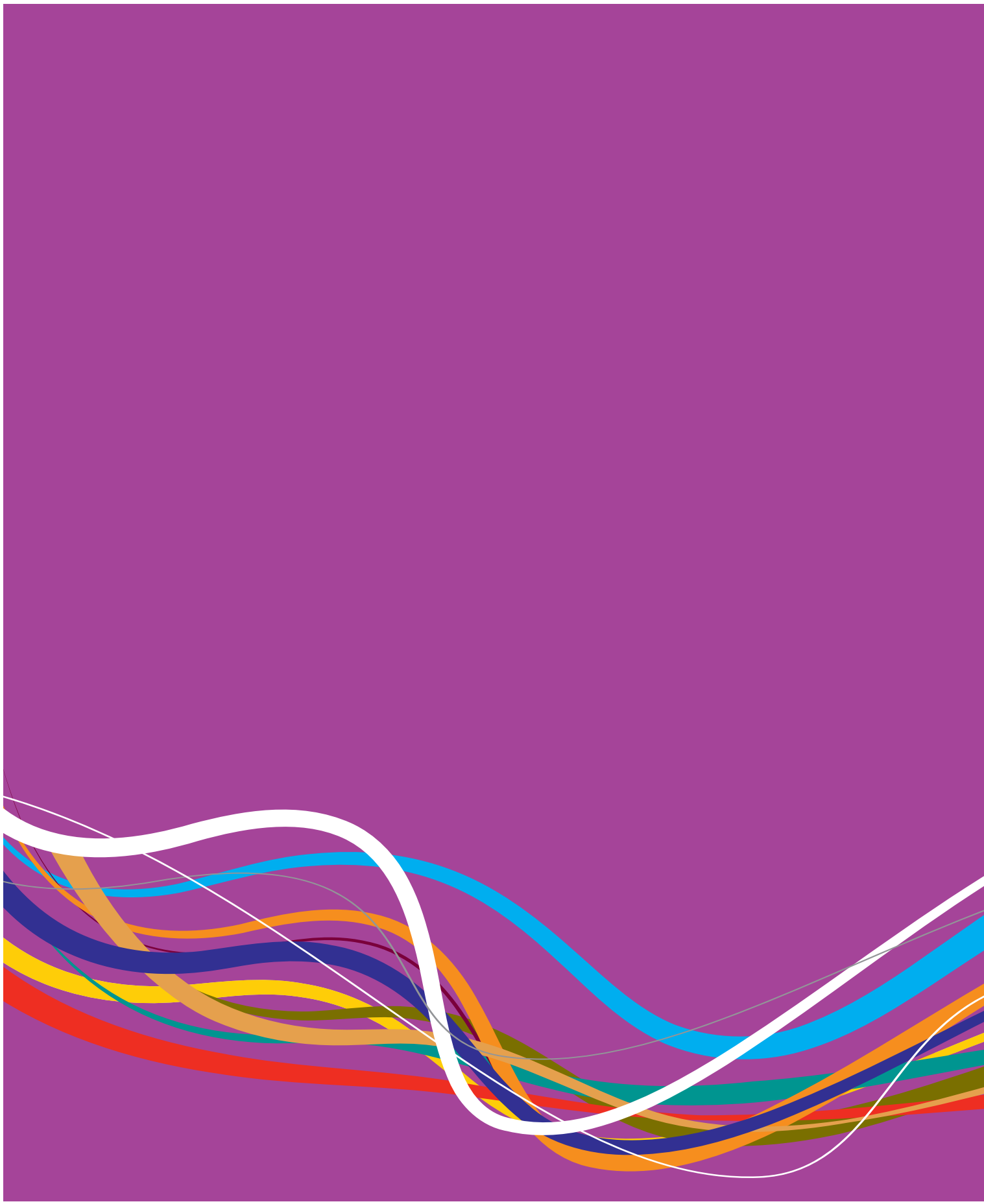

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CELFIL

BJBB, BJAB, BJMB and BJTB

Product Description

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

Features	Benefits
• Twisted pairs with varying lays	• Minimizes crosstalk and meets capacitance unbalance limitations
• Non-hygroscopic core wrap applied over assembled core	• Furnishes mechanical as well as high dielectric protection between shielding and individual conductors
• Rip cord placed parallel to core	• Facilitates easy jacket removal
• Black, medium-density polyethylene jacket	• Provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Dual-extruded cellular inner layer and color coded solid polyolefin skin
Twisted Pairs	Insulated conductors twisted to form pairs with varying lays
≤ 25-Pair Core	Assembled in concentric layers to form a cylindrical core
≥ 50-Pair Core	Assembled from concentrically formed units with 25-pair per unit; these may be stranded into 50-pair or 100-pair groups, which are then cabled to form the complete cylindrical core assembly
≥ 1,200-Pair Core	Color code is Mirror Image design
Filling Compound	PEPJ compound applied to cable core which completely coats each insulated conductor and fills interstices between pairs and units
Core	Non-hygroscopic core wrap applied over assembled core
Flooding Compound	Applied to fill all voids under shield
Shield	Electrically continuous 8 mil flat aluminum shielding tape, with polyolefin film fused and chemically bonded to both sides, applied longitudinally over the core and bonded to the outer jacket
Rip cord	Placed parallel to core
Jacket	Black, medium-density polyethylene
Jacket Marking	Manufacturer's identification, date of jacketing, gauge, pair count, sequential length and cable type marked at 1 meter intervals
Standards Compliance	RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath kft (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
19 (0.90)	1.0 (1.6)	3.2 (10.5)	8.5 (28.0)	1.5	5.0	4,500	10,000
22 (0.64)	1.0 (1.6)	4.5 (14.8)	17.3 (56.6)	1.5	5.0	3,600	10,000
24 (0.51)	1.0 (1.6)	5.6 (18.4)	26.1 (85.5)	1.5	5.0	3,000	10,000
26 (0.40)	1.0 (1.6)	7.0 (23.0)	44.0 (144.2)	1.5	5.0	2,400	10,000

	Minimum Near End Crosstalk (NEXT) dB/kft (dB/km)	
	@ 150 kHz	@ 772 kHz
PSWUNEXT Mean	58 (190)	47 (154)
PSWUNEXT Worst Pair	53 (174)	42 (138)

Conductor Size AWG (mm)	Minimum Far End Crosstalk dB/kft (dB/km)			
	PSELFEXT @ 150 kHz		PSELFEXT @ 772 kHz	
	Mean	Worst Pair	Mean	Worst Pair
19 (0.90)	65 (213)	59 (194)	51 (167)	45 (148)
22 (0.64)	63 (207)	57 (187)	49 (161)	43 (141)
24 (0.51)	63 (207)	57 (187)	49 (161)	43 (141)
26 (0.40)	61 (200)	57 (187)	47 (154)	43 (141)

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Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
BJBB							
85-026-13	6	19 (0.90)	0.49 (12)	120 (180)	4,593 (1,400)	660 (300)	44 x 18 x 20
85-028-13	12	19 (0.90)	0.58 (15)	190 (285)	4,593 (1,400)	1,040 (470)	46 x 25 x 20
85-031-13	25	19 (0.90)	0.77 (20)	355 (530)	7,924 (2,415)	3,100 (1,410)	62 x 30 x 24
85-034-13	50	19 (0.90)	1.03 (26)	655 (975)	4,593 (1,400)	3,295(1,500)	62 x 30 x 24
85-038-13	100	19 (0.90)	1.37 (35)	1,225 (1,825)	3,002 (915)	3,965 (1,800)	62 x 30 x 24
85-042-13	200	19 (0.90)	1.92 (49)	2,420 (3,600)	1,558 (475)	4,385 (1,990)	72 x 35 x 36
BJAB							
85-057-13	6	22 (0.64)	0.38 (9.7)	70 (105)	9,186 (2,800)	750 (340)	44 x 18 x 20
85-059-13	12	22 (0.64)	0.47 (12)	115 (170)	9,186 (2,800)	1,220 (555)	46 x 25 x 20
85-061-13	18	22 (0.64)	0.53 (14)	155 (230)	4,593 (1,400)	820 (370)	44 x 18 x 20
85-062-13	25	22 (0.64)	0.60 (15)	200 (300)	9,186 (2,800)	2,080 (945)	58 x 25 x 20
85-065-13	50	22 (0.64)	0.76 (19)	350 (520)	6,004 (1,830)	2,345 (1,065)	58 x 25 x 20
85-069-13	100	22 (0.64)	1.02 (26)	650 (965)	4,593 (1,400)	3,275 (1,485)	62 x 30 x 24
85-073-13	200	22 (0.64)	1.37 (35)	1,225 (1,825)	2,608 (795)	3,565 (1,615)	65 x 30 x 32
85-075-13	300	22 (0.64)	1.66 (42)	1,815 (2,700)	2,182 (665)	4,575 (2,075)	72 x 35 x 36
85-077-13	400	22 (0.64)	1.88 (48)	2,375 (3,535)	1,952 (595)	5,335 (2,420)	78 x 40 x 39
85-081-13	600	22 (0.64)	2.29 (58)	3,545 (5,275)	1,542 (470)	6,165 (2,795)	78 x 40 x 39
85-083-13	900	22 (0.64)	2.75 (70)	5,225 (7,775)	854 (260)	5,075 (2,305)	72 x 35 x 36
85-085-13	1,200	22 (0.64)	3.18 (81)	6,950 (10,364)	620 (190)	7,113 (3,226)	96 x 42 x 56
BJMB							
85-092-13	6	24 (0.51)	0.35 (8.9)	60 (90)	4,593 (1,400)	320 (145)	30 x 18 x 12
85-094-13	12	24 (0.51)	0.41 (10)	85 (125)	4,593 (1,400)	455 (205)	36 x 18 x 14
85-097-13	25	24 (0.51)	0.52 (13)	140 (210)	4,593 (1,400)	750 (340)	44 x 18 x 20
85-100-13	50	24 (0.51)	0.65 (17)	240 (355)	8,792 (2,680)	2,355 (1,070)	58 x 25 x 20
85-104-13	100	24 (0.51)	0.84 (21)	430 (640)	6,578 (2,005)	3,115 (1,415)	62 x 30 x 24
85-108-13	200	24 (0.51)	1.14 (29)	810 (1,205)	5,232 (1,595)	4,850 (2,205)	72 x 35 x 36
85-110-13	300	24 (0.51)	1.36 (35)	1,180 (1,755)	3,724 (1,135)	5,010 (2,270)	72 x 35 x 36
85-112-13	400	24 (0.51)	1.55 (39)	1,555 (2,315)	2,888 (880)	5,105 (2,320)	72 x 35 x 36
85-116-13	600	24 (0.51)	1.88 (48)	2,305 (3,430)	1,838 (560)	4,850 (2,205)	72 x 35 x 36
85-118-13	900	24 (0.51)	2.26 (57)	3,385 (5,040)	1,280 (390)	4,945 (2,250)	72 x 35 x 36
85-120-13	1,200	24 (0.51)	2.57 (65)	4,450 (6,625)	1,280 (390)	6,395 (2,905)	78 x 40 x 39
85-121-13	1,500	24 (0.51)	2.85 (72)	5,515 (8,210)	1,050 (320)	6,490 (2,950)	78 x 40 x 39
85-124-13	1,800	24 (0.51)	3.11 (79)	6,575 (9,785)	688 (210)	5,225 (2,370)	78 x 40 x 39
BJTB							
85-132-13	25	26 (0.40)	0.44 (11)	100 (150)	4,593 (1,400)	525 (235)	36 x 18 x 14
85-135-13	50	26 (0.40)	0.55 (14)	165 (245)	4,593 (1,400)	865 (395)	44 x 18 x 20
85-139-13	100	26 (0.40)	0.70 (18)	290 (430)	4,593 (1,400)	1,535 (695)	52 x 25 x 20
85-143-13	200	26 (0.40)	0.94 (24)	535 (795)	4,593 (1,400)	2,745 (1,245)	62 x 30 x 24
85-145-13	300	26 (0.40)	1.09 (28)	755 (1,125)	2,624 (800)	2,225 (1,010)	58 x 25 x 20
85-147-13	400	26 (0.40)	1.25 (32)	995 (1,480)	2,624 (800)	2,855 (1,295)	58 x 25 x 20
85-151-13	600	26 (0.40)	1.50 (38)	1,465 (2,180)	1,738 (530)	2,835 (1,285)	62 x 30 x 24
85-153-13	900	26 (0.40)	1.79 (46)	2,145 (3,190)	1,722 (525)	3,980 (1,805)	62 x 30 x 24
85-155-13	1,200	26 (0.40)	2.03 (52)	2,805 (4,175)	1,264 (385)	4,160 (1,885)	72 x 35 x 36
85-156-13	1,500	26 (0.40)	2.29 (58)	3,515 (5,230)	1,246 (380)	4,995 (2,265)	72 x 35 x 36
85-157-13	1,800	26 (0.40)	2.50 (64)	4,200 (6,250)	1,214 (370)	5,800 (2,630)	78 x 40 x 39
85-158-13	2,100	26 (0.40)	2.69 (68)	4,885 (7,270)	1,182 (360)	6,475 (2,935)	78 x 40 x 39
85-159-13	2,400	26 (0.40)	2.85 (72)	5,540 (8,245)	1,000 (305)	6,240 (2,830)	78 x 40 x 39
85-161-13	2,700	26 (0.40)	3.01 (77)	6,200 (9,225)	1,000 (305)	6,900 (3,130)	78 x 40 x 39

Canadian ALPETH

BHBB, BHAB, BKMB and BKTB

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.

Features

- Twisted pairs with varying lays
- Non-hygroscopic core wrap applied over assembled core
- Black, medium-density polyethylene jacket

Benefits

- Minimizes crosstalk and meets capacitance unbalance limitations
- Furnishes mechanical as well as high dielectric protection between shielding and individual conductors
- Provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Color coded solid polyolefin
Twisted Pairs	Insulated conductors twisted to pairs with varying lays
≤ 25-Pair Core	Assembled in concentric layers to form a cylindrical core
≥ 50-Pair Core	Assembled from concentrically formed units with 25-pair per unit; these may be stranded into 50-pair or 100-pair groups, which are then cabled to form the complete cylindrical core assembly
≥ 1,200-Pair Core	Color code is Mirror Image design
Core Covering	Non-hygroscopic core wrap applied over assembled core
Shield	Electrically continuous 8 mil flat aluminum shielding tape with polyolefin film fused and chemically bonded to both sides; applied longitudinally over the core and bonded to the outer jacket
Jacket	Black, medium-density polyethylene
Jacket Marking	Manufacturer's identification, date of jacketing, gauge, pair count, sequential length and cable type marked at 1 meter intervals
Standards Compliance	RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath kft (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
19 (0.90)	1.0 (1.6)	3.3 (10.8)	8.5 (28.0)	1.5	5.0	5,000	10,000
22 (0.64)	1.0 (1.6)	4.7 (15.4)	17.3 (56.6)	1.5	5.0	4,000	10,000
24 (0.51)	1.0 (1.6)	5.9 (19.4)	26.1 (85.5)	1.5	5.0	3,000	10,000
26 (0.40)	1.0 (1.6)	7.4 (24.3)	44.0 (144.2)	1.5	5.0	2,400	10,000

	Minimum Near End Crosstalk (NEXT) dB/kft (dB/km)	
	@ 150 kHz	@ 772 kHz
PSWUNEXT Mean	58 (190)	47 (154)
PSWUNEXT Worst Pair	53 (174)	42 (138)

Conductor Size AWG (mm)	Minimum Far End Crosstalk dB/kft (dB/km)			
	PSELFEXT @ 150 kHz		PSELFEXT @ 772 kHz	
	Mean	Worst Pair	Mean	Worst Pair
19 (0.90)	65 (213)	59 (194)	51 (167)	45 (148)
22 (0.64)	63 (207)	57 (187)	49 (161)	43 (141)
24 (0.51)	63 (207)	57 (187)	49 (161)	43 (141)
26 (0.40)	61 (200)	57 (187)	47 (154)	43 (141)

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Part Numbers and Physical Characteristics							
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)	Reel Size F x T x D in
BHBB							
85-026-01	6	19 (0.90)	0.47 (12)	105 (155)	4,593 (1,400)	590 (270)	44 x 18 x 20
85-028-01	12	19 (0.90)	0.56 (14)	170 (255)	4,593 (1,400)	945 (430)	46 x 25 x 20
85-031-01	25	19 (0.90)	0.74 (19)	310 (460)	4,593 (1,400)	1,625 (740)	52 x 25 x 20
85-034-01	50	19 (0.90)	0.98 (25)	565 (840)	4,593 (1,400)	2,965 (1,345)	65 x 30 x 32
85-038-01	100	19 (0.90)	1.31 (33)	1,060 (1,580)	3,002 (915)	3,470 (1,575)	62 x 30 x 24
85-042-01	200	19 (0.90)	1.84 (47)	2,075 (3,090)	1,492 (455)	3,385 (1,535)	62 x 30 x 24
BHAB							
85-057-01	6	22 (0.64)	0.38 (9.7)	65 (95)	4,593 (1,400)	345 (155)	30 x 18 x 12
85-059-01	12	22 (0.64)	0.45 (11)	100 (150)	4,593 (1,400)	525 (235)	36 x 18 x 14
85-062-01	25	22 (0.64)	0.59 (15)	180 (270)	5,724 (1,745)	1,195 (540)	46 x 25 x 20
85-065-01	50	22 (0.64)	0.75 (19)	310 (460)	5,724 (1,745)	2,020 (915)	58 x 25 x 20
85-069-01	100	22 (0.64)	1.00 (25)	570 (850)	4,593 (1,400)	2,905 (1,320)	62 x 30 x 24
85-073-01	200	22 (0.64)	1.35 (34)	1,080 (1,605)	3,412 (1,040)	4,300 (1,950)	72 x 35 x 36
85-075-01	300	22 (0.64)	1.64 (42)	1,595 (2,375)	2,182 (665)	4,095 (1,855)	72 x 35 x 36
85-077-01	400	22 (0.64)	1.86 (47)	2,105 (3,135)	2,132 (650)	5,100 (2,315)	72 x 35 x 36
85-081-01	600	22 (0.64)	2.27 (58)	3,135 (4,665)	1,410 (430)	5,035 (2,285)	72 x 35 x 36
85-083-01	900	22 (0.64)	2.74 (70)	4,640 (6,905)	688 (210)	3,805 (1,725)	72 x 35 x 36
BKMB							
85-092-01	6	24 (0.51)	0.34 (8.6)	50 (75)	4,593 (1,400)	275 (125)	30 x 18 x 12
85-094-01	12	24 (0.51)	0.40 (10)	75 (110)	4,593 (1,400)	410 (185)	36 x 18 x 14
85-097-01	25	24 (0.51)	0.50 (13)	125 (185)	4,593 (1,400)	680 (310)	44 x 18 x 20
85-100-01	50	24 (0.51)	0.63 (16)	215 (320)	4,593 (1,400)	1,155 (525)	46 x 25 x 20
85-104-01	100	24 (0.51)	0.81 (21)	380 (565)	4,593 (1,400)	1,950 (885)	52 x 25 x 20
85-108-01	200	24 (0.51)	1.09 (28)	705 (1,050)	4,593 (1,400)	3,605 (1,635)	65 x 30 x 32
85-110-01	300	24 (0.51)	1.30 (33)	1,025 (1,525)	1,838 (560)	2,085 (945)	52 x 25 x 20
85-112-01	400	24 (0.51)	1.50 (38)	1,355 (2,015)	1,492 (455)	2,265 (1,030)	58 x 25 x 20
85-116-01	600	24 (0.51)	1.81 (46)	2,010 (2,990)	1,264 (385)	2,830 (1,285)	62 x 30 x 24
85-118-01	900	24 (0.51)	2.17 (55)	2,970 (4,420)	1,182 (360)	4,125 (1,870)	72 x 35 x 36
85-120-01	1,200	24 (0.51)	2.49 (63)	3,915 (5,825)	952 (290)	4,340 (1,970)	72 x 35 x 36
BKTB							
85-132-01	25	26 (0.40)	0.43 (11)	90 (135)	4,593 (1,400)	475 (215)	36 x 18 x 14
85-135-01	50	26 (0.40)	0.53 (14)	150 (225)	4,822 (1,470)	830 (375)	44 x 18 x 20
85-139-01	100	26 (0.40)	0.68 (17)	255 (380)	4,593 (1,400)	1,335 (605)	46 x 25 x 20
85-143-01	200	26 (0.40)	0.91 (23)	465 (690)	4,593 (1,400)	2,380 (1,080)	58 x 25 x 20
85-145-01	300	26 (0.40)	1.05 (27)	665 (990)	2,624 (800)	1,950 (885)	52 x 25 x 20
85-147-01	400	26 (0.40)	1.21 (31)	870 (1,295)	2,624 (800)	2,530 (1,145)	58 x 25 x 20
85-151-01	600	26 (0.40)	1.45 (37)	1,290 (1,920)	2,394 (730)	3,455 (1,570)	65 x 30 x 32
85-153-01	900	26 (0.40)	1.74 (44)	1,900 (2,830)	1,526 (465)	3,270 (1,485)	65 x 30 x 32
85-155-01	1,200	26 (0.40)	1.98 (50)	2,495 (3,715)	1,460 (445)	4,255 (1,930)	72 x 35 x 36
85-156-01	1,500	26 (0.40)	2.23 (57)	3,105 (4,620)	1,000 (305)	3,720 (1,685)	72 x 35 x 36
85-157-01	1,800	26 (0.40)	2.43 (62)	3,705 (5,515)	1,312 (400)	5,560 (2,520)	78 x 40 x 39

SEALPAP

BHBF, BHAF, BKMF and BKTF

Product Description

Double jacketed air core cable, commonly called "SEALPAP," is a solid-insulated design intended for use in Outside Plant (OSP) 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.

Features

- Twisted pairs with varying lays
- Core wrap
- Inner jacket
- Outer jacket bonded to shield

Benefits

- Minimizes crosstalk and meets capacitance unbalance limitations
- Protects core and helps provide core-to-shield dielectric strength
- Provides protection against mechanical damage and helps prevent the ingress of moisture
- Provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, and stresses expected in standard installations
- Bonding provides additional moisture resistance

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Conductors are insulated with solid polyolefin in distinctive colors to facilitate pair identification
Twisted Pairs	Insulated conductors twisted to pairs with varying lays
≤ 25-Pair Core	Pairs are combined into a cylindrical core
≥ 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders
≥ 1,200-Pair Core	Color code is Mirror Image design
Core Wrap	Non-hygroscopic dielectric material
Inner Jacket	Polyethylene
Rip cords	Placed between the core wrap and the inner jacket and between the inner jacket and shield
Shield	Electrically continuous 8 mil flat aluminum shielding tape, with polyolefin film fused and chemically bonded to both sides, applied longitudinally over the core and bonded to the outer jacket
Outer Jacket	Black, medium-density polyethylene
Jacket Marking	Manufacturer's identification, plant location, date of jacketing, pair count, AWG, product identification, sequential length markings in meters and telephone handset
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE ANSI/ICEA S-85-625-2007 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 4 (52 ± 2)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath kft (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.6)	1.5	5.0	4,000	20,000
24 (0.51)	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) dB/kft (dB/km)	
	@ 150 kHz	@ 772 kHz
PSWUNEXT Mean	58 (190)	47 (154)
PSWUNEXT Worst Pair	53 (174)	42 (138)

Conductor Size AWG (mm)	Minimum Far End Crosstalk dB/kft (dB/km)			
	PSELFEXT @ 150 kHz		PSELFEXT @ 772 kHz	
	Mean	Worst Pair	Mean	Worst Pair
19 (0.90)	65 (213)	59 (194)	51 (167)	45 (148)
22 (0.64)	63 (207)	57 (187)	49 (161)	43 (141)
24 (0.51)	63 (207)	57 (187)	49 (161)	43 (141)
26 (0.40)	61 (200)	57 (187)	47 (154)	43 (141)

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Part Numbers and Physical Characteristics						
Part Number	**Pair Count**	**AWG (mm)**	**Nominal Diameter in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Standard Length ft (m)**	**Approx. Shipping Weight lbs (kg)**
BHBF						
85-031-41	25	19 (0.90)	0.84 (21)	355 (530)	9,006 (2,745)	3,990 (1,810)
85-034-41	50	19 (0.90)	1.07 (27)	625 (930)	4,512 (1,375)	3,615 (1,640)
85-038-41	100	19 (0.90)	1.43 (36)	1,170 (1,740)	2,986 (910)	4,290 (1,945)
85-042-41	200	19 (0.90)	1.96 (50)	2,230 (3,320)	2,230 (680)	5,770 (2,615)
BHAF						
85-062-41	25	22 (0.64)	0.68 (17)	215 (320)	5,724 (1,745)	2,025 (920)
85-065-41	50	22 (0.64)	0.85 (22)	360 (535)	5,724 (1,745)	2,855 (1,295)
85-069-41	100	22 (0.64)	1.09 (28)	635 (945)	4,282 (1,305)	3,515 (1,595)
85-073-41	200	22 (0.64)	1.47 (37)	1,190 (1,770)	3,412 (1,040)	4,855 (2,200)
85-077-41	400	22 (0.64)	1.99 (51)	2,260 (3,365)	2,132 (650)	5,615 (2,545)
85-081-41	600	22 (0.64)	2.42 (62)	3,370 (5,015)	1,410 (430)	5,545 (2,515)
BKMF						
85-100-41	50	24 (0.51)	0.72 (18)	255 (380)	6,316 (1,925)	2,405 (1,090)
85-104-41	100	24 (0.51)	0.91 (23)	430 (640)	6,004 (1,830)	3,375 (1,530)
85-108-41	200	24 (0.51)	1.18 (30)	770 (1,145)	2,116 (645)	2,425 (1,100)
85-110-41	300	24 (0.51)	1.43 (36)	1,130 (1,680)	2,280 (695)	3,370 (1,530)
85-112-41	400	24 (0.51)	1.62 (41)	1,475 (2,195)	2,280 (695)	4,160 (1,885)
85-116-41	600	24 (0.51)	1.94 (49)	2,160 (3,215)	1,312 (400)	3,630 (1,645)
85-118-41	900	24 (0.51)	2.33 (59)	3,190 (4,745)	1,050 (320)	4,145 (1,880)
85-120-41	1,200	24 (0.51)	2.64 (67)	4,165 (6,200)	1,312 (400)	6,260 (2,840)
BKTF						
85-135-41	50	26 (0.40)	0.63 (16)	185 (275)	4,822 (1,470)	1,685 (765)
85-139-41	100	26 (0.40)	0.77 (20)	300 (445)	4,822 (1,470)	2,240 (1,015)
85-143-41	200	26 (0.40)	1.00 (25)	525 (780)	4,822 (1,470)	3,325(1,510)
85-147-41	400	26 (0.40)	1.33 (34)	970 (1,445)	2,394 (730)	3,115 (1,415)
85-151-41	600	26 (0.40)	1.58 (40)	1,410 (2,100)	2,394 (730)	4,170 (1,890)
85-153-41	900	26 (0.40)	1.87 (48)	2,045 (3,045)	1,510 (460)	3,885 (1,760)
85-155-41	1,200	26 (0.40)	2.13 (54)	2,695 (4,010)	1,526 (465)	4,910 (2,225)

Canadian Bonded STALPETH

DCAZ, DCMZ and DCTZ

Product Description

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

Applications

- Congested underground duct systems

Features	Benefits
• Tightly controlled individual conductor dimensions	• Limits resistance unbalance of paired conductors
• Specially designed pair twist lays	• Minimizes crosstalk and meets the capacitance unbalance requirements
• Core wrap	• Protects the core and helps provide core-to-shield dielectric strength
• Aluminum tape shield	• Assures good electrical contact with non-piercing bonding clamps
• Steel tape armor bonded to outer jacket	• Protects the core from mechanical damage and reduces 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
• Polyethylene jacket	• Provides a tough, flexible, protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 22 (0.64), 24 (0.51) and 26 (0.40)
Insulation	Conductors are dual insulated with an inner layer of foamed, natural polyolefin covered by an outer layer of solid, colored polyolefin; conductor insulation is color coded in accordance with industry standard
≥ 50-Pair Core	Multiples of 25-pair groups are assembled to form the final cable core; each group is identified by color coded non-hygroscopic binders; for 1,200-pair and larger, the color code is Mirror Image design
Core Wrap	Non-hygroscopic dielectric material
Shield	Corrugated bare 8 mil aluminum tape applied longitudinally over the core wrap
Armor	Corrugated, copolymer coated, 6 mil steel tape applied over the aluminum shield and bonded to the outer jacket
Jacket	Black polyethylene
Jacket Marking	Manufacturer's identification, pair count, AWG, product identification and a telephone handset printed at 2 foot intervals; sequential footage markings are printed at alternate 2 foot intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE Issue 2 RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
All pairs	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath mile (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
22 (0.64)	1.0 (1.6)	5.0 (16.4)	91 (56.5)	1.5	5.0	1,400	5,000
24 (0.51)	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) @ 772 kHz dB/kft (dB/km)
PSWUNEXT Mean	47 (154)
PSWUNEXT Worst Pair	42 (138)

Conductor Size AWG (mm)	Minimum Far End Crosstalk PSELFEXT @ 772 kHz dB/kft (dB/km)	
	Mean	Worst Pair
22 (0.64)	49 (161)	43 (141)
24 (0.51)	49 (161)	43 (141)
26 (0.40)	47 (154)	43 (141)

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Part Numbers and Physical Characteristics						
Part Number	Pair Count	AWG (mm)	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
DCAZ						
07-021-76	900	22 (0.64)	2.49 (63)	4,375 (6,510)	1,600 (488)	7,795 (3,535)
07-021-77	1,200	22 (0.64)	2.85 (72)	5,770 (8,585)	1,200 (366)	7,720 (3,500)
DCMZ						
19-116-01	600	24 (0.51)	1.70 (43)	19,60 (2,915)	3,900 (1,189)	8,440 (3,830)
07-021-99	900	24 (0.51)	2.02 (51)	2,860 (4,255)	2,616 (797)	8,275 (3,755)
07-021-68	1,200	24 (0.51)	2.30 (58)	3,755 (5,590)	2,000 (610)	8,305 (3,765)
07-022-12	1,500	24 (0.51)	2.57 (65)	4,660 (6,935)	1,600 (488)	8,250 (3,745)
07-021-69	1,800	24 (0.51)	2.81 (71)	5,545 (8,250)	1,250 (381)	7,725 (3,505)
07-021-75	2,100	24 (0.51)	3.04 (77)	6,440 (9,585)	1,148 (350)	8,200 (3,720)
07-021-98	2,400	24 (0.51)	3.22 (82)	7,320 (10,895)	876 (267)	7,205 (3,270)
DCTZ						
07-022-11	900	26 (0.40)	1.62 (41)	1,850 (2,755)	3,904 (1,190)	8,010 (3,635)
07-021-70	1,200	26 (0.40)	1.84 (47)	2,420 (3,600)	3,200 (975)	8,540 (3,875)
07-022-08	1,500	26 (0.40)	2.08 (53)	2,995 (4,455)	2,500 (762)	8,285 (3,755)
07-021-71	1,800	26 (0.40)	2.26 (57)	3,560 (5,300)	2,080 (634)	8,200 (3,720)
07-021-72	2,400	26 (0.40)	2.58 (66)	4,685 (6,970)	1,600 (488)	8,290 (3,760)
07-021-90	2,700	26 (0.40)	2.71 (69)	5,240 (7,800)	1,247 (380)	7,345 (3,330)
07-021-73	3,000	26 (0.40)	2.86 (73)	5,800 (8,630)	1,200 (366)	7,755 (3,520)
07-021-74	3,600	26 (0.40)	3.03 (77)	6,885 (10,245)	1,150 (351)	8,715 (3,950)

Canadian Self Support

BHBS-BC, BHAS-BC and BKMS-BC

Product Description

Self Support Cable is a plastic insulated, single jacketed air core 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.

Features

- Twisted pairs with varying lays and specific color combinations
- Core wrap
- Shield interfaces and steel support member are flooded with adhesive compound
- Polyethylene jacket

Benefits

- Minimizes crosstalk and provides pair identification
- Provides core thermal protection
- Provides moisture barrier and inhibit corrosion
- Provides a tough protective covering designed to withstand exposure to direct sunlight, atmospheric temperature changes and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90), 22 (0.64) and 24 (0.51)
Insulation	Color coded solid polyolefin
Twisted Pairs	Individual insulated conductors twisted into pairs with varying lays and specific color combinations
≤ 25-Pair Core	Pairs are combined into a cylindrical core
≥ 50-Pair Core	Multiples of 25-pair groups are assembled into units; each unit is identified by color coded binders
Core Wrap	Non-hygroscopic, dielectric tape applied over core
Shield	Corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally with an overlap
Support Member	0.25 inch, 7-strand Extra High Strength (EHS) galvanized steel messenger support member is integral part of sheath
Jacket	Black, polyethylene
Jacket Markings	Manufacturer's ID, date of jacketing, pair count, AWG and meter sequentials at 1 meter intervals
Package	420 steel reel (F x T x D = 83 x 40 x 42 inches)
Standards Compliance	Telcordia GR-421-CORE RoHS-compliant

Electrical Specifications

Number of Pairs	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Pair to Pair @ 1 kHz		Capacitance Unbalance Pair to Ground @ 1 kHz	
		Maximum Individual pF/kft (pF/km)	Maximum RMS pF/kft (pF/km)	Maximum Individual pF/kft (pF/km)	Maximum Average pF/kft (pF/km)
12 or less	83 ± 7 (52 ± 4)	80 (262)	-	800 (2,625)	-
Over 12	83 ± 4 (52 ± 2)	80 (262)	25 (82)	800 (2,625)	175 (574)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 68°F (20°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath kft (km)	DC Resistance Unbalance Maximum %		Dielectric Strength DC Potential – Volts Minimum	
				Average	Individual Pair	Conductor to Conductor	Conductor to Shield
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 (56.6)	1.5	5.0	4,000	10,000
24 (0.51)	1.0 (1.6)	5.9 (19.4)	144 (89.5)	1.5	5.0	3,000	10,000

	Minimum Near End Crosstalk (NEXT) dB/kft (dB/km)	
	@ 150 kHz	@ 772 kHz
PSWUNEXT Mean	58 (190)	47 (154)
PSWUNEXT Worst Pair	53 (174)	42 (138)

Conductor Size AWG (mm)	Minimum Far End Crosstalk dB/kft (dB/km)			
	PSELFEXT @ 150 kHz		PSELFEXT @ 772 kHz	
	Mean	Worst Pair	Mean	Worst Pair
19 (0.90)	65 (213)	59 (194)	51 (167)	45 (148)
22 (0.64)	63 (207)	57 (187)	49 (161)	43 (141)
24 (0.51)	63 (207)	57 (187)	49 (161)	43 (141)

Part Numbers and Physical Characteristics

Part Number	Pair Count	AWG (mm)	Minor Dimension in (mm)	Major Dimension in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Approx. Shipping Weight lbs (kg)
BHBS-BC							
07-021-51	6	19 (0.90)	0.48 (12)	0.96 (24)	240 (355)	10,006 (3,050)	1,023 (1,526)
07-021-52	25	19 (0.90)	0.60 (15)	1.07 (27)	440 (655)	5,020 (1,530)	2,990 (4,459)
07-021-53	50	19 (0.90)	0.98 (25)	1.45 (34)	710 (1,055)	5,020 (1,530)	4,345 (6,480)
BHAS-BC							
07-021-54	25	22 (0.64)	0.58 (15)	1.05 (27)	325 (485)	10,006 (3,050)	1,109 (1,654)
07-021-55	50	22 (0.64)	0.74 (19)	1.20 (31)	460 (685)	7,513 (2,290)	4,238 (6,320)
07-021-56	100	22 (0.64)	1.00 (25)	1.47 (37)	720 (1,070)	6,004 (1,830)	5,105 (7,613)
BKMS-BC							
07-021-57	50	24 (0.51)	0.62 (16)	1.09 (28)	385 (573)	13,303 (4,055)	5,904 (8,805)
07-021-58	100	24 (0.51)	0.80 (22)	1.27 (32)	575 (856)	8,005 (2,440)	5,305 (8,031)
07-021-59	200	24 (0.51)	1.09 (28)	1.56 (40)	1,013 (1,508)	5,020 (1,530)	5,867 (8,750)

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Product Description

ADW is a PVC jacketed 2-pair or 4-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.

Features

- Twisted pairs with varying lays
- Fiberglass strength members
- Rip cord
- Weather-resistant PVC jacket extruded over the strength members and bonded to the fiberglass strength members

Benefits

- Minimizes resistance unbalance
- Provides the necessary longitudinal strength
- Facilitates jacket removal
- Protects the core from mechanical damage, degradation by sunlight and the ingress of moisture
- Provides the required strength characteristics

Specifications	
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Individual conductors insulated with solid polyolefin in distinctive colors; 2-pair color code is Blue/White and Orange/Red and 4-pair color code is Blue/White, Orange/Red, Black/Green and Yellow/Brown
Core Assembly	Individual conductors twisted into pairs
Strength Members	Fiberglass strength members placed in the jacket parallel to the core assembly
Rip cord	Placed parallel to the core
Jacket	Sky blue grey weather-resistant PVC jacket extruded over the strength members and bonded to the fiberglass strength members
Standards Compliance	RoHS-compliant

Electrical Specifications

Conductor Size AWG (mm)	Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Insulation Resistance @ 60°F (16°C) megohm-mile (megohm-km)	Capacitance Unbalance @ 1 kHz Pair to Pair Maximum pF/kft (pF/km)	Conductor DC Resistance @ 20°F (-7°C) Maximum Individual Ohms/kft (Ohms/km)	Resistance Unbalance Maximim Individual Pair %	Dielectric Strength DC Potential – Volts Minimum Conductor to Conductor
22 (0.64)	113 (70)	380 (610)	140 (459)	16.8 (55)	5.0	4,000

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
12-022-09	2	0.26 (6.6)	30 (45)	1,476 (450)	Coil
12-021-09	2	0.26 (6.6)	30 (45)	656 (200)	POP™ Box
12-023-09	2	0.26 (6.6)	30 (45)	5,000 (1,524)	Reel
12-041-09	4	0.33 (8.4)	55 (80)	820 (250)	Coil
12-042-09	4	0.33 (8.4)	55 (80)	3,937 (1,200)	Reel
12-043-09	4	0.33 (8.4)	55 (80)	328 (100)	POP™ Box

Canadian Integrated Messenger Wire

IM/F, IM/H and 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 a 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.

Features

- Tightly controlled individual conductor dimensions
- Varied pair twist lays
- Polyvinylchloride jacket

Benefits

- Limits resistance unbalance of the twisted pairs
- Minimizes crosstalk and meets capacitance limits
- Provides a tough flexible protective covering that withstands exposure to sunlight, atmospheric temperatures and stresses encountered in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	Available in 19 (0.90) and 22 (0.64)
Insulation	Solid polyolefin in distinctive colors; standard color codes are used for pair identification with compounds chosen for electrical balance and permanency
Core Assembly	Tightly controlled individual conductor dimensions; in multi-pair constructions, pair twist lays are varied; twisted pairs are formed into a firm, round core
Support Member	Available in 0.083 inch (F), 0.109 inch (H), or 0.095 inch (G) solid extra-strength steel support wire
Jacket	Black, fire retardant, polyvinylchloride jacket; steel support wire is jacketed in an integral extrusion with the core
Standards Compliance	Telcordia GR-3163-CORE ANSI/ICEA S-89-648-2006 UL Listed RoHS-compliant

Electrical Specifications				
Average Mutual Capacitance @ 1000 Hz		**Capacitance Unbalance @ 1 kHz Maximum Individual**		**Minimum Near End Crosstalk (NEXT) @ 772 kHz dB/kft (dB/km)**
Maximum Individual nF/mile (nF/km)	**Wire Average nF/mile (nF/km)**	**Pair to Pair pF/kft (pF/km)**	**Pair to Ground pF/kft (pF/km)**	
94 (58)	83 ± 7 (52 ± 4)	80 (262)	800 (2,625)	44 (144)

Conductor Size AWG (mm)	Minimum Insulation Resistance megohm-kft (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	DC Conductor Resistance @ 68°F (20°C) Maximum Individual Ohms/mile (Ohms/km)	Resistance Unbalance Maximum % Individual Pair	Conductor to Conductor Dielectric Strength Minimum Volts DC 3 secs, no breakdown
19 (0.90)	5,000 (1,600)	3.3 (11)	45 (28.0)	5.0	5,000
22 (0.64)	5,000 (1,600)	5.1 (17)	91 (56.5)	5.0	4,000

Part Numbers and Physical Characteristics								
Part Number	**Support Size in**	**Pair Count**	**AWG (mm)**	**Minor Dimension in (mm)**	**Major Dimension in (mm)**	**Approx. Weight lbs/kft (kg/km)**	**Standard Length ft (m)**	**Package**
10-921-38	IM/G 0.095	2	19 (0.90)	0.27 (6.8)	0.51 (12.9)	73 (109)	656 (200)	Coil
10-923-38	IM/G 0.095	2	19 (0.90)	0.27 (6.8)	0.51 (12.9)	73 (109)	4,921 (1,500)	Reel
10-002-34	IM/F 0.083	2	22 (0.64)	0.22 (5.7)	0.46 (11.7)	55 (82)	600 (183)	Coil
10-102-34	IM/F 0.083	2	22 (0.64)	0.22 (5.7)	0.46 (11.7)	55 (82)	5,000 (1,524)	Reel
10-503-34	IM/F 0.083	3	22 (0.64)	0.24 (6.2)	0.48 (12.3)	72 (107)	600 (183)	Coil
10-106-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	3,500 (1,067)	Reel
10-206-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	1,000 (305)	Reel
10-006-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	250 (76)	Coil
10-306-34	IM/F 0.083	6	22 (0.64)	0.30 (7.6)	0.53 (13.6)	80 (119)	400 (122)	Coil
10-261-38	IM/G 0.095	6	22 (0.64)	0.30 (7.6)	0.55 (13.9)	80 (119)	492 (150)	Coil
10-262-38	IM/G 0.095	6	22 (0.64)	0.30 (7.6)	0.55 (13.9)	80 (119)	2,461 (750)	Reel
10-265-38	IM/G 0.095	6	22 (0.64)	0.30 (7.6)	0.55 (13.9)	80 (119)	5,000 (1,524)	Reel
10-281-38	IM/G 0.095	12	22 (0.64)	0.38 (7.6)	0.65 (16.6)	114 (170)	410 (125)	Coil
10-284-38	IM/G 0.095	12	22 (0.64)	0.38 (7.6)	0.65 (16.6)	114 (170)	2,460 (750)	Reel
10-285-38	IM/G 0.095	12	22 (0.64)	0.38 (7.6)	0.65 (16.6)	114 (170)	8,202 (2,500)	Reel
10-102-35	IM/H 0.109	12	22 (0.64)	0.38 (7.6)	0.66 (16.7)	130 (193)	1,000 (305)	Reel
10-012-35	IM/H 0.109	12	22 (0.64)	0.38 (7.6)	0.66 (16.7)	130 (193)	250 (76)	Coil
10-212-35	IM/H 0.109	12	22 (0.64)	0.38 (7.6)	0.66 (16.7)	130 (193)	5,000 (1,524)	Reel

Contact Superior Essex for additional configurations and AWG sizes.

Product Description

ADP NMS is a PVC-jacketed aerial service wire with QuickCount® in meters. It is available in 2-pair and 6-pair designs. 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.

Features

- Insulation of the tip conductor is marked with a stripe of the mating ring insulation color
- Tightly controlled individual conductor dimensions
- Fiberglass yarns
- Rip cord
- Weather resistant, polyvinylchloride jacket bonded to the fiberglass strength members

Benefits

- Reduces the possibility of splitting pairs during installation
- Limits resistance unbalance of the twisted pairs
- Provides necessary longitudinal strength
- Facilitates jacket removal
- Protects the core from mechanical damage, degradation by sunlight and ingress of moisture
- Provides the required strength characteristics

Specifications	
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Solid polyolefin; insulation of the tip conductor is marked with a stripe of the mating ring insulation color
Core Assembly	Individual conductors are carefully twisted into pairs
Strength Members	Fiberglass yarns placed parallel to the core
Rip cord	Placed parallel to the core
Jacket	Black, weather resistant, polyvinylchloride jacket extruded over the yarns and rip cord and bonded to the fiberglass strength members
Standards Compliance	Telecordia GR-3163-CORE RDUP PE-7 ANSI/ICEA S-89-648-2006 UL Listed RoHS-compliant

Electrical Specifications

Average Mutual Capacitance @ 1000 Hz		Capacitance Unbalance @ 1 kHz Maximum Individual Pair to Pair pF/kft (pF/km)	Minimum Near End Crosstalk (NEXT) @ 772 kHz dB/kft (dB/km)
Maximum Individual nF/mile (nF/km)	Wire Average nF/mile (nF/km)		
94 (58)	83 ± 7 (52 ± 4)	80 (262)	48 (157)

Conductor Size AWG (mm)	Minimum Insulation Resistance megohm-mile (megohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	DC Conductor Resistance @ 68°F (20°C) Maximum Individual Ohms/mile (Ohms/km)	Resistance Unbalance Maximum % Individual Pair	Conductor to Conductor Dielectric Strength Minimum Volts DC 3 secs, no breakdown
22 (0.64)	1,000 (1,600)	5.1 (17)	91 (56.5)	5.0	4,000

Part Numbers and Physical Characteristics

Part Number	Pair Count	Minor Dimension in (mm)	Major Dimension in (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)	0.48 (12)	70 (105)	305	Reel
11-003-65	6	0.27 (7.0)	0.48 (12)	70 (105)	122	Coil

Buried Distribution Wire

BCBD

Product Description

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

Features	Benefits
• Varied pair twist lays	• Minimizes crosstalk and meets capacitance unbalance limitations
• Core wrap	• Furnishes mechanical and high dielectric protection between shielding and individual conductors
• Polyethylene jacket	• Provides a tough, flexible protective covering that withstands exposure to sunlight, atmospheric temperatures, ground chemicals and stresses expected in standard installations

Specifications	
Conductor	Solid annealed copper
AWG (mm)	22 (0.64)
Insulation	Dual-extruded cellular inner layer and a color coded solid outer layer of polyolefin
Core Assembly	Insulated conductors are twisted to form pairs with varying lays
Filling Compound	PEPJ compound applied to the wire core which completely coats each insulated conductor and fills the interstices between pairs
Core Wrap	Non-hygroscopic core wrap applied over the core
Flooding Compound	Applied to fill all the voids under the shield
Shield	Electrically-continuous 8 mil flat aluminum tape shield with a polyolefin film fused and chemically bonded to both sides; applied longitudinally over the core and bonded to the outer jacket
Jacket	Black medium-density polyethylene
Standards Compliance	RoHS-compliant

Electrical Specifications

Average Mutual Capacitance @ 1000 Hz nF/mile (nF/km)	Capacitance Unbalance Maximum Individual	
	Pair to Pair pF/kft (pF/km)	Pair to Ground pF/kft (pF/km)
90 (56)	140 (459)	800 (2,625)

Conductor Size AWG (mm)	Minimum Insulation Resistance @ 60°F (16°C) gigohm-mile (gigohm-km)	Maximum Average Attenuation 772 kHz @ 68°F (20°C) dB/kft (dB/km)	Maximum Conductor Resistance @ 68°F (20°C) Ohms/sheath kft (km)	Resistance Unbalance Maximum % Individual Pair	Dielectric Strength DC Potential – Volts Minimum	
					Conductor to Conductor	Conductor to Shield
22 (0.64)	1.0 (1.6)	4.5 (14.8)	17.3 (56.6)	5.0	3,600	10,000

Part Numbers and Physical Characteristics

Part Number	Pair Count	Nominal Diameter in (mm)	Approx. Weight lbs/kft (kg/km)	Standard Length ft (m)	Package
85-235-06	4	0.30 (7.6)	45 (65)	1,640 (500)	Reel
85-233-06	4	0.30 (7.6)	45 (65)	4,593 (1,400)	Reel
85-234-06	4	0.30 (7.6)	45 (65)	656 (200)	Coil

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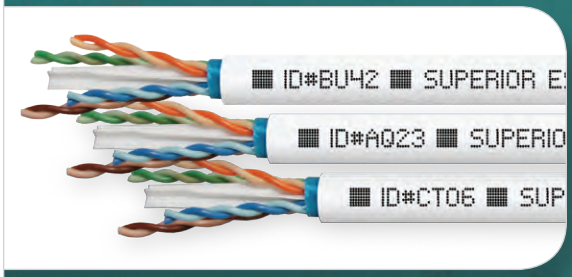
Product Features



CableID™ Alpha Numeric Coding

- Unique 4-character printed code, every 2 feet, on the cable jacket for each 1000-foot box and reel of copper data cable
- Both ends of each cable run are easily identifiable without the need to separately label or tone the cable
- Reduces installation time and cost for initial installations and for moves, adds and changes

ColorTip™ Circuit Identification

- Circumferentially colors 100% of the conductor for easily identifiable tip and ring mates
- Distinct colors reduces termination time and errors, even in low light environments
- Permanent, environmentally friendly color that doesn't rub or wear off

QuickCount® Feet/Meters Marking

- Jacket marking in feet and meters
- Provides remaining length of cable on reel removing the guesswork for cable installers
- Saves installation time and money

Standard Jacket Colors

- Extensive, in-stock jacket color offering in many of the premises copper products
- Most colors available with no minimum quantity and custom colors available upon request with minimum order quantities

BrakeBox® Payout Control

The BrakeBox packaging is a true advantage for installers who are pulling cable in multiple locations.

- Stacks, travels and protects cable better than an open reel
- Two resistance mechanisms on both sides of the box, each with three variable resistance settings
- Controls back-tension preventing over-spin and tangling

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Metric Measurement Conversions

Superior Essex uses the U.S. customary system of weights and measures as well as the metric equivalents. If you need help calculating these figures, please consult the conversion charts below.

Into Metric			
	If You Know	**Multiply By**	**To Get**
Length	milli-inch (mil)	25.40	microns (µm)
	inches (in)	25.40	millimeters (mm)
	inches (in)	2.54	centimeters (cm)
	feet (ft)	30.48	centimeters (cm)
	yards (yd)	0.91	meters (m)
	miles (mi)	1.61	kilometers (km)
Area	sq. inches (in^2)	6.45	sq. centimeters (cm^2)
	sq. feet (ft^2)	0.09	sq. meters (m^2)
	sq. yards (yd^2)	0.84	sq. meters (m^2)
	sq. miles (mi^2)	2.59	sq. kilometers (km^2)
	acres	0.40	hectares (ha)
Mass (Weight)	ounces (oz)	28.35	grams (g)
	pounds (lb)	0.45	kilograms (kg)
	short tons	0.91	tons (t)
Temperature	Fahrenheit (°F)	Subtract 32, then multiply by 0.56	Celsius (°C)
Mass per Length	pounds per 1,000 feet (lbs/kft)	1.49	kilograms per kilometers (kg/km)
Force	pounds force (lbf)	4.45	newtons (N)
	foot–pounds (ft–lb)	1.36	newtons–meters (N–m)
	pounds force per inches (lbf/in)	1.75	newtons per centimeters (N/cm)
	pounds per sq. inches (PSI)	6.89	kiloPascals (kPa)

Out of Metric			
	If You Know	**Multiply By**	**To Get**
Length	microns (µm)	0.04	milli-inch (mil)
	millimeters (mm)	0.04	inches (in)
	centimeters (cm)	0.39	inches (in)
	meters (m)	3.28	feet (ft)
	meters (m)	1.09	yards (yd)
	kilometers (km)	3,280.84	feet (ft)
	kilometers (km)	0.62	miles (mi)
Area	sq. centimeters (cm^2)	0.16	sq. inches (in^2)
	sq. meters (m^2)	1.20	sq. yards (yd^2)
	sq. kilometers (km^2)	0.39	sq. miles (mi^2)
	hectares (ha)	2.47	acres
Weight	grams (g)	0.04	ounces (oz)
	kilograms (kg)	2.20	pounds (lb)
	tons (t)	1.10	short tons
Temperature	Celsius (°C)	Multiply by 1.80, then add 32	Fahrenheit (°F)
Weight per Unit Length	kilograms per kilometers (kg/km)	0.67	pounds per 1,000 feet (lbs/kft)
Force	newtons (N)	0.22	pounds force (lbf)
	newtons–meters (N–m)	0.74	foot–pounds (ft–lb)
	newtons per centimeters (N/cm)	0.57	pounds force per inches (lbf/in)
	kiloPascals (kPa)	0.15	pounds per sq. inches (PSI)

American Wire Gauge (AWG) Sizes

The table below shows various data including both the resistance of the various wire gauges and the resistance (Ω) per unit length. The diameter information in the table applies to solid wires. Stranded wires are calculated by determining the equivalent cross sectional copper area. The table below assumes DC, or AC frequencies equal to or less than 60 Hz, and does not take skin effect into account.

	Diameter		**Copper Resistance***	
AWG	**in**	**mm**	**(Ω/km)**	**(Ω/kft)**
0000 (4/0)	0.4600	11.684	0.1608	0.04901
000 (3/0)	0.4096	10.404	0.2028	0.06180
00 (2/0)	0.3648	9.266	0.2557	0.07793
0 (1/0)	0.3249	8.252	0.3224	0.09827
1	0.2893	7.348	0.4066	0.1239
2	0.2576	6.544	0.5127	0.1563
3	0.2294	5.827	0.6465	0.1970
4	0.2043	5.189	0.8152	0.2485
5	0.1819	4.621	1.028	0.3133
6	0.1620	4.115	1.296	0.3951
7	0.1443	3.665	1.634	0.4982
8	0.1285	3.264	2.061	0.6282
9	0.1144	2.906	2.599	0.7921
10	0.1019	2.588	3.277	0.9989
11	0.0907	2.305	4.132	1.260
12	0.0808	2.053	5.211	1.588
13	0.0720	1.828	6.571	2.003
14	0.0641	1.628	8.286	2.525
15	0.0571	1.450	10.45	3.184
16	0.0508	1.291	13.17	4.016
17	0.0453	1.150	16.61	5.064
18	0.0403	1.024	20.95	6.385
19	0.0359	0.912	26.42	8.051
20	0.0320	0.812	33.31	10.15
21	0.0285	0.723	42.00	12.80
22	0.0253	0.644	52.96	16.14
23	0.0226	0.573	66.79	20.36
24	0.0201	0.511	84.22	25.67
25	0.0179	0.455	106.2	32.37
26	0.0159	0.405	133.9	40.81
27	0.0142	0.361	168.9	51.47
28	0.0126	0.321	212.9	64.90

**Figure for solid copper wire at 68°F, computed based on 100% IACS conductivity of 58.0 MS/m.*

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Single Mode Optical Fiber

Single mode fiber (SMF) is used primarily for intermediate and long distance Outside Plant (OSP) applications that have distances between connections of up to 80 km (50 mi). 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 SMF 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 optical fibers for communications applications. Based on the application, Superior Essex can recommend the following SMF types.

Standard SMF offered by Superior Essex is an excellent choice for patch cords, local area network (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 J-4 for performance information.

Reduced Water Peak (RWP) SMF, which has been designed to have low attenuation at 1383 nm, is becoming the most commonly recommended optical fiber for all types of network applications. Standard optical fiber displays an attenuation increase at or about 1383 nm. This wavelength is known as the water peak region and is where light is strongly absorbed by naturally occurring water-like end groups in the glass, causing high attenuation or signal loss. Specifically, hydroxyl end groups, 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 RWP SMF reduces this effect and allows all the wavelengths between 1300 nm and 1550 nm to be usable. This optical fiber 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. RWP SMF is the standard single mode optical fiber for all Superior Essex premises cables. Refer to the table on page J-4 for performance information.

Zero Water Peak SMF offers further reductions to the attenuation at 1383 nm. Attenuation improvement at 1383 nm is usually 0.03 to 0.04 dB per km. Refer to the table on page J-4 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 SMF. 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 J-4 for performance information.

TeraFlex® bend resistant optical fiber is a SMF that complies with ITU-T G.652.D and G.657.A. The bend sensitivity of this optical fiber has been improved so that it can be coiled into a 20 mm diameter loop with ≤ 0.5 dB incurred loss at 1625 nm and ≤ 0.2 dB incurred loss at 1550 nm – five times better bending performance than leading RWP optical 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.

Multimode Optical Fiber

Multimode fiber (MMF) is identified by the physical size of the core as measured in microns (µm) and the applications for which it is typically used. MMF, 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 optical fiber. For each pulse of light launched into the optical fiber by light source (transceiver), the light signal energy travels within the optical fiber core along multiple paths, or modes. These modes travel at different speeds, resulting in the pulse of light spreading out. This effect limits the bandwidth and distances that can be supported by MMF. For this reason, MMF is used in short distance LAN applications usually less than 2 km (6,560 ft) between connections. Typical network applications include building-to-building and communications closet-to-closet backbones, intelligent highway systems and fiber-to-the-desk. MMF is the 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 MMF cable applications. The use of LED-based transceivers, MMF cables and inexpensive MMF connector systems have provided network designers with a relatively low-cost, high-bandwidth technology for campus-like networks. Recent technology breakthroughs in optical fiber transceiver technology have led to a new light source that extends the distance and increases the signal carrying capacity of MMF. 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 1 GB and 10 GB Ethernet. The VCSEL source transmits light through the center region of the optical fiber core. This has created the requirement for laser-optimized MMF. One of the most popular emerging applications for VCSEL-based LAN application is 10 GB Ethernet. By using laser-optimized optical fibers, network engineers can improve transmission performance over greater distances.

TeraGain® optical fibers are available in 62.5/125 µm and 50/125 µm fiber types. These optical 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 MMF 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 J-5 for specific performance information.

TeraGain 10G 50/125 multimode fibers are specifically optimized for 850 nm lasers (or VCSELs) that are the heart of the new 10 GB Ethernet systems specified in TIA 568. These optical fibers exceed industry specifications for both bandwidth and for differential modal dispersion. TeraGain 10G optical fibers support 10 GB Ethernet applications in three ranges: 150, 300 and 550 meters. These ranges allow engineers to cost effectively design the right optical fiber for their application requirements. Superior Essex offers TeraGain 10G/150 as its standard 50 µm MMF in all its premises optical fiber cables. Refer to the table on page J-5 for specific performance information.

Like the TeraGain 10G 50/125 multimode fibers, TeraFlex 10G multimode fibers are specifically optimized for 850 nm lasers (or VCSELs) but with the added benefit of Macrobend Resistance. These optical fibers exceed industry specifications for not only bandwidth and differential modal dispersion, but for minimum bend radii allowing use where tight bend radii are encountered. This is especially important for applications, like 40 GB and 100 GB Ethernet, where channel margins are tight. TeraFlex 10G optical fibers support 10 GB Ethernet applications in three ranges: 150 (OM2+), 300 (OM3) and 550 (OM4) meters. Refer to the table on page J-5 for specific performance information.

Optical Fiber Selection Chart

Single Mode

Performance Property				Fiber Description	Conventional	Reduced Water Peak	Zero Water Peak	TeraFlex® Bend Resistant	NZDS
				Fiber Type Designator	9	3	2	K	8
Parameter	Test Method/Standard	Units	Conditions	Cable Type					
Maximum Attenuation	ANSI/TIA-455-78-B-2002	dB/km	1310 nm	Tight Buffer	0.70	0.70	0.70	0.70	-
				Loose Tube	0.40	0.35	0.35	0.35	-
			1383 nm	Tight Buffer	-	0.70	0.70	0.70	-
				Loose Tube	-	0.35	0.35	0.35	-
			1490 nm	Tight Buffer	0.70	0.70	0.70	0.70	0.70
				Loose Tube	0.25	0.25	0.25	0.25	0.30
			1550 nm	Tight Buffer	0.70	0.70	0.70	0.70	0.70
				Loose Tube	0.30	0.25	0.25	0.25	0.30
			1625 nm	Tight Buffer	0.70	0.70	0.70	0.70	0.70
				Loose Tube	0.25	0.25	0.25	0.25	0.25
Typical Attenuation	ANSI/TIA-455-78-B-2002	dB/km	1310 nm	Tight Buffer	N/A	0.41	0.41	0.41	-
				Loose Tube	0.34	0.34	0.34	0.34	-
			1383 nm	Tight Buffer	-	0.41	0.41	0.41	-
				Loose Tube	N/A	0.33	0.31	0.31	-
			1550 nm	Tight Buffer	N/A	0.41	0.41	0.41	0.41
				Loose Tube	0.19	0.19	0.19	0.19	0.25
Nominal Group Refractive Index	-	-	1310 nm	Tight Buffer and Loose Tube	1.467	1.467	1.467	1.467	1.467
			1550 nm		1.468	1.468	1.468	1.468	1.468
Maximum Individual Fiber Polarization Mode Dispersion	ANSI/TIA/EIA-455-113-96	ps/√km	-		0.2	0.2	0.2	0.2	0.2
Cable Cutoff Wavelength	ANSI/TIA-455-80-C-2003	nm	-		1260	1260	1260	1260	1260
Zero Chromatic Dispersion Wavelength	ANSI/TIA-455-175-B-2003	nm	-		1300 – 1324	1300 – 1324	1300 – 1324	1300 – 1324	N/A
Typical Chromatic Dispersion Slope	ANSI/TIA-455-175-B-2003	ps/nm^2-km	-		0.087	0.087	0.087	0.087	0.047
Proof Strength	TIA/EIA-455-31	kpsi	On-line		100	100	100	100	100
		GPa	On-line		0.69	0.69	0.69	0.69	0.69
Mode Field Diameter	ANSI/TIA-455-191-B-2003	µm	1310 nm		8.8 to 9.6	8.8 to 9.6	8.8 to 9.6	8.8 to 9.6	N/A
			1550 nm		9.5 to 11.5	9.9 to 10.9	9.9 to 10.9	9.9 to 10.9	7.8 to 10.0
Maximum Macrobend Attenuation Increase	ANSI/TIA-455-62-B-2003	dB	100 turns on 50 mm mandrel at 1310 nm		0.05	0.05	0.05	0.01	0.05
Cladding Diameter	ANSI/TIA-455-176-A-2003	µm	-		125.0 ± 1.2	125.0 ± 0.9	125.0 ± 0.9	125.0 ± 0.7	125.0 ± 0.7
Coating Diameter	ANSI/TIA-455-176-A-2003	micron	-		250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10
Maximum Core/Clad Concentricity Error	ANSI/TIA-455-176-A-2003	µm	-		0.6	0.5	0.5	0.5	0.5
Maximum Cladding Non-circularity	ANSI/TIA-455-176-A-2003	%	-		1	1	1	1	0.7
Maximum Coating/Cladding Concentricity Error	ANSI/TIA-455-176-A-2003	µm	-		12	12	12	12	12

Guaranteed Supportable Ethernet Distances	Protocol	Units	Conditions	Cable Type	Maximum Transmission Distances (km)				
1 Gbps	1000BASE-LH, 1000BASE-LH-LX	km	1310 nm	Tight Buffer and Loose Tube	10	10	10	10	10
	1000BASE-ZX	km	1550 nm		70	70	70	70	70
10 Gbps	10GBASE-LR	km	1310 nm		25	25	25	25	25
	10GBASE-ER	km	1550 nm		40	40	40	40	40
	10GBASE-ZR	km	1550 nm		80	80	80	80	80

Standards					
ISO/IEC Tight Buffer	11801: OS1	11801: OS1	11801: OS1	11801: OS1	-
ISO/IEC Loose Tube	11801: OS1	24702: OS2	24702: OS2	24702: OS2	-
Telcordia	GR-20-CORE				
ITU-T	G.652.B	G.652.D	G.652.D	G.652.D G.657.A	G.655.C, E G.656
TIA492	CAAA	CAAB	CAAB	CAAB	N/A
IEC 60793-2-50 Type	B1.1	B1.3	B1.3	B1.3	-
ANSI/ICEA Tight Buffer	S-83-596				
ANSI/ICEA Loose Tube	S-87-640				

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Optical Fiber Selection Chart

Multimode

Performance Property				Fiber Description	TeraGain® 62.5/125	TeraGain 50/125	TeraGain Laser Optimized 50/125			TeraFlex® Bend Resistant Laser Optimized 50/125		
							10G/150	10G/300	10G/550	10G/150	10G/300	10G/550
				Fiber Type Designator	6	5	A	B	F	M	N	P
Parameter	**Test Method/ Standard**	**Units**	**Conditions**	**Cable Type**								
Maximum Attenuation	TIA/EIA-455-78	dB/km	850 nm	Tight Buffer and Loose Tube	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	TIA/EIA-455-78	dB/km	1300 nm	Tight Buffer and Loose Tube	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Typical Attenuation	TIA/EIA-455-78	dB/km	850 nm	Tight Buffer	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
				Loose Tube	2.7	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	TIA/EIA-455-78	dB/km	1300 nm	Tight Buffer	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
				Loose Tube	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Numerical Aperture	ANSI/TIA-455-177-B-2003	-	-	Tight Buffer and Loose Tube	0.275 ± 0.015	0.200 ± 0.015	0.200 ± 0.015			0.200 ± 0.015		
Nominal Group Refractive Index	OTDR	-	850 nm		1.496	1.483	1.483	1.483	1.483	1.483	1.483	1.483
		-	1300 nm		1.491	1.479	1.479	1.479	1.479	1.479	1.479	1.479
Macrobend Attenuation Change	ANSI/TIA-455-62-B-2003	dB	100 turns on 75 mm Mandrel		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Proof Strength	TIA/EIA-455-31	kpsi	On-line		100	100	100	100	100	100	100	100
		GPa	On-line		0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Cladding Diameter	ANSI/TIA-455-176-A-2003	micron	-		125 ± 2	125 ± 2	125 ± 2	125 ± 2	125 ± 2	125 ± 2	125 ± 2	125 ± 2
Coating Diameter	ANSI/TIA-455-176-A-2003	micron	-		250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10	250 ± 10
Core/Clad Concentricity Error	ANSI/TIA-455-176-A-2003	microns	-		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Cladding Non-Circularity	ANSI/TIA-455-176-A-2003	%	-		1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Coating/Clad Concentricity Error	ANSI/TIA-455-176-A-2003	microns	-		12 µm	12 µm	12 µm	12 µm	12 µm	12 µm	12 µm	12 µm
Min. Bandwidth: Overfilled Launch	TIA/EIA-455-124-2000	MHz-km	850 nm		220	500	700	1,500	3,500	700	1,500	3,500
			1300 nm		600	500	500	500	500	500	500	500
Min. Bandwidth: Laser Effective Modal Bandwidth	TIA-455-220-A	MHz-km	850 nm		N/A	N/A	950	2,000	4,700	950	2,000	4,700
			1300 nm		N/A	N/A	500	500	500	500	500	500

Guaranteed Supportable Ethernet Distances	Protocol	Units	Conditions	Cable Type	Maximum Transmission Distances (meters)							
10 Mbps	IEEE 10BASE-FL	meters	850 nm	Tight Buffer and Loose Tube	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250
100 Mbps	IEEE 100BASE-SX	meters	850 nm		500	750	1,000	1,000	1,000	1,000	1,000	1,000
	IEEE 100BASE-FX	meters	1300 nm		2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
1 Gbps	IEEE 1000BASE-SX	meters	850 nm		300	750	1,000	1,000	1,040	1,000	1,000	1,040
	IEEE 1000BASE-LX	meters	1300 nm		600*	600*	600	600	600	600	600	600
10 Gbps	IEEE 10GBASE-SR	meters	850 nm		35	82	150	300	550	150	300	550
	IEEE 10GBASE-LRM	meters	1300 nm		300	300	300	300	300	300	300	300

**Mode conditioning patch cord required*

Standards							
ISO/IEC 11801	OM1	OM2	OM2	OM3	OM4	OM2	OM3	OM4
Telcordia	GR-20-CORE							
ITU-T	G.651							
TIA492	AAAA-A	AAAB	AAAB	AAAC-A	AAAD	AAAB	AAAC-A	AAAD
IEC 60793-2-10 Type	A1b	A1a.1	A1a.1	A1a.2	A1a.3	A1a.1	A1a.2	A1a.3
ANSI/ICEA Tight Buffer	S-83-596							
ANSI/ICEA Loose Tube	S-87-640							

Optical Fiber Cable

ANSI/TIA/EIA-598-B Standard Colors

Fiber Number	Fiber Color
fiber 1	Blue
fiber 2	Orange
fiber 3	Green
fiber 4	Brown
fiber 5	Slate
fiber 6	White
fiber 7	Red
fiber 8	Black
fiber 9	Yellow
fiber 10	Violet
fiber 11	Rose
fiber 12	Aqua
fiber 13 and higher	The color code is repeated, Black stripe or dash is added, according to the ANSI/TIA/EIA-598-B specifications

Standard Jacket Colors

Cable Type	Standard Jacket Color
Single Mode Premises	Yellow
Standard Multimode Premises	Orange
Laser-Optimized 50 µm Premises	Aqua
Indoor/Outdoor	Black
Hybrid Standard Multimode Premises	Orange
Hybrid Laser-Optimized 50 µm Premises	Aqua
Outside Plant (OSP)	Black*
Custom jacket colors also available	

**One extruded color stripe is available. Standard stripe colors are Orange, Green, Yellow and Blue (other colors available upon request).*

OSP Flooding Compound and Jacket Marking Options

	Flooding Compound	Jacket Marking	Part No. Designator (Last Digit in Part No.)
Standard	Dry (SAP) Block	feet	1
Options	Dry (SAP) Block	meters	2
	Flooding Compound	feet	3
	Flooding Compound	meters	4
	Special Print Dry (SAP) Block	feet	5
	Special Print Dry (SAP) Block	meters	6
	Special Print Flooding Compound	feet	7
	Special Print Flooding Compound	meters	8

OSP Central Members/Strength Members Options

	Central Member/Strength Member
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

Additional OSP Options

- Special protection jacket
- Rodent and fuel protection
- Nylon outer jacket

Contact your Superior Essex sales representative for further information.

Canadian Central Office Copper Cable

Insulation Color Codes

The distinctive Canadian insulation color-coding utilizes colored ink in a systematic pattern of dots/dashes/bands. These marks provide positive identification of each conductor and each pair within a unit. Cable cores may contain both pairs and single conductors. And, some cables may contain "spare" pairs. Each insulated conductor shall be marked with 1 or 2 dots/dashes/bands in accordance with the table below.

	Conductor #1		Conductor #2	
Pair Number	Solid Color	Single Band Color	Solid Color	Double Band Color
1	Blue	White	Blue	White
2	Orange	White	Orange	White
3	Green	White	Green	White
4	Brown	White	Brown	White
5	Slate	White	Slate	White
6	Blue	Red	Blue	Red
7	Orange	Red	Orange	Red
8	Green	Red	Green	Red
9	Brown	Red	Brown	Red
10	Slate	Red	Slate	Red
11	Blue	Black	Blue	Black
12	Orange	Black	Orange	Black
13	Green	Black	Green	Black
14	Brown	Black	Brown	Black
15	Slate	Black	Slate	Black
16	Blue	Yellow	Blue	Yellow
17	Orange	Yellow	Orange	Yellow
18	Green	Yellow	Green	Yellow
19	Brown	Yellow	Brown	Yellow
20	Slate	Yellow	Slate	Yellow
21	Blue	Violet	Blue	Violet
22	Orange	Violet	Orange	Violet
23	Green	Violet	Green	Violet
24	Brown	Violet	Brown	Violet
25	Slate	Violet	Slate	Violet

Spare Pair Insulation Color Codes

	Conductor #1		Conductor #2	
Spare Pair Number	Solid Color	Single Band Color	Solid Color	Double Band Color
1	White	Black	White	Black
2	White	Yellow	White	Yellow
3	Red	White	Red	White
4	Red	Yellow	Red	Yellow
5	Red	Black	Red	Black

Spare Single Insulation Color Codes

	Single Conductor	
Spare Single Number	Solid Color	Triple Band Color
1	White	Black
2	White	Yellow
3	Red	White
4	Red	Yellow

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Pair Identification Colors

For pairs numbering 1 through 25, the pair identification colors are outlined below. In cable constructions containing more than 25-pair, 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
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Slate
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Slate
11	Black	Blue
12	Black	Orange
13	Black	Green
14	Black	Brown
15	Black	Slate
16	Yellow	Blue
17	Yellow	Orange
18	Yellow	Green
19	Yellow	Brown
20	Yellow	Slate
21	Violet	Blue
22	Violet	Orange
23	Violet	Green
24	Violet	Brown
25	Violet	Slate

Groups of Pairs Binder Identification Colors

For cables through 600-pair, 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-pair or less, binders are normally not used. However, if specified, the binders will be Group 1, White-Blue. For cables of 100-pair or less, the use of the White binder is optional.

Group Number	Group Pair Counts	Binder Colors	
1	1-25	White	Blue
2	26-50	White	Orange
3	51-75	White	Green
4	76-100	White	Brown
5	100-125	White	Slate
6	126-150	Red	Blue
7	151-175	Red	Orange
8	176-200	Red	Green
9	201-225	Red	Brown
10	226-250	Red	Slate
11	251-275	Black	Blue
12	276-300	Black	Orange
13	301-325	Black	Green
14	326-350	Black	Brown
15	351-375	Black	Slate
16	376-400	Yellow	Blue
17	401-425	Yellow	Orange
18	426-450	Yellow	Green
19	451-475	Yellow	Brown
20	476-500	Yellow	Slate
21	501-525	Violet	Blue
22	526-550	Violet	Orange
23	551-575	Violet	Green
24	576-600	Violet	Brown

Super-units Binder Identification Colors

It is desirable for manufacturing purposes to combine four 25-pair groups into "super units" when cables have 900-pair or more.

Pair Number	Group Number	Binder Color
1-600	1-24	White
601-1,200*	25-48	Red
1,201-1,800*	49-72	Black
1,801-2,400*	73-96	Yellow
2,401-3,000*	97-120	Violet
3,001-3,600*	121-144	Blue
3,601-4,200*	145-168	Orange

**The above information is based on the Full Count binder color coding used in RDUP copper cable designs having 1,200-pair or more.*

TECH TIP

Bell Mirror Image binder color coding information and core lay-up diagrams are available online:

www.SuperiorEssex.com/techtip.aspx

Copper Wire and 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	CSA Equivalent	Common Term	Test	Comments
CMP	FT6	Communications Plenum	NFPA 262	• Cable must have resistance to flame spread and reduced smoke generating properties • Cable is approved for placement in air handling ducts and chambers (plenums) without the use of fireproof conduit • 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 • Equivalent to Canadian FT6 rating
CMR	N/A	Communications Riser	UL 1666	• Cable must not transmit flame from one floor to another when placed vertically in a building shaft (riser) • Equivalent to Canadian FT4 rating
CMG	FT4	Communications General Use	CSA C22.2 No. 0.3-M (Vertical Tray)	• Cable may not transmit flame for more than 4 feet, 11 inches • Cable shall not penetrate floors or ceilings (i.e. cable may only be used within a single floor) • Designation was added as a part of the harmonization efforts between U.S. and Canadian standards
CM	N/A	Communications General Purpose	UL 1581 (Vertical Tray)	• Cable may not transmit flame for more than 4 feet, 11 inches • Cable shall not penetrate floors or ceilings (i.e. cable may only be used within a single floor)
CMX	FT1	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*

**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 (OSP) 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.*

Balanced Twisted Pair Transmission Categories

In response to growing demand for data applications, premises cable performance has evolved such that several categories of transmission performance for balanced twisted pair cables have been developed. These categories are detailed below. 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
CAT 6A	500 MHz	10GBASE-T (IEEE 802.3an)	ANSI/TIA-568-C.2 ANSI/ICEA S-90-661	• Designed for reduced alien crosstalk
CAT 6	250 MHz	1000BASE-T		• Doubles the bandwidth of CAT 5e and vastly improves signal-to-noise margins
CAT 5e	100 MHz	1000BASE-T		• Characterized by tightly twisted pairs to reduce crosstalk loss • Proposed FCC minimum category requirement effective 2020
CAT 5	100 MHz	100BASE-T 100 Mbps TPDDI 622 Mbps ATM		• No longer recognized as an appropriate medium for commercial networking installations (replaced by CAT 5e or higher)
CAT 3	16 MHz	10BASE-T Analog Voice Telecom Closet Wiring		• 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

Premises Cable Conduit Fill Guide

This information is intended as a guideline. Because conduit sizes may vary by manufacturer, please verify all dimensions prior to using this reference chart. All dimensions are rounded up. This guide is based on NEC recommendations of 40% fill for 3 or more cables per conduit and on straight runs. For each 90 degree bend, reduce available space by 15%. Lubricants are recommended (check compatibility with jacket materials).

Conduit Trade Size in (mm)		0.50 (12.7)	0.75 (19.1)	1.00 (25.4)	1.25 (31.8)	1.50 (38.1)	2.00 (50.8)	2.50 (63.5)	3.00 (76.2)	3.50 (88.9)	4.00 (101.6)	5.00 (127.0)
Conduit Inner Diameter in (mm)		0.62 (15.7)	0.82 (20.8)	1.05 (26.7)	1.38 (35.1)	1.61 (40.9)	2.07 (52.6)	2.56 (65.0)	3.07 (78.0)	3.55 (90.2)	4.03 (102.4)	5.05 (128.3)
Conduit Outer Diameter in (mm)		0.84 (21.3)	1.05 (26.7)	1.32 (33.5)	1.70 (43.2)	1.90 (48.3)	2.38 (60.5)	2.88 (73.2)	3.50 (88.9)	4.00 (101.6)	4.50 (114.3)	5.56 (141.2)
Fill Area in² (cm²)		0.30 (1.94)	0.53 (3.42)	0.86 (5.55)	1.50 (9.68)	2.04 (13.16)	3.36 (21.68)	4.79 (30.90)	7.39 (47.68)	9.89 (63.81)	12.73 (82.13)	20.01 (129.10)
Recommended Fill 40% in² (cm²)		0.12 (0.77)	0.21 (1.35)	0.35 (2.26)	0.60 (3.87)	0.81 (5.23)	1.35 (8.71)	1.92 (12.39)	2.96 (19.10)	3.95 (25.48)	5.09 (32.84)	8.00 (51.61)
Cable Nominal Diameter in (mm)	**Cable Area in² (cm²)**	**Number of Cables at 40% Conduit Fill**										
0.10 (2.5)	0.008 (0.05)	15	27	44	76	103	171	243	375	500	644	1013
0.13 (3.3)	0.012 (0.08)	10	17	28	49	66	109	156	240	320	412	648
0.15 (3.8)	0.018 (0.12)	7	12	20	34	46	76	108	167	222	286	450
0.18 (4.6)	0.026 (0.17)	5	8	14	23	32	53	75	116	154	199	313
0.20 (5.1)	0.032 (0.21)	4	7	11	19	26	43	61	94	125	161	253
0.21 (5.3)	0.035 (0.23)	3	6	10	17	23	39	55	85	113	146	230
0.22 (5.6)	0.038 (0.25)	3	5	9	16	21	35	50	77	103	133	209
0.23 (5.8)	0.042 (0.27)	3	5	8	14	19	32	46	71	95	122	191
0.24 (6.1)	0.046 (0.30)	3	5	8	13	18	30	42	65	87	112	176
0.25 (6.4)	0.049 (0.32)	2	4	7	12	16	27	39	60	80	103	162
0.26 (6.6)	0.053 (0.34)	2	4	7	11	15	25	36	55	74	95	150
0.27 (6.9)	0.058 (0.37)	2	4	6	10	14	23	33	51	69	88	139
0.28 (7.1)	0.062 (0.40)	2	3	6	10	13	22	31	48	64	82	129
0.29 (7.4)	0.066 (0.43)	2	3	5	9	12	20	29	45	59	77	120
0.30 (7.6)	0.071 (0.46)	2	3	5	8	11	19	27	42	56	72	113
0.31 (7.9)	0.076 (0.49)	2	3	5	8	11	18	25	39	52	67	105
0.32 (8.1)	0.081 (0.52)	1	3	4	7	10	17	24	37	49	63	99
0.33 (8.4)	0.086 (0.55)	1	2	4	7	9	16	22	34	46	59	93
0.34 (8.6)	0.091 (0.59)	1	2	4	7	9	15	21	32	43	56	88
0.35 (8.9)	0.097 (0.63)	1	2	4	6	8	14	20	31	41	53	83
0.40 (10.2)	0.126 (0.81)	1	2	3	5	6	11	15	23	31	40	63
0.45 (11.4)	0.160 (1.03)	1	1	2	4	5	8	12	19	25	32	50
0.50 (12.7)	0.198 (1.28)	1	1	2	3	4	7	10	15	20	26	41
0.55 (14.0)	0.239 (1.54)	1	1	1	3	3	6	8	12	17	21	33
0.60 (15.2)	0.284 (1.83)	0	1	1	2	3	5	7	10	14	18	28
0.65 (16.5)	0.334 (2.15)	0	1	1	2	2	4	6	9	12	15	24
0.70 (17.8)	0.387 (2.50)	0	1	1	2	2	3	5	8	10	13	21
0.75 (19.0)	0.444 (2.86)	0	0	1	1	2	3	4	7	9	11	18
0.80 (20.3)	0.506 (3.26)	0	0	1	1	2	3	4	6	8	10	16
0.85 (21.6)	0.571 (3.68)	0	0	1	1	1	2	3	5	7	9	14
0.90 (22.9)	0.640 (4.13)	0	0	1	1	1	2	3	5	6	8	13
0.95 (24.1)	0.713 (4.60)	0	0	0	1	1	2	3	4	6	7	11
1.00 (25.4)	0.790 (5.10)	0	0	0	1	1	2	2	4	5	6	10

Packaging

Descriptions

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.

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.

Wood/Plywood Reel

Reels may be made of plywood or wood. Superior Essex wooden reels can be recycled an average of five times before retirement (see Web site for further details).

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.

Spool

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.

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.

Parallel Cone

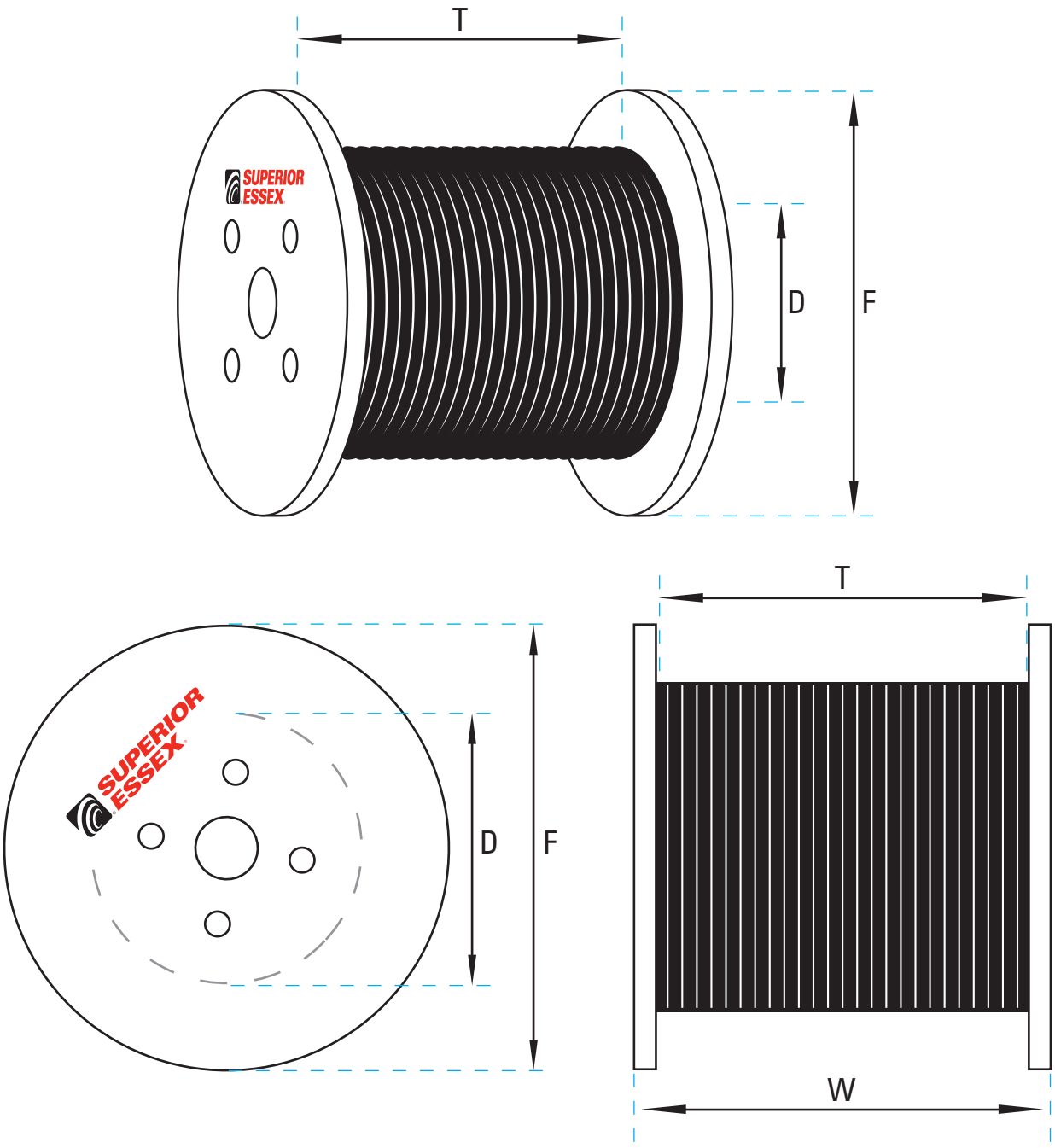
This package is designed to fit into the General Machine Products (GMP) cast aluminum wire dispensing system (GMP units 80470 or 80471). When placed onto the GMP dispenser, the jumper or distribution frame wire pays out smoothly. GMP dispensers are most common in central offices.

Knock-out Box

Cable is coiled and fastened within a box. Knock out boxes can be identified by a perforated "knock-out" that is removed, allowing access to the cable.

Coils

Coils refer to lengths of cable wrapped into a shape (usually a circle) and fastened with multiple ties. Multiple coils may be placed inside a box for shipping or shipped on 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.



Flange x Traverse x Drum (F x T x D)

F = Flange Diameter

T = Traverse (inside width between flanges)

D = Drum Diameter

W = Overall Width (includes flanges)

Packaging

Premises Fiber Reels

Premises Fiber Reel Dimensions						
Reel Type	**Plastic**			**Plywood**		
Flange (F) in	12	12	14	16	24	30
Traverse (T) in	6	9	9	15	18	18
Drum (D) in	5	5	5	8	12	12
Overall Width (W) in	7.125	10.125	10.375	15.75	19.375	19.375
Reel Weight lbs	2	2	2	5	17	28
Premises Fiber Reel Capacities						
Cable Nominal Diameter in (mm)	**Cable Length ft (m)**			**Cable Length ft (m)**		
0.075 (1.91)	2,561 (781)	3,856 (1,175)	7,319 (2,231)	12,836 (3,912)		
0.100 (2.54)	1,441 (439)	2,169 (661)	4,172 (1,272)	7,434 (2,266)	28,571 (8,709)	
0.125 (3.18)	917 (280)	1,383 (422)	2,665 (812)	4,753 (1,449)	18,270 (5,569)	37,970 (11,573)
0.150 (3.81)	637 (194)	961 (293)	1,749 (533)	3,198 (975)	12,283 (3,744)	25,836 (7,875)
0.175 (4.45)	429 (131)	646 (197)	1,321 (403)	2,314 (705)	8,874 (2,705)	19,346 (5,897)
0.200 (5.08)	329 (100)	495 (151)	982 (299)	1,853 (565)	7,123 (2,171)	14,802 (4,512)
0.225 (5.72)	247 (75)	374 (114)	807 (246)	1,290 (393)	5,318 (1,621)	11,630 (3,545)
0.250 (6.35)	227 (69)	343 (105)	661 (202)	1,183 (361)	4,551 (1,387)	9,459 (2,883)
0.275 (6.99)	169 (51)**	255 (77)**	539 (164)**	934 (285)	3,584 (1,093)	7,623 (2,323)
0.300 (7.62)	157 (47)**	238 (72)**	434 (132)**	723 (220)	3,058 (932)	6,433 (1,961)
0.325 (8.26)	112 (34)**	170 (51)**	344 (104)**	678 (207)	2,604 (794)	5,396 (1,645)
0.350 (8.89)	105 (32)**	160 (48)**	327 (99)**	513 (156)	2,208 (673)	4,813 (1,467)
0.375 (9.53)	100 (30)**	151 (46)**	254 (77)**	485 (148)	1,861 (567)	3,987 (1,215)
0.400 (10.16)	67 (20)**	101 (30)**	242 (73)**	460 (140)	1,770 (540)	3,537 (1,078)
0.425 (10.80)	64 (19)**	96 (29)**	183 (55)**	336 (102)**	1,482 (452)	3,131 (954)
0.450 (11.43)	61 (18)**	92 (28)**	176 (53)**	320 (97)**	1,226 (374)	2,763 (842)
0.475 (12.07)	58 (17)**	88 (26)**	169 (51)**	306 (93)**	1,175 (358)	2,428 (740)
0.500 (12.70)	56 (17)**	85 (25)**	163 (49)**	293 (89)**	1,130 (344)	2,348 (716)
0.525 (13.34)	*	*	*	200 (60)**	922 (281)	2,056 (627)
0.550 (13.97)	*	*	*	193 (58)**	889 (271)	1,789 (545)
0.575 (14.61)	*	*	*	186 (56)**	710 (216)	1,737 (530)
0.600 (15.24)	*	*	*	179 (54)**	687 (209)	1,501 (458)
0.625 (15.88)	*	*	*	173 (52)**	665 (203)	1,461 (445)
0.650 (16.51)	*	*	*	168 (51)**	645 (196)**	1,251 (381)**
0.675 (17.15)	*	*	*	*	500 (152)**	1,220 (371)**
0.700 (17.78)	*	*	*	*	486 (148)**	1,191 (363)**
0.725 (18.42)	*	*	*	*	473 (144)**	1,009 (307)**
0.750 (19.05)	*	*	*	*	460 (140)**	986 (300)**
0.775 (19.69)	*	*	*	*	449 (136)**	965 (294)**
0.800 (20.32)	*	*	*	*	438 (133)**	805 (245)**
0.825 (20.96)	*	*	*	*	324 (98)**	789 (240)**
0.850 (21.59)	*	*	*	*	317 (96)**	773 (235)**
0.875 (22.23)	*	*	*	*	309 (94)**	759 (231)**
0.900 (22.86)	*	*	*	*	303 (92)**	621 (189)**
0.925 (23.50)	*	*	*	*	296 (90)**	610 (185)**
0.950 (24.13)	*	*	*	*	290 (88)**	599 (182)**
0.975 (24.77)	*	*	*	*	284 (86)**	589 (179)**
1.000 (25.40)	*	*	*	*	279 (85)**	579 (176)**

**Drum diameter is less than 10 times cable diameter (minimum bend radius). **Drum diameter is less than 20 times cable diameter (recommended bend radius).*
This chart pertains to round cable only, and may be further limited by the design of the cable.

OSP Fiber Wood Reel Dimensions							
Flange (F) in	30	36	48	60	72	84	96
Traverse (T) in	18	30	32	36	36	42	42
Drum (D) in	12	17	23	29.5	37.5	42	48
Overall Width (W) in	20	32	34	39	39	45	45
Reel Weight lbs	59	104	184	416	596	900	1,100

OSP Fiber Wood Reel Capacities							
Cable Nominal Diameter in (mm)	**Cable Length ft (m)**						
0.35 (8.89)	5,015 (1,529)	11,293 (3,442)	23,685 (7,219)	41,668 (12,700)			
0.40 (10.16)	3,686 (1,123)	8,411 (2,564)	17,893 (5,454)	32,687 (9,963)	46,454 (14,159)		
0.45 (11.43)	2,879 (878)	6,640 (2,024)	14,038 (4,279)	25,425 (7,750)	35,596 (10,850)		
0.50 (12.70)	2,447 (746)	5,667 (1,727)	11,578 (3,529)	20,477 (6,241)	29,187 (8,896)		
0.55 (13.97)	1,864 (568)	4,397 (1,340)	9,501 (2,896)	17,252 (5,259)	23,795 (7,253)	40,579 (12,369)	
0.60 (15.24)	1,564 (477)	3,726 (1,136)	7,728 (2,356)	14,487 (4,416)	20,240 (6,169)	33,839 (10,314)	45,134 (13,757)
0.65 (16.51)	1,304 (397)**	3,143 (958)	6,749 (2,057)	12,091 (3,685)	17,160 (5,230)	29,324 (8,938)	38,085 (11,608)
0.70 (17.78)	1,242 (378)**	2,635 (803)	5,889 (1,795)	10,003 (3,049)	14,469 (4,410)	25,357 (7,729)	33,321 (10,156)
0.75 (19.05)	1,028 (313)**	2,508 (764)	5,126 (1,562)	8,842 (2,695)	12,927 (3,940)	21,847 (6,659)	29,096 (8,869)
0.80 (20.32)	839 (255)**	2,089 (637)	4,445 (1,355)	7,806 (2,379)	11,549 (3,520)	18,723 (5,707)	25,327 (7,720)
0.85 (21.59)	806 (245)**	1,717 (523)	3,836 (1,169)	6,875 (2,095)	9,580 (2,920)	16,929 (5,160)	21,947 (6,689)
0.90 (22.86)	647 (197)**	1,647 (502)**	3,288 (1,002)	6,034 (1,839)	8,501 (2,591)	15,303 (4,664)	19,987 (6,092)
0.95 (24.13)	624 (190)**	1,333 (406)**	3,165 (965)	5,273 (1,607)	8,172 (2,491)	13,821 (4,213)	18,201 (5,548)
1.00 (25.40)	603 (183)**	1,284 (391)**	2,694 (821)	5,083 (1,549)	7,246 (2,208)	12,466 (3,800)	16,564 (5,049)
1.05 (26.67)	474 (144)**	1,240 (377)**	2,603 (793)	4,424 (1,348)	6,399 (1,951)	11,223 (3,421)	14,128 (4,306)
1.10 (27.94)	459 (139)**	983 (299)**	2,194 (669)	4,280 (1,305)	5,625 (1,714)	10,078 (3,072)	13,673 (4,168)
1.15 (29.21)	445 (135)**	951 (289)**	2,126 (648)	3,702 (1,128)	5,444 (1,659)	9,022 (2,750)	12,390 (3,777)
1.20 (30.48)	338 (103)**	922 (281)**	1,769 (539)**	3,591 (1,095)	4,762 (1,451)	8,048 (2,453)	11,202 (3,414)
1.25 (31.75)	*	895 (272)**	1,717 (523)**	3,081 (939)	4,621 (1,408)	7,818 (2,383)	10,100 (3,078)
1.30 (33.02)	*	688 (209)**	1,670 (509)**	2,995 (913)	4,016 (1,224)	6,948 (2,118)	9,075 (2,766)
1.35 (34.29)	*	669 (203)**	1,366 (416)**	2,542 (775)	3,905 (1,190)	6,764 (2,062)	8,835 (2,693)
1.40 (35.56)	*	651 (198)**	1,330 (405)**	2,476 (755)	3,366 (1,026)	5,984 (1,824)	7,913 (2,412)
1.45 (36.83)	*	634 (193)**	1,297 (395)**	2,415 (736)	3,279 (999)	5,836 (1,779)	7,719 (2,353)
1.50 (38.10)	*	619 (188)**	1,266 (385)**	2,022 (616)**	3,198 (975)	5,132 (1,564)	6,885 (2,099)

**Drum diameter is less than 10 times cable diameter (minimum bend radius). **Drum diameter is less than 20 times cable diameter (recommended bend radius).*
This chart pertains to round cable only, and may be further limited by the design of the cable.

Packaging

OSP Fiber/Copper Steel Reels

OSP Fiber/Copper Steel Reel Dimensions								
Reel Number	**413**	**414**	**415**	**416**	**417**	**419**	**420**	**487**
Flange (F) in	48	50	56	66	78	78	83	96
Traverse (T) in	18	25.4	25.4	25.4	25.4	30	39.8	44.5
Drum (D) in	30	30	30	36	42	42	42	42
Overall Width (W) in	24	31.375	31.375	31.625	32.375	37	46.75	52.875
Reel Weight lbs	216	250	282	360	566	610	782	1,400
OSP Fiber/Copper Steel Reel Capacities								
Cable Nominal Diameter in (mm)	**Cable Length ft (m)**							
0.35 (8.89)	9,866 (3,007)	15,649 (4,770)	23,894 (7,283)	27,367 (8,341)				
0.40 (10.16)	7,288 (2,221)	12,535 (3,821)	18,169 (5,538)	25,756 (7,850)	38,265 (11,663)			
0.45 (11.43)	5,701 (1,733)	9,374 (2,857)	14,342 (4,371)	19,931 (6,075)	29,604 (9,023)	35,013 (10,672)		
0.50 (12.70)	4,814 (1,467)	8,006 (2,440)	11,878 (3,620)	16,777 (5,114)	24,441 (7,450)	28,911 (8,812)		
0.55 (13.97)	3,706 (1,130)	6,312 (1,924)	9,807 (2,989)	13,382 (4,079)	20,099 (6,126)	23,778 (7,248)	37,297 (11,368)	
0.60 (15.24)	3,109 (948)	5,382 (1,640)	8,043 (2,452)	11,178 (3,407)	16,402 (4,999)	19,408 (5,916)	30,984 (9,444)	
0.65 (16.51)	2,598 (792)	4,581 (1,396)	6,528 (1,990)	9,897 (3,017)	13,961 (4,255)	16,523 (5,036)	26,766 (8,158)	
0.70 (17.78)	2,442 (744)	3,885 (1,184)	5,691 (1,735)	8,196 (2,498)	11,831 (3,606)	14,003 (4,268)	23,064 (7,030)	38,432 (11,714)
0.75 (19.05)	2,035 (620)	3,276 (999)	4,953 (1,510)	7,293 (2,223)	10,594 (3,229)	12,541 (3,822)	19,792 (6,033)	33,928 (10,341)
0.80 (20.32)	1,677 (511)	3,109 (948)	4,297 (1,310)	6,388 (1,947)	9,490 (2,893)	11,236 (3,425)	17,889 (5,453)	29,885 (9,109)
0.85 (21.59)	1,594 (486)	2,607 (795)	3,711 (1,131)	5,625 (1,715)	7,934 (2,418)	9,395 (2,864)	15,223 (4,640)	26,239 (7,998)
0.90 (22.86)	1,297 (395)	2,160 (658)	3,553 (1,083)	4,938 (1,505)	7,070 (2,155)	8,373 (2,552)	13,718 (4,181)	22,938 (6,992)
0.95 (24.13)	1,239 (378)	2,066 (630)	3,056 (931)	4,317 (1,316)	6,286 (1,916)	7,446 (2,270)	12,349 (3,764)	21,040 (6,413)
1.00 (25.40)	1,187 (362)	1,982 (604)	2,940 (896)	4,152 (1,266)	6,049 (1,844)	7,167 (2,185)	11,098 (3,383)	19,295 (5,881)
1.05 (26.67)	949 (289)	1,622 (494)	2,512 (766)	3,617 (1,102)	5,373 (1,638)	6,366 (1,931)	9,951 (3,033)	16,682 (5,085)
1.10 (27.94)	912 (278)	1,561 (476)	2,425 (739)	3,129 (954)	4,753 (1,449)	5,633 (1,717)	8,897 (2,712)	15,234 (4,643)
1.15 (29.21)	878 (268)	1,251 (381)	2,052 (625)	3,024 (922)	4,184 (1,275)	4,959 (1,512)	8,619 (2,627)	13,891 (4,234)
1.20 (30.48)	683 (208)	1,208 (368)	1,987 (606)	2,597 (792)	4,051 (1,235)	4,803 (1,464)	7,687 (2,343)	12,642 (3,853)
1.25 (31.75)	660 (201)	1,167 (356)	1,660 (506)	2,517 (767)	3,549 (1,082)	4,208 (1,283)	6,826 (2,081)	12,314 (3,753)
1.30 (33.02)	638 (194)	1,130 (344)	1,611 (491)	2,442 (744)	3,445 (1,050)	4,085 (1,245)	6,636 (2,023)	11,191 (3,411)
1.35 (34.29)	617 (188)	881 (269)	1,565 (477)	2,078 (633)	2,998 (914)	3,556 (1,084)	5,866 (1,788)	10,142 (3,091)
1.40 (35.56)	598 (182)	854 (260)	1,287 (392)	2,020 (616)	2,916 (889)	3,460 (1,055)	5,715 (1,742)	9,162 (2,793)
1.45 (36.83)	447 (136)	830 (253)	1,252 (382)	1,697 (517)	2,840 (866)	3,369 (1,027)	5,022 (1,531)	8,955 (2,729)
1.50 (38.10)	434 (132)	807 (246)	1,220 (372)	1,652 (504)	2,452 (747)	2,910 (887)	4,901 (1,494)	8,063 (2,458)
1.55 (39.37)	421 (128)	785 (239)	1,189 (362)	1,610 (491)	2,392 (729)	2,838 (865)	4,276 (1,303)	7,893 (2,406)
1.60 (40.64)	410 (125)	765 (233)	956 (292)	1,571 (479)	2,335 (712)	2,771 (845)	4,178 (1,273)	7,079 (2,158)
1.65 (41.91)	399 (122)	571 (174)	933 (284)	1,298 (396)	1,995 (608)	2,368 (722)	4,086 (1,245)	6,938 (2,115)
1.70 (43.18)	389 (119)	557 (170)	912 (278)	1,268 (386)	1,950 (594)	2,315 (706)	3,534 (1,077)	6,192 (1,887)
1.75 (44.45)	379 (116)	543 (166)	892 (272)	1,239 (378)	1,907 (581)	2,265 (690)	3,460 (1,055)	6,076 (1,852)
1.80 (45.72)	264 (80)	530 (162)	872 (266)	1,212 (369)	1,608 (490)	1,910 (582)	3,390 (1,033)	5,391 (1,643)
1.85 (46.99)	258 (79)	518 (158)	680 (207)	1,187 (362)	1,574 (480)	1,870 (570)	3,324 (1,013)	5,295 (1,614)
1.90 (48.26)	252 (77)	507 (155)	665 (203)	958 (292)	1,542 (470)	1,832 (558)	2,844 (867)	5,203 (1,586)
1.95 (49.53)	246 (75)	496 (151)	652 (199)	939 (286)	1,511 (461)	1,796 (547)	2,790 (850)	4,586 (1,398)
2.00 (50.80)	240 (73)	485 (148)	639 (195)	920 (280)	1,482 (452)	1,761 (537)	2,739 (835)	4,510 (1,375)
2.05 (52.07)	235 (72)	338 (103)	626 (191)	902 (275)	1,228 (374)	1,460 (445)	2,691 (820)	4,437 (1,352)
2.10 (53.34)	230 (70)	331 (101)	615 (187)	885 (270)	1,205 (367)	1,432 (436)	2,269 (692)	3,879 (1,182)
2.15 (54.61)	225 (69)	324 (99)	604 (184)	869 (265)	1,183 (361)	1,407 (429)	2,230 (680)	3,819 (1,164)
2.20 (55.88)	221 (67)	318 (97)	593 (181)	699 (213)	1,162 (354)	1,382 (421)	2,193 (668)	3,761 (1,146)
2.25 (57.15)	216 (66)	311 (95)	441 (134)	685 (209)	1,142 (348)	1,358 (414)	2,160 (658)	3,706 (1,129)
2.30 (58.42)	212 (65)	306 (93)	433 (132)	656 (200)	924 (282)	1,099 (335)	2,123 (647)	3,207 (977)
2.35 (59.69)	130 (40)	300 (91)	425 (130)	644 (196)	908 (277)	1,081 (329)	1,758 (536)	3,161 (963)
2.40 (60.96)	128 (39)	295 (90)	418 (127)	634 (193)	893 (272)	1,063 (324)	1,731 (528)	3,117 (950)
2.45 (62.23)	125 (38)	289 (88)	411 (125)	623 (190)	879 (268)	1,046 (319)	1,705 (520)	3,075 (937)
2.50 (63.50)	123 (37)	285 (87)	405 (123)	613 (187)	865 (264)	1,030 (314)	1,679 (512)	3,035 (925)
2.55 (64.77)	*	*	*	604 (184)	852 (260)	1,014 (309)	1,655 (504)	2,594 (791)
2.60 (66.04)	*	*	*	595 (181)	839 (256)	999 (304)	1,632 (497)	2,560 (780)
2.65 (67.31)	*	*	*	443 (135)	826 (252)	984 (300)	1,319 (402)	2,528 (771)
2.70 (68.58)	*	*	*	437 (133)	647 (197)	771 (235)	1,300 (396)	2,497 (761)
2.75 (69.85)	*	*	*	430 (131)	638 (194)	760 (232)	1,282 (391)	2,466 (752)
2.80 (71.12)	*	*	*	424 (129)	628 (191)	749 (228)	1,265 (386)	2,076 (633)
2.85 (72.39)	*	*	*	418 (127)	619 (189)	738 (225)	1,248 (380)	2,051 (625)
2.90 (73.66)	*	*	*	412 (126)	611 (186)	728 (222)	1,232 (376)	2,027 (618)
2.95 (74.93)	*	*	*	406 (124)	602 (183)	718 (219)	1,217 (371)	2,004 (611)
3.00 (76.20)	*	*	*	400 (122)	594 (181)	709 (216)	1,202 (366)	1,981 (604)
3.05 (77.47)	*	*	*	*	587 (179)	700 (213)	1,187 (362)	1,959 (597)
3.10 (78.74)	*	*	*	*	579 (176)	691 (211)	927 (283)	1,938 (591)
3.15 (80.01)	*	*	*	*	572 (174)	682 (208)	916 (279)	1,600 (488)
3.20 (81.28)	*	*	*	*	565 (172)	674 (205)	905 (276)	1,582 (482)
3.25 (82.55)	*	*	*	*	421 (128)	503 (153)	894 (272)	1,565 (477)
3.30 (83.82)	*	*	*	*	416 (127)	497 (151)	884 (269)	1,549 (472)
3.35 (85.09)	*	*	*	*	411 (125)	491 (150)	874 (266)	1,533 (467)
3.40 (86.36)	*	*	*	*	406 (124)	485 (148)	864 (263)	1,518 (463)
3.45 (87.63)	*	*	*	*	401 (122)	479 (146)	855 (261)	1,503 (458)
3.50 (88.90)	*	*	*	*	396 (121)	473 (144)	846 (258)	1,489 (454)

**Drum diameter is less than 12 times the 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 2 inch clearance.

OSP Copper Wood Reel Dimensions												
Flange (F) in	30	36	44	46	52	58	62	65	72	78	84	96
Traverse (T) in	18	18	18	25	25	25	30	30	36	40	40	40
Drum (D) in	12	14	20	20	20	20	24	32	36	39	42	48
Overall Width (W) in	21	21	21	28	29	29	34	35	41	45	46	46
Reel Weight lbs	46	64	108	165	203	245	288	368	614	699	797	1,175

OSP Copper Wood Reel Capacities												
Cable O.D. in (mm)	**Cable Length ft (m)**											
0.40 (10.16)	3,723 (1,135)	5,844 (1,781)	8,738 (2,663)	13,498 (4,114)	19,316 (5,888)	25,088 (7,647)	33,422 (10,187)	32,580 (9,930)				
0.45 (11.43)	2,908 (886)	4,757 (1,450)	6,802 (2,073)	10,654 (3,247)	15,170 (4,624)	19,545 (5,957)	26,054 (7,941)	25,720 (7,839)	37,698 (11,490)			
0.50 (12.70)	2,472 (753)	3,848 (1,173)	5,576 (1,700)	8,838 (2,694)	12,337 (3,760)	16,303 (4,969)	21,714 (6,618)	21,006 (6,403)	31,148 (9,494)			
0.55 (13.97)	1,883 (574)	3,078 (938)	4,541 (1,384)	7,297 (2,224)	9,930 (3,027)	12,887 (3,928)	17,191 (5,240)	17,033 (5,192)	25,619 (7,809)	32,856 (10,015)	39,025 (11,895)	
0.60 (15.24)	1,580 (482)	2,664 (812)	3,658 (1,115)	5,975 (1,821)	8,378 (2,554)	11,105 (3,385)	14,804 (4,512)	14,431 (4,399)	20,898 (6,370)	28,333 (8,636)	32,542 (9,919)	
0.65 (16.51)	1,317 (401)	2,078 (633)	3,177 (968)	4,834 (1,473)	7,023 (2,141)	9,535 (2,906)	12,710 (3,874)	12,174 (3,711)	17,794 (5,424)	23,225 (7,079)	28,199 (8,595)	36,623 (11,163)
0.70 (17.78)	1,254 (382)	1,774 (541)	2,754 (839)	4,218 (1,286)	6,269 (1,911)	8,142 (2,482)	10,858 (3,310)	10,202 (3,110)	15,077 (4,595)	20,946 (6,384)	24,383 (7,432)	32,041 (9,766)
0.75 (19.05)	1,038 (316)	1,698 (518)	2,379 (725)	3,670 (1,119)	5,183 (1,580)	6,902 (2,104)	9,214 (2,808)	9,087 (2,770)	13,514 (4,119)	17,895 (5,454)	21,007 (6,403)	27,978 (8,528)
0.80 (20.32)	847 (258)**	1,445 (440)	2,046 (624)	3,181 (970)	4,598 (1,401)	6,221 (1,896)	8,299 (2,530)	8,090 (2,466)	12,116 (3,693)	15,185 (4,628)	18,003 (5,487)	24,353 (7,423)
0.85 (21.59)	814 (248)**	1,218 (371)	1,748 (533)	2,743 (836)	4,069 (1,240)	5,601 (1,707)	7,469 (2,277)	7,193 (2,192)	10,118 (3,084)	13,652 (4,161)	16,277 (4,961)	21,102 (6,432)
0.90 (22.86)	654 (199)**	1,174 (358)**	1,679 (512)	2,639 (804)	3,589 (1,094)	4,653 (1,418)	6,220 (1,896)	6,381 (1,945)	9,018 (2,749)	12,263 (3,738)	14,713 (4,485)	19,217 (5,857)
0.95 (24.13)	630 (192)**	980 (299)**	1,425 (434)	2,264 (690)	3,151 (960)	4,153 (1,266)	5,554 (1,693)	5,645 (1,721)	8,020 (2,444)	10,999 (3,352)	13,289 (4,050)	17,499 (5,334)
1.00 (25.40)	609 (186)**	948 (289)**	1,374 (419)	2,187 (667)	3,053 (931)	4,034 (1,230)	5,383 (1,641)	4,974 (1,516)	7,733 (2,357)	9,845 (3,001)	11,985 (3,653)	15,925 (4,854)
1.05 (26.67)	*	781 (238)**	1,155 (352)	1,861 (567)	2,670 (814)	3,593 (1,095)	4,797 (1,462)	4,361 (1,329)	6,866 (2,093)	8,787 (2,678)	10,789 (3,288)	13,583 (4,140)
1.10 (27.94)	*	758 (231)**	1,118 (341)	1,804 (550)	2,318 (707)	3,186 (971)	4,258 (1,298)	4,219 (1,286)	6,071 (1,850)	7,816 (2,382)	9,689 (2,953)	13,145 (4,007)
1.15 (29.21)	*	612 (187)**	927 (283)	1,519 (463)	2,255 (687)	2,810 (856)	3,761 (1,146)	3,682 (1,122)	5,342 (1,628)	7,573 (2,308)	8,674 (2,644)	11,911 (3,630)
1.20 (30.48)	*	*	899 (274)	1,476 (450)	1,944 (593)	2,743 (836)	3,664 (1,117)	3,571 (1,088)	5,181 (1,579)	6,715 (2,047)	7,736 (2,358)	10,769 (3,282)
1.25 (31.75)	*	*	873 (266)	1,225 (373)	1,895 (578)	2,406 (733)	3,219 (981)	3,096 (944)	4,534 (1,382)	6,523 (1,988)	7,515 (2,291)	9,708 (2,959)
1.30 (33.02)	*	*	712 (217)	1,193 (364)	1,618 (493)	2,352 (717)	3,143 (958)	3,010 (917)	4,408 (1,344)	5,759 (1,755)	6,679 (2,036)	8,723 (2,659)
1.35 (34.29)	*	*	693 (211)**	1,162 (354)**	1,580 (482)**	2,049 (625)**	2,743 (836)	2,588 (789)	3,832 (1,168)	5,052 (1,540)	6,502 (1,982)	8,492 (2,588)
1.40 (35.56)	*	*	675 (206)**	948 (289)**	1,545 (471)**	2,007 (612)**	2,683 (818)	2,520 (768)	3,732 (1,138)	4,921 (1,500)	5,751 (1,753)	7,606 (2,318)
1.45 (36.83)	*	*	537 (164)**	925 (282)**	1,304 (397)**	1,733 (528)**	2,323 (708)	2,458 (749)	3,640 (1,109)	4,799 (1,463)	5,609 (1,710)	7,419 (2,261)
1.50 (38.10)	*	*	524 (160)**	904 (276)**	1,276 (389)**	1,699 (518)**	2,274 (693)	2,091 (637)	3,138 (956)	4,182 (1,275)	4,932 (1,503)	6,618 (2,017)
1.55 (39.37)	*	*	511 (156)**	884 (269)**	1,250 (381)**	1,453 (443)**	1,950 (594)	2,041 (622)	3,064 (934)	4,085 (1,245)	4,818 (1,469)	6,465 (1,971)
1.60 (40.64)	*	*	500 (152)**	703 (214)**	1,039 (317)**	1,426 (435)**	1,911 (582)	1,995 (608)	2,995 (913)	3,528 (1,075)	4,205 (1,282)	5,737 (1,749)
1.65 (41.91)	*	*	489 (149)**	688 (210)**	1,019 (311)**	1,400 (427)**	1,875 (572)**	1,674 (510)	2,554 (778)	3,450 (1,052)	4,113 (1,254)	5,612 (1,711)
1.70 (43.18)	*	*	*	*	*	*	1,841 (561)**	1,638 (499)	2,499 (762)	3,376 (1,029)	4,026 (1,227)	4,949 (1,508)
1.75 (44.45)	*	*	*	*	*	*	1,559 (475)**	1,603 (489)	2,447 (746)	3,307 (1,008)	3,483 (1,062)	4,846 (1,477)
1.80 (45.72)	*	*	*	*	*	*	1,531 (467)**	1,571 (479)	2,058 (627)	2,825 (861)	3,412 (1,040)	4,750 (1,448)
1.85 (46.99)	*	*	*	*	*	*	1,505 (459)**	1,295 (395)	2,017 (615)	2,770 (844)	3,345 (1,020)	4,157 (1,267)
1.90 (48.26)	*	*	*	*	*	*	1,255 (383)**	1,269 (387)	1,978 (603)	2,717 (828)	3,282 (1,000)	4,078 (1,243)
1.95 (49.53)	*	*	*	*	*	*	1,235 (376)**	1,245 (379)	1,941 (592)	2,289 (698)	2,808 (856)	4,003 (1,220)
2.00 (50.80)	*	*	*	*	*	*	1,215 (370)**	1,222 (372)	1,906 (581)	2,246 (685)	2,757 (840)	3,931 (1,198)
2.05 (52.07)	*	*	*	*	*	*	*	1,201 (366)	1,574 (480)	2,206 (672)	2,708 (825)	3,410 (1,039)
2.10 (53.34)	*	*	*	*	*	*	*	966 (294)	1,546 (471)	2,168 (661)	2,661 (811)	3,350 (1,021)
2.15 (54.61)	*	*	*	*	*	*	*	949 (289)**	1,520 (463)	2,131 (650)	2,245 (684)	3,294 (1,004)
2.20 (55.88)	*	*	*	*	*	*	*	933 (284)**	1,494 (455)	1,763 (537)	2,207 (673)	3,240 (988)
2.25 (57.15)	*	*	*	*	*	*	*	917 (280)**	1,470 (448)	1,734 (529)	2,171 (662)	2,778 (847)
2.30 (58.42)	*	*	*	*	*	*	*	902 (275)**	1,185 (361)	1,706 (520)	2,137 (651)	2,734 (833)
2.35 (59.69)	*	*	*	*	*	*	*	888 (271)**	1,166 (355)	1,679 (512)	2,104 (641)	2,692 (821)
2.40 (60.96)	*	*	*	*	*	*	*	875 (267)**	1,148 (350)	1,653 (504)	1,742 (531)	2,651 (808)
2.45 (62.23)	*	*	*	*	*	*	*	680 (207)**	1,130 (344)**	1,629 (497)	1,716 (523)	2,241 (683)
2.50 (63.50)	*	*	*	*	*	*	*	670 (204)**	1,114 (340)**	1,605 (489)	1,690 (515)	2,207 (673)
2.55 (64.77)	*	*	*	*	*	*	*	660 (201)**	1,097 (334)**	1,295 (395)	1,666 (508)	2,176 (663)
2.60 (66.04)	*	*	*	*	*	*	*	650 (198)**	1,082 (330)**	1,277 (389)	1,642 (500)	2,145 (654)
2.65 (67.31)	*	*	*	*	*	*	*	641 (195)**	1,067 (325)**	1,259 (384)**	1,619 (493)	2,115 (645)
2.70 (68.58)	*	*	*	*	*	*	*	*	832 (254)**	1,241 (378)**	1,598 (487)	2,087 (636)
2.75 (69.85)	*	*	*	*	*	*	*	*	820 (250)**	1,224 (373)**	1,291 (393)	2,059 (628)
2.80 (71.12)	*	*	*	*	*	*	*	*	809 (247)**	1,208 (368)**	1,273 (388)	1,708 (521)
2.85 (72.39)	*	*	*	*	*	*	*	*	798 (243)**	1,193 (364)**	1,257 (383)**	1,685 (514)
2.90 (73.66)	*	*	*	*	*	*	*	*	788 (240)**	1,178 (359)**	1,240 (378)**	1,664 (507)
2.95 (74.93)	*	*	*	*	*	*	*	*	777 (237)**	919 (280)**	1,225 (373)**	1,643 (501)
3.00 (76.20)	*	*	*	*	*	*	*	*	768 (234)**	907 (276)**	1,210 (369)**	1,623 (495)
3.05 (77.47)	*	*	*	*	*	*	*	*	*	896 (273)**	1,195 (364)**	1,603 (489)
3.10 (78.74)	*	*	*	*	*	*	*	*	*	885 (270)**	1,181 (360)**	1,584 (483)
3.15 (80.01)	*	*	*	*	*	*	*	*	*	874 (266)**	1,167 (356)**	1,282 (391)
3.20 (81.28)	*	*	*	*	*	*	*	*	*	864 (263)**	911 (278)**	1,267 (386)
3.25 (82.55)	*	*	*	*	*	*	*	*	*	854 (260)**	900 (274)**	1,252 (382)**
3.30 (83.82)	*	*	*	*	*	*	*	*	*	*	890 (271)**	1,238 (377)**
3.35 (85.09)	*	*	*	*	*	*	*	*	*	*	880 (268)**	1,224 (373)**
3.40 (86.36)	*	*	*	*	*	*	*	*	*	*	870 (265)**	1,210 (369)**
3.45 (87.63)	*	*	*	*	*	*	*	*	*	*	860 (262)**	1,197 (365)**
3.50 (88.90)	*	*	*	*	*	*	*	*	*	*	851 (259)**	1,184 (361)**
3.55 (90.17)	*	*	*	*	*	*	*	*	*	*	*	1,172 (357)**
3.60 (91.44)	*	*	*	*	*	*	*	*	*	*	*	1,160 (354)**
3.65 (92.71)	*	*	*	*	*	*	*	*	*	*	*	1,148 (350)**

**Drum diameter is less than 12 times the cable diameter (minimum bend radius). **Drum diameter is less than 15 times the 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 2 inch clearance.

Glossary of Terms

Copper

COPPER Glossary of Terms

ACR (Attenuation to Crosstalk Ratio): The ratio between attenuation and near end crosstalk, measured in decibels (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 any interfering signals imposed on that same pair by crosstalk from adjacent pairs. While it is not included in TIA 568, it is a good figure of merit in that it describes the signal to noise ratio.

ACRF: See "**ELFEXT**"

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.

aerial cable: Cable suspended in the air usually on utility poles. Except for self supporting cables an external messenger strand is used to support the cable.

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): A standards-setting, non-government organization which develops and publishes standards for transmission codes, protocols and high-level languages for "voluntary"use in the United States.

armor: Additional protective covering beneath the outer jacket to provide physical protection against severe outdoor environments. Usually made of plastic-coated steel, it may be corrugated for flexibility.

armored cable: A cable having an outer protection usually in the form of a steel corrugated tape.

Asynchronous Transfer Mode (ATM): A high-speed, packet-switching technology used to transmit video, data, voice, etc. via fixed-length cells of 53 bytes.

ATM: See **"Asynchronous Transfer Mode"**

attenuation: Also known as Insertion Loss. Loss of signal power between two points. Attenuation is a ratio of input power versus output power, measured in decibels per unit length, usually decibels per 100 meters (dB/100 m). 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 intrabuilding.

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 ribbon used to separate and identify units and groups of cable pairs by means of color coding.

B-ISDN (Broadband Integrated Services 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.

buried cable: A cable that is buried directly in the ground without being placed in underground conduit. Generally waterproof type cables are employed.

byte (B): Eight bits of digital data.

cable closure: Any of several types of housings that can be used to enclose cable sheath openings necessary for splicing or terminating.

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

CATV (cable television): The term originally stood for "community antenna television," reflecting the fact that the original cable systems carried only broadcast stations received off the air; however, as cable systems began to originate their own programming, the term evolved to mean Cable Television. CATV is a broadband transmission facility.

CCTV: Closed Circuit Television

Central Office (CO): The location that houses a switch to serve local telephone subscribers on the public switched telephone network (PSTN) for a small regional area.

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.

CO: See **"Central Office"**

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.

data link: The cable, receiver and transmitter that connect two points communicating with digital data.

dB: See **"decibel"**

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 versus 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.

drop wire cable: Cable containing 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.

DS1 (Digital Signal, level 1): Also known as T-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 (Digital Signal, level 1 Combined): Two T2 frames packed into a higher-level frame transmitted at 3.15 Mbps.

DS2 (Digital Signal, level 2): Four T1 frames packed into a higher-level frame transmitted at 6.312 Mbps.

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): Also known as ACRF. The ratio of the unwanted crosstalk at the far end (from the transmitter) 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 optical fiber cable design makes them immune to EMI.

Equipment Room (ER): 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.

far end crosstalk: See **"FEXT"**

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 fluorinated thermoplastic material with good electrical insulating properties used for plenum cable.

FEXT (far end crosstalk): Refers to crosstalk that is measured at the opposite end of the cable from which it is being disturbed.

Figure 8 cable: 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.

flooding: The act of applying a material over a cable or any of its components, usually for the purpose of adhesion, corrosion deterrent, or to fill voids.

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.

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 (GE): 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: Any amount of margin that is above the standard for a category.

hertz (Hz): The unit of frequency, one cycle per second.

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).

insertion loss: See **"attenuation"**

inside plant: Usually considered being all cable and equipment inside the Central Office (CO) and customer's premises.

laminate: A sheet material made by bonding together two or more layers of the same or different material.

LAN: See **"Local Area Network"**

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.

Local Area Network (LAN): A network connecting several nodes within a limited geographic area, usually within a building or campus

Mbps: A million bits per second when referring to the speed of a telecommunications, networking or local area networking transmission facility.

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.

mutual capacitance: One of the primary constants of a cable pair which contributes to transmission loss.

near end crosstalk: See **"NEXT"**

NEXT (near end crosstalk): The crosstalk which occurs when signals transmitted on one pair of wires are picked up by another (disturbed) pair in the same cable when measured at the near (transmitter) end.

ns (nanosecond): One-billionth of a second or 10^{-9} second.

OEM (Original Equipment Manufacturer): An OEM maker is a manufacturer of original equipment. A company who buys their components from someone else and simply assembles the components into a product is not considered an OEM and is often called a value-added reseller.

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 (OSP): Usually considered all cable and equipment used outside of the Central Office (CO) and customers' premises.

OSP: See **"Outside Plant"**

pair: Two wires forming a single circuit, held together by twisting, binding, or a common jacket.

PE: See **"polyethylene"**

pedestal: An above ground watertight housing for splicing and terminating buried cables.

PIC: See **"plastic insulated conductor"**

plastic insulated conductor (PIC): A metallic cabling system in which the individual conductors are covered with an extruded coating of plastic. Common insulation includes polyethylene and polypropylene. Although a plastic, PVC insulated conductors are not referred to as PIC.

Glossary of Terms

Copper

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: Cables made of fire-retardant materials that generate little smoke. These cables are installed in plenum air ducts, vertical shafts etc.

polyethylene (PE): A polyolefin thermoplastic material having excellent electrical properties.

polyvinylchloride (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 4 kHz 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.

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 due to the transmission medium between when a signal is transmitted and when it is received.

PSAACRF (Power Sum Alien Attenuation to Crosstalk Ratio Far End): The combined (power sum) crosstalk from all adjacent (alien) cables on a single pair inside a victim (disturbed) cable taken at the far end (at the receiver). The value obtain from this test is then taken as a ratio with the attenuation to yield the reported value.

PSACR (Power Sum-Attenuation-to-Crosstalk Ratio): Similar to ACR except Power Sum Near End Crosstalk (PSNEXT) is used in the calculation instead of Near End Crosstalk (NEXT). 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).

PSACRF: See **"PSELFEXT"**

PSANEXT (Power Sum Alien Near End Crosstalk): The combined (power sum) crosstalk from all adjacent (alien) cables on a single pair inside a victim (disturbed) cable taken at the near end (at the transmitter).

PSELFEXT (Power Sum Equal Level Far End Crosstalk): Also known as PSACRF. The mathematical summation (power sum) 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.

PSNEXT (Power Sum Near End Crosstalk): The combined (power sum) crosstalk from all other pairs on the victim (disturbed) pair within a cable taken at the near (transmitter) end of the cable.

PSTN (public switched telephone network): The worldwide communications network that carries phone calls and data.

pulling eye: A strong metal ring usually installed at the factory, for use in pulling a cable into a duct.

PVC: See **"polyvinylchloride"**

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: The 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: 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 connectivity.

router: The central switching device in a packet-switched computer network that directs and controls the flow of data through the network.

RoHS-compliant: (The Restriction of Hazardous Substances Directive) RoHS-compliant 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-compliant is often referred to as the "lead-free" directive.

sag: The downward curvature of an aerial cable or wire due to its weight.

sheath: The protective outer covering of a cable core, including metallic shields and jackets.

shield: A tape 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 an OSP copper cable, above the guaranteed number.

splice box or splice closure: A metal or plastic housing used around a cable splice to provide a water and gas tight closure.

SRL (Structural Return Loss): 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: See **"DS1"**

Telcordia Technologies: Formerly Bellcore, a research company once owned by the RBOCs.

TIA (Telecommunications Industry Association): TIA represents the telecommunications industry in association with the EIA (Electronics Industry Association) and creates telecommunications standards.

UL (Underwriters Laboratories): A privately-owned company that charges manufacturers a fee to ensure their products meet various safety standards, some of which UL develops.

unbalance to ground capacitance: 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.

UTP (Unshielded Twisted Pair): Cable containing one or more pairs of twisted copper without metallic shielding.

velocity of propagation (Vp): The transmission speed of electrical energy in a length of cable compared to speed in free space. Usually expressed as a percentage.

Voice Frequency (VF): 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 1 kHz.

waterproof cable: 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.

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 naturally occuring impurities and defects in the glass.

aerial cable: Optical fiber cable suspended in the air usually on utility poles. Except for self supporting cables an external messenger strand is used to support the cable.

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® and Twaron® are brands of aramid yarns.

armor: Additional protective covering beneath the 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.

breakout 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.

cable core: The central portion of a cable containing the optical fibers and surrounded by a sheath.

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.

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: Also known as duct. A pipe or tube that may be buried or installed within buildings through which cables can be pulled or housed.

dB: See **"decibel"**

decibel (dB): The unit for measuring the relative strength of light signals (attenuation), normally expressed in dB.

dielectric cable: Also known as nonmetallic 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.

EMI (electromagnetic interference): Any electrical interference that causes undesirable interference or failure in electronic equipment. Optical fibers neither emit nor receive EMI.

FDDI (Fiber Distributed Data Interface): A transmission standard for a optical fiber local area network.

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: The radius a fiber can bend before the risk of breakage or increase in attenuation.

fiber core: 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.

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 optical fiber 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 optical fiber 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 brand of aramid yarn used as cable strength members. The name is a trademark of the Dupont Company.

km (kilometer): 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: 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.

macrobending: Visible bends often caused by exceeding suggested bend radius of a cable.

MFD: See **"mode field diameter"**

mode field diameter (MFD): Also known as spot size. 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.

Glossary of Terms

Fiber

MHz (megahertz): A unit of frequency that is equal to one million cycles per second.

microbending: 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.

micron: One thousandth of a millimeter or one millionth of a meter (10^{-6} meters). A micron can be used to specify the core diameter of optical fiber network cabling.

minimum bend radius: The amount of bend a fiber (or cable) can withstand before experiencing problems in performance.

MMF: See **"multimode fiber"**

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.

multifiber cable: An optical fiber cable that contains two or more fibers.

multimode fiber (MMF): 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.

nm (nanometer): One-billionth of a meter or 10^{-9} meter; a unit of measurement typically used to express the wavelength of light.

NEC (National Electrical Code): Defines flammability requirements for cables installed within buildings. (Local codes take precedence but may refer to or require compliance to the NEC.)

nonmetallic cable: See "**dielectric cable**"

optical fiber: See "**fiber**"

OSP: See **"Outside Plant"**

Outside Plant (OSP): The portion of a cable network that resides outside of buildings.

PE (polyethylene): A type of thermoplastic material used for Outside Plant (OSP) cable jackets.

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).

PMD (Polarization Mode Dispersion): 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.

PVDF (Polyvinylidene Difluoride): A fluoropolymer material that is resistant to heat and used in the jackets of plenum cable.

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 connectivity.

RoHS-compliant: (The Restriction of Hazardous Substances Directive) RoHS-compliant 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-compliant is often referred to as the "lead-free" directive.

SAP: Abbreviation used to denote super absorbent polymer.

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 (SMF): An optical fiber in which the signal travels in one mode. The fiber has a small core diameter, typically 8.3 µm.

SMF: See **"single mode fiber"**

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 optical fiber 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 buffer optical fiber cable: Type of cable construction where the plastic buffer is applied directly over the coating on the fiber to a diameter of 900 µm.

wavelength: The distance between two successive points on adjacent waves, usually measured in nanometers (nm).

WiMAX (Worldwide Interoperability for Microwave Access): A Broadband Wireless Access (BWA) solution that is based on standards recommendations from both the Institute for Electrical and Electronics Engineers (IEEE) 802.16 working group and the European Telecommunications Standards Institute (ETSI).

window: A range of wavelengths within which a fiber best operates.

1. GENERAL

These Terms and Conditions of Sale (the "Terms") govern Buyer's purchase of any communication wire products (the "Products") from Superior Essex Communications LP or any of its subsidiaries or affiliates (collectively, "Seller"). Buyer's purchase of the Products is limited to the terms and conditions contained herein. If there is an executed written sales agreement in effect between the parties (a "Sales Agreement"), these Terms form a part thereof. Any additional or different terms in any of Buyer's forms are hereby deemed to be material alterations and Seller hereby provides notice of objection and rejection of any such terms. Waiver by Seller of any breach, remedy or provision of these Terms shall not be construed to be a waiver of any succeeding breach or any other provision or legal remedy of Seller. These Terms and all accepted orders shall be construed in accordance with the laws of the State of Georgia, United States of America without regard to its conflict of law principles. The section headings of these Terms are for ease of reference only and shall not be admissible in any action to alter, modify or interpret the contents of any section hereof. The International Convention on the Sale of Goods shall have no application to any sales of Products hereunder.

2. PRICE AND PAYMENT

Orders are not binding upon Seller until accepted by Seller in its sole discretion. No order submitted by Buyer shall be deemed accepted by Seller unless and until either confirmed in writing by Seller or by delivery of the Product specified in the order. Seller may modify Buyer's order where necessary as follows: (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; (c) substituting an estimated delivery schedule which is reasonable (considering Seller's stock availability and lead time); and (d) correcting any stenographical or typographical error. The price of any Product sold to Buyer shall be Seller's price in effect at time of order entry. Overdue payments shall bear interest from the due date until paid at a rate of 1.5% (.015) per month or the maximum legal rate, whichever is less. Unless otherwise agreed to by the parties, all shipping charges and costs shall be paid by Buyer. Seller's weights shall govern provisional and final settlement.

Credit is extended at the sole discretion of Seller. If credit has been extended, the amount of credit may be changed or credit withdrawn by Seller at any time, in its sole discretion. If a cash discount is stipulated, it is subject to Buyer's entire account being current. Seller will charge and Buyer shall pay a convenience fee of 2.5% of the total invoice amount on all invoices paid by Buyer using a credit card. Any discounts given to Buyer by Seller in relation to the price of the Products are conditional upon payment for the Products being made strictly in accordance with the Sales Agreement and these Terms and to Buyer's entire account for all products purchased from Seller being current. Fees for and relating to the Products are subject to adjustment in the event there are cost increases created by circumstances such as, but not limited to, changes in government energy policies, fuel and energy increases, metal premium or metal processing charges, chemical or material price increases, material and supply shortages, transportation and shipping costs. Any accepted order requiring special manufacturing processes, inspection, specified weight, packaging, test results, certification, etc., is subject to additional charges.

3. DELIVERY, TITLE, RISK OF LOSS, AND SHIPPING OF PRODUCTS

Title to and risk of loss of the Products shall pass to Buyer upon tender of such Products to Buyer at Seller's factory or a common carrier. Unless otherwise agreed to in writing by both parties, Buyer shall pay for shipping costs and charges for the Products. All shipments will be at the Seller's option. 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 the Products shipped at the lowest permissible rates unless otherwise instructed in writing by Buyer.

Buyer will furnish destination instructions for all Products as promptly as possible. Any shipping date provided by Seller is the Seller's best estimate and will not operate to bind Seller to ship or make deliveries on such date. In the absence of destination instructions, Seller will not be required to ship Buyer any Products. Seller shall not be liable for loss or damage attributed to negligence either in selection of the carrier or in agreeing with a carrier to contract terms on Buyer's behalf.

4. LIMITED WARRANTIES AND DISCLAIMERS

Seller warrants to Buyer that at the time of delivery the Products will be free from material defects in workmanship and materials under normal use and will conform substantially to Seller's applicable specification. As Buyer's sole and exclusive remedy and Seller's entire liability for any breach of the foregoing warranty, Seller will, at its sole option and expense, either refund the purchase price paid, repair or replace the Product which fails to meet this warranty upon return of the nonconforming Product; provided, Buyer notifies Seller of noncompliance in writing within one (1) year of delivery of such Product. Transportation charges to and from Seller's location for the return of nonconforming Products to Seller and their re-shipment to Buyer and the risk of loss thereof will be borne by Seller. Buyer shall use Seller's designated carrier for all re-shipments. These warranties do not apply to any Product that was not properly stored or handled by the Buyer, that was repaired or altered or was otherwise subject to abuse, neglect or improper use by Buyer, or that has any stage of processing performed on it which causes the defect. EXCEPT WITH RESPECT TO THE SPECIFIC WARRANTIES SET FORTH IN THIS SECTION 4 OF THESE TERMS, SELLER MAKES NO OTHER WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCTS OR PERFORMANCE OF ITS OBLIGATIONS HEREUNDER, AND SPECIFICALLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Without limitation, under no circumstances shall Seller be liable for any costs associated with reworking, re-manufacturing or scrapping goods in which defective Product supplied by Seller was incorporated, for any costs associated with production stoppages, machinery breakdown or recall campaigns, or for any trouble shooting, administrative or engineering charges.

5. CLAIMS OF PATENT INFRINGEMENT

Seller shall conduct, at its own expense, the entire defense of any claim, suit, action or other proceedings ("Claim") brought against Buyer by a third party alleging that any Product infringes upon any United States patent of any third party; provided, however: (i) Seller receives prompt written notice of the Claim; (ii) Seller has full control of the defense and all related settlement negotiations; (iii) the Products are made according to a specification or design furnished by Seller, or if a process patent is involved, the process performed by the Products are recommended in writing by Seller; and (iv) Buyer provides Seller with all necessary assistance, information and authority to perform the defense and negotiate settlement thereof. Provided all four of the foregoing conditions are met, Seller shall, at its own expense, either settle said Claim or shall pay all damages (excluding consequential damages) and costs awarded by the court therein. If the use or resale of such Products is finally enjoined, Seller shall, at Seller's option, procure for defendant the right to use or resell the Products, replace them with equivalent non-infringing Products, 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). Buyer shall indemnify and hold Seller harmless from all Claims based upon (i) the use of a Product customized for Buyer based on Buyer's ideas, specifications or designs, (ii) the performance of a process performed by the Products not recommended in writing by Seller, or (iii) the use or sale of the Products delivered hereunder in combination with other products not delivered to Buyer by Seller.

6. EXCUSABLE PERFORMANCE

Seller is excused from performing any of its obligations under these Terms, any order or Sales Agreement if its performance is prevented, hindered or delayed by delays of suppliers, acts of God, nature, governments or their agencies, terrorism, war or sabotage, compliance in good faith with any applicable foreign or domestic governmental regulation or order (whether or not it proves to be invalid), fires, riots, inability to supply or obtain labor, products, materials, raw materials, supplies, fuel or utilities, labor disputes, work stoppages, lockouts, delays in transportation, earthquakes, floods, storms or other severe weather conditions, power shortages or power failures or any other events or circumstances beyond Seller's reasonable control (an "Event"). To the extent an Event delays Seller's performance, such performance shall be extended for as many days beyond the due date as is required to obtain removal of such delay; provided, however, if Seller is unable to perform any of its obligations under any order due to an Event for more than thirty (30) days, it may in its sole option terminate, without liability or penalty, any Sales Agreement, order or obligation in whole or in part. It is expressly understood that the Seller has available a limited source for the materials used by Seller in the manufacture of the Products. If there is an interference, limitation or cessation of any material from Seller's source of supply for any reason, Buyer agrees to relieve the Seller temporarily, proportionately, or permanently of liability under these Terms or any Sales Agreement or order, depending upon whether the interruption of the source of supply is a temporary interruption, a reduced delivery of materials, or a permanent cessation of supply. In the event there is a Product shortage pursuant to this section, Seller may ration and distribute such Products as it deems appropriate.

7. TAXES AND EXPORTS

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 Products 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

Buyer's solvency is a condition of Seller's performance and Seller may, at any time, in its sole discretion for credit reasons (including a good faith belief that a current or future payment is or may be impaired) or because of Buyer's breach of this or any other agreement with Seller, suspend or change credit terms, fix a limit on credit, require progress payments, demand payment in full of any outstanding balance, withhold shipments, demand COD or request other assurances of payment, cancel or terminate any order or agreement, or repossess all Products previously delivered, which Products shall become the absolute property of Seller subject to credit therefore. Seller retains a security interest in Products delivered hereunder until paid in full. Notwithstanding any other provision of these Terms, Seller reserves the right in its absolute discretion from time to time to require payment in full of the price of the Products before delivery of all or any of the Products

Seller may terminate any order or Sales Agreement by written notice to Buyer if (i) a receiver or trustee is appointed for any of Buyer's property; (ii) Buyer is adjudicated or voluntarily becomes bankrupt under any bankruptcy, dissolution or reorganization laws or similar legislation; (iii) Buyer becomes insolvent or makes an assignment for the benefit of creditors; (iv) an execution is issued pursuant to a judgment rendered against Buyer; or (v) Buyer is unable or refuses to make payment to Seller. If any order or Sales Agreement is terminated by Seller pursuant to this section, Seller shall 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.

Each order shall be treated as a separate transaction, but if Buyer shall fail to fulfill the payment terms of any order, Seller may without prejudice to any other lawful remedy defer further shipments and/or cancel any order. 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. In addition to any right of set off or recoupment provided by law, Buyer agrees that all its accounts with Seller will be administered on a net settlement basis and that Seller may set off debits and credits, including Seller's attorney fees and costs of enforcement, against any of Buyer's accounts regardless of basis for such debits and credits and without advance notice. In this section, "Seller" includes Seller's parent, subsidiaries and affiliates, and "Buyer" includes Buyer's parent, subsidiaries and affiliates.

9. CANCELLATIONS AND RETURNS

Due to raw material and manufacturing plant scheduling, all orders accepted by Seller are non-cancelable unless (i) such order is cancelled in writing thirty (30) days prior to the scheduled ship date and (ii) the Products ordered were not manufactured as special or customized items. If paid for, cancelled Products may be returned for credit only.

Return of any Product must be authorized by Seller. Seller will issue a formal RETURN MATERIAL AUTHORIZATION (RMA) to support all authorized returns. For any credit, this document must provide the Buyer's order number, Seller's invoice number, part number, description, and quantity of item to be returned, and reason for request. Standard stock items are returnable at invoice price less a 20% restocking charge, freight prepaid by Buyer to the plant of manufacturer or Seller's designated location. Non-stock items and/or special items are not subject to return. All material must be returned to Seller undamaged and in the original packaging.

10. PACKAGING MATERIAL

The Metal Reels Seller uses to ship Products to Buyer shall always remain the property of Seller and are not a component of Buyer's purchase. Seller will arrange with Buyer for pick-up of the Metal Reels from the original ship to location at Seller's expense. Seller reserves the right to charge for Metal Reels not returned within 1 year or which are damaged as the result of improper handling or storage.

11. 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 Buyer's applications of the Products rely upon any performance, dimensional or constant criteria other than as required by the applicable specifications, Buyer 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 Buyer.

12. LIMITATION OF LIABILITY

IN NO EVENT WILL SELLER BE LIABLE TO BUYER FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE, DELAY, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOSS OF DIRECT OR INDIRECT PROFITS, REVENUE, OR USE, WHETHER ARISING IN CONTRACT, TORT, OR OTHERWISE, EVEN IF BUYER OR ANY OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL SELLER'S AGGREGATE LIABILITY TO BUYER EXCEED ALL AMOUNTS ACTUALLY PAID BY BUYER TO SELLER. These limitations shall apply notwithstanding any failure of essential purpose of the limited remedy set forth in Section 4.

13. CONFIDENTIALITY

Buyer will not disclose to third persons any proprietary or confidential information of Seller concerning its business and operations, including without limitation, pricing information, for a period of five (5) years from the date such confidential information was learned or for confidential information meeting the definition of "trade secret" under applicable law, until such information is no longer a "trade secret." Confidential Information does not include any data or information that is publicly known or in the public domain through means that do not involve a breach by Buyer of its obligations set forth herein.

14. ADDITIONAL TERMS

The provisions of these Terms and the Sales Agreement, if any, constitute the entire agreement between Buyer and Seller with respect to the matter contained herein and supersedes any prior oral or written communications, understanding, representations, proposals or agreements. Seller may revise these Terms from time to time. These Terms may not be amended or modified by Buyer except upon the execution of a written agreement signed by both parties indicating an intent to modify these Terms. Neither Buyer nor Seller may assign any of its rights or obligations hereunder or under any order; provided, however, that Seller shall be permitted to assign any of its rights or obligations under these Terms, Sales Agreement or any order in connection with the sale or transfer of all or substantially all of its assets or capital stock, whether by merger, reorganization, consolidation or other similar transaction. If any provision of these Terms is held invalid, unenforceable or in conflict with any law by a court of competent jurisdiction or arbitration tribunal, such provision shall be deemed severed from these Terms and the validity of the remainder of these Terms shall not be affected thereby. The provisions of these Terms that by their nature are reasonably intended by the parties to survive the expiration or termination of the Terms or any accepted order, including without limitation sections 4, 5, 11, 12, 13 and this section 14, shall survive the expiration or termination of the Terms or any accepted order.

PerformaLink® Warranty

Terms and Conditions

WARRANTY

The PerformaLink® Warranty provides that at the time of delivery, the premises copper cables (e.g. CAT 5e, CAT 5e ScTP, CAT 6, CAT 6 ScTP, CAT 6A STP, CAT 6A ScTP) and premises fiber optic network installations will be free from defects in design, material, and manufacture and conform substantially to the TIA 568 series industry specifications in force at the time of purchase for a period of twenty-five (25) years from the delivery date (the "PerformaLink Warranty").

SCOPE

The PerformaLink Warranty covers the permanent link of the network as defined by the ANSI/TIA/EIA-568-B series, which includes the cable and connecting hardware. The PerformaLink Warranty does not cover other elements of the channel, such as patch cords and workstation cords. The customer must notify Superior Essex of warranty noncompliance, in writing, within 10 days of the defect discovery date.

QUALIFICATION

To qualify for the PerformaLink Warranty, customer must meet the following conditions:

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/Krone
   - AllenTel
   - AMP/Tyco
   - Belden IBDN
   - Corning
   - Hellermann Tyton
   - Hubbell
   - Ortronics
   - Panduit
   - Siemon
   - Systimax/ CommScope
   - Uniprise/ CommScope
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. PerformaLink Warranty 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 resubmitted when requested by Superior Essex. Data must be exported in the original native file format of the tester (see below) used and submitted via CD along with the registration form to Superior Essex.
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:
- DSP-4000 Series
- DTX Series
- OMNIScanner 2

Ideal Industries:
- LANTEK® 6, 6a, 7, 7g Series
- LT 8000 Series
- LANTEK II 350, 500, 1000 and LANTEK II FiberTEK FDX

Agilent:
- WireScope 350
- WireScope Pro

The PerformaLink 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.

ADMINISTRATION

To receive the PerformaLink Warranty all customers must complete and return the PerformaLink Warranty registration form within 10 days of installation completion. Registration forms can be submitted through mail, fax, or e-mail. Test data must be sent electronically.

Warranty registration will then be approved or disapproved with a response sent to the registrant. Registration applications may be sent using one of the addresses below:

1. **PerformaLink® Warranty Superior Essex**
   6120 Powers Ferry Road
   Suite 150
   Atlanta, GA 30339-2923
2. E-mail: Warranties@SPSX.com
3. Fax: 770.657.6770

CLAIMS, EXCLUSIVE REMEDIES AND DISCLAIMERS

The validity of any warranty claim shall be determined by Superior Essex in its sole discretion. A claim will be reviewed for validity only if all of the following are satisfied:

1. Reported in writing to Superior Essex within ten (10) days of date of defect discovery;
2. All installation records are provided to Superior Essex (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 are provided to Superior Essex; and
4. Superior Essex has full and open access to inspect and evaluate the installation site.

As customer's sole and exclusive remedy and the Superior Essex entire liability for any breach of the foregoing PerformaLink Warranty, Superior Essex will, at its sole option and expense, i) either replace or repair the defective components and ii) reimburse customer for necessary and reasonable labor costs provided prior approval is obtained from Superior Essex. The Superior Essex total liability hereunder to the customer shall not exceed $500 per each network permanent link or end-user drop.

EXCEPT WITH RESPECT TO THE SPECIFIC WARRANTIES SET FORTH HEREIN, SUPERIOR ESSEX MAKES NO OTHER WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCTS, INSTALLATION OR PERFORMANCE OF ITS OBLIGATIONS HEREUNDER, AND SPECIFICALLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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:	
		Proj. Manager Telephone:	Proj. 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				
Superior Essex Copper Product(s) Used:				
Superior Essex Fiber Product(s) Used:				
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:	

Signature of the Warranty Holder is required.

Warranty Holder Signature:	**Date:**

Superior Essex use only

Superior Essex Approval Signature:	**Date:**	**Version of industry standards in place at time of purchase:**

A Total Approach to Campus-Wide Cabling

Today's communications networks encompass more than the inside building data cabling system. In a campus setting, the network extends outside – between the buildings and through the telco rooms. Often the voice network is separate from the 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.

What You Get

The Superior Essex Campus Warranty assures that products within the cabling system will be free from defects in material or workmanship, and will meet all published performance specifications for the applicable term.

How it Works

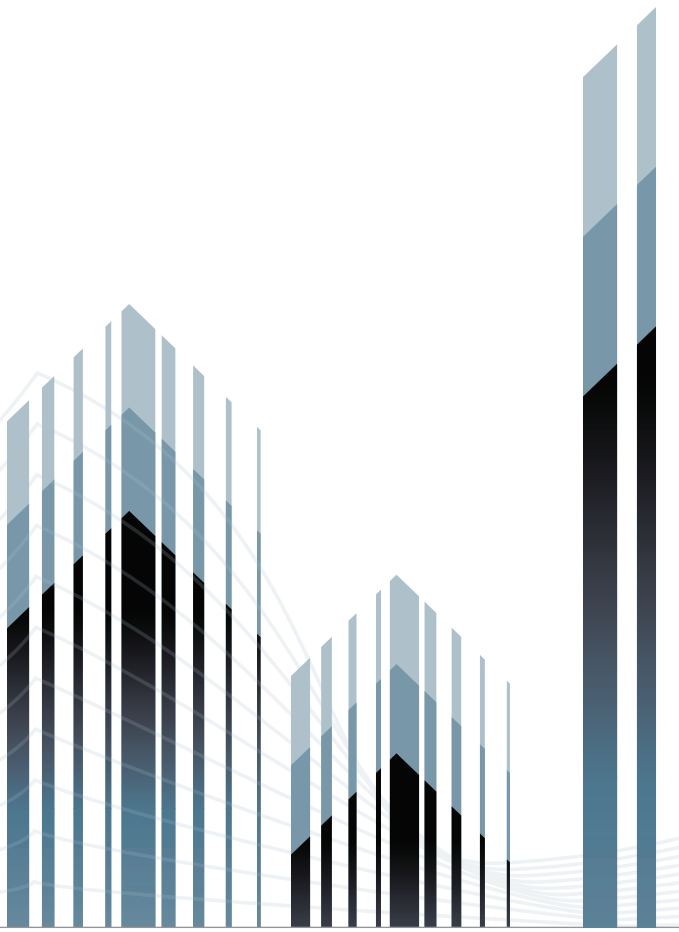
The Campus Warranty provides true assurance from a single source. It covers all the Superior Essex fiber and copper cables used throughout a campus, plus connectivity hardware.

Obtaining a Campus Warranty that covers the inside building structured cabling, premises voice, telco room cabling and/or Outside Plant (OSP) cable from Superior Essex is simple:

1. Install your structured cabling system using copper and/or fiber data cable from Superior Essex for 100% of the installation in combination with a connectivity manufacturer that is included in either the PerformaLink®* or NextLAN®* warranties.

2a. When using Superior Essex premises cable and Leviton connectivity, certify your structured cabling installation in accordance with the NextLAN Warranty requirements and your NextLAN Warranty will be provided. Then, submit the completed Campus Warranty registration form with supporting documentation to Superior Essex and your extended Campus Warranty on voice-grade premises and OSP cable products will be provided.

2b. When using Superior Essex cable in combination with an approved connectivity manufacturer listed in the PerformaLink Warranty (other than Leviton), you can obtain your structured cabling warranty from Superior Essex or the connectivity manufacturer. Once the structured cabling warranty is obtained, submit both the complete Campus Warranty registration form and required documentation to Superior Essex. Your Campus Warranty on voice grade premises and OSP cable products will then be provided.



Campus Warranty Highlights

Premises Voice and OSP Cabling

For projects that use Superior Essex cables for 100% of the copper and fiber structured cabling portion of the network project (i.e. horizontal and inside building backbone), Superior Essex will provide a 20-year warranty for voice-grade premises cables and OSP cables in the network. Specific terms and conditions regarding the Campus Warranty are available at www.SuperiorEssex.com or upon request.

Premises Voice Cabling

20-Year extended warranty on all copper voice-grade premises cables used within the campus project

Outside Plant Cabling

20-Year extended warranty on all OSP copper and fiber cables used within the campus project

Structured Cabling System

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.

25-Year Warranty on Cable and Connectivity Installed as a PerformaLink® 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 and ISO/IEC 11801 standards when installed by a certified contractor in accordance with industry standard practices.

Lifetime Warranty on Cable and Connectivity Installed as a NextLAN® System*

NextLAN cabling systems are warranted for the lifetime of the building. The NextLAN warranty covers the permanent link, channel and inside building backbone as described in TIA/EIA-568 (including connectivity). The NextLAN Lifetime Warranty guarantees the copper or fiber system will meet or exceed the applicable TIA/EIA-568 and ISO/IEC 11801 standards when installed by a certified contractor in accordance with industry standard practices.

**Details on the PerformaLink® and NextLAN® Warranties systems requirements are available at www.SuperiorEssex.com/Comm.*

Campus Warranty

Terms and Conditions

WARRANTY

The Campus Warranty provides that at the time of delivery, premises Voice-Grade Cable and Outside Plant (OSP) Cable products, when installed as part of a campus network along with copper and/or fiber cables from Superior Essex for 100% of the premises LAN installation, will be free from defects in design, material, and manufacture and conform to manufacturer specifications in force at the time of purchase for a period of twenty (20) years from the delivery date (the "Campus Warranty").

SCOPE

The Campus Warranty covers Superior Essex cable products, installed within a single campus location, which are not covered by other LAN premises structured cabling warranty programs.

QUALIFICATION

To qualify for the Campus Warranty, customer must meet the following conditions:

1. The customer must obtain and submit proof of a premises LAN cabling system warranty from Superior Essex, Leviton or a connectivity manufacturer that is an approved participant of the PerformaLink® Warranty Program. Companies currently recognized as approved PerformaLink connectivity suppliers. Please see the PerformaLink Warranty Terms and Conditions for a complete list of approved connectivity suppliers.
2. All cables covered by the Campus Warranty must be installed in accordance with industry accepted practices.
3. Each copper pair and each optical fiber link covered by the Campus Warranty must be tested in accordance with industry practices for proper operation and customer acceptance.
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 along with a copy of the original registration form must be kept on file by the registrant for submission to Superior Essex in the event of a warranty claim.

The Campus Warranty will be void unless the cable products are maintained in accordance with industry standards and no changes are made after warranty issuance and acceptance date, unless Superior Essex grants written consent. This warranty does not cover product failures caused by damage to the cable by persons, machinery, foreign objects, animals, chemicals, acts of God, or by other means that are beyond normal use.

ADMINISTRATION

To receive the Campus Warranty, all customers must complete and return the Campus Warranty Registration Form to Superior Essex within 10 days of installation completion. Registration forms may be submitted through mail, fax, or E-mail. Warranty registration will then be approved or disapproved with a response sent to the registrant.

Registration applications may be sent using one of the addresses below:

1. Campus Warranty Superior Essex
   6120 Powers Ferry Road
   Suite 150
   Atlanta, GA 30339-2923
2. E-mail: Warranties@SPSX.com
3. Fax: 770.657.6770

CLAIMS, EXCLUSIVE REMEDIES AND DISCLAIMERS

The validity of any warranty claim shall be determined by Superior Essex in its sole discretion. A claim will be reviewed for validity only if all of the following are satisfied:

1. Reported in writing to Superior Essex within ten (10) days of date of defect discovery;
2. All installation records are provided to Superior Essex (original network installation design prints, test results, warranty registration) evidence of original test, including reports showing passing test results for each optical link or copper pair;
3. Copies of all original receipts for materials and labor from the date of initial installation are provided to Superior Essex; and
4. Superior Essex has full and open access to inspect and evaluate the installation site.

As customer's sole and exclusive remedy and the Superior Essex entire liability for any breach of the foregoing Campus Warranty, Superior Essex will, at its sole option and expense, i) either replace or repair the defective components and ii) reimburse customer for necessary and reasonable labor costs provided prior approval is obtained from Superior Essex. The Superior Essex total liability shall not exceed $500 per each cable run.

EXCEPT WITH RESPECT TO THE SPECIFIC WARRANTIES SET FORTH HEREIN, SUPERIOR ESSEX MAKES NO OTHER WARRANTIES WHATSOEVER, EXPRESS OR IMPLIED, REGARDING THE PRODUCTS, INSTALLATION OR PERFORMANCE OF ITS OBLIGATIONS HEREUNDER, AND SPECIFICALLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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 Address:	
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:	

Project Details
Is the structured cabling (horizontal and backbone data) 100% Superior Essex products?: **Y / N** (Please enclose copy(ies) of purchase invoices for products eligible for warranty.)
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.)

Signature of the Warranty Holder is required.	
Warranty Holder Signature:	**Date:**

Superior Essex use only		
Superior Essex Approval Signature:	**Date:**	**Version of industry standards in place at time of purchase:**

Please fax this completed form to Gayle Watson @ 770.657.6770.

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10-006-19	H-3
10-006-34	I-12
10-012-15	H-3
10-012-17	H-3
10-012-19	H-3
10-012-35	H-8
10-012-35	I-12
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10-040-29	H-4
10-061-29	H-4
10-096-06	H-2
10-102-34	H-8
10-102-34	I-12
10-102-35	H-8
10-102-35	I-12
10-106-34	H-8
10-106-34	I-12
10-116-06	H-2
10-206-34	H-8
10-206-34	I-12
10-212-35	H-8
10-212-35	I-12
10-261-38	H-8
10-261-38	I-12
10-262-38	H-8
10-262-38	I-12
10-265-38	H-8
10-265-38	I-12
10-281-38	H-8
10-281-38	I-12
10-284-38	H-8
10-284-38	I-12
10-285-38	H-8
10-285-38	I-12
10-306-34	H-8
10-306-34	I-12
10-503-34	H-8
10-503-34	I-12
10-921-38	H-8
10-921-38	I-12
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11-001-02	H-18
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11-003-12	A-37
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11-003-45	H-14
11-003-46	H-14
11-003-47*	E-9
11-003-53	H-14
11-003-55*	E-9
11-003-65	I-13
11-003-66	I-13
11-003-91	A-37
11-003-92	A-37
11-005-90	H-17
11006xN01	C-12
11006xx01	C-2
11006xxM1	C-8
11012xN01	C-12
11012xx01	C-2
11012xxM1	C-8
11024C02Q	D-8
11024D01Q	D-8
11024xN01	C-12
11024xx01	C-2
11024xxM1	C-8
11036xN01	C-12
11036xx01	C-2
11036xxM1	C-8
11048xN01	C-12
11048xx01	C-2
11048xxM1	C-8
11072xN01	C-12
11072xx01	C-2
11072xxM1	C-8
11096xN01	C-12
11096xx01	C-2
11096xxM1	C-8
11120xxM1	C-8
11144xN01	C-12
11144xx01	C-2
11216xN01	C-12
11216xx01	C-2
11288xN01	C-12
11288xx01	C-2
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12-001-11	E-13
12-001-12	E-13
12-001-13	E-13
12-002-11	E-13
12-003-11	E-13
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12-004-08	H-5
12-004-11	E-13
12-004-12	E-13
12-005-12	E-13
12-005-13	E-13
12-006-08	H-5
12006xx01	C-4
12006xxM1	C-10
12-007-08	H-5
12-008-08	H-5
12-009-08	H-5
12-010-08	H-5
12-011-04	H-16
12012xx01	C-4
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12-013-08	I-13
12-014-08	I-13
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12-016-04	H-16
12-018-04	H-16
12-019-08	H-5
12-021-09	I-11
12-022-08	H-5
12-022-09	I-11
12-023-08	H-5
12-023-09	I-11
12-024-08	H-5
12024D01Q	D-8
12024D02Q	D-8
12024xx01	C-4
12024xxM1	C-10
12-025-08	H-5
12-026-08	H-5
12-031-08	H-5
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