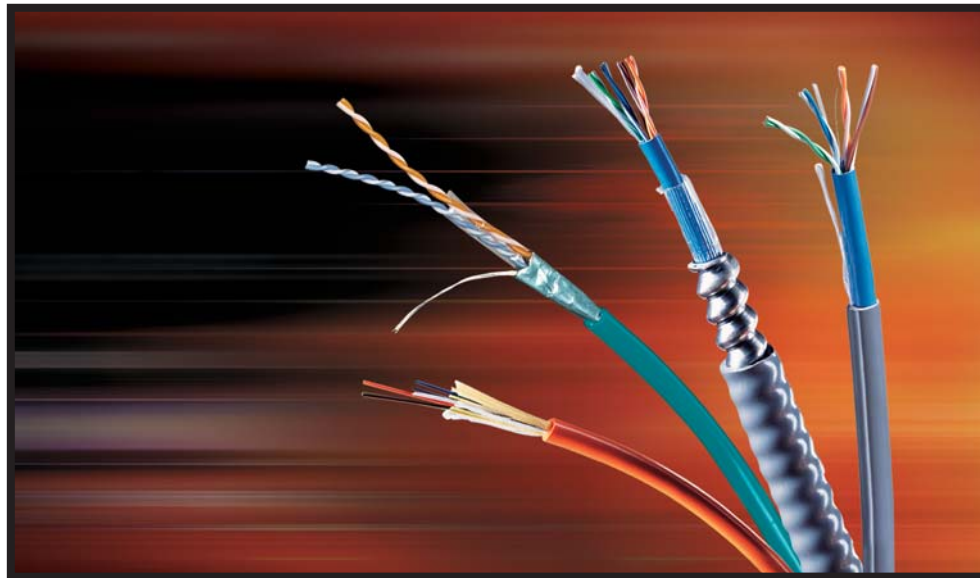


NP 120E

**Industrial Ethernet**

Whether you specify copper or fiber optic cables, peak network efficiency and reliability are achieved with Belden® DataTuff® Industrial Ethernet cables. Bonded-Pair UTP and ScTP versions also offer Installable Performance®.



**Belden Expands the DataTuff® Cable Line With A Stranded, Shielded Construction**

Over the past five years or so, Ethernet has moved increasingly from the office environment into the industrial world – mainly for control and automation applications. But the two environments couldn't differ more: the office environment offers its cabling system a relatively safe harbor and should a signal transmission fault occur, retries are generally acceptable. The industrial world presents a different reality: the cabling system can be integral to a harsh and hazardous environment and yet there's no margin for error since the cables typically carry signals between devices to make events happen on a very exacting schedule.

To ensure successful Ethernet signal transmissions in an industrial environment you need high performance cables designed specifically for the environment. Commercial off-the-shelf (COTS) Cat 5e UTP Ethernet cable just can't stand up. It is quite fragile when compared to an industrial-grade cable, meaning that any number of stresses and challenges encountered in the industrial environment could result in one of the classic failure models: catastrophic failure, intermittent operation, incremental failure and degradation of performance. The result could be a loss of data, process downtime or a drop in the safety level of your operation.

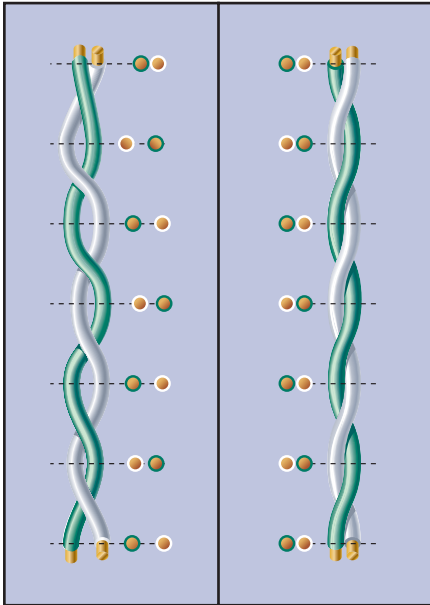
Belden offers a complete range of high quality, high reliability DataTuff® Industrial Ethernet cables that have been designed for industrial use and tested using state-of-the-art testing equipment. Belden DataTuff cables are also field-proven relative to exceptional day-in/day-out performance.

So, you can count on to Belden for the right solution, even if your cabling system is exposed to the following conditions:

- Oil, sunlight and gasoline
- Temperature variations
- Abrasion, crushing and burial
- Presence of EMI/RFI (electromagnetic interference or radio frequency interference)
- MSHA mining approval
- Red jackets designating safety network

**Only DataTuff® Cables with Belden's Patented Bonded-Pair Technology Offer the Benefit of Installable Performance®**

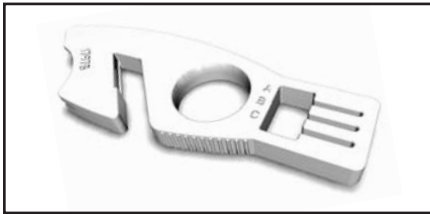
Many versions of DataTuff cables feature Belden's patented Bonded-Pair technology. This construction feature affixes the conductor insulation of the cable pairs along their longitudinal axes to ensure that no performance-robbing gaps can develop between the conductor pairs. Since no gaps can occur, and the conductor-to-conductor spacing, or centricity, is always uniform, the cable offers excellent and consistently reliable electrical performance – even after the cable has been subjected to the bending, pulling and twisting that is inherent in the installation process. Belden calls this unique after-installation performance capability the Installable Performance.



Installed and manipulated nonbonded-pairs (left) have a tendency to gap, varying the centricity of the two conductors. Bonded-Pairs (right) do not gap so the physical integrity of the pair is maintained.

Additionally, when the nonbonded pairs gap, an impedance mismatch occurs. When the transmitted signal encounters this mismatch, portions of the signal are reflected back towards the receiver. This is called return loss, or RL. A cable with poor RL values can significantly impact the performance of an active network, reduce network efficiency and lead to excessive bit error rates.

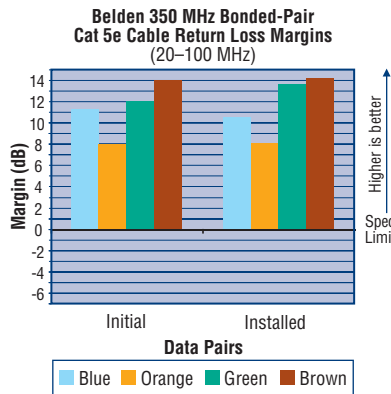
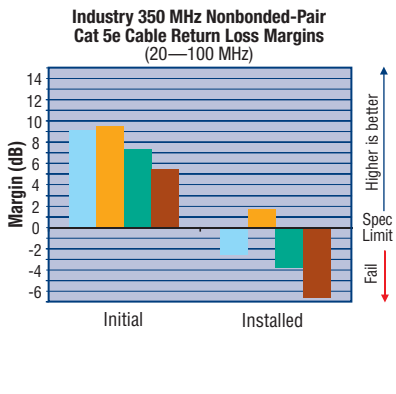
In tests performed by Belden that simulate the effects of the installation process, both an industry-leading 350 MHz Cat 5e cable (a nonbonded-pair cable) and a Belden 350 MHz Cat 5e Bonded-Pair cable were tested right off the reel and then for the sake of comparison, they were subjected to an Installation Stress Test. This Stress Test simulated just some of the stresses that a cable experiences as it is installed (being bent around corners, creating a service loop and being stuffed into an outlet box). The nonbonded-pair cable showed an RL degradation greater than 12 dB – over 15 times worse than its before-installation value. The Bonded-Pair cables showed little change in RL performance.



A cable prep tool is included in each reel of bonded-pair products. The tool is sold separately as 1797B.

**Advanced Technology for Advanced Networks**

Today's advanced networks are diverse and extremely varied. And they are almost always complex. So the right approach is to future-proof these networks and take precautions to protect them from any problems, damage or disruption. This means that you need to match the correct hardware with the right cabling to guarantee ongoing and lasting performance.



In an Installation Stress Test that simulates the installation process, the Cat 5e nonbonded-pair cables (left) showed an RL degradation of more than 12 dB. The bonded-pair cables (right) exhibited little change in RL performance.

Fiber optic cable has become essential for bringing light-speed communication to commercial and industrial environments.

- Tactical Mobile Fiber Cables**  
Belden's Mobile Fiber Cable is movable and versatile in rugged data environments. Its semi-tight buffer technology is designed for rugged field applications and will withstand extreme temperatures and vehicle traffic. Repeated bending is > 500000 times according to IEC 60794-1-2-E6. For indoor use, it has flame retardancy acc. IEC 60332-2.
- Central Loose Tube Cables (CLT)**  
Belden central loose tube cables are designed for either indoor or outdoor applications, including direct burial, duct and outside tray. For better performance, Belden only uses (non-dripping and silicone-free) jelly-filled loose tubes. The central loose tube series has a polyethylene or halogen-free jacket. These cables have been updated with swellable yarn for longitudinal watertightness and weather-resistance. Belden central loose tube cables for industrial applications are available with industrial grade Steel Wire Armor (SWA) as per EN50288-1. Alternatively, they are available with Corrugated Steel Tape (CST) or in a metal-free Fiber Reinforced Plastic armor (FRP) version to protect the whole cable from mechanical damage and rodents.

**Quality You Can Trust**



These Belden products are RoHS compliant, plus they are manufactured to the industry's highest standards of quality, utilizing the most advanced equipment, systems, controls and processes. Belden has long been a pioneer in production processes, such as statistical process control (SPC), that have become industry standards. Belden was the first major designer and manufacturer of cable products to achieve ISO 9000 registration for the majority of its domestic and overseas facilities.

**Belden Quality Means Uptime and Superior Safety Performance**

Today's critical industrial networking applications can't afford data transmission errors that can cause downtime, delays, and even safety concerns. Belden quality gives you the performance and reliability you need on a day-by-day basis.



## Industrial Data Solutions® – Industrial Ethernet Cables

Category 5e DataTuff® Twisted Pair Cables, 2-Pair, Heavy Duty Sunlight- and Oil-Resistant Jackets

De- scription	Part No.	UL NEC / C(UL)/CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			Input Imp. (Ω)	Min. RL dB
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m		
<b>Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Overall Beldfoil® Shield • Rip Cord</b>																			
<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black, Red and Teal)</b>																			
	<b>7932A</b>	NEC: CMR CEC: CMR FT4	1000 2000	305 610	19.0 38.0	8.6 17.3	0.51 mm 24 AWG Solid BC	0.038	0.97	Bonded-Pair Overall Beldfoil® (24 AWG TC)	0.207	5.26	1 4 8 10 16 25 31.25 62.5 100 155 200 250 350	2.0 4.0 5.7 6.4 8.1 10.3 11.6 16.8 21.7 27.7 32.0 36.4 44.3	65.3 56.3 51.8 50.3 47.3 44.3 42.9 38.4 35.3 32.5 30.8 29.3 27.2	63.3 52.3 46.1 43.9 39.1 34.1 31.3 21.6 17.1 4.7 3.0 -	60.8 48.7 42.7 40.8 36.7 32.8 30.9 24.8 20.8 16.9 14.7 12.8 9.9	100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 18 100 ± 20 100 ± 20 100 ± 22	20.0 23.6 25.4 26.0 26.0 25.5 25.0 23.5 22.5 19.0 19.0 18.0 17.0
<p>Rip Cord 2-Pair</p>																			



EtherNet/IP Compliant

Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
610 m put-up available in Black only.

M-12 or RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart below

## Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Overall Beldfoil® Shield • 24 AWG Tinned Copper Drain Wire

<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black, Red and Teal)</b>																			
Shielded	<b>7933A</b>	NEC: CMR CEC: CMR FT4	1000 2000	305 610	32.0 64.8	14.5 29.4	0.51 mm 24 AWG Solid BC	0.038	0.97	Bonded-Pair Overall Beldfoil® + Drain Wire (24 AWG TC)	0.227	5.77	1 4 10 16 31.25 62.5 100 200	2.0 4.1 6.5 8.2 11.7 17.0 22.0 32.4	62.3 53.3 47.3 44.3 39.9 35.4 32.3 27.8	60.3 49.2 40.8 36.1 28.2 18.4 10.3 1.0	60.8 48.7 40.8 36.7 30.9 24.8 20.8 14.7	100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 25	20.0 23.6 26.0 26.0 25.0 23.5 22.5 15.0
<p>2-Pair</p>																			



EtherNet/IP Compliant

Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
610 m put-up available in Black only.

M-12 or RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Shield is bonded to jacket inner wall for electrical stability. Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart below

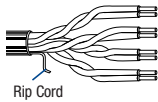
TC = Tinned Copper • BC = Bare Copper • ACR = Attenuation Crosstalk Ratio • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • DCR = DC resistance • \* Subject to length de-rating.

### Color Code

Pair No.	Color
1	White/Blue Stripe, Blue
2	White/Orange Stripe, Orange
3	White/Green Stripe, Green
4	White/Brown Stripe, Brown

## Industrial Data Solutions® – Industrial Ethernet Cables

Category 5e DataTuff® Twisted Pair Cables, 4-Pair, Heavy Duty Sunlight- and Oil-Resistant Jackets

De- scription	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			Input Imp. (Ω)	Min. RL dB
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m		
<b>Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Twisted Pairs • Rip Cord</b>																			
<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black, Red or Teal)</b>																			
 <p>Rip Cord</p> <p>4-Pair</p>	<b>7923A</b>	NEC: CMR CMX-Outdoor CEC: CMR FT4	1000 2000	305 610	28.0 54.0	12.7 24.5	0.51 mm 24 AWG Solid BC	0.038 0.97	Bonded-Pair Unshielded	0.230 5.84	1 4 8 10 16 25 31.25 62.5 100 155 200 250 350	2.0 4.0 5.7 6.4 8.1 10.3 11.6 16.8 21.7 27.7 32.0 36.4 44.3	65.3 56.3 51.8 50.3 47.3 44.3 42.9 38.4 35.3 32.5 30.8 29.3 27.2	68.3 52.3 46.1 43.9 39.1 34.1 31.3 21.6 17.1 4.7 3.0 -	60.8 48.7 42.7 40.8 36.7 32.0 30.9 24.8 20.8 16.9 14.7 12.8 9.9	100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 18 100 ± 20 100 ± 20 100 ± 20	20.0 23.6 25.4 26.0 26.0 25.5 25.0 23.5 22.5 19.0 19.0 18.0 17.0		

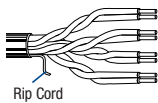
Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
610 m put-up available in Black only.

RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
P-07-KA060003-MSHA\*\*  
Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart page 3



**EtherNet/IP** Compliant

### Enhanced Cat 5e • 24 AWG • Solid 0.5 mm Bare Copper • Rip Cord

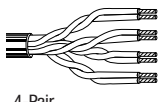
<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black and Blue)</b>																			
 <p>Rip Cord</p> <p>4-Pair</p>	<b>7918A</b>	NEC: CMR CMX-Outdoor CEC: CMR FT4	1000 2000	305 610	28.0 52.0	12.7 23.6	0.51 mm 24 AWG Solid BC	0.037 0.94	Non- Bonded-Pair Unshielded	0.230 5.84	1 4 8 10 16 31.25 62.5 100 200	2.0 4.1 6.5 8.2 11.7 17.0 22.0 32.4	62.3 53.3 47.3 44.3 39.9 35.4 32.3 27.8	60.3 49.2 40.8 36.1 28.2 18.4 10.3 1.0	60.8 48.7 40.8 36.7 30.9 24.8 20.8 14.7	100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 25	20.0 23.0 25.0 25.0 23.6 21.5 20.1 15.0		

Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
610 m put-up available in Black only.

RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e  
Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart page 3



### Enhanced Cat 5e • 24 AWG • Bonded-Pair • Stranded (7x32) 0.6 mm Tinned Copper

<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black, Red or Teal)</b>																			
 <p>Rip Cord</p> <p>4-Pair</p>	<b>7924A</b>	NEC: CMR CMX-Outdoor CEC: CMR FT4	1000 2000	305 610	30.0 58.0	13.6 26.3	0.61 mm 24 AWG (7x32) TC	0.039 0.99	Bonded-Pair Unshielded	0.242 6.15	1 4 8 10 16 25 31.25 62.5 100 155 200 250 350	2.4 4.8 6.8 7.7 9.7 12.4 13.9 20.2 26.0 33.2 38.4 43.7 53.2	65.3 56.3 51.8 50.3 47.3 44.3 42.9 38.4 35.3 32.5 30.8 29.3 27.2	62.9 51.5 45.0 42.6 37.5 31.9 29.0 18.3 9.2 -	60.8 48.7 42.7 40.8 36.7 32.8 30.9 24.8 20.8 16.9 14.7 12.8 9.9	100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 15 100 ± 15 100 ± 15 100 ± 15 100 ± 18 100 ± 20 100 ± 20 100 ± 22	20.0 23.6 25.4 26.0 26.0 25.5 25.0 23.5 22.5 19.0 19.0 18.0 17.0		

Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
610 m put-up available in Black only.

RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151; 5,734,126 and 5,763,823  
Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart page 3



TC = Tinned Copper • BC = Bare Copper • ACR = Attenuation Crosstalk Ratio • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • DCR = DC resistance

\* Subject to length de-rating. \*\* Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.

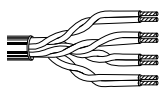


De- scription	Part No.	UL NEC / C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			Input Imp. ( $\Omega$ )	Min. RL dB
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m		

**Cat 5e • 22 AWG • Stranded (7x32) 0.6 mm Bare Copper • Twisted Pairs**

**Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket**

Stranded Flexible	<b>7930A</b>	NEC:	1000	305	29.0	13.2	0.64 mm 22 AWG (7x32) BC	0.048	1.22	Bonded-Pair Unshielded	0.240	6.09	1	2.5	62.3	59.8	60.8	100 ± 15	20.0
		CMR	2000	610	56.0	25.4							4	4.9	53.5	48.4	48.7	100 ± 15	23.0
		CMX- Outdoor											10	7.8	47.3	39.5	40.8	100 ± 15	25.0
		CEC:											16	9.9	44.3	34.4	36.7	100 ± 15	25.0
		CMR FT4											31.25	14.1	39.9	25.8	30.9	100 ± 15	23.6
													62.5	20.4	35.4	15.0	24.8	100 ± 15	21.5
													100	26.4	32.3	5.9	20.8	100 ± 15	20.1
					200	38.9	27.8	-	14.7	100 ± 25	15.0								



4-Pair

Cable passes -25°C Cold Bend per UL1581  
Installation Temperature: -10°C to +75°C  
Operating Temperature: -25°C to +75°C\*

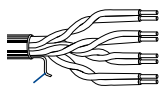
RJ45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e  
Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart page 3



**Enhanced Cat 5e • 22 AWG • Bonded-Pair • Solid 0.6 mm Bare Copper • Rip Cord**

**Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket**

PLTC	<b>7922A</b>	NEC:	1000	305	46.3	21.0	0.64 mm 22 AWG Solid BC	0.048	1.22	Bonded-Pair Unshielded	0.301	7.65	1	2.0	65.3	63.3	60.8	100 ± 12	20.0
		PLTC	2000	610	92.6	42.0							4	4.0	56.3	52.3	48.7	100 ± 12	23.0
		CMR											8	5.7	51.8	46.1	42.7	100 ± 12	24.5
		CMX- Outdoor											10	6.4	50.3	43.9	40.8	100 ± 12	25.0
		CEC:											16	8.1	47.3	39.1	36.7	100 ± 12	25.0
		CMR FT4											25	10.3	44.3	34.1	32.8	100 ± 15	24.3
													31.25	11.6	42.9	31.3	30.9	100 ± 15	23.6
					62.5	16.8	38.4	21.6	24.8	100 ± 15	21.5								
					100	21.7	35.3	17.1	20.8	100 ± 15	20.1								
					155	27.7	32.5	4.7	16.9	100 ± 18	19.0								
					200	32.0	30.8	3.0	14.7	100 ± 20	19.0								
					250	36.4	29.3	-	12.8	100 ± 20	18.0								
					350	44.3	27.2	-	9.9	100 ± 22	17.0								



4-Pair

Cable passes -25°C Cold Bend per UL1581  
Installation Temperature: -10°C to +75°C  
Operating Temperature: -25°C to +75°C\*

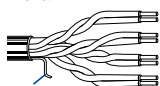
Third party verified to TIA/EIA-568-B.2, Category 5e  
U.S. Patents 5,606,151 and 5,734,126  
Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart page 3



**Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Rip Cord**

**Polyolefin Insulation • Waterblocked • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket**

Halogen-free Waterblocked Burial	<b>7934A</b>	-	1000	305	25.0	11.4	0.51 mm 24 AWG Solid BC	0.038	0.97	Bonded-Pair Unshielded	0.230	5.84	1	2.0	62.3	60.0	60.8	100 ± 15	20.0
			4	4.1	53.3	49.0							48.7	100 ± 15	23.6				
			8	5.8	48.8	43.0							42.7	100 ± 15	25.4				
			10	6.5	47.3	41.0							40.8	100 ± 15	26.0				
			16	8.2	44.3	36.0							36.7	100 ± 15	26.0				
			20	9.3	42.8	33.5							34.7	100 ± 15	26.0				
			25	10.4	41.3	30.9							32.8	100 ± 15	25.5				
	31.25	11.7	39.9	28.0	30.9	100 ± 15	25.0												
	62.5	17.0	35.4	19.0	24.8	100 ± 15	23.5												
	100	22.0	32.3	11.0	20.8	100 ± 15	22.5												
	155	28.1	29.5	1.4	16.9	100 ± 25	15.8												
	200	32.0	27.8	1.0	14.7	100 ± 25	15.0												



4-Pair

Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
Waterblocked per Telcordia, IEC and ICEA

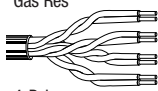

RJ45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Jacket sequentially marked at 0.9 m intervals.  
Color Code: see chart page 3



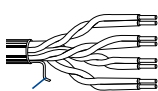

BC = Bare Copper • ACR = Attenuation Crosstalk Ratio • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • DCR = DC resistance  
\* Subject to length de-rating.

## Industrial Data Solutions® – Industrial Ethernet Cables

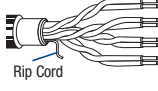

Category 5e DataTuff® Twisted Pair Cables, 4-Pair, Heavy Duty Sunlight- and Oil-Resistant Jackets

De- scription	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			Input Imp. (Ω)	Min. RL dB
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m		
<b>Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper</b>																			
<b>Plenum • FEP Insulation • Sunlight-, Oil- and Gas-Resistant Black FEP Jacket</b>																			
Compliant	<b>7928A</b>	NEC: Limited	1000	305	24.0	10.9	0.51 mm	0.036	0.91	Bonded-Pair	0.187	4.57	1	2.0	65.3	63.3	60.8	100 ± 12	20.0
High & Low Temp		CEC: Combustible					24 AWG			Unshielded			4	4.0	56.3	52.3	48.7	100 ± 12	23.6
Oil Res I & II		FHC 25/50					Solid BC						10	6.4	50.3	43.9	40.8	100 ± 12	26.0
Gas Res		CMP											16	8.1	47.3	39.1	36.7	100 ± 12	26.0
		CMP FT6											31.25	11.6	42.9	31.3	30.9	100 ± 15	25.0
													62.5	16.8	38.4	21.6	24.8	100 ± 15	23.5
													100	21.7	35.3	17.1	20.8	100 ± 15	22.5
													350	44.3	27.2	-	9.9	100 ± 22	17.0
 <p>4-Pair</p> <p>Cable passes -70°C Cold Bend per UL1581 Installation Temperature: -55°C to +150°C Operating Temperature: -70°C to +150°C*</p> <p>RJ-45 Compatible Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 Jacket sequentially marked at 0.6 m intervals. Color Code: see chart page 3</p>																			
 <p><b>EtherNet/IP</b> Compliant</p>																			

### Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Rip Cord

<b>Polyolefin Insulation • Industrial Grade Sunlight-Resistant Black LSNH Jacket</b>																			
LSNH	<b>7935A</b>	NEC: CM	1000	305	24.0	10.9	0.51 mm	0.039	0.97	Bonded-Pair	0.230	5.84	1	2.0	65.3	63.3	60.8	100 ± 12	20.0
		CEC: CMR FT1	2000	610	44.0	20.0	24 AWG			Unshielded			4	4.0	56.3	52.3	48.7	100 ± 12	23.0
							Solid BC						8	5.7	51.8	46.1	42.7	100 ± 12	25.0
													10	6.4	50.3	43.9	40.8	100 ± 12	26.0
													16	8.1	47.3	39.1	36.7	100 ± 12	26.0
													25	10.3	44.3	34.1	32.8	100 ± 15	25.0
													31.25	11.6	42.9	31.3	30.9	100 ± 15	25.0
													62.5	16.8	38.4	21.6	24.8	100 ± 15	23.0
													100	21.7	35.3	17.1	20.8	100 ± 15	22.0
													155	27.7	32.5	4.7	16.9	100 ± 18	19.0
													200	32.0	30.8	3.0	14.7	100 ± 20	19.0
													250	36.4	29.3	-	12.8	100 ± 20	18.0
													350	44.3	27.2	-	9.9	100 ± 22	17.0
 <p>4-Pair</p> <p>Installation Temperature: +5°C to +75°C Operating Temperature: -10°C to +75°C*</p> <p>RJ-45 Compatible • Jacket sequentially marked at 0.6 m intervals. Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 Color Code: see chart page 3</p>																			
 <p><b>EtherNet/IP</b> Compliant</p>																			

### Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Rip Cord

<b>Polyolefin Insulation • PVC Inner Jacket • Industrial Grade PVC Outer Jacket (Black, Grey, Red, Teal or Blue)</b>																			
Upjacketed	<b>11700A</b>	NEC: CMR	1000	305	39.0	17.7	0.51 mm	0.038	0.97	Bonded-Pair	0.285	7.24	1	2.0	65.3	68.3	60.8	100 ± 12	20.0
		CEC: CMX-Outdoor	3000	914	117.3	53.2	24 AWG			Unshielded			4	4.0	56.3	52.3	48.7	100 ± 12	23.6
		CMR FT4					Solid BC						8	5.7	51.8	46.1	42.7	100 ± 12	25.4
													10	6.4	50.3	43.9	40.8	100 ± 12	26.0
													16	8.1	47.3	39.1	36.7	100 ± 12	26.0
													25	10.3	44.3	34.1	32.8	100 ± 15	25.5
													31.25	11.6	42.9	31.3	30.9	100 ± 15	25.0
													62.5	16.8	38.4	21.6	24.8	100 ± 15	23.5
													100	21.7	35.3	17.1	20.8	100 ± 15	22.5
													155	27.7	32.5	4.7	16.9	100 ± 18	19.0
													200	32.0	30.8	3.0	14.7	100 ± 20	19.0
													250	36.4	29.3	-	12.8	100 ± 20	18.0
													350	44.3	27.2	-	9.9	100 ± 22	17.0
 <p>4-Pair</p> <p>Cable passes -40°C Cold Bend per UL1581 Installation Temperature: -25°C to +75°C Operating Temperature: -40°C to +75°C* 914 m put-up available in Black only.</p> <p>RJ-45 Compatible Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 P-07-KA060005-MSHA** Outer jacket is sunlight- and oil-resistant. Jacket sequentially marked at 0.6 m intervals. Color Code: see chart page 3</p>																			
 <p><b>EtherNet/IP</b> Compliant</p>																			

BC = Bare Copper • ACR = Attenuation Crosstalk Ratio • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • DCR = DC resistance • \* Subject to length de-rating. • \*\* Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.



De- scrip- tion	Part No.	UL NEC / C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			Input Imp. (Ω)	Min. RL dB
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m		

**Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Rip Cord**

<b>Polyolefin Insulation • PVC Inner Jacket • Industrial Grade PVC Outer Jacket (Black, Grey, Red, Teal or Blue)</b>																					
<p>Rip Cord</p> <p>4-Pair</p>	Oil Res I & II Upjacketed	<b>11700A2</b>	NEC: CMR CEC: CMR FT4	1000 2000	305 610	39.0 86.0	17.7 39.1	0.51 mm 24 AWG Solid BC	0.038	0.97	Bonded-Pair Unshielded	0.285 0.200	7.24 5.08	1 8 10 16 25	2.0 5.7 6.4 8.1 10.3	65.3 51.8 50.3 47.3 44.3	68.3 46.1 43.9 39.1 32.8	60.8 42.7 40.8 36.7 32.8	100 ± 12 100 ± 12 100 ± 12 100 ± 12 100 ± 15	20.0 23.6 26.0 26.0 25.5	
														31.25	11.6	42.9	31.3	30.9	100 ± 15	25.0	
															62.5	16.8	38.4	21.6	24.8	100 ± 15	23.5
															100	21.7	35.3	17.1	20.8	100 ± 15	22.5
															155	27.7	32.5	4.7	16.9	100 ± 18	19.0
															200	32.0	30.8	3.0	14.7	100 ± 20	19.0
															250	36.4	29.3	-	12.8	100 ± 20	18.0
															350	44.3	27.2	-	9.9	100 ± 22	17.0

Cable passes -10°C Cold Bend per UL1581  
Installation Temperature: +5°C to +75°C  
Operating Temperature: -10°C to +75°C\*  
610 m put-up available in Black only.

RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Jacket sequentially marked at 0.6 m intervals.  
Outer jacket is sunlight-resistant. • Color Code: see chart page 3

**Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Polyester Wrap • Rip Cord**

<b>Polyolefin Insulation • PVC Inner Jacket • Interlocked AL Armor • Industrial Grade PVC Outer Jacket (Black or Grey)</b>																					
<p>Rip Cord</p> <p>4-Pair CMG</p>	Interlocked AL Armor	<b>121700A</b>	NEC: CM CEC: HL CMG FT4	1000 3000	305 914	158.7 464.3	72.0 210.6	0.51 mm 24 AWG Solid BC	0.038	0.97	Bonded-Pair Unshielded	0.530	13.46							see above	

Cable passes -40°C Cold Bend per UL1581  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
914 m put-up available in Black only.

RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Verified to TIA/EIA-568-B.2, Category 5e  
Outer jacket is sunlight- and oil-resistant. Jacket sequentially marked at 1 m intervals.  
Color Code: see chart page 3

**Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Polyester Wrap • Rip Cord**

<b>Polyolefin Insulation • PVC Inner Jacket • Interlocked AL Armor • Industrial Grade PVC Outer Jacket (Black or Blue)</b>																					
<p>Rip Cord</p> <p>4-Pair CMG</p>	Interlocked AL Armor	<b>121700R</b>	NEC: CM CEC: HL CMG FT4	1000 3000 5000	305 914 1524	158.7 464.3 690.0	72.0 210.6 313.0	0.51 mm 24 AWG Solid BC	0.038	0.97	Bonded-Pair Unshielded	0.530	13.46							see above	

-40°C Cold Impact  
Installation Temperature: -25°C to +75°C  
Operating Temperature: -40°C to +75°C\*  
914 m and 1524 m put-ups are available in Black only.

RJ-45 Compatible  
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Verified to TIA/EIA-568-B.2, Category 5e  
Outer jacket is sunlight- and oil-resistant. Jacket sequentially marked at 1 m intervals.  
Color Code: see chart page 3

**Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Overall Beldfoil® Shield • 24 AWG Tinned Copper Drain Wire**

<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket (Black and Blue)</b>																					
<p>Rip Cord</p> <p>4-Pair</p>	Shielded	<b>7929A</b>	NEC: CMR CMX-Outdoor CEC: CMR FT4	1000 2000	305 610	37.0 72.1	16.8 32.7	0.51 mm 24 AWG Solid BC	0.045	1.14	Bonded-Pair Overall Beldfoil® + Drain Wire (24 AWG TC)	0.265	6.73	1 4 10 16	2.0 4.1 6.5 8.2	62.3 53.3 47.3 44.3	60.3 49.2 40.8 36.1	60.8 48.7 40.8 36.7	100 ± 15 100 ± 15 100 ± 15 100 ± 15	20.0 23.0 25.0 25.0	

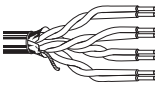
RJ-45 Compatible, -25°C Cold Bend  
610 m put-up available in Black only.

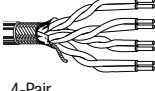
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126  
Shield is bonded to jacket inner wall for electrical stability. Jacket sequentially marked at 0.6 m intervals.  
Color Code: see chart page 3


TC = Tinned Copper • BC = Bare Copper • ACR = Attenuation Crosstalk Ratio • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • DCR = DC resistance • \* Subject to length de-rating.


## Industrial Data Solutions® – Industrial Ethernet Cables

Category 5e DataTuff® Twisted Pair Cables, 4-Pair, Heavy Duty Sunlight- and Oil-Resistant Jackets

De- scription	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths		Standard Unit Weight		Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD		Shielding Material Nom. DCR	Nominal OD		Freq. MHz	Max. Atten. dB/100m	Min. PSUM			Input Imp. (Ω)	Min. RL dB					
			ft.	m	lbs.	kg		inch	mm		inch	mm			NEXT dB	ACR dB/100m	ELFEXT dB/100m							
<b>Enhanced Cat 5e • 24 AWG • Solid 0.5 mm Bare Copper • Overall Beldfoil® Shield • 24 AWG Tinned Copper Drain Wire</b>																								
<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket</b>																								
Shielded  4-Pair	<b>7919A</b>	NEC:	1000	305	35.1	15.9	0.51 mm 24 AWG Solid BC	0.042	1.07	Non- Bonded-Pair Overall Beldfoil® + Drain Wire (24 AWG TC)	0.265	6.73	1	2.0	62.3	60.3	60.8	100 ± 15	20.0					
		CMR	2000	610	68.1	30.9									4	4.1	53.3	49.2	48.7	100 ± 15	23.0			
		CEC:																						
		CMR FT4																						
Cable passes -40°C Cold Bend per UL1581 Installation Temperature: -25°C to +75°C Operating Temperature: -40°C to +75°C* 610 m put-up available in Black only.								RJ-45 Compatible Third party verified to TIA/EIA-568-B.2, Category 5e • P-07-KA060004-MSHA** Shield is bonded to jacket inner wall for electrical stability. Jacket sequentially marked at 0.6 m intervals. Color Code: see chart page 3																

<b>Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm BC • Overall Beldfoil® Shield + 70% TC Braid • 24 AWG Spiral Drain Wire</b>																								
<b>Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket (Black, Red, Blue and Teal)</b>																								
Heavy Shielded  4-Pair	<b>7921A</b>	NEC:	1000	305	54.9	24.9	0.51 mm 24 AWG Solid BC	0.047	1.19	Bonded-Pair Overall Beldfoil® + Overall 70% TC Braid + Drain Wire (24 AWG TC)	0.330	8.38	1	2.0	62.3	60.3	60.8	100 ± 15	20.0					
		CMR	2000	610	106.0	48.1									4	4.1	53.3	49.2	48.7	100 ± 15	23.6			
		CEC:																						
		CMR FT4																						
-25°C Cold Bend 610 m put-up available in Black only.								Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 Jacket sequentially marked at 0.6 m intervals. Color Code: see chart page 3																

<b>Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Overall Beldfoil® Shield • 24 AWG Tinned Copper Drain Wire</b>																								
<b>Polyolefin Insulation • Industrial Grade Sunlight-Resistant Black LSNH PVC Jacket</b>																								
Shielded LSNH  4-Pair	<b>7936A</b>	NEC:	1000	305	39.0	17.7	0.51 mm 24 AWG Solid BC	0.045	1.14	Bonded-Pair Overall Beldfoil® + Drain Wire (24 AWG TC)	0.265	6.73	1	2.0	62.3	60.3	60.8	100 ± 15	20.0					
		CMR	2000	610	76.0	34.5									4	4.1	53.3	49.2	48.7	100 ± 15	23.0			
		CEC:																						
		CMR FT4																						
Installation Temperature: +5°C to +75°C Operating Temperature: -10°C to +75°C* RJ-45 Compatible								Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126 Shield is bonded to jacket inner wall for electrical stability. Jacket sequentially marked at 0.6 m intervals. Color Code: see chart page 3																
<b>EtherNet/IP Compliant</b>																								

<b>Enhanced Cat 5e • 24 AWG • Bonded-Pair • Solid 0.5 mm Bare Copper • Overall Beldfoil® Shield • 24 AWG Tinned Copper Drain Wire</b>																													
<b>Polyolefin Insulation • Waterblocked • PE Inner Jacket • Sunlight- and Oil-Resistant Black PE Outer Jacket</b>																													
Halogen-free Shielded Waterblocked Burial  4-Pair	<b>7937A</b>	NEC:	1000	305	38.0	17.2	0.51 mm 24 AWG Solid BC	0.045	1.14	Bonded-Pair Overall Beldfoil® + Drain Wire (24 AWG TC)	0.276	7.01	1	2.0	62.3	60.3	60.8	100 ± 15	20.0										
		CMR	2000	610	76.0	34.5									4	4.1	53.3	49.2	48.7	100 ± 15	23.0								
		CEC:																											
Cable passes -40°C Cold Bend per UL1581 Installation Temperature: -25°C to +75°C Operating Temperature: -40°C to +75°C* Waterblocked per Telcordia, IEC and ICEA								RJ-45 Compatible U.S. Patents 5,606,151 and 5,734,126 Jacket sequentially marked at 0.6 m intervals. Color Code: see chart page 3																					

TC = Tinned Copper • BC = Bare Copper • ACR = Attenuation Crosstalk Ratio • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • DCR = DC resistance • \* Subject to length de-rating. • \*\* Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.



## DataTuff® Industrial Ethernet Cable Selection Guide

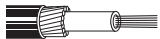
Part No.	Pulling Tension	Shielding		Conductor		Installation Stress Resistance†	Environmental Issues		Industrial Grade Jacket						
		Un-shielded	Shielded*	Solid	Stranded** Flexibility		Oil Resistance	UV Sun-light Resistance	Gasoline Resistance	HI/LO Temp	Heavy	Upjacket	Armored	PVC	LSHN / FRNC
<b>Category 5e</b>															
BEB1212	–	●		●		●	●	●				●			●
BEB3212	–		●	●		●	●	●				●			●
7923A	40	●		●		●	●	●				●			●
7929A	35		●	●		●	●	●				●			●
7921A	75		●	●		●	●	●				●			●
11700A	40	●		●		●	●	●			●				●
121700A	40	●		●		●	●	●					●		●
7924A	40	●			●	●	●	●				●			●
7928A	40	●		●		●	●	●	●	●		●			●
7918A	35	●		●		●	●	●				●			●
7919A	25		●	●		●	●	●				●			●
<b>Category 6</b>															
7927A	45	●		●		●	●	●				●			●
7931A	40	●		●		●	●	●	●	●		●			●
11872A	45	●		●		●	●	●				●			●
121872A	45	●		●		●	●	●					●		●

\* Shielded products are recommended for high-noise environments.  
 \*\* Stranded products are recommended where more flexibility is needed.  
 † Products with bonded-pair technology provide Installable Performance™ advantages.

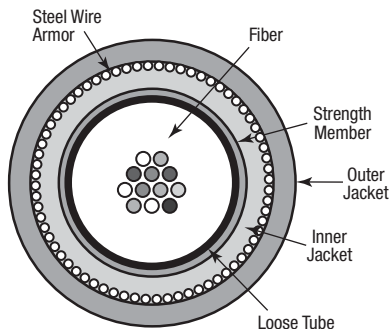
## Central Loose Tube Cables

Outdoor – Steel Wire Armor (SWA), Full Rodent Protection

De-scription	Part No.	No. of Fibers	Standard Lengths		Standard Unit Weight		Fiber Size $\mu\text{m}$	Nom. Buffer / Tube OD		Strength Members	Nominal OD		Central Element mm	Pulling Tension N	Crush Resistance kN/m	Energy kJ/m	Bending radii cable (mm)	
			ft.	m	lbs.	kg		inch	mm		inch	mm					static	dyna-mic
<b>GOWA • Loose Tube (Jelly-Filled, Non-Dripping and Silicone-Free) • Longitudinal Watertightness • SWA • A-DQ(ZN)2YB2Y (R0.63vzk)</b>																		
<b>Dry Construction • Double Black PE Jacket</b>																		
-30/70°C			6888	2100	1263.8	561.0	$\emptyset 250 \pm 15$	0.16	4.0	Longitudinal watertightness Swellable Glass Yarn	0.421	10.7	no	6500	50	–	130	260



GOWAx04 4  
 GOWAx08 8  
 GOWAx12 12



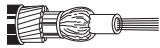
Color Code: see page 11



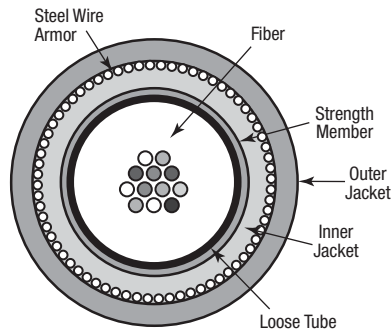
## Central Loose Tube Cables

Universal – Indoor/Outdoor, Steel Wire Armor (SWA), Full Rodent Protection

De- scrip- tion	Part No.	No. of Fibers	Standard Lengths		Standard Unit Weight		Fiber Size µm	Nom. Buffer/ Tube OD		Strength Members	Nominal OD		Central Element mm	Pulling Tension N	Crush Re- sistance kN/m	Energy kJ/m	Bending radii cable (mm)	
			ft.	m	lbs.	kg		inch	mm		inch	mm					static	dyna- mic
<b>GUWA • Loose Tube (Jelly-Filled, Non-Dripping and Silicone-Free) • Longitudinal Watertightness • SWA • A/I-DQ(ZN)HBH (R0.63vzk)</b>																		
<b>Dry Construction • Double Black FRNC/LSNH Jacket</b>																		
-30/70°C			6888	2100	1263.8	561.0	Ø 250 ± 15	0.16	4.0	Longitudinal watertightness Swellable Glass Yarn	0.421	10.7	no	6500	50	-	130	260



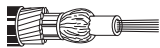
GUWAx04 4  
GUWAx08 8  
GUWAx12 12



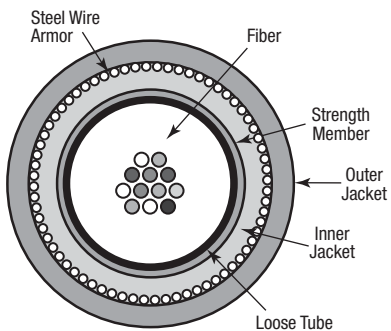
Color Code: see page 11

## GUWB • Loose Tube (Jelly-Filled, Non-Dripping and Silicone-Free) • Longitudinal Watertightness • SWA • A/I-DQ(ZN)HBH (R0.63vzk)

<b>Dry Construction • Double Black FRNC/LSNH Jacket</b>																		
-30/70°C			6888	2100	1263.8	561.0	Ø 250 ± 15	0.16	4.0	Longitudinal watertightness Swellable Glass Yarn	0.51	13.0	no	6500	50	-	130	260



GUWBx02 2  
GUWBx04 4  
GUWBx06 6  
GUWBx08 8  
GUWBx12 12  
GUWBx16 16  
GUWBx24 24



Color Code: see page 11

### Central Loose Tube Cables\*

Fiber No.	Color
1	Red
2	Green
3	Blue
4	Yellow
5	White
6	Grey
7	Brown
8	Violet

Fiber No.	Color
9	Turquoise
10	Black
11	Orange
12	Pink
13	Red/Black
14	Green/Black
15	Blue/Black
16	Yellow/Black

Fiber No.	Color
17	White/Black
18	Grey/Black
19	Brown/Black
20	Violet/Black
21	Turquoise/Black
22	Natural/Black
23	Orange/Black
24	Pink/Black

\* fiber color code according to IEC 60304; different color coding available on request

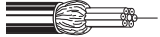
## Tactical Mobile Fiber

De- scription	Part No.	No. of Fibers	Standard Lengths		Standard Unit Weight		Fiber Size µm	Nom. Buffer/ Tube OD		Strength Members	Nominal OD		Central Element mm	Pulling Tension N	Crush Re- sistance kN/m	Energy kJ/m	Bending Radii Cable (mm)	
			ft.	m	lbs.	kg		inch	mm		inch	mm					static	dyna- mic

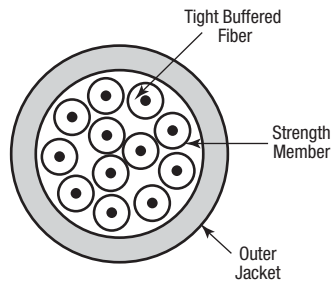
**GMMT • Intex Mobile • Tight Buffer • Designed for Despooling and Respooling • A/I-VQ(ZN)H**

**Dry Construction • PUR Jacket** (Orange or Black)

70°C	6888	2100	Ø 280 ± 15		Longitudinal watertightness Swellable Reinforced Yarn		no	
------	------	------	------------	--	--	--	----	--



<b>GMMT</b> x04	4		143.5	65.1			0.23	5.8	800	4	580	58	87
<b>GMMT</b> x06	6		175.9	79.8			0.25	6.3	950	4	725	63	95
<b>GMMT</b> x08	8		217.6	98.7			0.28	7.0	1100	4	890	70	105



Color Code: see page 11

## Optical Characteristics

European Part Number Coding (position 5)	Fiber-Type	Core/Cladding Diameter (µm)	Wavelength (nm)	Bandwidth (MHz • km)	Ethernet Per- formance (m)		Numerical Aperture (µm)	Refractive Index	Attenuation	
					1GbE	10GbE			Loose Tube Cables average/max. (dB/km)	(Semi-) Tight average/max. (dB/km)
<b>Characteristics (Cabled) Multimode – Graded-Index Optical Fibers According to IEC 60793</b>										
<b>1</b>	62.5/125 OM1	62.5 ± 2.5 125 ± 1	850	≤ 200	275	33	0.275 ± 0.015	1.495	2.7/3.2	3.0/3.2
			1300	≤ 600	550	N.A.				
<b>5</b>	50.0/125 OM2	50.0 ± 2.5 125 ± 1	850	≤ 500	600	82	0.200 ± 0.015	1.481	2.4/3.0	2.6/2.8
			1300	≤ 500	600	N.A.				
<b>2</b>	50.0/125 OM2	50.0 ± 2.5 125 ± 1	850	≤ 600	600	82	0.200 ± 0.015	1.481	2.3/2.8	2.6/2.8
			1300	≤ 1200	600	N.A.				
<b>4</b>	50.0/125 OM2e	50.0 ± 2.5 125 ± 1	850	≤ 600	750	110	0.200 ± 0.015	1.481	2.3/2.8	2.6/2.8
			1300	≤ 1200	2000	N.A.				
<b>3</b>	50.0/125 OM3	50.0 ± 2.5 125 ± 1	850	≤ 1500	900	300	0.200 ± 0.015	1.482	2.5/3.0	2.6/2.8
			1300	≤ 500	550	N.A.				
<b>6</b>	50.0/125 OM3+	50.0 ± 2.5 125 ± 1	850	≤ 3500	900	550	0.200 ± 0.015	1.482	2.5/3.0	2.6/2.8
			1300	≤ 500	550	N.A.				