

Industrial Data Solutions® — Industrial Ethernet

DataTuff® Twisted Pair and TrayOptic® Fiber Optic Cables Overview

The reliability of your industrial Ethernet network depends on the cable infrastructure. Data transmission errors can lead to interruptions in critical control functions resulting in lost production time and even safety issues. Belden's family of industrial Ethernet cables is designed to withstand the rigors of industrial environments. Whether it's exposure to oil and sunlight, temperature variation, abrasion and crushing, or the presence of electromagnetic interference (EMI) or radio frequency interference (RFI), turn to Belden for the solution.

Belden offers an extensive line of high performance cables in both copper constructions with DataTuff cables as well as fiber optic designs with TrayOptic cables.

Performance Assurance from Blue Hose® to Industrial Ethernet

To assist you in achieving optimum network performance, Belden has built

quality and reliability into each cable it manufactures. Decades of leadership and experience in supplying reliable high-end cable solutions, such as Blue Hose®, to industrial networks and control systems are combined to give you industrial Ethernet cables that perform to maximum network capability.

Our dedication to quality manufacturing practices and processes assures consistent products of uncompromising quality.

Installable Performance® with Patented Bonded-Pair Technology

Belden's Bonded-Pair versions of DataTuff cables are unique in the industry to give you an Installable Performance advantage. This patented design yields superior electrical performance even after the effects and stresses of pulling, twisting and bending during typical installations.

This performance advantage is achieved by bonding the individual insulated conductors along their longitudinal axes, resulting in uniform conductor-to-conductor spacing and the elimination of gaps between conductors that can occur during installation. This is a critical construction feature because non-uniform conductor spacing and gaps change the physical characteristics of the cable such that the electrical performance of the cable suffers. Only Bonded-Pair cables deliver the electrical integrity you demand.

TrayOptic Cables

Belden® TrayOptic cables are a line of indoor/outdoor fiber optic cables designed to meet the demanding requirements of industrial applications. When the installation demands the combination of sophisticated fiber optic technology and rugged durability, turn to Belden.

DataTuff® Industrial Ethernet Cable Selection Guide

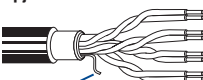
Part No.	No. of Pairs	Shielding		Conductor		Installation		Environmental Issues						Industrial Grade Jacket		
		Unshielded	Shielded *	Solid	Stranded **	Installation Stress Resistance†	Pull Tension	Oil Resistance	UV Sunlight Resistance	CMX/ Outdoor	Underground (burial)	Gasoline Resistance	Hi/Lo Temp	Heavy	Upjacket	Armored
Category 5e Cable																
7932A EtherNet/IP	2	●		●		●	20	●	●					●		
7933A EtherNet/IP	2		●	●		●	20	●	●					●		
7923A EtherNet/IP	4	●		●		●	40	●	●	●				●		
7918A	4	●		●			35	●	●	●				●		
7924A	4	●			●	●	40	●	●	●				●		
7930A	4	●			●		25	●	●	●				●		
7922A PLTC	4	●		●		●	40	●	●	●				●		
7934A EtherNet/IP	4	●		●		●	40		●		●			●		
7928A EtherNet/IP	4	●		●		●	40	●	●			●	●	●		
11700A EtherNet/IP	4	●		●		●	40	●	●	●					●	
11700A2 Oil Res I&II	4	●		●		●	40	●	●						●	
121700A	4	●		●		●	40	●	●							●
121700R	4	●		●		●	40	●	●							●
7929A	4		●	●		●	35	●	●	●				●		
7919A	4		●	●			25	●	●	●				●		
7921A EtherNet/IP	4		●	●		●	75	●	●	●				●		
Category 6 Cable																
7927A	4	●		●		●	45	●	●					●		
7931A	4	●		●		●	40	●	●			●	●	●		
11872A	4	●		●		●	45								●	
121872A	4	●		●		●	45	●	●							●

*Shielded products are recommended for high-noise environments. **Stranded products are recommended where more flexibility is needed.

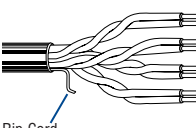
†Products with Bonded-Pair technology provide Installable Performance® advantages — refer to Belden's Bonded-Pair Cable Bulletin #BP02

EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc.

Industrial Data Solutions® — Industrial EthernetCategory 5e DataTuff® Twisted Pair Cables, 2-Pair and 4-Pair
Heavy-Duty Sunlight and Oil-Resistant Jackets

Description	Part No.	UL NEC/ (UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm							
Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Rip Cord • See Color Codes below																
Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red or Teal)																
EtherNet/IP Compliant 	7932A new	NEC: CMR CEC: CMR FT4	2	1000	304.8	19.0	8.61	.207	5.26	1	2.0	65.3	63.3	60.8	100±12	20.0
				2000 ▲	609.6	38.0	17.24			4	4.0	56.3	52.3	48.7	100±12	23.6
										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
▲2000 ft. put-up available in Black only. • M-12 or RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals																
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°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																
EtherNet/IP Compliant 	7923A	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	28.0	12.7	.230	5.84	1	2.0	65.3	63.3	60.8	100±12	20.0
				2000 ▲	609.6	54.0	24.5			4	4.0	56.3	52.3	48.7	100±12	23.6
										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
▲2000 ft. put-up available in Black only. • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals																
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°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 • P-07-KA060003-MSHA*																
Polyolefin Insulation • Waterblocked Sunlight- and Oil-resistant Black Polyethylene Jacket																
EtherNet/IP Compliant Halogen-Free Burial 	7934A new	—	4	1000	304.8	25.0	11.34	.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
RJ-45 Compatible • Jacket sequentially marked at 3 ft. intervals																
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°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 • Waterblocked per Telcordia, IEC and ICEA																
Plenum • FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																
EtherNet/IP Compliant High & Low Temp Oil Res I & II Gas Res 	7928A	NEC: Limited Combustible FHC 25/50 CMP CEC: CMP FT6	4	1000	304.8	24.0	10.9	.187	4.75	1	2.0	65.3	63.3	60.8	100±12	20.0
										4	4.0	56.3	52.3	48.7	100±12	23.6
										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
RJ-45 Compatible																
Cable passes -70°C Cold Bend per UL1581 • Installation Temperature: -55°C to +150°C • Operating Temperature: -70°C to +150°C**																
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126																
Polyolefin Insulation • PVC Inner Jacket • .035" Industrial Grade PVC Outer Jacket (Black, Gray, Red, Teal or Blue)																
EtherNet/IP Compliant Upjacketed 	11700A	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	39.0	17.7	.285	7.24	1	2.0	65.3	63.3	60.8	100±12	20.0
				3000 †	914.4	117.0	53.2			4	4.0	56.3	52.3	48.7	100±12	23.6
										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
†3000 ft. put-up available in Black only. • Outer jacket is sunlight- and oil-resistant. • Jacket sequentially marked at 2 ft. intervals																
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°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 • P-07-KA060005-MSHA*																
Oil Res I & II Upjacketed 	11700A2 new	NEC: CMR CEC: CMR FT4	4	1000 ††	304.8	42.0	19.1	.285	7.24	1	2.0	65.3	63.3	60.8	100±12	20.0
				2000 ††	609.6	86.0	39.1			4	4.0	56.3	52.3	48.7	100±12	23.0
										8	5.7	51.8	46.1	42.7	100±12	24.5
										10	6.4	50.3	43.9	40.8	100±12	25.0
										16	8.1	47.3	39.1	36.7	100±12	25.0
										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
††1000 ft. put-up available in Black or Blue only, 2000 ft. put-up in Black only. • RJ-45 Compatible • Outer jacket is sunlight resistant.																
Cable passes -10°C Cold Bend per UL1581 • Installation Temperature: +5°C to +75°C • Operating Temperature: -10°C to +75°C**																
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126																

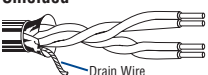
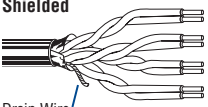
Industrial Data Solutions® — Industrial EthernetCategory 5e DataTuff® Twisted Pair Cables, 2-Pair and 4-Pair
Heavy-Duty Sunlight and Oil-Resistant Jackets

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm							
Enhanced Cat 5e • 22 AWG Bonded-Pairs Solid Bare Copper Conductors • Rip Cord • See Color Code Chart (below)																
Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																
 Rip Cord	7922A new	NEC:	4	1000	304.8	46.3	21.0	.301	7.65	1	2.0	65.3	63.3	60.8	100±12	20.0
		PLTC,		2000	609.6	92.5	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-								10	6.4	50.3	43.9	40.8	100±12	25.0
		Outdoor								16	8.1	47.3	39.1	36.7	100±12	25.0
		CEC:								25	10.3	44.3	34.1	32.8	100±15	24.3
		CMR FT4								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
Cable passes -25°C Cold Bend per UL1581 • Installation Temperature: -10°C to +75°C • Operating Temperature: -25°C to +75°C**										250	36.4	29.3	—	12.8	100±20	18.0
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126										350	44.3	27.2	—	9.9	100±22	17.0

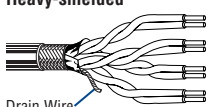
Enhanced Cat 5e • 24 AWG Bonded-Pairs Stranded (7x32) TC Conductors • See Color Code Chart (below)

Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red or Teal)																
Stranded Flexible 	7924A	NEC:	4	1000	304.8	30.0	13.6	.242	6.15	1	2.4	65.3	62.9	60.8	100±12	20.0
		CMR,		2000 †	609.6	58.0	26.3			4	4.8	56.3	51.5	48.7	100±12	23.6
		CMX-								8	6.8	51.8	45.0	42.7	100±12	25.4
		Outdoor								10	7.7	50.3	42.6	40.8	100±12	26.0
		CEC:								16	9.7	47.3	37.5	36.7	100±12	26.0
		CMR FT4								25	12.4	44.3	31.9	32.8	100±15	25.5
										31.25	13.9	42.9	29.0	30.9	100±15	25.0
										62.5	20.2	38.4	18.3	24.8	100±15	23.5
										100	26.0	35.3	9.2	20.8	100±18	22.5
										155	33.2	32.5	—	16.9	100±18	19.0
										200	38.4	30.8	—	14.7	100±20	19.0
†2000 ft. put-up available in Black only. • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals										250	43.7	29.3	—	12.8	100±20	18.0
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**										350	53.2	27.2	—	9.9	100±22	17.0
Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151; 5,734,126 and 5,763,823																

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Overall Beldfoil® Shield (100%) • Drain Wire • See Color Codes (below)

Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red or Teal)																	
 Drain Wire	EtherNet/IP Compliant Shielded	7933A new	NEC: CMR CEC: CMR FT4	2	1000	304.8	32.0	14.5	.227	5.77	1	2.0	62.3	60.3	60.8	100±15	20.0
					2000 ▲	609.6	64.8	29.4			4	4.1	53.3	49.2	48.7	100±15	23.6
											10	6.5	47.3	40.8	40.8	100±15	26.0
											16	8.2	44.3	36.1	36.7	100±15	26.0
											31.25	11.7	39.9	28.2	30.9	100±15	25.0
											62.5	17.0	35.4	18.4	24.8	100±15	23.5
											100	22.0	32.3	10.3	20.8	100±15	22.5
											200	32.4	27.8	1.0	14.7	100±25	15.0
▲2000 ft. put-up available in Black only. • M-12 or RJ-45 Compatible • Shield is bonded to jacket inner wall for electrical stability. Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126																	
Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black or Blue)																	
 Drain Wire	Shielded	7929A	NEC: CMR, CMX- Outdoor CEC: CMR FT4	4	1000	304.8	37.0	16.8	.265	6.73	1	2.0	62.3	60.3	60.8	100±15	20.0
					2000 ▲	609.6	72.0	32.7			4	4.1	53.3	49.2	48.7	100±15	23.0
											10	6.5	47.3	40.8	40.8	100±15	25.0
											16	8.2	44.3	36.1	36.7	100±15	25.0
											31.25	11.7	39.9	28.2	30.9	100±15	23.6
											62.5	17.0	35.4	18.4	24.8	100±15	21.5
											100	22.0	32.3	10.3	20.8	100±15	20.1
											200	32.4	27.8	1.0	14.7	100±25	15.0
▲2000 ft. put-up available in Black only. • RJ-45 Compatible • Shield is bonded to jacket inner wall for electrical stability. Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** Jacket sequentially marked at 2 ft. intervals • 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*																	

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Overall Beldfoil (100%) + TC Braid Shield (70% Coverage) • Drain Wire*

Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black, Red, Blue or Teal)																
EtherNet/IP Compliant Heavy-shielded  Drain Wire	7921A	NEC:	4	1000	304.8	55.0	24.9	.330	8.38	1	2.0	62.3	60.3	60.8	100±15	20.0
		CMR,		2000 ▲	609.6	106.0	48.1			4	4.1	53.3	49.2	48.7	100±15	23.6
		CMX-								10	6.5	47.3	40.8	40.8	100±15	26.0
		Outdoor								16	8.2	44.3	36.1	36.7	100±15	26.0
		CEC:								31.25	11.7	39.9	28.2	30.9	100±15	25.0
		CMR FT4								62.5	17.0	35.4	18.4	24.8	100±15	23.5
										100	22.0	32.3	10.3	20.8	100±15	22.5
▲2000 ft. put-up available in Black only. *24 AWG solid spiral drain wire.																
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**																
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • NEMA WC-63.1 Category 5e • U.S. Patents 5,606,151 and 5,734,126																

ACR = Attenuation Crosstalk Ratio • AL = Aluminum • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper
EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc.

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.

**Subject to length de-rating.

DataTuff Color Codes: Pair 1 = White/Blue Stripe & Blue, Pair 2 = White/Orange Stripe & Orange, Pair 3 = White/Green Stripe & Green, Pair 4 = White/Brown Stripe & Brown

For two pair products: use color codes for Pairs 2 & 3

BELDEN

For more information, contact Belden Technical Support: 1-800-BELDEN-1 • www.belden.com

견적문의 Belden114@C

Industrial Data Solutions® — Industrial Ethernet

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

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Freq. (MHz)	Max. Atten. (dB/100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/100m)	Min. PSUM ELFEXT (dB/100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm							

Enhanced Cat 5e • 24 AWG Bonded-Pairs Solid BC Conductors • Polyester Wrap • Rip Cord • See Color Code Chart (below)

AL Interlocked Armor • Polyolefin Insulation • PVC Inner Jacket • .045" Industrial Grade PVC Outer Jacket (Black or Gray)

	Interlocked AL Armor	121700A	NEC: CM CEC: HL CMG FT4	4	1000	304.8	159.0	72.0	.530	13.46	1	2.0	65.3	63.3	60.8	100±12	20.0
					3000 †	914.4	459.0	210.6			4	4.0	56.3	52.3	48.7	100±12	23.0
											8	5.7	51.8	46.1	42.7	100±12	24.5
											10	6.4	50.3	43.9	40.8	100±12	25.0
											16	8.1	47.3	39.1	36.7	100±12	25.0
											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	

†3000 ft. put-up available in Black only. • RJ-45 Compatible • Outer jacket is sunlight- and oil-resistant.

Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**

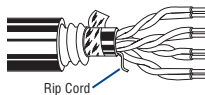
Jacket sequentially marked at 1 meter intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

†3000 ft. put-up available in Black only. • RJ-45 Compatible • Outer jacket is sunlight- and oil-resistant.

Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**

Jacket sequentially marked at 1 meter intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

AL Interlocked Armor • Polyolefin Insulation • PVC Inner Jacket • .045" Industrial Grade PVC Outer Jacket (Black or Blue)

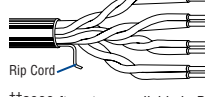
	Interlocked AL Armor -40°C Cold Impact	121700R	NEC: CM CEC: HL CMG FT4	4	1000	304.8	159.0	72.0	.530	13.46	(Same as above)						
					3000	914.4	459.0	210.6									
					5000 †	1524.0	690.0	313.0									

†5000 ft. put-up available in Blue only. • RJ-45 Compatible • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**

Outer jacket is sunlight- and oil-resistant. • Jacket sequentially marked at 1 meter intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • U.S. Patents 5,606,151 and 5,734,126

Cat 5e • 24 AWG Solid Bare Copper Conductors • Twisted Pairs • Rip Cord • See Color Code Chart (below)

Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black or Blue)

	7918A	NEC:	4	1000	304.8	28.0	12.7	.230	5.84	1	2.0	62.3	60.3	60.8	100±15	20.0	
		CMR,		2000 ††	609.6	52.0	23.6			4	4.1	53.3	49.2	48.7	100±15	23.0	
		CMX-Outdoor								10	6.5	47.3	40.8	40.8	100±15	25.0	
		CEC:								16	8.2	44.3	36.1	36.7	100±15	25.0	
		CMR FT4								31.25	11.7	39.9	28.2	30.9	100±15	23.6	
										62.5	17.0	35.4	18.4	24.8	100±15	21.5	
										100	22.0	32.3	10.3	20.8	100±15	20.1	
										200	32.4	27.8	1.0	14.7	100±25	15.0	

††2000 ft. cut-up available in Black only • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals

††2000 ft. put-up available in Black only. • RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals

Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** • Third party verified to TIA/EIA-568-B.2, Category 5e

Cat 5e • 24 AWG Solid BC • Twisted Pairs • Overall Beldfoil® Shield (100% Coverage) • 24 AWG Stranded TC Drain Wire • See Color Code Chart

Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant PVC Jacket (Black or Blue)

	7919A	NEC: CMR, CMX-Outdoor CEC: CMR FT4	4	1000	304.8	35.0	15.9	.265	6.73	1	2.0	62.3	60.3	60.8	100±15	20.0
				2000 †	609.6	68.0	30.9			4	4.1	53.3	49.2	48.7	100±15	23.0
										10	6.5	47.3	40.8	40.8	100±15	25.0
										16	8.2	44.3	36.1	36.7	100±15	25.0
										31.25	11.7	39.9	28.2	30.9	100±15	23.6
										62.5	17.0	35.4	18.4	24.8	100±15	21.5
										100	22.0	32.3	10.3	20.8	100±15	20.1

†2000 ft. put-up available in Black only. • RJ-45 Compatible • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C** • Cable passes -40°C Cold Bend per UL1581

Shield is bonded to jacket inner wall for electrical stability. • Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • P-07-KA060004-MSHA*

Cat 5e • 24 AWG Stranded (7x32) Bare Copper Conductors • Twisted Pairs • See Color Code Chart (below)

Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket

	7930A new	NEC:	4	1000	304.8	29.0	13.2	.240	6.09	1	2.5	62.3	59.8	60.8	100±15	20.0
		CMR,		2000	609.6	56.0	25.4			4	4.9	53.3	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

Installation Temperature: 0°C to +75°C • Operating Temperature: -25°C to +75°C** • Cable passes -25°C Cold Bend per UL1581

RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2, Category 5e • P-07-KA060003-MSHA*

ACR = Attenuation Crosstalk Ratio • BC = Bare Copper • ELFEXT = Equal Level Far-end Crosstalk • FEP = Fluorinated Ethylene-propylene •

NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • TC = Tinned Copper

EtherNet/IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc.

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.

**Subject to length de-rating.

Color Codes: DataTuff

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

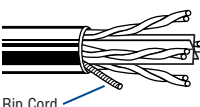
For two pair products: use color codes for Pairs 2 & 3

BELDEN

For more information, contact **Belden Technical Support: 1-800-BELDEN-1 • www.belden.com**

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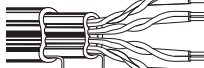
Industrial Data Solutions® — Industrial Ethernet**Category 6 DataTuff® Twisted Pair Cables, 4-Pair
Heavy-Duty Jackets**

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm							
Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • Patented E-Spline Center Member • Rip Cord • See Color Code Chart																
Polyolefin Insulation • .030" Industrial Grade Sunlight- and Oil-resistant Black PVC Jacket																
 Rip Cord	7927A	NEC:	4	1000	304.8	44.0	20.0	.251	6.38	1	1.9	80.3	78.5	70.8	100±12	20.0
		CMR		2000	609.6	88.0	39.9	x	x	10	5.7	65.3	59.6	50.8	100±12	25.0
		CEC:						.339	8.61	31.25	10.2	57.9	47.7	40.9	100±15	25.0
		CMR FT4								62.5	14.7	53.4	38.7	34.9	100±15	25.0
										100	18.9	50.3	31.4	30.8	100±15	25.0
										155	23.9	47.5	23.5	27.0	100±15	22.8
										200	27.5	45.8	18.3	24.8	100±15	21.7
										250	31.2	44.3	13.2	22.8	100±20	20.5
										350	37.7	40.2	4.5	19.9	100±22	19.8
										400	40.6	39.3	0.6	18.8	100±22	19.5
										500	46.2	37.8	>0.0*	16.8	100±22	18.4
RJ-45 Compatible • Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2-1, Category 6										Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**						
*PSUM ACR >0 is guaranteed to 460 MHz. • U.S. Patents 5,606,151; 5,734,126; 5,789,711 and 6,297,454-B1										600 51.4 36.6 — 15.2 100±22 17.6						

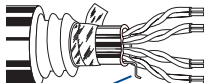
Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • See Color Code Chart (below)

Plenum • FEP Insulation • Sunlight-, Oil- and Gas-resistant Black FEP Jacket																	
High & Low Temp		7931A	NEC:	4	1000	304.8	35.0	15.9	.214	5.44	1	2.0	72.3	70.3	64.8	100±15	20.0
Oil Res I & II			Limited								10	6.0	57.3	51.3	44.8	100±15	25.0
Gas Res			Combustible								20	8.5	52.8	44.3	38.7	100±15	25.0
			FHC 25/50								31.25	10.7	49.9	39.2	34.9	100±15	23.6
			CMP								62.5	15.4	45.4	30.0	28.8	100±15	21.5
			CEC:								100	19.8	42.3	22.5	24.8	100±15	20.1
		CMP FT6								200	29.0	37.8	8.8	18.7	100±22	18.0	
										250	32.8	36.3	3.5	16.8	100±32	17.3	
RJ-45 Compatible																	
Cable passes -70°C Cold Bend per UL1581 • Installation Temperature: -55°C to +150°C • Operating Temperature: -70°C to +150°C**																	
Jacket sequentially marked at 2 ft. intervals • Third party verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151 and 5,734,126																	

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • Rip Cord • See Color Code Chart (below)

Polyolefin Insulation • PVC Inner Jacket • .035" Industrial Grade PVC Outer Jacket (Black or Gray)																
Upjacketed	11872A	NEC:	4	1000	304.8	66.0	30.0	.475	12.07	1	1.9	72.3	70	64.8	100±12	20.0
		CM						x	x	4	3.7	63.3	59	52.7	100±12	23.0
		CEC:						.265	6.73	10	5.9	57.3	51	44.8	100±12	25.0
		CM								16	7.5	54.3	46	40.7	100±12	25.0
		FT1								31.25	10.6	49.9	39	34.9	100±15	23.6
										62.5	15.4	45.4	30	28.8	100±15	21.5
										100	19.8	42.3	25	24.8	100±15	21.0
										155	25.1	39.5	14	20.9	100±15	21.0
										200	29.0	37.9	10	18.7	100±15	21.0
										310	37.1	34.9	—	14.9	100±20	18.0
										350	39.8	34.2	—	13.9	100±22	17.0
								.365	9.27	400 †	43.0	33.3	—	12.7	100±32	14.0
								x	x	500 †	49.0	31.8	—	10.8	100±32	14.0
								.165	4.19							
†Value provided for information only. • RJ-45 Compatible • Cable passes -25°C Cold Bend per UL1581																
Installation Temperature: -10°C to +75°C • Operating Temperature: -25°C to +75°C**																
Jacket sequentially marked at 2 ft. intervals • Verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151, 5,734,126 and 5,821,467																

Enhanced Cat 6 • 23 AWG Bonded-Pairs Solid BC Conductors • Polyester Wrap • Rip Cord • See Color Code Chart (below)

AL Interlocked Armor • Polyolefin Insulation • PVC Inner Jacket • .055" Industrial Grade PVC Outer Jacket (Black or Gray)																									
Interlocked AL Armor		121872A	NEC: CM CEC: HL CMG FT4	4	1000	304.8	222.0	100.6	.684	17.37	1	1.9	72.3	70	64.8	100±12	20.0								
 Rip Cord																									
																		Nominal Core OD:	4	3.7	63.3	59	52.7	100±12	23.0
																			10	5.9	57.3	51	44.8	100±12	25.0
																			16	7.5	54.3	46	40.7	100±12	25.0
																			31.25	10.6	49.9	39	34.9	100±15	23.6
																			62.5	15.4	45.4	30	28.8	100±15	21.5
																			100	19.8	42.3	25	24.8	100±15	21.0
																			155	25.1	39.5	14	20.9	100±15	21.0
																			200	29.0	37.9	10	18.7	100±15	21.0
																			310	37.1	34.9	—	14.9	100±20	18.0
350	39.8	34.2	—	13.9	100±22	17.0																			
										400 †	43.0	33.3	—	12.7	100±32	14.0									
										500 †	49.0	31.8	—	10.8	100±32	14.0									
†Value provided for information only. • RJ-45 Compatible • Jacket sequentially marked at 1 meter intervals																									
Cable passes -40°C Cold Bend per UL1581 • Installation Temperature: -25°C to +75°C • Operating Temperature: -40°C to +75°C**																									
Verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151, 5,734,126 and 5,821,467																									

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

Color Codes: DataTuff

Pair No.	Color Combination
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**TrayOptic® Heavy-Duty, All-Dielectric Fiber Optic Cables**
Loose Tube — Indoor/Outdoor Riser & Tray**Applications**

- Industrial and other harsh environment applications
- Factory automation
- Direct burial

Product Description

Laser Optimized Fiber to handle Gigabit Ethernet light sources and expanded bandwidth requirements. Passes IEEE 383-2003 flame test. Waterblocking agent for moisture protection. CPE outer jacket option provides extra chemical or abrasion resistance.

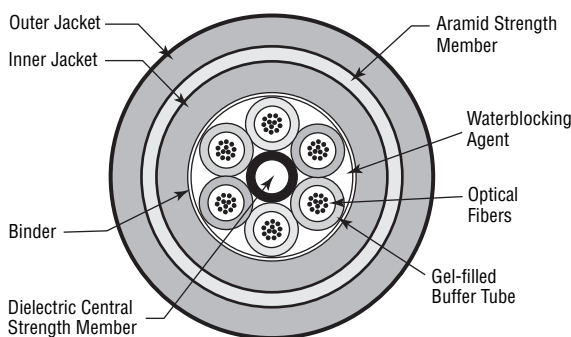
Jacket Material	PVC or CPE
Strength Member	Aramid Yarn
Jacket Color	Orange

Ratings

Riser	
UL Type	OFNR
cUL Type	OFN FT4
Flame Resistance	IEEE 383-2003

Specifications

Temperature Range	
Storage	-40 to +70°C
Operating	-40 to +70°C
Crush Resistance (EIA-455-41)	500 lbs./in. min.
Impact Resistance (EIA-455-25)	3.3 ft.-lbs./25 impacts min. @ 2.2N-m
Cyclic Flexing (EIA-455-104)	25 cycles, 12 lbs., 20 x OD radius min.
Min. Bend Radius	
Installation	20 x OD
Long Term	15 x OD
Maximum Installation Load	600 lbs. (2700 N)
Optical Specifications	See page 10.2

Fiber Bundle Detail

No. of Fibers	Fibers Per Tube	Outside Diameter		PVC Jacket			CPE Jacket		
		Inches	mm	Belden Part No.	Weight Lbs./1000'	Weight kg/km	Belden Part No.	Weight Lbs./1000'	Weight kg/km

TrayOptic Series

Riser (NEC/CEC OFNR/OFN FT4)									
2	2	0.440	11.18	I100255	88	131	I100266	83	124
4	4	0.440	11.18	I100455	88	131	I100466	83	124
6	6	0.440	11.18	I100655	88	131	I100666	83	124
8	4	0.440	11.18	I400855	88	131	I400866	83	124
12	6	0.440	11.18	I601255	88	131	I601266	83	124
18	6	0.440	11.18	I601855	88	131	I601866	83	124
24	6	0.440	11.18	I602455	88	131	I602466	83	124
36	6	0.440	11.18	I603655	88	131	I603666	83	124
48	12	0.540	13.72	I604855	136	202	I604866	129	192
60	12	0.540	13.72	I606055	136	202	I606066	129	192
72	12	0.540	13.72	I607255	136	202	I607266	129	192

All optical fiber products can be supplied in compliance with RoHS regulations. Please contact Customer Service for more details.

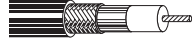
Industrial Data Solutions® — Industrial Ethernet

Coaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

Thinnet 10Base2 Ethernet • 20 AWG Stranded (19x32) .037" TC Conductor • Duobond® II (100% Coverage) + TC Braid (93% Coverage)

Foam Polyethylene Insulation • Gray PVC Jacket

	9907	NEC:	500	152.4	12.5	5.7	20 AWG	.102	2.59	Duobond II	.185	4.70	50	80%	25.4	83.3	1	.43	1.4
		CL2	U-1000	U-304.8	25.0	11.4	(19x32)			+ 93%							10	1.30	4.3
		CM	1000	304.8	25.0	11.4	.037"			TC Braid							50	2.90	9.5
		CEC:	1640	500.0	41.0	18.6	TC			5.8Ω/M'							100	4.20	13.8
		CM	U-2500	U-762.0	60.0	27.3	8.8Ω/M'			19.0Ω/km							200	6.10	20.0
			2500	762.0	62.5	28.4	28.9Ω/km										400	8.90	29.2
			3280	1000.0	82.0	37.3											700	12.10	39.7
																	900	13.90	45.6
																	1000	14.80	48.6

DEC Part No. 17-01248-00

Plenum • Foam FEP Insulation • Gray Fluorocopolymer Jacket

	89907	NEC:	500	152.4	13.0	5.7	20 AWG	.095	2.41	Duobond II	.160	4.06	50	80%	25.4	83.3	1	.43	1.4
		CL2P	1000	304.8	24.0	10.9	(19x32)			+ 93%							10	1.30	4.3
		CMP	2500†	762.0	60.0	27.3	.037"			TC Braid							50	2.90	9.5
		CEC:					TC			5.8Ω/M'							100	4.18	13.8
		CMP FT6					8.8Ω/M'			19.0Ω/km							200	6.10	20.0
							28.9Ω/km										400	9.20	30.2
																	700	12.90	42.3
																	900	15.00	49.2
																	1000	16.00	52.5

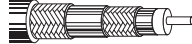
RG-58/U Type

DEC Part No. 17-01246-00

Suitable for Outdoor and Direct Burial applications.

Thicknet 10Base5 Ethernet • 12 AWG Solid .086" Bare Copper Conductor • Duobond IV* Quad Shield (100% Coverage)

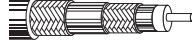
Foam Polyethylene Insulation • Yellow PVC Jacket

	9880	NEC:	500	152.4	66.0	30.0	12 AWG	.243	6.17	Duobond IV	.405	10.29	50	78%	26.0	85.0	1	.19	.62
		CL2	1000	304.8	131.0	59.5	(solid)			(Duobond II							5	.37	1.21
		CM	1640	500.0	219.0	99.9	.086"			+ 94% TC Braid							10	.52	1.71
		CEC:					BC			+ Duofoil®							50	1.20	3.94
		CM					1.4Ω/M'			+ 90% TC							100	1.70	5.58
							4.7Ω/km			Braid)							200	2.55	8.37
										1.5Ω/M'							400	3.90	12.80
										5.0Ω/km							700	5.50	18.10
																	900	6.50	21.30
																	1000	6.90	22.60

DEC Part No. 17-00451-00

Ring-band stripes marked every 2.5 meters to aid users in tap placement.

Plenum • Foam FEP Insulation • Orange Fluorocopolymer Jacket

	89880	NEC:	1000	304.8	134.0	60.9	12 AWG	.245	6.22	Duobond IV	.375	9.53	50	78%	26.0	85.0	1	.18	.59
		CL2P	1640†	500.0	224.7	102.1	(solid)			(Duobond II							5	.37 max.	1.21
		CMP					.086"			+ 90% TC Braid							10	.52 max.	1.71
		CEC:					BC			+ Duofoil							50	1.15	3.77
		CMP FT6					1.4Ω/M'			+ 90% TC							100	1.65	5.41
							4.7Ω/km			Braid)							200	2.45	8.04
										1.5Ω/M'							400	3.80	12.50
										5.0Ω/km							700	5.60	18.40
																	900	6.80	22.30
																	1000	7.20	23.60

DEC Part No. 17-00324-00

Ring-band stripes marked every 2.5 meters to aid users in tap placement.

Suitable for Outdoor and Direct Burial applications.

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • TC = Tinned Copper

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**.

*Duobond IV = Duobond II + 94% tinned copper braid + Duofoil® + 90% tinned copper braid.

(Plenum version is Duobond II + 90% tinned copper braid + Duofoil + 90% tinned copper braid.)

† Spools and/or UnReel® cartons are one piece, but length may vary ±10% from length shown.

Industrial Data Solutions® — Industrial Twinax

Belden® Blue Hose® Selection Guide for PLC and DCS Applications

Part No.	Description	Specifications
9463	Blue Hose Standard Data Highway Cable A Standard Data Highway Cable that is sometimes referred to as Blue Hose. Designed to be used in light industrial environments. Available in Blue, Brown or Orange up to 10,000 ft. special lengths.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil® + 55% tinned copper braid and drain wire, Blue sunlight-resistant PVC jacket. Nominal diameter: .238".
3072F	600V Data Highway Cable — UL Type TC A DataTray® cable designed for cable tray use in industrial applications. Cable can occupy same tray or conduit as 600V power cables.	1-pair, 18 AWG stranded (7x26) tinned copper, flame-retardant polyolefin insulation (color coded Blue, White), Beldfoil + 55% tinned copper braid and drain wire, Blue sunlight-resistant PVC jacket. Nominal diameter: .324". UL-1277 600V TC/PLTC/ITC/CMG.
9463F	High-Flex Cable A highly flexible version of the standard Blue Hose cable. The cable also has heavier braid coverage for better noise immunity.	1-pair, 20 AWG stranded (42x36) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 85% tinned copper braid, Blue sunlight-resistant PVC jacket. Nominal diameter: .243".
YR28826*	Dual Blue Hose Cable Dual Data Highway/Remote I/O cable has two Twinax pairs individually shielded with an overall braid. Designed for use in daisy chain applications or applications requiring two Blue Hose cables.	2-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), each pair Beldfoil shielded (1 pair Blue tape and 1 pair Green tape), 85% tinned copper braid and drain wire, Blue PVC jacket. Nominal diameter: .382".
YC39151*	Dual Armored Data Highway Cable Features two twinax pairs individually shielded with an overall braid, an inner PVC jacket, aluminum interlocked armor, with an outer PVC jacket. Designed for use in daisy chain applications or applications requiring two Blue Hose cables, with the extra mechanical protection and electrical shielding provided by the armor.	2-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), each pair Beldfoil shielded, 55% tinned copper braid and drain wire, Blue PVC inner jacket, aluminum interlocked armor, Blue sunlight-resistant PVC outer jacket. Nominal diameter: .820".
9463DB	Gel-Filled Direct Burial Cable A gel-filled Blue Hose cable featuring a low-density polyethylene (LDPE) jacket. Especially suited for high-moisture environments and burial applications.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, CoreGuard® flooding compound, Blue sunlight-resistant low density polyethylene jacket. Nominal diameter: .240".
89463	Plenum Cable A plenum, 200°C grade cable that is suitable for installations where high and low temperatures, as well as corrosive environments, are encountered.	1-pair, 20 AWG stranded (7x28) tinned copper, FEP insulation (color coded Blue, Clear), Beldfoil + 76% tinned copper braid and drain wire, Blue FEP jacket. Nominal diameter: .203".
YR28764*	Thick-Wall, Heavy-Duty Cable — UL Type PLTC A rugged, heavy-duty cable specially designed for abusive environments. A .069" thick jacket provides extra protection against cuts and abrasion.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue sunlight-resistant PVC jacket. Nominal diameter: .380".
YR41104*	Low Smoke, Zero Halogen Cable For applications concerned with smoke emissions, toxicity and electronic component corrosion.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue Haloarrest® jacket. Nominal diameter: .256".
129463	Aluminum Interlocked Armor Blue Hose Cable Features interlocked aluminum armor combined with a PVC jacket and is an ideal alternative to conduit installation. Provides both mechanical protection and electrical shielding. Up to 25 Data Highway cables can be bundled under one sheath.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue PVC inner jacket, aluminum interlocked armor, Blue PVC sunlight-resistant outer jacket. Nominal overall diameter: .563".
139463	Steel Interlocked Armor Blue Hose Cable Features interlocked galvanized steel armor combined with a PVC jacket. Provides mechanical protection and electrical shielding, as well as prevention against the low-frequency 60 Hz magnetic noise from power lines. Up to 25 cables can be bundled under one sheath.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue PVC inner jacket, steel interlocked armor, Blue sunlight-resistant outer PVC jacket. Nominal overall diameter: .563".
189463	Continuously Corrugated Aluminum Armor Blue Hose Cable Features continuously corrugated aluminum armor combined with a PVC jacket. Provides mechanical protection, electrical shielding and is impervious to moisture.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, Blue PVC inner jacket, continuously corrugated aluminum armor, Blue sunlight-resistant PVC outer jacket. Nominal overall diameter: .500".
YR29565*	Colored Blue Hose When your application calls for multiple Blue Hose cables you can rest assured that Belden has the solution. This special construction is available in Red, Yellow, Green, White or Pink.	1-pair, 20 AWG stranded (7x28) tinned copper, polyethylene insulation (color coded Blue, Clear), Beldfoil + 55% tinned copper braid and drain wire, sunlight-resistant PVC jacket. Nominal diameter: .238".

*Custom made product. Minimum order quantity may apply.

Industrial Data Solutions® — Industrial Twinax

Blue Hose® Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

78 Ohm • 20 AWG Stranded (7x28) .038" TC Conductors • Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire

Polyethylene Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Clear, Blue)

Blue Hose UL AWM Style 2464 (300V 80°C) Z- Fold® 	9463	NEC:	100	30.5	4.2	1.9	20 AWG	.154	3.91	Beldfoil	.238	6.05	78	66%	19.7	64.6	1	.6	2.0
		CM CL2	U-500	U-152.4	18.5	8.4	(7x28)			+55%							10	2.1	6.9
		CEC:	500	152.4	18.5	8.4	.038"			TC Braid							50	5.0	16.4
		CM	U-1000	U-304.8	37.0	16.8	Tinned			4.1Ω/M'							100	7.5	24.6
			1000*	304.8	37.0	16.8	Copper			13.4Ω/km							200	11.0	36.1
			6000*†	1828.8	222.0	100.9	9.5Ω/M'										400	16.0	52.5



Drain Wire

CPE jacket optional.

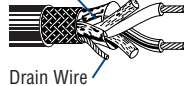
Allen-Bradley P/N 1770-CD • P-7K-SC-182141-MSHA*

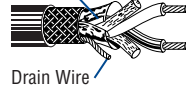
*1000 ft. and 6000 ft. put-ups also available in Brown, Orange or Purple.

†10000 ft. put-up available in Brown or Orange only.

†Final put-up length may vary ±10% from length shown.)

Polyethylene Insulation • Blue Sunlight-resistant LDPE Jacket (Color Code: Clear, Blue)

Flooded Direct Burial Blue Hose 300V 80°C Z- Fold® 	9463DB	—	1000	304.8	33.0	15.0	20 AWG	.154	3.91	Beldfoil	.240	6.10	78	66%	19.7	64.6	1	.6	2.0
			5000	1524.0	155.0	70.4	(7x28)			+55%							10	2.1	6.9
							.038"			TC Braid							50	5.0	16.4
							Tinned			4.1Ω/M'							100	7.5	24.6
							Copper			13.4Ω/km							200	11.0	36.1
							9.5Ω/M'										400	16.0	52.5



Drain Wire

Allen-Bradley P/N 1770-CD

78 Ohm • 20 AWG Stranded (42x36) .038" TC Conductors • Overall Beldfoil (100% Coverage) + TC Braid Shield (85% Coverage)

Polyethylene Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Clear, Blue)

High-Flex Blue Hose UL AWM Style 2464 (300V 60°C) Z- Fold® 	9463F	NEC:	1000	304.8	42.0	19.1	20 AWG	.154	3.91	Beldfoil	.243	6.17	78	66%	19.7	64.6	1	.6	2.0
		CM CL2	5000	1524.0	205.0	93.1	(42x36)			+85%							10	2.1	6.9
		CEC:					.038"			TC Braid							50	5.0	16.4
		CM					Tinned			5.0Ω/M'							100	7.5	24.6
							Copper			6.4Ω/km							200	11.0	36.1
							9.5Ω/M'										400	16.0	52.5

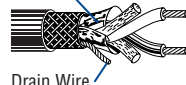


Allen-Bradley P/N 1770-CD • P-7K-SC-182141-MSHA*

78 Ohm • 20 AWG Stranded (7x28) .038" TC Conductors • Overall Beldfoil (100% Coverage) + TC Braid Shield (76% Coverage) • Drain Wire

Plenum • FEP Insulation • Blue FEP Jacket (Color Code: Clear, Blue)

High Temperature Blue Hose 300V 200°C Z- Fold® 	89463	NEC:	1000	304.8	34.0	15.4	20 AWG	.151	3.83	Beldfoil	.203	5.16	78	69%	19.7	64.6	1	.6	2.0
		CMP CL2P	2500	762.0	90.0	40.9	(7x28)			+76%							10	2.1	6.9
		CEC:					.038"			TC Braid							50	5.0	16.4
		CMP FT6					Tinned			4.1Ω/M'							100	7.5	24.6
							Copper			13.4Ω/km							200	11.0	36.1
							9.5Ω/M'										400	16.0	52.5



Drain Wire

Allen-Bradley P/N 1770-CD

DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • LDPE = Low-density Polyethylene • TC = Tinned Copper

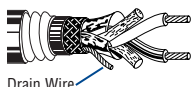
*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification.

Industrial Data Solutions® — Industrial Twinax**Blue Hose® and Other Twinaxial Cables**

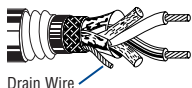
Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

78 Ohm • 20 AWG Stranded (7x28) TC Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire**Aluminum Interlocked Armor • PE Insulation • Blue Sunlight-resistant PVC Outer Jacket*** (Color Code: Clear, Blue)

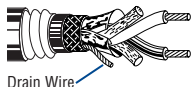
Aluminum Armored Blue Hose 300V 60°C	129463	NEC:	1000†	304.8	122.0	55.5	20 AWG	.154	3.91	Beldfoil	Inner Jacket:	78	66%	19.7	64.6	1	.6	2.0
		CM CL2	6000†	1828.8	924.0	420.0	(7x28)			+55%	.238	6.05				10	2.1	6.9
		CEC:					.038"			TC Braid						50	5.0	16.4
		CM,					Tinned			4.1Ω/M'	Overall:					100	7.5	24.6
		CMG FT4, HLBCD (Haz Loc)					Copper			13.4Ω/km	.563	14.30				200	11.0	36.1
							9.5Ω/M'									400	16.0	52.5
							31.0Ω/km											

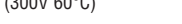
*Blue PVC inner jacket.
Allen-Bradley P/N 1770-CD**Steel Interlocked Armor • PE Insulation • Blue Sunlight-resistant PVC Outer Jacket*** (Color Code: Clear, Blue)

Steel Armored Blue Hose 300V 60°C	139463	NEC:	1000†	304.8	220.0	100.0	20 AWG	.154	3.91	Beldfoil	Inner Jacket:	78	66%	19.7	64.6	1	.6	2.0
		CM CL2	6000†	1828.8	1488.0	676.4	(7x28)			+55%	.238	6.05				10	2.1	6.9
		CEC:					.038"			TC Braid						50	5.0	16.4
		CM,					Tinned			4.1Ω/M'	Overall:					100	7.5	24.6
		CMG FT4, HLBCD (haz loc)					Copper			13.4Ω/km	.563	14.30				200	11.0	36.1
							9.5Ω/M'									400	16.0	52.5
							31.0Ω/km											

*Blue PVC inner jacket.
Allen-Bradley P/N 1770-CD**Continuously Corrugated AL Armor • PE Insulation • Blue Sunlight-resistant PVC Outer Jacket*** (Color Code: Clear, Blue)

Continuously Armored Blue Hose 300V 60°C	189463	NEC:	2000†	609.6	258.0	117.1	20 AWG	.154	3.91	Beldfoil	Inner Jacket:	78	66%	19.7	64.6	1	.6	2.0
		PLTC					(7x28)			+55%	.238	6.05				10	2.1	6.9
							.038"			TC Braid						50	5.0	16.4
							Tinned			4.1Ω/M'	Overall:					100	7.5	24.6
							Copper			13.4Ω/km	.500	12.70				200	11.0	36.1
							9.5Ω/M'									400	16.0	52.5
							31.0Ω/km											

*Blue PVC inner jacket.
Allen-Bradley P/N 1770-CD**78 Ohm • 20 AWG** Stranded (7x28) .038" Tinned Copper Conductors • Tinned Copper Braid Shield (93% Coverage)**Polyethylene Insulation • Blue PVC Jacket** (Color Code: Clear, Blue)

UL AWM Style 2092 (300V 60°C) 	9272	NEC:	100	30.5	4.5	2.0	20 AWG	.156	3.96	93%	.244	6.20	78	66%	19.7	64.6	1	.6	2.0
		CM	U-500	U-152.4	20.5	9.3	(7x28)			TC Braid							10	2.1	6.9
		CEC:	500	152.4	20.0	9.1	.038"			Shield							50	5.0	16.4
		CM	U-1000	U-304.8	41.0	18.6	Tinned			3.4Ω/M'	For Plenum version of 9272, see 89272. CPE jacket optional.					100	7.5	24.6	
			1000	304.8	40.0	18.2	Copper			11.2Ω/km						200	11.0	36.1	
							9.5Ω/M'										400	16.0	52.5
							31.0Ω/km												

**95 Ohm • RG-22B/U Type • 18 AWG** Stranded (7x26) Bare Copper Conductors†† • TC Double Braid Shield (95% Coverage)**Polyethylene Insulation • PE Inner Jacket • Black Non-contaminating PVC Outer Jacket**

80°C	9250	—	500	152.4	61.5	27.9	18 AWG	.285	7.24	2	.416	10.57	95	66%	16.0	52.5	1	.3	1.0
VW-1			1000	304.8	121.0	54.9	(7x26)			TC Braid							10	.9	3.0
							.046"			95%							20	1.3	4.3
							BC			Shield							50	2.1	6.9
							6.6Ω/M'			.9Ω/M'	CPE jacket optional.						100	3.0	9.8
							21.5Ω/km			3.0Ω/km							400	6.3	20.7



††One conductor has tinned center strand.

AL = Aluminum • BC = Bare Copper • DCR = DC Resistance • PE = Polyethylene • TC = Tinned Copper

†Final put-up length may vary ±10% from length shown.

Industrial Data Solutions® — Industrial Twinax

Twinaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

100 Ohm • 20 AWG Stranded (7x28) .037" One TC, One BC Conductor • Duofoil® (100% Coverage) + TC Braid Shield (86% Coverage)

Polyethylene Insulation • Polyethylene Inner Jacket • Black PVC Outer Jacket

75°C		9207	NEC:	100	30.5	7.1	3.2	20 AWG	.236	5.99	Duofoil	.330	8.38	100	66%	14.5	47.6	1	.3	1.0
		CMG CL2	U-500	U-152.4	34.0	15.5	(7x28)			+ 86%								10	1.2	3.9
		CEC:	500	152.4	34.5	15.7	.037"			TC Braid								50	2.8	9.2
		CMG FT4	1000	304.8	68.0	30.9	1 TC			2.5Ω/M'								100	4.1	13.5
			1640	500.0	111.5	50.7	1 BC			8.2Ω/km								200	6.4	21.0
			2000	609.6	136.0	61.8	9.5Ω/M'											400	10.2	33.5
			3280	1000.0	219.8	99.9	31.0Ω/km													
			5000	1524.0	350.0	159.1														
IBM P/N 7362211																				

For Plenum version of 9207,
see 89207.
CPE jacket optional.

124 Ohm • 25 AWG Stranded (7x33) .021" Tinned Copper Conductors • Beldfoil® (100% Coverage) • Stranded Tinned Copper Drain Wire

Polyethylene Insulation • Blue PVC Jacket (Color Code: Clear, Blue)

	9271	NEC:	100	30.5	3.2	1.5	25 AWG	.170	4.32	100%	.240	6.10	124	66%	12.2	40.0	1	.6	2.0	
		CM	500	152.4	14.0	6.4	(7x33)			Beldfoil							10	1.7	5.6	
		CEC:	U-1000	U-304.8	27.0	12.3	.021"			Shield							50	3.6	11.8	
		CM	1000	304.8	28.0	12.7	Tinned			12.0Ω/M'							100	5.0	16.4	
							Copper			39.4Ω/km							200	6.9	22.6	
Shorting Fold							31.8Ω/M'											400	9.6	31.5
							104.3Ω/km													

CPE jacket optional.

124 Ohm • 16 AWG Solid .051" Bare Copper Conductors • Duofoil (100% Coverage) + Tinned Copper Braid Shield (90% Coverage)

Foam Polyethylene Insulation • Black PVC Jacket (Color Code: Clear, Blue)

	9860	NEC:	500	152.4	52.0	23.6	16 AWG	.322	8.18	Duofoil	.440	11.18	124	78%	10.9	35.8	1	.2	.6
		CMX	1000	304.8	103.0	46.8	(solid)			+90%							10	.7	2.3
		CEC:	2000	609.6	202.0	91.8	.051"			TC Braid							50	1.8	5.9
		CMX					Bare			1.3Ω/M'							100	2.9	9.5
							Copper			4.3Ω/km							200	4.1	13.5
								4.2Ω/M'									400	6.2	20.3
								13.8Ω/km											

CPE jacket optional.

150 Ohm • 22 AWG Stranded (19x34) .031" Tinned Copper Conductors • Duofoil (100% Coverage) • Stranded Tinned Copper Drain Wire

Datalene® Insulation • Black PVC Jacket (Color Code: Black, Yellow)

	9182	NEC:	U-500	U-152.4	22.5	10.2	22 AWG	.275	6.98	100%	.345	8.76	150	78%	8.8	28.9	1	.4	1.3
		CL2X CMX	500	152.4	23.0	10.4	(19x34)			Duofoil							10	1.2	3.9
		CEC:	1000	304.8	44.0	20.0	.031"			Shield							50	2.7	8.9
		CMX					Tinned			6.3Ω/M'							100	4.3	14.1
							Copper			20.7Ω/km							200	6.2	20.3
							14.0Ω/M'										400	8.8	28.9
							45.9Ω/km												

For Plenum version of 9182,
see 89182.
Dual version: YR41609
CPE jacket optional.

Plenum • Foam FEP Teflon® Insulation • Black FEP Teflon Jacket (Color Code: Black, Yellow)

	89182	NEC:	100	30.5	6.4	2.9	22 AWG	.278	7.06	100%	.307	7.80	150	78%	8.8	28.9	1	.4	1.3		
		CMP	500 [†]	152.4	28.0	12.7	(19x34)			Duofoil							10	1.2	3.9		
		CL2P	1000 [†]	304.8	53.0	24.1	.031"			Shield							50	2.7	8.9		
		CEC:					Tinned			6.3Ω/M'							100	4.3	14.1		
		CMP FT6					Copper			20.7Ω/km							200	6.2	20.3		
									14.0Ω/M'										400	8.8	28.9
									45.9Ω/km												

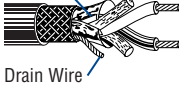
BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • TC = Tinned Copper

[†]Spools are one piece, but length may vary ±10% from length shown.

Teflon is a DuPont trademark.

Industrial Data Solutions® — Industrial Twinax

DataTray® 600V Twinaxial Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m
18 AWG Stranded (7x26) Tinned Copper Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (55% Coverage) • TC Drain Wire																			
Flame-retardant Polyolefin Insulation • Blue Sunlight-resistant PVC Jacket (Color Code: Natural, Blue)																			
 Z-Fold® Drain Wire	3072F	NEC:	250	76.2	17.5	8.0	18 AWG (7x26)	.192	4.88	Beldfoil +55%	.324	8.23	78	65%	19.5	64	1	.5	1.7
		CMG, ITC	500	152.4	35.0	15.9				TC Braid (100% Shield)							10	2.0	6.5
		TC, PLTC	1000	304.8	69.0	31.3	.046"										50	3.8	12.4
		CEC:	2500	762.0	170.0	77.2	Tinned Copper										100	5.4	17.6
		CMG FT4	5000†	1524.0	345.0	156.6	6.9Ω/M'				3.2Ω/M'						200	7.6	24.8
			10000†	3048.0	710.0	322.3	22.7Ω/km			10.4Ω/km							400	10.7	35.1
															For CPE jacketed version order Part No. YM45044.				
P-MSHA-C-7K-1827*																			
 Z-Fold® Drain Wire	3073F	NEC:	250	76.2	21.0	9.5	18 AWG (7x26)	.246	6.25	Beldfoil +55%	.388	9.86	100	65%	15.3	50.2	1	.4	1.3
		CMG, ITC	1000	304.8	85.0	38.6				TC Braid (100% Shield)							10	1.3	4.4
		TC, PLTC	5000†	1524.0	420.0	190.7	.046"										50	3.0	9.7
		CEC:					Tinned Copper										100	4.2	13.8
		CMG FT4					6.9Ω/M'			2.9Ω/M'							200	6.0	19.5
							22.7Ω/km			9.6Ω/km							400	7.5	24.7
															CPE jacket optional.				
 Z-Fold® Drain Wire	3074F	NEC:	500	152.4	62.5	28.4	18 AWG (7x26)	.328	8.33	Beldfoil +55%	.460	11.68	124	65%	12.3	40.3	1	.3	1.1
		CMG, ITC	1000	304.8	121.0	54.9				TC Braid (100% Shield)							10	1.1	3.5
		TC, PLTC	2500	762.0	300.0	136.2	.046"										50	2.4	7.8
		CEC:					Tinned Copper										100	3.4	11.1
		CMG FT4					6.9Ω/M'			2.8Ω/M'							200	4.8	15.7
							22.7Ω/km			9.1Ω/km							400	6.8	22.2
															CPE jacket optional.				

DCR = DC Resistance • TC = Tinned Copper if conductor, or Tray Cable if NEC rating.

*Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration certification.

†Final put-up length may vary -0 to +10% from length shown.

Industrial Data Solutions® — Industrial Coax**ControlNet™ Quad Shielded Coax**

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

RG-6/U Type • 18 AWG Solid Bare Copper-covered Steel Conductor • Duobond® IV* Quad Shield (100% Coverage)

Foam Polyethylene Insulation • PVC Jacket (Black or Intrinsically Safe Blue)																			
	3092A	NEC:	500	152.4	20.0	9.1	18 AWG	.180	4.57	Duobond IV	.298	7.57	75	82%	16.2	53.1	1	.35	1.1
		CL2R CMR	1000	304.8	39.0	17.7	(solid)			Quad							2	.38	1.2
		CEC:	2000	609.6	78.0	35.4	.040"			Shield							5	.45	1.5
		CMG FT4	2500	762.2	92.5	42.0	BCCS			3.6Ω/M'							10	.59	1.9
							28.0Ω/M'			11.8Ω/km							20	.86	2.8
							91.8Ω/km										50	1.37	4.5

Sweep tested 5 MHz to 50 MHz.
CPE jacket optional.

Allen-Bradley P/N 1786

Plenum • Foam FEP Insulation • Fluorocopolymer Jacket (Black or Intrinsically Safe Blue*)																			
	3093A	NEC:	1000*	304.8	40.0	18.2	18 AWG	.170	4.32	Duobond IV	.274	6.96	75	82%	16.3	53.5	1	.36	1.2
		CMP	2000†	609.6	80.0	36.3	(solid)			Quad							2	.38	1.2
		CEC:	2500†	762.0	95.0	43.1	.040"			Shield							5	.50	1.6
		CMG FT6					BCCS			3.6Ω/M'							10	.65	2.1
							28.0Ω/M'			11.8Ω/km							20	.95	3.1
							91.8Ω/km										50	1.50	4.9

Sweep tested 5 MHz to 50 MHz.

*Blue available as standard in 1000 ft. only.

Suitable for Outdoor and Direct Burial applications. • Allen-Bradley P/N 1786

RG-6/U Type • 20 AWG Stranded (105x40) Bare Copper Conductor • Duobond IV* Quad Shield (100% Coverage)

Foam Polyethylene Insulation • Black PVC Jacket																			
	3092F	NEC:	1000	304.8	44.0	20.0	20 AWG	.183	4.65	Duobond IV	.303	7.70	75	79%	17.0	55.8	1	.36	1.2
		CL2R CMR	5000	1524.0	220.0	99.8	(105x40)			Quad							2	.47	1.5
		CEC:					.040"			Shield							5	.80	2.6
		CMG FT4					Bare			3.6Ω/M'							10	1.20	3.9
							Copper			11.8Ω/km							20	2.00	6.6
							10.5Ω/M'										50	3.20	10.5

Sweep tested 5 MHz to 400 MHz.
CPE jacket optional.
123092F — Aluminum Armor
133092F — Steel Armor

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP • Allen-Bradley P/N 1786

For Rockwell authorized Flexible ControlNet order YR28890 (Tinned Copper Braid version).

RG-6/U Type • 18 AWG Solid Bare Copper-Covered Steel Conductor • Duobond IV* Quad Shield (100% Coverage)

Aluminum Interlocked Armor • Foam Polyethylene Insulation • PVC Inner Jacket • Black PVC Sunlight Resistant Outer Jacket																		
75°C	123092A new	NEC: CM CEC: CMG, FT4, HL	1000 ††	304.8	180.0	81.7	18 AWG (solid) .040" BCCS 28.0Ω/M' 91.9Ω/km	.180	4.57	Duobond IV Quad Shield 3.6Ω/M' 11.8Ω/km	Inner Jacket .298 7.57 Overall: .620 15.75	75	82%	16.2	53.2	1 2 5 10 20 50	.35 .38 .45 .59 .86 1.37	1.2 1.3 1.5 1.9 2.8 4.5
											Sweep tested 5 MHz to 50 MHz.							
											CPE jacket optional.							
											123092A — Steel Armor							
											400 4.04 13.3							

Sweep tested 5 MHz to 50 MHz.

CPE jacket optional.

133092A — Steel Armor

Allen-Bradley P/N 1786

Jacket sequentially marked at 1 meter intervals.

Continuously Corrugated Aluminum Armor • Foam Polyethylene Insulation • PVC Inner Jacket • Black PVC Outer Jacket																			
75°C	183092A	NEC:	2000 ▲	609.6	350.0	158.9	18 AWG	.180	4.57	Duobond IV	Inner Jacket	75	82%	16.2	53.2	1	.35	1.2	
	new	CL2, CM					(solid)			Quad	.298	7.57				2	.38	1.3	
							.040"			Shield	Overall:					5	.45	1.5	
							BCCS			3.6Ω/M'	.570	14.48				10	.59	1.9	
							28.0Ω/M'			11.8Ω/km						20	.86	2.8	
							91.9Ω/km									50	1.37	4.5	
																100	1.97	6.5	
Sweep tested 5 MHz to 50 MHz.																200	2.82	9.3	
																300	3.48	11.4	
																400	4.04	13.3	
Allen-Bradley P/N 1786																			
Jacket sequentially marked at 2 ft. intervals.																			

Sweep tested 5 MHz to 50 MHz.

Allen-Bradley P/N 1786

Jacket sequentially marked at 2 ft. intervals.

BCCS = Bare Copper-covered Steel • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene

*Duobond IV Quad Shield = Duobond II Foil + 60% aluminum braid + Duofoil + 40% aluminum braid.

†Final put-up length may vary 0 to +10% from length shown.

††Final put-up length may vary ±5% from length shown.

▲Final put-up length may vary ±10% from length shown.

ControlNet is a ControlNet International trademark.

Industrial Data Solutions® — Industrial Coax

ControlBus™ Quad Shielded Coax

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m
RG-6/U Type • 20 AWG Stranded (105x40) Bare Copper Conductor • Duobond® IV* Quad Shield (100% Coverage)																			
Foam Polyethylene Insulation • Black PVC Jacket																			
	3092F	NEC:	1000	304.8	44.0	20.0	20 AWG	.183	4.65	Duobond IV	.303	7.70	75	79%	17.0	55.8	1	.36	1.2
		CL2R CMR	5000	1524.0	225.0	102.2	(105x40)			Quad							2	.47	1.5
		CEC:					.040"			Shield							5	.80	2.6
		CMG					Bare			3.6Ω/M'							10	1.20	3.9
		FT4					Copper			11.8Ω/km							20	2.00	6.6
							10.5Ω/M'										50	3.20	10.5
							34.4Ω/km										100	4.60	15.1
																	200	6.50	21.3
																	300	8.00	26.2
																	400	9.30	30.5

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.

RG-6/U Type • 18 AWG Solid Bare Copper-covered Steel Conductor • Duobond IV* Quad Shield (100% Coverage)

Gas-Injected Foam Polyethylene Insulation • Gray PVC Jacket																			
	3131A	NEC:	1000	304.8	41.0	18.6	18 AWG	.180	4.57	Duobond IV	.300	7.62	75	82%	16.2	53.1	1	.35	1.1
		CL2R CMR	2500	762.0	100.0	45.4	(solid)			Quad							2	.38	1.2
		CEC:					.040"			Shield							5	.45	1.5
		CMR FT4					BCCS			3.6Ω/M'							10	.59	1.9
							28.0Ω/M'			11.8Ω/km							20	.86	2.8
							91.8Ω/km										50	1.37	4.5
																	100	1.97	6.5
																	200	2.82	9.3
																	300	3.48	11.4
																	400	4.04	13.3

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.

Tap marks every 2.6 meters to aid users in installation.

Plenum • Foam FEP Insulation • Gray Fluorocopolymer Jacket																			
	3132A	NEC:	1000	304.8	36.0	16.3	18 AWG	.170	4.32	Duobond IV	.274	6.96	75	82%	16.3	53.5	1	.36	1.2
		CMP					(solid)			Quad							2	.38	1.2
		CEC:					.040"			Shield							5	.50	1.6
		CMP FT6					BCCS			3.6Ω/M'							10	.65	2.1
							28.0Ω/M'			11.8Ω/km							20	.95	3.1
							91.8Ω/km										50	1.50	4.9
																	100	2.12	7.0
																	200	2.99	9.8
																	300	3.66	12.0
																	400	4.23	13.9

IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.

Tap marks every 2.6 meters to aid users in installation.

Suitable for Outdoor and Direct Burial applications.

RG-11/U Type • 14 AWG Solid Bare Copper-covered Steel Conductor • Duobond IV* Quad Shield (100% Coverage)

Gas-Injected Foam Polyethylene Insulation • Gray PVC Jacket																			
	3094A	NEC:	500	152.4	35.5	16.1	14 AWG	.280	7.11	Duobond IV	.407	10.34	75	82%	16.2	53.1	1	.16	.5
		CL2R CMR	1000	304.8	62.0	28.1	(solid)			Quad							2	.18	.6
		CEC:	2000	609.6	140.0	63.6	.064"			Shield							5	.26	.9
		CMG FT4					BCCS			1.5Ω/M'							10	.38	1.2
							11.0Ω/M'			4.9Ω/km							20	.55	1.8
							36.1Ω/km										50	.83	2.7
																	100	1.17	3.8
																	200	1.60	5.3
																	300	1.99	6.5
																	400	2.30	7.5

IEEE 802.4 MAP

Tap marks every 2.6 meters to aid users in installation.

Plenum • Foam FEP Insulation • Gray Fluorocopolymer Jacket																			
	3095A	NEC:	1000	304.8	76.0	34.5	14 AWG	.280	7.11	Duobond IV	.387	9.83	75	82%	16.5	54.1	1	.17	.6
		CMP					(solid)			Quad							2	.22	.7
		CEC:					.064"			Shield							5	.28	.9
		CMP FT6					BCCS			3.9Ω/M'							10	.40	1.3
							11.0Ω/M'			12.8Ω/km							20	.60	2.0
							36.1Ω/km										50	1.20	3.9
																	100	1.70	5.6
																	200	2.50	8.2
																	300	3.04	10.0
																	400	3.50	11.5

IEEE 802.4 MAP

Tap marks every 2.6 meters to aid users in installation.

Suitable for Outdoor and Direct Burial applications.

BCCS = Bare Copper-covered Steel • DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene

*Duobond IV Quad Shield = Duobond II Foil + 60% aluminum braid + Duofoil® + 40% aluminum braid.

Industrial Data Solutions® — Industrial Data

DataBus® ISA/SP-50 FOUNDATION Fieldbus or PROFIBUS Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

FOUNDATION Fieldbus/PROFIBUS PA • 18 AWG Stranded (7x26) TC Conductors • Beldfoil® Shield (100% Coverage) • TC Drain Wire**Polyolefin Insulation • Orange or Blue PVC Jacket** (Color Code: Blue, Orange)

Type A	3076F	NEC:	250	76.2	10.5	4.8	(2) 18 AWG	.088	2.24	100%	.253	6.43	100 @	66%	24.0	78.7	.039	.08	.26
300V 105°C		PLTC CM	500	152.4	18.5	8.4	(7x26)			Beldfoil			31.25 KHz						
(31.25 KBits/sec)		ITC	1000	304.8	37.0	16.8	.048"			Shield									
		CEC:	2500	762.0	85.0	38.6	Tinned			7.5Ω/M'									
		CM	5000†	1524.0	170.0	77.2	Copper			24.6Ω/km									
							7.5Ω/M'												
							24.6Ω/km												



Shorting Fold

123076F — Version with Aluminum Interlocked Armor
 133076F — Version with Steel Interlocked Armor
 YM47023 — CPE jacketed version
 YM46698 — Black & White color-coded pairs
 YM47090 — Various colored jackets
 YM41725 — LSZH (FRNC) jacketed version

Fieldbus: Orange jacket. Profibus PA: Intrinsically Safe Blue jacket. Blue available as standard in 1000 ft. put-up only.

FOUNDATION Fieldbus • 22 AWG Stranded (7x30) TC Conductors • Beldfoil Shield (100% Coverage) • Tinned Copper Drain Wire**Polyolefin Insulation • Orange PVC Jacket** (Color Code: Blue, Orange)

Type B	3077F	NEC:	500†	152.4	11.0	5.0	(2) 22 AWG	.059	1.50	100%	.196	4.97	100 @	66%	23.5	77.1	.039	.14	.45
300V 105°C		PLTC CM	1000†	304.8	23.0	10.4	(7x30)			Beldfoil			31.25 KHz						
(31.25 KBits/sec)		ITC					.030"			Shield									
		CEC:					Tinned			11.4Ω/M'									
		CM					Copper			37.4Ω/km									
							17.1Ω/M'												
							56.0Ω/km												



Shorting Fold

123077F — Version with Aluminum Interlocked Armor
 133077F — Version with Steel Interlocked Armor
 CPE and LSZH jacketed versions also available.

FHDPE Insulation • Orange PVC Jacket (Color Code: Blue, Orange)

High Speed▲	3078F	NEC:	250	76.2	10.0	4.5	(2) 22 AWG	.121	3.07	100%	.351	8.92	150 @	78%	8.5	27.9	.250	.18	.59
300V 75°C		PLTC CM	500	152.4	23.0	10.4	(7x30)			Beldfoil			1 MHz				.625	.26	.85
(1.0 & 2.5 MBits/sec)		ITC	1000	304.8	44.0	20.0	.030"			Shield							1.250	.34	1.12
		CEC:	2500	762.0	115.0	52.2	Tinned			3.3Ω/M'							3.125	.55	1.81
		CM					Copper			11.1Ω/km									
							17.1Ω/M'												
							56.1Ω/km												



Shorting Fold

123078F — Version with Aluminum Interlocked Armor
 133078F — Version with Steel Interlocked Armor
 CPE and LSZH jacketed versions also available.

PROFIBUS DP • 22 AWG Solid Bare Copper Conductors • Beldfoil (100% Coverage) + Tinned Copper Braid Shield (65% Coverage)**FHDPE Insulation • Chrome or Purple PVC Jacket** (Color Code: Red, Green)

300V 75°C	3079A	NEC:	1000	304.8	56.0	25.4	(2) 22 AWG	.099	2.52	Beldfoil	.315	8.00	150	78%	8.5	27.9	.2	.27	.9
		PLTC CMG	2000	609.6	112.0	50.8	(solid)			+ 65%							4.0	.67	2.2
		CEC:	3600	1097.6	201.6	91.4	.026"			TC Braid							16.0	1.37	4.5
		CMG FT4					Bare			Shield							100.0	3.75	12.3
							Copper			(100%							300.0	6.52	21.4
							16.0Ω/M'			Coverage)									
							52.5Ω/km			3.9Ω/M'									
										12.8Ω/km									

UL AWM 20201 (600V)
 Siemens Sinec L2 cable.

123079A — Aluminum Interlocked Armor
 133079A — Steel Interlocked Armor
 YR45047 — CPE jacketed version
 YR44731 — LSZH (FRNC) jacketed version

PROFIBUS DP • 22 AWG Stranded (7x30) Bare Copper Conductors • Beldfoil (100% Coverage) + TC Braid Shield (65% Coverage)**FR-FPE Insulation • Purple PVC Jacket** (Color Code: Red, Green)

300V 75°C	3079E	NEC:	1000	304.8	44.0	20.0	(2) 22 AWG	.099	2.52	Beldfoil	.315	8.00	150	78%	8.5	27.9	.2	.34	1.1
		PLTC CMG	1640	500.0	73.8	33.5	Stranded			+ 65%							4.0	.81	2.7
		CEC:	3280	1000.0	144.3	65.5	(7x30)			TC Braid							16.0	1.64	5.4
		CMG FT4					Bare			Shield									
							Copper			(100%									
							16.0Ω/M'			Coverage)									
							52.5Ω/km			3.9Ω/M'									
										12.8Ω/km									

DCR = DC Resistance • FHDPE = Foamed High-Density Polyethylene • FR-FPE = Flame-Retardant Polyethylene • FRNC = Flame-Retardant Non-Corrosive • LSZH = Low-Smoke Zero-Halogen • TC = Tinned Copper
 †Final put-up length may vary -0 to +10% from length shown.

▲For HSE, see Industrial Ethernet Section for copper and fiber cables.

BELDEN

For more information, contact Belden Technical Support: 1-800-BELDEN-1 • www.belden.com

견적문의 Belden114@CableCon.kr / 0707-434-7704 / Fax. 02-744-0909 / www.CableCon.co.kr

Industrial Data Solutions® — Industrial Data

DeviceBus® for ODVA DeviceNet™

DeviceNet Communications Rate Table

Communications Rate	Maximum Distance																			
	3082A		3082F		3082K		3083A		3084F		3084A/3085A		7895A		7896A		7897A		7900A	
	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
125 Kbps	1640	500	1640	500	1378	420	1640	500	328	100	328	100	984	300	1378	420	1640	500	328	100
250 Kbps	820	250	820	250	656	200	820	250	328	100	328	100	820	250	656	200	820	250	328	100
500 Kbps	328	100	328	100	246	75	328	100	328	100	328	100	328	100	328	100	328	100	328	100

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

600V Class 1 Thick • 15 and 18 AWG Stranded TC Conductors • Individually Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**PVC/Nylon Insulation (Power) • FEP Insulation (Data) • Gray Sunlight/Oil-resistant PVC Jacket**

High Velocity Thick 600V 75°C	7897A	NEC:	500	152.4	69.5	31.6	(2)15 AWG TC	100%	Power Pair:	.460	11.7	—	—	—	—	—	—	—
		TC-ER	1000	304.8	135.0	61.3	(19x28)	Individual	Red&Black									
			2000	609.6	274.0	124.4	3.6Ω/M'	Foil										
							11.8Ω/km	+ Overall										
							(2)18 AWG TC	65%	Data Pair:			120	75%	12.0	39.4	.125	.13	.43
							(19x30)	TC Braid	Blue&White							.500	.25	.82
							6.9Ω/M'	1.8Ω/M'								1.000	.40	1.31
							22.6Ω/km	5.9Ω/km										



18 AWG stranded (19x30) tinned copper drain wire.
Meter marks on jacket to aid users in installation.
Allen-Bradley P/N 1485 CPI-A

600V Class 1 ODVA Cable V • 16 and 18 AWG Stranded TC Cond. • Individ. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**PVC/Nylon Insulation (Power) • F-R Polypropylene Insulation (Data) • Gray Sunlight/Oil-resistant PVC Jacket**

600V 75°C	7896A	NEC:	500	152.4	89.0	40.4	(2)16 AWG TC	100%	Power Pair:	.525	13.34	—	—	—	—	—	—	—
		TC-ER	1000	304.8	168.0	76.2	(19x29)	Individual	Red&Black									
			2000	609.6	340.0	154.2	4.9Ω/M'	Foil										
							16.1Ω/km	+ Overall										
							(2)18 AWG TC	65%	Data Pair:			120	64%	14.7	48.2	.125	.13	.43
							(19x30)	TC Braid	Blue&White							.500	.25	.82
							6.9Ω/M'	1.8Ω/M'								1.000	.40	1.31
							22.6Ω/km	5.9Ω/km										



C(UL) AWM I/II A/B
16 AWG stranded (19x29) tinned copper drain wire.
Meter marks on jacket to aid users in installation.
Allen-Bradley P/N 1485 CPI-A

600V Class 1 ODVA Cable IV • 16 and 18 AWG Stranded Tinned Copper Conductors • Unshielded**PVC/Nylon Insulation (Power) • F-R Polypropylene Insulation (Data) • Gray Sunlight/Oil-resistant PVC Jacket**

Drop 600V 75°C	7900A	NEC:	500	152.4	51.0	23.1	(2)16 AWG TC	Unshielded	Power Pair:	.430	10.92	—	—	—	—	—	—	—
		TC-ER	1000	304.8	105.0	47.6	(19x29)		Red&Black									
		CEC:					4.9Ω/M'											
		FT1					16.1Ω/km											
							(2)18 AWG TC		Data Pair:			120	64%	14.7	48.2	.125	.13	.43
							(19x30)		Blue&White							.500	.25	.82
							6.9Ω/M'									1.000	.40	1.31
							22.6Ω/km											



C(UL) AWM I/II A/B
Meter marks on jacket to aid users in installation.
Allen-Bradley P/N 1485 CPI-C

DCR = DC Resistance • FEP = Fluorinated Ethylene-propylene • F-R = Flame-retardant • TC = Tinned Copper • TC-ER = Tray Cable Exposed Run per 2005 NEC Article 336

ODVA DeviceNet is an Open DeviceNet Vendor Association, Inc. trademark.

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DeviceBus® for ODVA DeviceNet™

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

300V Class 2 Thick • 15 and 18 AWG Stranded TC Cond. • Individually Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**PVC Insulation (Power) • FPE Insulation (Data) • Sunlight- and Oil-resistant PVC Jacket (Available in Gray or Red)**

Thick 75°C	3082A	NEC: CMG, PLTC-ER CEC: CMG FT4	500 [†] 1000 2000 [†]	152.4 304.8 609.6	71.0 138.0 280.0	32.2 62.6 127.0	(2)15 AWG TC (19x28) 3.6Ω/M' 11.8Ω/km (2)18 AWG TC (19x30) 6.9Ω/M' 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M' 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.480	12.19	—	—	—	—	—	—	—
																		
1500 ft. and 2000 ft. put-ups not available in Red. UL AWM 20201 (600V) • C(UL) AWM I/II A 18 AWG stranded (19x30) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A																		

Thick 75°C	3082F	NEC: CMG, PLTC-ER CEC: CMG FT4	500 [†] 1000 2000 [†]	152.4 304.8 609.6	72.5 140.0 284.0	32.9 63.5 128.8	(2)15 AWG TC (65x33) 3.6Ω/M' 11.8Ω/km (2)18 AWG TC (65x36) 6.9Ω/M' 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M' 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.480	12.19	—	—	—	—	—	—	—
																		
1500 ft. and 2000 ft. put-ups not available in Red. UL AWM 20201 (600V) • C(UL) AWM I/II A 18 AWG stranded (65x36) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A																		

PVC Insulation (Power) • FPE Insulation (Data) • Yellow CPE Jacket

Thick 75°C	3083A	NEC: CMG, PLTC CEC: CMG FT4	1000 2000	304.8 609.6	137.0 278.0	62.1 126.1	(2)15 AWG TC (19x28) 3.6Ω/M' 11.8Ω/km (2)18 AWG TC (19x30) 6.9Ω/M' 22.6Ω/km	100% Individual Foil + Overall 65% TC Braid 1.8Ω/M' 5.9Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.475	12.07	—	—	—	—	—	—	—
																		
18 AWG stranded (19x30) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A																		

300V Class 2 Thin • 22 and 24 AWG Stranded TC Conductors • Individ. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**PVC Insulation (Power) • FPE Insulation (Data) • Gray Sunlight- and Oil-resistant PVC Jacket**

Thin 75°C	3084A	NEC: CL2 CMG CEC: CMG FT4	500 1000 [†] 2000	152.4 304.8 609.6	22.0 47.0 96.0	10.0 21.3 43.6	(2)22 AWG TC (19x34) 17.5Ω/M' 57.4Ω/km (2)24 AWG TC (19x36) 91.9Ω/km	100% Individual Foil + Overall 65% TC Braid 28.0Ω/M' 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White 3.2Ω/M'	.280	7.11	—	—	—	—	—	—	—
																		
1000 ft. put-up also available in Red. 22 AWG stranded (19x34) tinned copper drain wire. • C(UL) AWM I/II A Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C																		

Thin 75°C	3084F	NEC: CL2 CMG CEC: CMG FT4	500 1000 2000	152.4 304.8 609.6	22.0 47.0 96.0	10.0 21.3 43.6	(2)22 AWG TC (154x44) 17.5Ω/M' 57.4Ω/km (2)24 AWG TC (105x44) 28.0Ω/M' 91.9Ω/km	100% Individual Foil + Overall 65% TC Braid 3.2Ω/M' 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.275	6.99	—	—	—	—	—	—	—
																		
C(UL) AWM I/II A 22 AWG stranded (26x36) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C																		

PVC Insulation (Power) • FPE Insulation (Data) • Yellow CPE Jacket

Thin 75°C	3085A	NEC: CL2 CMG CEC: CMG FT4	500 1000 2000	152.4 304.8 609.6	25.0 47.0 96.0	11.4 21.4 43.6	(2)22 AWG TC (19x34) 17.5Ω/M' 57.4Ω/km (2)24 AWG TC (19x36) 28.0Ω/M' 91.9Ω/km	100% Individual Foil + Overall 65% TC Braid 3.2Ω/M' 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.280	7.11	—	—	—	—	—	—	—
																		
22 AWG stranded (19x34) tinned copper drain wire. Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C																		

DCR = DC Resistance • FPE = Foam Polyethylene • PLTC-ER = Power Limited Tray Cable - Exposed Run per 2005 NEC Article 725 • TC = Tinned Copper

*These values are Maximum Attenuation.

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DeviceBus® for ODVA DeviceNet™

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Maximum Attenuation		
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

300V Class 2 ODVA Cable III • 20 and 18 AWG Stranded TC Cond. • Indiv. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**PVC Insulation (Power) • FPE Insulation (Data) • Gray Sunlight/Oil-resistant PVC Jacket**

Mid 75°C	7895A	NEC: CMG PLTC CEC: CMG FT4	500 1000	152.4 304.8	41.0 84.0	18.6 38.1	(2)18 AWG TC (19x30) 6.9Ω/M' 22.6Ω/km (2)20 AWG TC (19x32) 10.9Ω/M' 35.8Ω/km	100% Individual Foil + Overall 65% TC Braid 10.5Ω/km	Power Pair: Red&Black Data Pair: Blue&White	.378 9.60								
												120	75%	12.0	39.4	.125 .500 1.000	.29 .50 .70	.95 1.64 2.30

UL AWM 20201 (600V)
20 AWG stranded (19x32) tinned copper drain wire.
Meter marks on jacket to aid users in installation.

Flat • 16 AWG Stranded (19x29) Tinned Copper Conductors • Unshielded**PVC Insulation (Power) • FPE Insulation (Data) • Gray Sunlight-resistant PVC Jacket**

Class 2 300V 75°C	3082K	NEC: CMG CL2 PLTC CEC: CMG FT4	246 656 1378	75.0 200.0 420.0	30.8 78.7 165.4	14.0 35.7 75.1	(4)16 AWG TC (19x29) 4.9Ω/M' 16.1Ω/km	Unshielded	Power Pair: Red&Black Data Pair: Blue&White	.760 x .210 10.92 x 5.33								
												120	75%	14.7	48.2	.125 .500 1.000	.13 .25 .40	.43 .82 1.31

Allen-Bradley P/N 1485 CPI-G

PVC Insulation • Black Sunlight-resistant PVC Jacket

Class 1 Power 600V 75°C	3082KP	NEC: CMG, ITC, PLTC, TC CEC: CMG FT4	246 656 1378	75.0 200.0 420.0	32.0 81.3 170.9	14.5 36.9 77.6	(4)16 AWG TC (19x29) 4.9Ω/M' 16.1Ω/km	Unshielded	Red&Black, Blue&White	.760 x .210 10.92 x 5.33								
																.125 .500 1.000	.13 .25 .40	.43 .82 1.31

Allen-Bradley P/N 1485 CPI-G

DCR = DC Resistance • FPE = Foam Polyethylene • F-R = Flame-retardant • TC = Tinned Copper if conductor, or Tray Cable if NEC rating.

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DeviceBus® for Honeywell Smart Distributed System

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

22 AWG Stranded Tinned Copper Conductors • Each Pair Individually Beldfoil® Shielded (100% Coverage) • Drain Wire**PVC Insulation (Power) • FPE Insulation (Data) • Gray PVC Jacket**

UL AWM	3087A	NEC:	500	152.4	19.0	8.6	(4)22 AWG	100%	Power Pair:	.290	7.37	—	—	—	—	—	—	—
Style 2464		CL2	1000	304.8	41.0	18.6	(19x34)	Beldfoil	Blue&Brown									
30V 80°C		CEC:	2000	609.6	84.0	38.1	.030"	Each Pair										
CSA AWM I/II A		FT1					Tinned Copper		Data Pair:									
							17.5Ω/M'		Black&White			120	76%	12.0	39.4	.125	.23	.76
							57.4Ω/km									.500	.42	1.38
																1.000	.60	1.97



Micro Cable (Drop)

22 AWG stranded (19x34) tinned copper drain wire.

16 and 20 AWG Stranded Tinned Copper Conductors • Each Pair Individually Beldfoil Shielded (100% Coverage) • Drain Wire**PVC Insulation (Power) • FPE Insulation (Data) • Gray PVC Jacket**

UL AWM	3086A	NEC:	500	152.4	43.5	19.7	(2)16 AWG TC	100%	Power Pair:	.398	10.11	—	—	—	—	—	—	—
Style 2464		CL2	1000	304.8	88.0	39.9	(19x29)	Beldfoil	Blue&Brown									
30V 80°C		CEC:					.067"	Each Pair										
CSA AWM I/II A		FT1					3.6Ω/M'		Data Pair:									
							11.8Ω/km		Black&White			120	76%	12.0	39.4	.125	.18	.59
							(2)20 AWG TC									.500	.35	1.15
							(19x32)									1.000	.47	1.54
							.041"											
							10.0Ω/M'											
							32.8Ω/km											



Mini Cable (Trunk)

20 AWG stranded (19x32) tinned copper drain wire.

DCR = DC Resistance • FPE = Foamed Polyethylene • TC = Tinned Copper

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DeviceBus® for Square D/Seriplex®

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance*	
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m
18 and 22 AWG Stranded Tinned Copper Conductors • Overall 100% Beldfoil® Shield (100% Coverage) • 22 AWG (7x30) TC Drain Wire															
Foam HDPE Insulation (Power) • Foam HDPE Insulation (Data) • Orange PVC Jacket															
UL AWM Style 20201 (600V 75°C)	3124A	NEC: CL2 CM CEC: CM	1000	304.8	47.0	21.3	(2)18 AWG (16x30) .040" TC 6.8Ω/M' 21.3Ω/km (2)22 AWG (7x30) .030" TC 18.1Ω/M' 59.4Ω/km	100% Overall Beldfoil Shield 10.7Ω/M' 35.1Ω/km	Power Cdrs: Red&Black Data Cdrs: White&Green	.308	7.82	—	—	20.0	65.6
															
Seriplex CBL 1822-P18															

16 and 22 AWG Stranded Tinned Copper Conductors • Overall 100% Beldfoil Shield (100% Coverage) • 22 AWG (7x30) TC Drain Wire															
Foam HDPE Insulation (Power) • Foam HDPE Insulation (Data) • Orange PVC Jacket															
300V 75°C	3125A	NEC: CL2 CM CEC: CM	500 1000	152.4 304.8	31.5 63.0	14.3 28.6	(2)16 AWG (26x30) .060" TC 4.5Ω/M' 14.8Ω/km (2)22 AWG (7x30) .030" TC 18.1Ω/M' 59.4Ω/km	100% Overall Beldfoil Shield 10.7Ω/M' 35.1Ω/km	Power Cdrs: Red&Black Data Cdrs: White&Green	.368	9.35	—	—	28.0	91.9
															
Seriplex CBL 1622-P1															

16, 22 and 12 AWG Stranded Tinned Copper Conductors • Overall Beldfoil Shield (100% Coverage) • 22 AWG (7x30) TC Drain Wire															
Foam HDPE Insulation (Control) • Foam HDPE Insulation (Data) • PVC Insulation (Power) • Orange PVC Jacket															
300V 75°C	3126A	NEC: CL2 CM CEC: CM	1000	304.8	112.0	50.8	(2)16 AWG (26x30) .060" TC 4.5Ω/M' 14.7Ω/km (2)22 AWG (7x30) .030" TC 18.1Ω/M' 59.4Ω/km (2)12 AWG (65x30) .090" TC 1.8Ω/M' 5.9Ω/km	100% Overall Beldfoil Shield 10.7Ω/M' 35.1Ω/km	Control Cdrs: Red&Black Data Cdrs: White&Green Power Cdrs: Black&White, Red&White	.486 x .363	12.34 x 9.22	—	—	28.0	91.9
															
Seriplex CBL 162212-P16															

DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

*Capacitance between one conductor and other conductors connected to shield.

Square D/Seriplex is a Square D/Schneider AEG trademark.

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Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance*	
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m

18 and 24 AWG Stranded Tinned Copper Conductors • Overall Beldfoil® Shield (100% Coverage) + Tinned Copper Braid (90% Coverage)

PVC Insulation (Power) • PE Insulation (Data) • Green Polyurethane Jacket

UL AWM Style 20233 (300V 80°C)	3119A	—	500	152.4	35.5	16.1	(3)18 AWG (7x26) .060" TC 6.6Ω/M' 21.7Ω/km	100% Overall Beldfoil + 90% TC Braid	Power: Red, Blue, Green w/ Yellow Stripe Data: Pink&Gray, White&Brown, Yellow&Green	.333	8.46	—	—	—	—
			1000	304.8	71.0	32.2	(3pr)24 AWG (7x32) .024" TC 23.4Ω/M' 76.8Ω/km	2.7Ω/M' 8.9Ω/km				100	66%	15.4	50.5



24 AWG Stranded Tinned Copper Conductors • Overall 100% Beldfoil Shield (100% Coverage) + Tinned Copper Braid (90% Coverage)

Polyethylene Insulation • Green Polyurethane Jacket

UL AWM Style 20233 (300V 80°C)	3120A	—	500	152.4	26.0	11.8	(3pr)24 AWG (7x32) TC 26.0Ω/M' 85.3Ω/km	100% Overall Beldfoil + 90% TC Braid	Pink&Gray, White&Brown, Yellow&Green	.277	7.04	100	66%	15.4	50.5
			1000	304.8	49.0	22.2		2.7Ω/M' 8.9Ω/km							



DCR = DC Resistance • PE = Polyethylene • PVC = Polyvinyl Chloride • TC = Tinned Copper

*Capacitance between one conductor and other conductors connected to shield.

InterBus-S is a Phoenix Contact trademark.

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EIA Industrial RS-485 PLTC/CM

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance			
					Ft.	m	Lbs.	kg	Cond.	Shield	Inch	mm			* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m
22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Overall Beldfoil® Shield (100% Coverage) + TC Braid (90% Coverage) • Drain Wire▲																		
Datalene® Insulation • Black UV Resistant PVC Jacket (CPE jacket optional)																		
	Oil Res II 300V	3105A▼	NEC: CM PLTC CEC: CM FT1	1	See Chart (below)	500 1000 5000†	152.4 304.8 1523.9	23.0 50.0 255.0	10.4 22.7 115.8	14.7Ω/M' 48.2Ω/km	2.8Ω/M' 9.2Ω/km	.284 7.21	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR44345			
		3106A	NEC: CM PLTC CEC: CM FT1	1.5★	White/Orange, Orange/White, Blue/White	500 1000 5000†	152.4 304.8 1523.9	27.0 51.0 260.0	12.3 23.2 118.1	14.7Ω/M' 48.2Ω/km	2.8Ω/M' 9.2Ω/km	.300 7.62	120	78%	11.0	36.1	20.9	68.6
															For CPE jacketed version order Part No. YR46721			
		3107A▼	NEC: CM PLTC CEC: CM FT1	2	See Chart (below)	1000 4000 5000†	304.8 1219.2 1523.9	69.0 300.0 385.0	31.3 136.2 174.8	14.7Ω/M' 48.2Ω/km	1.8Ω/M' 5.9Ω/km	.356 9.04	120	78%	11.0	36.1	20.9	68.6
														For CPE jacketed version order Part No. YR46792				
		3108A	NEC: CM PLTC CEC: CM FT1	3	See Chart (below)	1000 2000	304.8 609.6	93.0 184.0	42.2 83.5	14.7Ω/M' 48.2Ω/km	1.5Ω/M' 4.9Ω/km	.420 10.67	120	78%	11.0	36.1	20.9	68.6
														For CPE jacketed version order Part No. YR45287				
		3109A	NEC: CM PLTC CEC: CM FT1	4	See Chart (below)	1000 2000	304.8 609.6	107.0 218.0	48.6 99.0	14.7Ω/M' 48.2Ω/km	1.4Ω/M' 4.6Ω/km	.420 10.67	120	78%	11.0	36.1	20.9	68.6
														For CPE jacketed version order Part No. YR44768				
▼3015A and 3107A are DMX512 Type.																		

[▼]3015A and 3107A are DMX512 Type.[★]22 AWG stranded tinned copper drain wire.

AL Interlocked Armor • Datalene® Insulation • PVC Inner Jacket • Black UV Resistant PVC Outer Jacket																		
300V	123107A NEW	NEC: CM PLTC CEC: CMG FT4	2	See Chart (below)		5000 ^{††}	1523.9	1140.0	514.1	14.7Ω/M' 48.2Ω/km	1.8Ω/M' 5.9Ω/km	.650 16.51	120	78%	11.0	36.1	20.9	68.6

[▲]22 AWG stranded tinned copper drain wire.

DCR = DC Resistance • TC = Tinned Copper

* Capacitance between conductors.

** Capacitance between one conductor and other conductors connected to shield.

[†] Final put-up length may vary -0 to +10% from length shown.^{††} Final put-up length may vary ±10% for spools or reels and ±5% for UnReel® cartons from length shown.[▲]All conductors are under the braid shield; one pair is under the Beldfoil shield.**Color Code Chart**

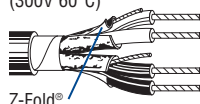
Pair No.	Color Combination
1	White/Blue Stripe Blue/White Stripe
2	White/Orange Stripe Orange/White Stripe
3	White/Green Stripe Green/White Stripe
4	White/Brown Stripe Brown/White Stripe

Industrial Data Solutions® — Interconnect Cable**Shielded Twisted Pair Cables**

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Nom. DCR		Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nom. Capacitance			
					Ft.	m	Lbs.	kg	Cond.	Shield	Inch	mm			* pF/ Ft.	* pF/ m	** pF/ Ft.	** pF/ m

24 AWG Stranded (7x32) TC Conductors • Twisted Pairs • Individually Beldfoil® Shielded (100% Coverage) • 24 AWG Stranded TC Drain Wire**Datalene® Insulation • Chrome PVC Jacket**

UL AWM Style 2493 (300V 60°C)	9729	NEC: CM	2	Red&Black, White&Black	100	30.5	4.3	2.0	24.0Ω/M'	15.0Ω/M'	.266	6.76	100	76%	12.5	41.0	23.2	76.1
		CEC: CM			500	152.4	20.5	9.3	78.7Ω/km	49.3Ω/km								
					1000	304.8	39.0	17.7										
					10000	3048.0	390.0	177.1										



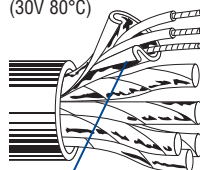
Z-Fold®

For Plenum version of 9729,
see 89729 or 82729.

24 AWG stranded (7x32) tinned copper drain wire.

22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Individually Beldfoil Shielded (100% Coverage) • 22 AWG Stranded TC Drain Wire**Polypropylene Insulation • Chrome PVC Jacket**

UL AWM Style 2919 (30V 80°C)	8777	NEC: CM	3	Red&Black, White&Black, Green&Black	100	30.5	4.6	2.1	15.0Ω/M'	10.6Ω/M'	.273	6.93	50	66%	30	98	55	180
		CEC: CM			250	76.2	11.0	5.0	49.2Ω/km	34.8Ω/km								
					U-500	U-152.4	21.0	9.5										
					500	152.4	21.0	9.5										
					U-1000	U-304.8	41.0	18.6										
					1000	304.8	42.0	19.1										
					1640	499.9	67.2	30.5										
					3280	999.7	137.8	62.5										
					5000	1524.0	210.0	95.3										
					10000	3048.0	450.0	204.3										



Z-Fold®

For Plenum versions of 8777,
see 88777, 87777 or 82777.

22 AWG stranded (19x34) tinned copper drain wire.

22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Individually Beldfoil Shielded (100% Coverage) • 24 AWG Stranded TC Drain Wire**Polypropylene Insulation • Chrome PVC Jacket (Pairs Cabled on Common Axis to Reduce Diameter)**

300V RMS 60°C	8723	NEC: CM	2	Red&Black, Green&White	100	30.5	2.3	1.0	16.0Ω/M'	14.7Ω/M'	.168	4.27	45	66%	35	115	62	203
		CEC: CM			U-500	U-152.4	10.5	4.8	52.5Ω/km	48.3Ω/km								
					500	152.4	10.0	4.5										
					U-1000	U-304.8	20.0	9.1										
					1000	304.8	20.0	9.1										
					1640	499.9	32.8	14.9										
					U-2000	U-609.6	40.0	18.2										
					2000	609.6	40.0	18.2										
					3280	999.7	65.6	29.8										
					5000	1524.0	95.0	43.1										
					10000	3048.0	200.0	90.8										



Z-Fold®

For Plenum versions of 8723,
see 88723, 87723 or 82723.

24 AWG stranded (7x32) tinned copper drain wire.

Plenum • FEP Insulation • Red FEP Jacket (Pairs Cabled on Common Axis to Reduce Diameter)

300V RMS, Non-conduit	88723	NEC: CMP	2	Red&Black, Green&White	100	30.5	3.4	1.5	16.0Ω/M'	14.7Ω/M'	.148	3.76	40	69%	35	115	67	220
		CEC: CMP FT6			500	152.4	11.0	5.0	52.5Ω/km	48.3Ω/km								
					1000	304.8	21.0	9.5										

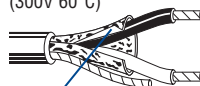


Z-Fold®

24 AWG stranded (7x32) tinned copper drain wire.

18 AWG Stranded (16x30) TC Conductors • Twisted Pair • Overall Beldfoil Shield (100% Coverage) • 20 AWG Stranded TC Drain Wire**Polyethylene Insulation • Chrome PVC Jacket**

UL AWM Style 2092 (300V 60°C)	8760	NEC: CM	1	Black & Clear	250	76.2	6.8	3.1	—	—	.222	5.64	—	—	24	79	44	144
		CEC: CM			U-500	U-152.4	13.0	5.9										
					500	152.4	13.0	5.9										
					U-1000	U-304.8	26.0	11.8										
					1000	304.8	26.0	11.8										
					2000	609.6	50.0	22.7										
					5000	1524.0	135.0	61.3										
					10000	3048.0	260.0	118.0										



Shorting Fold

For Plenum versions of 8760,
see 88760, 87760 or 82760.

20 AWG stranded (7x28) tinned copper drain wire.

DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • PVC = Polyvinyl Chloride • TC = Tinned Copper

* Capacitance between conductors.

** Capacitance between one conductor and other conductors connected to shield.