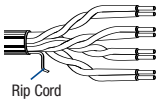
Industrial Data Solutions® – Industrial Ethernet Cables

Category 5e DataTuff® Twisted Pair Cables

Heavy Duty Sunlight- and Oil-Resistant Jackets

INDUSTRIALTUFF™

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Freq. MHz	Max. Atten. dB/100m	Min. PSUM NEXT dB	Min. PSUM ACR dB/100m	Min. PSUM ELFEXT dB/100m	Input Imp. (Ω)	Min. RL dB
Enhanced Cat 5e • 24 AWG • Solid 0.5 mm Bare Copper • Rip Cord																			
Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black and Blue)																			
	7918A	NEC:	1000	305	28.0	12.7	0.51 mm	0.037	0.94	Non-	0.230	5.84	1	2.0	62.3	60.3	60.8	100 ± 15	20.0
		CMR	2000	610	52.0	23.6	24 AWG			Bonded-Pair			4	4.1	53.3	49.2	48.7	100 ± 15	23.0
		CMX-Outdoor					Solid BC			Unshielded			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



Rip Cord

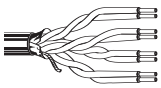
4-Pair

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

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

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

Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant Black PVC Jacket																			
Shielded	**7919A**	NEC:	1000	305	35.1	15.9	0.51 mm	0.042	1.07	Non-	0.265	6.73	1	2.0	62.3	60.3	60.8	100 ± 15	20.0
		CMR	2000	610	68.1	30.9	24 AWG			Bonded-Pair			4	4.1	53.3	49.2	48.7	100 ± 15	23.0
		CMX-Outdoor					Solid BC			Overall Beldfoil®			10	6.5	47.3	40.8	40.8	100 ± 15	25.0
		CEC:								+ Drain Wire			16	8.2	44.3	36.1	36.7	100 ± 15	25.0
		CMR FT4								(24 AWG TC)			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



4-Pair

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

RJ-45 Compatible
Third party verified to TIA/EIA-568-B.2, Category 5e • P-07-KA060004-MSHA**
Shield is bonded to jacket inner wall for electrical stability. Jacket sequentially marked at 0.6 m intervals.
Color Code: see chart below

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

Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black, Red and Teal)																			
Shielded	**7933A**	NEC:	1000	305	32.0	14.5	0.51 mm	0.038	0.97	Bonded-Pair	0.227	5.77	1	2.0	62.3	60.3	60.8	100 ± 15	20.0
		CMR FT4	2000	610	64.8	29.4	24 AWG			Overall Beldfoil®			4	4.1	53.3	49.2	48.7	100 ± 15	23.6
		CEC:					Solid BC			+ Drain Wire			10	6.5	47.3	40.8	40.8	100 ± 15	26.0
		CMR FT4								(24 AWG TC)			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

2-Pair

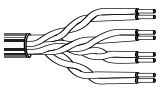
EtherNet/IP Compliant

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

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

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

Plenum • FEP Insulation • Sunlight-, Oil-and Gas-Resistant Black FEP Jacket																			
Compliant	**7928A**	NEC:	1000	305	24.0	10.9	0.51 mm	0.036	0.91	Bonded-Pair	0.187	4.57	1	2.0	65.3	63.3	60.8	100 ± 12	20.0
High & Low Temp		Limited					24 AWG			Unshielded			4	4.0	56.3	52.3	48.7	100 ± 12	23.6
Oil Res I & II		Combustible					Solid BC						10	6.4	50.3	43.9	40.8	100 ± 12	26.0
Gas Res		FHC 25/50											16	8.1	47.3	39.1	36.7	100 ± 12	26.0
		CMP											31.25	11.6	42.9	31.3	30.9	100 ± 15	25.0
		CEC:											62.5	16.8	38.4	21.6	24.8	100 ± 15	23.5
		CMP FT6											100	21.7	35.3	17.1	20.8	100 ± 15	22.5
													350	44.3	27.2	–	9.9	100 ± 22	17.0



4-Pair

EtherNet/IP Compliant

Cable passes -70°C Cold Bend per UL1581
Installation Temperature: -55°C to +150°C
Operating Temperature: -70°C to +150°C*

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

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

Color Code

Pair No.	Color
1	White/Blue Stripe, Blue
2	White/Orange Stripe, Orange

Pair No.	Color
3	White/Green Stripe, Green
4	White/Brown Stripe, Brown

Industrial Data Solutions® – Industrial Ethernet Cables

Category 5e DataTuff® Twisted Pair Cables

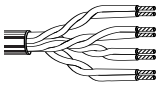
Heavy Duty Sunlight- and Oil-Resistant Jackets

INDUSTRIALTUFF™

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

Polyolefin Insulation • Industrial Grade Sunlight- and Oil-Resistant PVC Jacket (Black, Red or Teal)

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Freq. MHz	Max. Atten. dB/100m	Min. PSUM NEXT dB	Min. PSUM ACR dB/100m	Min. PSUM ELFEXT dB/100m	Input Imp. (Ω)	Min. RL dB
Stranded Flexible	7924A	NEC: CMR CMX-Outdoor CEC: CMR FT4	1000 2000	305 610	30.0 58.0	13.6 26.3	0.61 mm 24 AWG (7x32) TC	0.039	0.99	Bonded-Pair Unshielded	0.242	6.15	1	2.4	65.3	62.9	60.8	100 ± 12	20.0
													4	4.8	56.3	51.5	48.7	100 ± 12	23.6
													8	6.8	51.8	45.0	42.7	100 ± 12	25.4
													10	7.7	50.3	42.6	40.8	100 ± 12	26.0
													16	9.7	47.3	37.5	36.7	100 ± 12	26.0
													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 ± 15	22.5
													155	33.2	32.5	–	16.9	100 ± 18	19.0
													200	38.4	30.8	–	14.7	100 ± 20	19.0
													250	43.7	29.3	–	12.8	100 ± 20	18.0
													350	53.2	27.2	–	9.9	100 ± 22	17.0



4-Pair

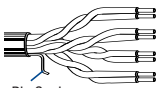
Cable passes -40°C Cold Bend per UL1581
Installation Temperature: -25°C to +75°C
Operating Temperature: -40°C to +75°C*
610 m put-up available in Black only.

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

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

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

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Freq. MHz	Max. Atten. dB/100m	Min. PSUM NEXT dB	Min. PSUM ACR dB/100m	Min. PSUM ELFEXT dB/100m	Input Imp. (Ω)	Min. RL dB
PLTC	7922A	NEC: PLTC CMR CMX-Outdoor CEC: CMR FT4	1000 2000	305 610	46.3 92.6	21.0 42.0	0.64 mm 22 AWG Solid BC	0.048	1.22	Bonded-Pair Unshielded	0.301	7.65	1	2.0	65.3	63.3	60.8	100 ± 12	20.0
													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



Rip Cord

4-Pair

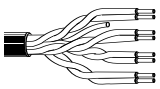
Cable passes -25°C Cold Bend per UL1581
Installation Temperature: -10°C to +75°C
Operating Temperature: -25°C to +75°C*

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

Cat 6 • 23 AWG • Bonded-Pair • Solid 0.6 mm Bare Copper

Plenum • FEP Insulation • Sunlight-, Oil- and Gas-Resistant Black FEP Jacket

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Freq. MHz	Max. Atten. dB/100m	Min. PSUM NEXT dB	Min. PSUM ACR dB/100m	Min. PSUM ELFEXT dB/100m	Input Imp. (Ω)	Min. RL dB
High & Low Temp Oil Res I & II Gas Res	7931A	NEC: Limited Combustible FHC 25/50 CMP CEC: CMP FT6	1000	305	35.1	15.9	0.57 mm 23 AWG Solid BC	0.038	0.97	Bonded-Pair Unshielded	0.214	5.44	1	2.0	72.3	70.3	64.8	100 ± 15	20.0
													10	6.0	57.3	51.3	44.8	100 ± 15	25.0
													20	8.5	52.8	44.3	38.7	100 ± 15	25.0
													31.25	10.7	49.9	39.2	34.9	100 ± 15	23.6
													62.5	15.4	45.4	30.0	28.8	100 ± 15	21.5
													100	19.8	42.3	22.5	24.8	100 ± 15	20.1
													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



4-Pair

Cable passes -70°C Cold Bend per UL1581
Installation Temperature: -55°C to +150°C
Operating Temperature: -70°C to +150°C*

RJ-45 Compatible
Third party verified to TIA/EIA-568-B.2-1, Category 6 • U.S. Patents 5,606,151 and 5,734,126
Jacket sequentially marked at 0.6 m intervals.
Color Code: see chart below

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

Color Code

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

Industrial Data Solutions® – Industrial Ethernet Cables

Coaxial Cables

INDUSTRIALTUFF™

Description	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 ft.	Nominal Attenuation dB/ 100 m
Thinnet 10Base2 Ethernet • 20 AWG • Stranded (19x32) 0.9 mm Tinned Copper • **Duobond® II** • 93 % Tinned Copper Braid																			
Ethernet • Foam HDPE Insulation • Grey PVC Jacket																			
30V 60°C UL AWM Style 1354	**9907**	NEC: CL2 CM CEC: CM	500 U-1000 1000 1640 3280	152 U-305 305 500 1000	12.6 25.1 25.1 41.0 82.2	5.7 11.4 11.4 18.6 37.3	0.94 mm 20 AWG (19x32) TC 47.9 Ω/km* 28.9 Ω/km**	0.102	2.59	Duobond® II + 93% TC Braid 19.0 Ω/km***	0.185	4.70	50	80%	25.4	83.3	1 10 50 100 200 400 700 900 1000	0.4 1.3 2.9 4.2 6.1 8.9 12.1 13.9 14.8	1.4 4.3 9.5 13.8 20.0 29.2 39.7 45.6 48.6
DEC Part No. 17-01248-00																			
Plenum • Ethernet • Foam FEP Insulation • Grey Fluorocopolymer Jacket																			
300V 150°C RG-58/U Type	**89907**	NEC: CL2P CMP CEC: CMP	† 500 † 1000 † 2500	152 305 762	12.6 24.0 60.2	5.7 10.9 27.3	0.94 mm 20 AWG (19x32) TC 47.9 Ω/km* 28.9 Ω/km**	0.095	2.41	Duobond® II + 93% TC Braid 19.0 Ω/km***	0.160	4.06	50	80%	25.4	83.3	1 10 50 100 200 400 700 900 1000	0.4 1.3 2.9 4.2 6.1 9.2 12.9 15.0 16.0	1.4 4.3 9.5 13.8 20.0 30.2 42.3 49.2 52.5
DEC Part No. 17-01248-00 Suitable for outdoor and direct burial applications.																			
Thicknet 10Base5 Ethernet • 12 AWG • Solid 2.1 mm Bare Copper • **Duobond® IV** Quad Shield																			
Ethernet • Foam PE Insulation • Yellow PVC Jacket																			
30V 60°C UL AWM Style 1478	**9880**	NEC: CL2 CM CEC: CM	500 1000 1640	152 305 500	66.1 131.2 220.2	30.0 59.5 99.9	2.05 mm 12 AWG Solid BC 9.7 Ω/km* 4.7 Ω/km**	0.243	6.17	Duobond® IV Quad Shield 5.0 Ω/km***	0.405	10.29	50	78%	25.9	85.3	1 5 10 50 100 200 400 700 900 1000	0.2 0.4 0.5 1.2 1.7 2.6 3.9 5.5 6.5 6.9	0.6 1.2 1.7 3.9 5.6 8.4 12.8 18.1 21.3 22.6
DEC Part No. 17-00451-00 Ring-band stripes marked every 2.5 m to aid users in tap placement.																			
Plenum • Foam FEP Insulation • Orange Fluorocopolymer Jacket																			
150°C	**89880**	NEC: CL2P CMP CEC: CMP FT6	1000 †† 1640	305 500	134.3 225.1	60.9 102.1	2.05 mm 12 AWG Solid BC 9.7 Ω/km* 4.7 Ω/km**	0.245	6.22	Duobond® IV Quad Shield 5.0 Ω/km***	0.375	9.53	50	78%	25.9	85.3			see above
DEC Part No. 17-00324-00 Ring-band stripes marked every 2.5 m to aid users in tap placement. Suitable for outdoor and direct burial applications.																			

* DC loop resistance • ** DC resistance inner conductor • *** DC resistance outer conductor • TC = Tinned Copper • BC = Bare Copper • DCR = DC resistance
† Spools are one piece, but length may vary ±10% from length shown.
†† Final put-up length may vary from length shown ±10% for spools and reels, ±5% for UnReel® cartons.

Duobond® II and Duobond® IV see technical information page 23.13.

Industrial Data Solutions® – Industrial Twinax

Blue Hose® Cables

INDUSTRIALTUFF™

Description	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 ft.	Nominal Attenuation dB/ 100 m
20 AWG • Stranded (7x28) 1.0 mm Tinned Copper • Overall **Beldfoil®** + 76% Tinned Copper Braid • 20 AWG Tinned Copper Drain Wire																			
Plenum • FEP Insulation • Blue FEP Jacket																			
300V 200°C High Temperature	**89463**	NEC: CMP CL2P CEC: CMP FT6	1000 2500	305 762	34.0 90.2	15.4 40.9	0.96 mm 20 AWG (7x28) TC	0.073	1.85	Overall Beldfoil® + Overall 76% TC Braid + Drain Wire (20 AWG TC)	0.203	5.16	78	66%	19.7	64.6	1 10 50 100 200 400	0.6 2.1 5.0 7.5 11.0 16.0	2.0 6.9 16.4 24.6 36.1 52.5
 Z-Fold®																			
			Color Code: Clear, Blue							Allen-Bradley P/N 1770-CD									
20 AWG • Stranded (7x28) 1.0 mm Tinned Copper • **Beldfoil®** • 55% Tinned Copper Braid • 20 AWG Tinned Copper Drain Wire																			
Polyethylene Insulation • Blue PVC Inner Jacket • Aluminum Interlocked Armor • Blue Sunlight-Resistant PVC Outer Jacket																			
300V 60°C Aluminum Armored	**129463**	NEC: CM CL2 CEC: CM CMG FT4 HLBCD (Haz Loc)	1000 6000	305 1829	122.4 925.9	55.5 420.0	0.96 mm 20 AWG (7x28) TC	0.076	1.92	Overall Beldfoil® + Overall 55% TC Braid + Drain Wire (20 AWG TC)	*0.238 **0.563	*6.05 **14.30	78	66%	19.7	64.6	see above		
																			
* Over Armor ** Under Armor			Color Code: Clear, Blue							Allen-Bradley P/N 1770-CD									
Polyethylene Insulation • Blue PVC Inner Jacket • Steel Armor • Blue Sunlight-Resistant PVC Outer Jacket																			
300V 60°C Steel Armored	**139463**	NEC: CM CL2 CEC: CM CMG FT4 HLBCD (Haz Loc)	1000 6000	305 1829	220.5 1491.2	100.0 676.4	0.96 mm 20 AWG (7x28) TC	0.076	1.92	Overall Beldfoil® + Overall 55% TC Braid + Drain Wire (20 AWG TC)	*0.238 **0.563	*6.05 **14.30	78	66%	19.7	64.6	see above		
																			
* Over Armor ** Under Armor			Color Code: Clear, Blue							Allen-Bradley P/N 1770-CD									
Polyethylene Insulation • Blue PVC Inner Jacket • Continuously Corrugated Aluminum Armor • Blue Sunlight-Resistant PVC Outer Jacket																			
300V 60°C Continuously Armored	**189463**	NEC: PLTC	2000	610	258.2	117.1	0.96 mm 20 AWG (7x28) TC	0.076	1.92	Overall Beldfoil® + Overall 55% TC Braid + Drain Wire (20 AWG TC)	*0.238 **0.500	*6.05 **12.70	78	66%	19.7	64.6	see above		
																			
* Over Armor ** Under Armor			Color Code: Clear, Blue							Allen-Bradley P/N 1770-CD									

TC = Tinned Copper • DCR = DC resistance

Industrial Data Solutions® – Industrial Twinax

Twinaxial Cables

INDUSTRIALTUFF™

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/100 ft.	Nominal Attenuation dB/100 m
22 AWG • Stranded (19x34) 0.8 mm Tinned Copper • **Duofoil®** • 22 AWG Tinned Copper Drain Wire																			
Datalene® Insulation • Black PVC Jacket																			
30V 60°C UL AWM Style 2668	**9182**	NEC: CL2X CMX CEC: CMX	U-500 500 1000	U-152 152 305	22.5 22.9 44.1	10.2 10.4 20.0	0.78 mm 22 AWG (19x34) TC	0.137	3.49	Overall Duofoil® + Drain Wire (22 AWG TC)	0.345	8.76	150	78%	8.8	28.9	1 10 50 100 200 400	0.4 1.2 2.7 4.3 6.2 8.8	1.3 3.9 8.9 14.1 20.3 28.9
																			
VW-1																			
		Color Code: Black, Yellow								Dual version: YR41609 CPE jacket optional.									
Datalene® Insulation • Black FRNC/LSNH Jacket																			
300V 80°C	**9182NH**	IEC 332-1 BS 7655	1000 1640 3280	305 500 1000	50.3 80.0 150.1	22.8 36.3 68.1	0.78 mm 22 AWG (19x34) TC	0.136	3.45	Overall Duofoil® + Drain Wire (22 AWG TC)	0.346	8.80	150	78%	8.8	28.9	1 5 10 20 50 100 200 400	0.4 0.9 1.2 1.7 2.7 4.3 6.2 8.8	1.3 2.8 3.9 5.6 8.9 14.1 20.3 28.9
																			
		Color Code: Black, Yellow																	
Plenum • Foam FEP Teflon® Insulation • Black FEP Teflon® Jacket																			
	89182	NEC: CMP CL2P CEC: CMP FT6	100 † 500 † 1000	31 152 305	6.4 28.0 53.1	2.9 12.7 24.1	0.78 mm 22 AWG (19x34) TC	0.139	3.53	Overall Duofoil® + Drain Wire (22 AWG TC)	0.307	7.80	150	78%	8.8	28.9	1 10 50 100 200 400	0.4 1.2 2.7 4.3 6.2 8.8	1.3 3.9 8.9 14.1 20.3 28.9
																			
		Color Code: Black, Yellow																	

TC = Tinned Copper • DCR = DC resistance
† Spools are one piece, but length may vary ±10% from length shown.

Duofoil® see technical information page 23.13.

Teflon® is a DuPont trademark.

Industrial Data Solutions® – Industrial Coax

ControlNet™ Quad Shielded Coax

INDUSTRIALTUFF™

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/100 ft.	Nominal Attenuation dB/100 m
18 AWG • Solid 1.0 mm Copper-Covered Steel • **Duobond® IV** Quad Shield																			
Foam Polyethylene Insulation • PVC Jacket (Black or Intrinsically Safe Blue)																			
	3092A	NEC:	500	152	20.1	9.1	1.02 mm	0.180	4.57	Duobond® IV	0.298	7.57	75	82%	16.2	53.1	1	0.3	1.1
		CL2R CMR	1000	305	39.0	17.7	18 AWG			Quad Shield							2	0.4	1.2
		CEC:	2000	610	78.0	35.4	Solid CCS			11.8 Ω/km***							5	0.5	1.5
		CMG FT4	2500	762	92.6	42.0	103.6 Ω/km*										10	0.6	1.9
							91.8 Ω/km**										20	0.9	2.8
																	50	1.4	4.5
																	100	2.0	6.5
																	200	2.8	9.3
RG-6/U Type																	300	3.5	11.4
		Sweep tested 5 MHz to 50 MHz.								CPE jacket optional.							400	4.1	13.3
		For Rockwell authorized flexible ControlNet™ order YR28890 (Tinned Copper Braid version).																	
Plenum • Foam FEP Insulation • Fluorocopolymer Jacket (Black or Intrinsically Safe Blue)																			
150°C	**3093A**	NEC:	1000	305	40.1	18.2	1.02 mm	0.170	4.32	Duobond® IV	0.274	6.96	75	82%	16.3	53.5	1	0.4	1.2
		CMP	† 2000	610	80.0	36.3	18 AWG			Quad Shield							2	0.4	1.2
		CEC:	† 2500	762	95.0	43.1	Solid CCS			11.8 Ω/km***							5	0.5	1.6
		CMP FT6					103.6 Ω/km*										10	0.6	2.1
							91.8 Ω/km**										20	0.9	3.1
																	50	1.5	4.9
																	100	2.1	7.0
																	200	3.0	9.8
RG-6/U Type																	300	3.7	12.0
		Sweep tested 5 MHz to 50 MHz.								Allen-Bradley P/N 1786							400	4.2	13.9
		Blue available as standard in 305 m only.								Suitable for outdoor and direct burial applications									
18 AWG • Stranded (105x40) 1.0 mm Bare Copper • **Duobond® IV** Quad Shield																			
Foam Polyethylene Insulation • Black PVC Jacket																			
High-Flex	**3092F**	NEC:	1000	305	44.1	20.0	1.02 mm	0.183	4.65	Duobond® IV	0.303	7.70	75	79%	17.0	55.8	1	0.4	1.2
		CL2R CMR	5000	1524	220.0	99.8	18 AWG			Quad Shield							2	0.5	1.5
		CEC:					(105x40) BC			11.8 Ω/km***							5	0.8	2.6
		CMR FT4					46.2 Ω/km*										10	1.2	3.9
							34.4 Ω/km**										20	2.0	6.6
																	50	3.2	10.5
																	100	4.6	15.1
																	200	6.5	21.3
RG-6/U Type																	300	8.0	26.2
		Sweep tested 5 MHz to 400 MHz.								123092F – Aluminum Armor							400	9.3	30.5
		Allen-Bradley P/N 1786								133092F – Steel Armor									
		IEEE 802.4 MAP/IEEE 802.7 Mini-MAP.																	
		CPE jacket optional.																	
		For Rockwell authorized flexible ControlNet™ order YR28890 (Tinned Copper Braid version).																	

* DC loop resistance • ** DC resistance inner conductor • *** DC resistance outer conductor • BC = Bare Copper • CCS = Copper-Covered Steel • DCR = DC resistance
† Final put-up length may vary 0% to +10% from length shown.

Duobond® IV see technical information page 23.13.

ControlNet™ is a ControlNet International trademark.

Industrial Data Solutions® – Industrial Coax

ControlBus™ Quad Shielded Coax

INDUSTRIALTUFF™

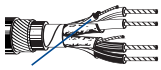
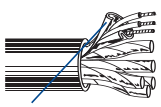
Description	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Nominal Attenuation MHz	Nominal Attenuation dB/ 100 ft.	Nominal Attenuation dB/ 100 m
18 AWG • Solid 1.0 mm Copper-Covered Steel • **Duobond® IV** Quad Shield																			
Gas-Injected Foam Polyethylene Insulation • Grey PVC Jacket																			
	3131A	NEC:	1000	305	41.0	18.6	1.02 mm	0.180	4.57	Duobond® IV	0.300	7.62	75	82%	16.2	53.1	1	0.3	1.1
		CL2R CMR	2500	762	100.1	45.4	18 AWG			Quad Shield							2	0.4	1.2
		CEC:					Solid CCS			11.8 Ω/km***							5	0.5	1.5
		CMG FT4					103.6 Ω/km*										10	0.6	1.9
							91.8 Ω/km**										20	0.9	2.8
																	50	1.4	4.5
																	100	2.0	6.5
RG-6/U Type																	200	2.8	9.3
																	300	3.5	11.4
		Sweep tested 5 MHz to 400 MHz.								CPE jacket optional.							400	4.1	13.3
		IEEE 802.4 MAP/IEEE 802.7 Mini-MAP								Tap marks every 2.6 m to aid users in installation.									
Plenum • Foam FEP Insulation • Grey Fluorocopolymer Jacket																			
150°C	**3132A**	NEC:	1000	305	36.2	16.4	1.02 mm	0.170	4.32	Duobond® IV	0.274	6.96	75	82%	16.3	53.5	1	0.4	1.2
		CMP					18 AWG			Quad Shield							2	0.4	1.2
		CEC:					Solid CCS			11.8 Ω/km***							5	0.5	1.6
		CMG FT6					103.6 Ω/km*										10	0.6	2.1
							91.8 Ω/km**										20	0.9	3.1
																	50	1.5	4.9
																	100	2.1	7.0
RG-6/U Type																	200	3.0	9.8
																	300	3.7	12.0
		Sweep tested 5 MHz to 400 MHz.								Tap marks every 2.6 m to aid users in installation.							400	4.2	13.9
		IEEE 802.4 MAP/IEEE 802.7 Mini-MAP								Suitable for outdoor and direct burial applications.									
14 AWG • Solid 1.6 mm Copper-Covered Steel • **Duobond® IV** Quad Shield																			
Gas-Injected Foam Polyethylene Insulation • Grey PVC Jacket																			
	3094A	NEC:	500	152	35.5	16.1	1.63 mm	0.280	7.11	Duobond® IV	0.407	10.34	75	82%	16.2	53.1	1	0.2	0.5
		CL2R CMR	1000	305	61.9	28.1	14 AWG			Quad Shield							2	0.2	0.6
		CEC:	2500	762	140.2	63.6	Solid CCS			4.9 Ω/km***							5	0.3	0.9
		CMG FT4					41.0 Ω/km*										10	0.4	1.2
							36.1 Ω/km**										20	0.5	1.8
																	50	0.8	2.7
																	100	1.2	3.8
RG-11/U Type																	200	1.6	5.3
																	300	2.0	6.5
		Sweep tested 5 MHz to 400 MHz.								CPE jacket optional.							400	2.3	7.5
		IEEE 802.4 MAP								Tap marks every 2.6 m to aid users in installation.									
Plenum • Foam FEP Insulation • Grey Fluorocopolymer Jacket																			
150°C	**3095A**	NEC:	1000	305	76.1	34.5	1.63 mm	0.280	7.11	Duobond® IV	0.387	9.83	75	82%	16.5	54.1	1	0.2	0.6
		CMP					14 AWG			Quad Shield							2	0.2	0.7
		CEC:					Solid CCS			12.8 Ω/km***							5	0.3	0.9
		CMG FT6					48.9 Ω/km*										10	0.4	1.3
							36.1 Ω/km**										20	0.6	2.0
																	50	1.2	3.9
																	100	1.7	5.6
RG-11/U Type																	200	2.5	8.2
																	300	3.0	10.0
		Sweep tested 5 MHz to 400 MHz.								Tap marks every 2.6 m to aid users in installation.							400	3.5	11.5
		IEEE 802.4 MAP								Suitable for outdoor and direct burial applications.									

* DC loop resistance • ** DC resistance inner conductor • *** DC resistance outer conductor • CCS = Copper-Covered Steel • DCR = DC resistance
Duobond® IV see technical information page 23.13.

Industrial Data Solutions® – Interconnect Cables

Shielded Twisted Pair Cables

INDUSTRIALTUFF™

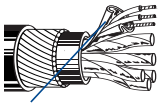
Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Color Code
24 AWG • Stranded (7x32) 0.6 mm Tinned Copper • Twisted Pair • **Beldfoil®** • 24 AWG Tinned Copper Drain Wire																		
Datalene® Insulation • Chrome PVC Jacket																		
300V 60°C UL AWM Style 2493	**9729**	NEC: CM CEC: CM	100 500 1000 10000	31 152 305 3049	4.4 20.5 39.0 390.4	2.0 9.3 17.7 177.1	0.61 mm 24 AWG (7x32) TC	0.061	1.55	Individual Beldfoil® + Drain Wire (24 AWG TC)	0.266	6.76	100	76%	CDR/CDR CDR/SCR	12.5 23.2	41.0 76.1	Red, Black White, Black
 Z-Fold®																		
2-Pair																		
Datalene® Insulation • Black FRNC/LSNH Jacket • Color Coded Foils (Red, Green)																		
300V 80°C	**9729NH**	IEC 332-3C BS 7655	1000 1640 3280	305 500 1000	44.1 74.5 137.3	20.0 33.8 62.3	0.61 mm 24 AWG (7x32) TC	0.061	1.55	Individual Beldfoil® + Drain Wire (24 AWG TC)	0.335	8.50	100	76%	CDR/CDR CDR/SCR	12.5 23.2	41.0 76.1	Red, Black White, Black
 Z-Fold®																		
2-Pair																		
Datalene® Insulation • Chrome FRNC/LSNH Inner Jacket • Steel Wire Armor • Black Sunlight-Resistant FRNC/LSNH Jacket • Color Coded Foils (Red, Green)																		
300V 80°C	**9729LS**	IEC 332-3C BS 7655	1640 3280	500 1000	347.2 672.4	157.5 305.0	0.61 mm 24 AWG (7x32) TC	0.061	1.55	Individual Beldfoil® + Drain Wire (24 AWG TC)	*0.335 **0.512	*8.50 **13.00	100	76%	CDR/CDR CDR/SCR	12.5 23.2	41.0 76.1	Red, Black White, Black
 Z-Fold®																		
2-Pair																		
* Under Armor ** Over Armor																		
22 AWG • Stranded (7x30) 0.8 mm Tinned Copper • Twisted Pair • **Beldfoil®** • 22 AWG Tinned Copper Drain Wire																		
Polypropylene Insulation • Chrome PVC Jacket																		
30V 80°C UL AWM Style 2919	**8777**	NEC: CM CEC: CM	100 250 U-500 500 U-1000 1000 1640 3280 5000 10000	31 76 U-152 152 U-305 305 500 1000 1524 3049	4.6 11.0 20.9 20.9 41.0 42.1 67.2 137.8 210.1 450.4	2.1 5.0 9.5 9.5 18.6 19.1 30.5 62.5 95.3 204.3	0.76 mm 22 AWG (7x30) TC	0.050	1.27	Individual Beldfoil® + Drain Wire (22 AWG TC)	0.273	6.93	50	66%	CDR/CDR CDR/SCR	30.0 55.0	98.0 180.0	Red, Black White, Black Green, Black
 Z-Fold®																		
For Plenum version of 8777, see 88777, 87777 or 82777.																		
3-Pair																		
Polypropylene Insulation • Chrome FRNC/LSNH Jacket • Color Coded Foils (Red, Green, Blue)																		
300V 80°C	**8777NH**	IEC 332-3C BS 7655	1000 1640 3280	305 500 1000	50.7 78.5 151.5	23.0 35.6 68.7	0.76 mm 22 AWG (7x30) TC	0.050	1.27	Individual Beldfoil® + Drain Wire (22 AWG TC)	0.276	7.00	50	66%	CDR/CDR CDR/SCR	30.0 55.0	98.4 180.4	Red, Black White, Black Green, Black
 Z-Fold®																		
3-Pair																		

TC = Tinned Copper • DCR = DC resistance

Industrial Data Solutions® – Interconnect Cables

Shielded Twisted Pair Cables

INDUSTRIALTUFF™

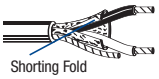
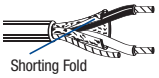
Description	Part No.	UL NEC/ C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Color Code
22 AWG • Stranded (7x30) 0.8 mm Tinned Copper • Twisted Pair • **Beldfoil®** • 22 AWG Tinned Copper Drain Wire																		
Polyethylene Insulation • Chrome FRNC/LSNH Inner Jacket • Steel Wire Armor • Black Sunlight-Resistant FRNC/LSNH Jacket • Color Coded Foils (Red, Green, Blue)																		
300V 80°C	**8777LS**	IEC 332-3C BS 7655	1640 3280	500 1000	290.3 712.5	131.7 323.2	0.76 mm 22 AWG (7x30) TC	0.050	1.27	Individual Beldfoil® + Drain Wire (22 AWG TC)	*0.276 **0.425	*7.00 **10.80	50	66%	CDR/CDR CDR/SCR	30.0 55.0	98.4 180.4	Red, Black Green, White Green, Black
 Z-Fold® 3-Pair																		
* Under Armor ** Over Armor																		
22 AWG • Stranded (7x30) 0.8 mm Tinned Copper • Twisted Pair • **Beldfoil®** • 24 AWG Tinned Copper Drain Wire																		
Polypropylene Insulation • Chrome PVC Jacket																		
300V RMS 60°C	**8723**	NEC: CM CEC: CM	100 U-500 500 U-1000 1000 1640 U-2000 2000 3280 5000 10000	31 U-152 152 U-305 305 500 U-610 610 1000 1524 3049	2.2 10.6 9.9 20.1 20.1 32.8 40.1 40.1 65.7 95.0 200.4	1.0 4.8 4.5 9.1 9.1 14.9 18.2 18.2 29.8 43.1 90.9	0.76 mm 22 AWG (7x30) TC	0.046	1.17	Individual Beldfoil® + Drain Wire (24 AWG TC)	0.168	4.27	45	66%	CDR/CDR CDR/SCR	35.0 62.0	115.0 203.0	Red, Black Green, White
 2-Pair																		
For Plenum version of 8723, see 88723, 87723 or 82723 Pairs cabled on common axis to reduce diameter.																		
Polypropylene Insulation • Chrome FRNC/LSNH Jacket																		
300V 80°C	**8723NH**	IEC 332-3C BS 7655	1000 1640 3280	305 500 1000	23.1 36.8 75.0	10.5 16.7 34.0	0.76 mm 22 AWG (7x30) TC	0.046	1.17	Individual Beldfoil® + Drain Wire (24 AWG TC)	0.179	4.55	45	66%	CDR/CDR CDR/SCR	35.0 62.0	114.8 203.4	Red, Black Green, White
 2-Pair																		
Pairs cabled on common axis to reduce diameter.																		
Polypropylene Insulation • Chrome FRNC/LSNH Inner Jacket • Steel Wire Armor • Black Sunlight-Resistant FRNC/LSNH Jacket																		
300V 80°C	**8723LS**	IEC 332-3C BS 7655	1640 3280	500 1000	168.7 350.1	76.5 158.8	0.76 mm 22 AWG (7x30) TC	0.046	1.17	Individual Beldfoil® + Drain Wire (24 AWG TC)	*0.179 **0.346	*4.55 **8.80	45	66%	CDR/CDR CDR/SCR	35.0 62.0	114.8 203.4	Red, Black Green, White
 2-Pair																		
* Under Armor ** Over Armor																		
Plenum • FEP Insulation • Red FEP Jacket																		
300V RMS Non-conduit	**88723**	NEC: CMP CEC: CMP FT6	100 500 1000	31 152 305	3.3 11.0 20.9	1.5 5.0 9.5	0.76 mm 22 AWG (7x30) TC	0.046	1.17	Individual Beldfoil® + Drain Wire (24 AWG TC)	0.148	3.76	40	69%	CDR/CDR CDR/SCR	35.0 67.0	115.0 220.0	Red, Black Green, White
 Z-Fold® 2-Pair																		

TC = Tinned Copper • DCR = DC resistance

Industrial Data Solutions® – Interconnect Cable

Shielded Twisted Pair Cables

INDUSTRIALTUFF™

Description	Part No.	UL NEC/C(UL)CEC Type IEC	Standard Lengths ft.	Standard Lengths m	Standard Unit Weight lbs.	Standard Unit Weight kg	Conductor (Stranding) Diameter Nom. DCR	Nominal Insulation OD inch	Nominal Insulation OD mm	Shielding Material Nom. DCR	Nominal OD inch	Nominal OD mm	Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance	Nominal Capacitance pF/ft.	Nominal Capacitance pF/m	Color Code
18 AWG • Stranded (16x30) 1.2 mm Tinned Copper • Twisted Pair • **Beldfoil®** • 20 AWG Tinned Copper Drain Wire																		
Polyethylene Insulation • Chrome PVC Jacket																		
300V 60°C UL AWM Style 2092	**8760**	NEC: CM CEC: CM	250 U-500 500 U-1000 1000 2000 5000 10000	76 U-152 152 U-305 305 610 1524 3049	6.8 13.0 13.0 26.0 26.0 50.0 135.1 260.1	3.1 5.9 5.9 11.8 11.8 22.7 61.3 118.0	1.2 mm 18 AWG (16x30) TC	0.082	2.08	Overall Beldfoil® + Drain Wire (20 AWG TC)	0.222	5.64	–	–	CDR/CDR CDR/SCR	24.0 44.0	79.0 144.0	Black, Clear
 Shorting Fold 1-Pair		For Plenum version of 8760, see 88760, 87760 or 82760.																
Polyethylene Insulation • Chrome FRNC/LSNH Jacket																		
300V 80°C	**8760NH**	IEC 332-3C BS 7655	1000 1640 3280	305 500 1000	34.6 54.2 110.5	15.7 24.6 50.1	1.2 mm 18 AWG (16x30) TC	0.082	2.08	Overall Beldfoil® + Drain Wire (20 AWG TC)	0.236	6.00	60	66%	CDR/CDR CDR/SCR	24.0 44.0	78.7 144.4	Black, Clear
 Shorting Fold 1-Pair																		
Polyethylene Insulation • Chrome FRNC/LSNH Inner Jacket • Steel Wire Armor • Black Sunlight-Resistant FRNC/LSNH Jacket																		
300V 80°C	**8760LS**	IEC 332-3C BS 7655	1640 3280	500 1000	270.1 610.5	122.5 276.9	1.2 mm 18 AWG (16x30) TC	0.082	2.08	Overall Beldfoil® + Drain Wire (20 AWG TC)	*0.236 **0.409	*6.00 **10.40	60	66%	CDR/CDR CDR/SCR	24.0 44.0	78.7 144.4	Black, Clear
 Shorting Fold 1-Pair																		

* Under Armor
** Over Armor

TC = Tinned Copper • DCR = DC resistance