

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	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
UL AWM		CM CL2	U-500	U-152.4	18.5	8.4	(7x28)			+55%							10	2.1	6.9
Style 2464		CEC:	500	152.4	18.5	8.4	.038"			TC Braid							50	5.0	16.4
(300V 80°C)		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
			10000 ^{▲†}	3048.0	370.0	168.0	31.0Ω/km												



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	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
300V 80°C			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
							31.0Ω/km												



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	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
300V 60°C		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
							31.0Ω/km												



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	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
300V 200°C		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
							31.0Ω/km												



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 (7x28)	.154	3.91	Beldfoil +55%	Inner Jacket: .238	78	66%	19.7	64.6	1	.6	2.0
		CM CL2	6000†	1828.8	924.0	420.0	.038"	Tinned	4.1Ω/M'	TC Braid	Overall: .563	14.30				10	2.1	6.9
		CEC:					.038"	Copper	9.5Ω/M'							50	5.0	16.4
		CM, CMG FT4, HLBCD (Haz Loc)					31.0Ω/km									100	7.5	24.6
																200	11.0	36.1
														400	16.0	52.5		



Drain Wire

*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 (7x28)	.154	3.91	Beldfoil +55%	Inner Jacket: .238	78	66%	19.7	64.6	1	.6	2.0
		CM CL2	6000†	1828.8	1488.0	676.4	.038"	Tinned	4.1Ω/M'	TC Braid	Overall: .563	14.30				10	2.1	6.9
		CEC:					.038"	Copper	9.5Ω/M'							50	5.0	16.4
		CM, CMG FT4, HLBCD (haz loc)					31.0Ω/km									100	7.5	24.6
																200	11.0	36.1
														400	16.0	52.5		



Drain Wire

*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 (7x28)	.154	3.91	Beldfoil +55%	Inner Jacket: .238	78	66%	19.7	64.6	1	.6	2.0
		PLTC					.038"	Tinned	4.1Ω/M'	TC Braid	Overall: .500	12.70				10	2.1	6.9
		CEC:					.038"	Copper	9.5Ω/M'							50	5.0	16.4
		CM	U-1000	U-304.8	41.0	18.6	31.0Ω/km									100	7.5	24.6
			1000	304.8	40.0	18.2										200	11.0	36.1
														400	16.0	52.5		



Drain Wire

*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 (7x28)	.156	3.96	93% TC Braid Shield	.244	6.20	78	66%	19.7	64.6	1	.6	2.0
		CM	U-500	U-152.4	20.5	9.3	.038"	Tinned	3.4Ω/M'							10	2.1	6.9	
		CEC:	500	152.4	20.0	9.1	.038"	Copper	9.5Ω/M'							50	5.0	16.4	
		CM	U-1000	U-304.8	41.0	18.6	31.0Ω/km									100	7.5	24.6	
			1000	304.8	40.0	18.2										200	11.0	36.1	
														400	16.0	52.5			



Drain Wire

For Plenum version of 9272, see 89272.
CPE jacket optional.**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 VW-1	9250	—	500	152.4	61.5	27.9	18 AWG (7x26)	.285	7.24	2 TC Braid Shield	.416	10.57	95	66%	16.0	52.5	1	.3	1.0
			1000	304.8	121.0	54.9	.046"	BC	6.6Ω/M'							10	.9	3.0	
								21.5Ω/km								20	1.3	4.3	
																50	2.1	6.9	
																100	3.0	9.8	
														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.