BELDEN

Industrial Fieldbus And Ethernet Cables

Belden Fieldbus & Ethernet cables are designed to withstand the destructive conditions commonly found in industrial applications, such as temperature extremes, humidity/moisture, dust and oil. Invest in cable with proven performance and reliability to significantly reduce system failures and avoid costly downtime.

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Industrial Fieldbus

Today, more than ever, manufacturing productivity depends upon seamless data communication and automation systems. And both depend upon high-performance cabling solutions. The Industrial Fieldbus range covers all key protocols in the market: Foundation Fieldbus (type A, type B, high speed), Profibus DP and PA, CanOpen RS-485, DeviceBus for ODVA DeviceNet™, ControlNet, ControlBus, MODBUS, Lonworks, DataTray® 600 V Twinaxial, CC Link, KNX/EIB. The products are approved for the main PLC/DCS manufacturers in the market, such as: ABB, Siemens, Rockwell Automation, Honeywell, Emerson, Yokogawa, Mitsubishi, Schneider Electric, Omron, etc.

Applications

Belden has developed the world's most comprehensive line of industrial cabling solutions for applications like yours: whether you are networking your factory floor or your process equipment and devices to their controllers, or to the control room, or relaying data between the control room, the engineering department, and remote manufacturing sites. From your petrochemical, automotive manufacturing, pharmaceutical, power generation, pulp and paper, metals, food and beverage, or general manufacturing plant to your corporate headquarters – and everywhere in between – Belden has your cabling solution.

Product Features

- Variety of jacket materials: PVC, CPE, HDPE, FRNC/LSNH, or TPE jackets
- Versions available with Beldfoil® shields and Beldfoil® Plus Braid shields
- Twisted and bonded pairs, quad, single and multi-conductor versions
- Operation temperature from -40 °C up to +150 °C, designs suitable for high/low temperature installations
- UL, IEC, NFPA approvals
- Sunlight, oil, gasoline and weldsplatter resistant designs
- Suitable for CMX/outdoor applications
- PLTC listed cables
- High resistance against trailing and torsion as well continous flexing
- Options suitable for direct burial

Benefits

- Robustness for full range of industrial applications: outdoors trailing, oil contact.
- Reliability through design robustness: steel wire armor, aluminium interlock armor, stranded conductors.
- Ease of use through fast connect versions

Foundation Fieldbus

Foundation Fieldbus Type A

- Impedance 100 Ohm

Part No.	AWG	Voltage	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features /Standards
				Inch	mm		
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • FRLS PVC Sheath							
18 AWG							
YJ55281F	18	300V	1	0.28	7.2	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55282F	18	300V	2	0.48	12.4	-30°C to +90°C	
YJ55283F	18	300V	3	0.50	13.0	-30°C to +90°C	
YJ55284F	18	300V	4	0.56	14.4	-30°C to +90°C	
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • LSZH Sheath							
18 AWG							
YJ55281L	18	300V	1	0.28	7.2	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55282L	18	300V	2	0.48	12.4	-30°C to +90°C	
YJ55283L	18	300V	3	0.50	13.0	-30°C to +90°C	
YJ55284L	18	300V	4	0.56	14.4	-30°C to +90°C	
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • FRLS PVC Sheath							
16 AWG							
YJ55261F	16	300V	1	0.34	8.8	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55262F	16	300V	2	0.58	14.7	-30°C to +90°C	
YJ55263F	16	300V	3	0.63	16.3	-30°C to +90°C	
YJ55264F	16	300V	4	0.69	17.5	-30°C to +90°C	
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • LSZH Sheath							
16 AWG							
YJ55261L	16	300V	1	0.34	8.8	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55262L	16	300V	2	0.58	14.7	-30°C to +90°C	
YJ55263L	16	300V	3	0.63	16.3	-30°C to +90°C	
YJ55264L	16	300V	4	0.69	17.5	-30°C to +90°C	

TC = Tinned Copper • PVC = Polyvinyl Chloride • XLPE = Cross-Linked Polyethylene • LSZH = Low Smoke Zero Halogen

Foundation Fieldbus

Foundation Fieldbus Type A

- Impedance 100 Ohm

Part No.	AWG	Voltage	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features /Standards
				Inch	mm		
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • PVC Inner Sheath • Steel Wire Armor • FRLS PVC Outer Sheath							
18 AWG							
YJ55281FS	18	300V	1	0.41	10.5	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55282FS	18	300V	2	0.62	15.9	-30°C to +90°C	
YJ55283FS	18	300V	3	0.64	16.5	-30°C to +90°C	
YJ55284FS	18	300V	4	0.70	18.0	-30°C to +90°C	
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • LSZH Inner Sheath • Steel Wire Armor • LSZH Outer Sheath							
18 AWG							
YJ55281LS	18	300V	1	0.41	10.5	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55282LS	18	300V	2	0.62	15.9	-30°C to +90°C	
YJ55283LS	18	300V	3	0.65	16.5	-30°C to +90°C	
YJ55284LS	18	300V	4	0.70	18.0	-30°C to +90°C	
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • PVC Inner Sheath • Steel Wire Armor • FRLS PVC outer Sheath							
16 AWG							
YJ55261FS	16	300V	1	0.47	12.2	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55262FS	16	300V	2	0.78	20.1	-30°C to +90°C	
YJ55263FS	16	300V	3	0.81	20.9	-30°C to +90°C	
YJ55264FS	16	300V	4	0.88	22.7	-30°C to +90°C	
Stranded TC Conductors • XLPE Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • LSZH Inner Sheath • Steel Wire Armor • LSZH Outer Sheath							
16 AWG							
YJ55261LS	16	300V	1	0.47	12.2	-30°C to +90°C	BS EN 50290-2-29, BS EN 50290-2-27, BS EN 50290-2-22, IEC 60332-3-22 (Cat A), UL 1581, ASTM D 2843, Sunlight Res, Oil Res
YJ55262LS	16	300V	2	0.78	20.1	-30°C to +90°C	
YJ55263LS	16	300V	3	0.81	20.9	-30°C to +90°C	
YJ55264LS	16	300V	4	0.88	22.7	-30 °C to +90°C	

TC = Tinned Copper • PVC = Polyvinyl Chloride • XLPE = Cross-Linked Polyethylene • LSZH = Low Smoke Zero Halogen

Foundation Fieldbus

Foundation Fieldbus Type A

- Impedance 100 Ohm

Part No.	AWG	Voltage	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features /Ratings
				Inch	mm		
Stranded (7 x 26) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
3076F*	18	300	1	.253	6.43	-40 to +105	PLTC/ITC-ERCMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
Stranded (7 x 26) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® Shielding • LSNH Inner Jacket (Black and Blue) • Steel Wire Armor • Black LSNH Outer Jacket							
3076ELS	18	300	1	.295/.511	7.5/13	-45 to +80	NEC: CM • CEC: CM
Stranded (7 x 26) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® Shielding • LSNH Jacket							
3076ENH	18	300	1	.295	7.5	-45 to +80	NEC: CM • CEC: CM
Stranded (7 x 26) TC Conductors • PO Insulation • TC Drain Wire • Individually Foil Shielded Pairs + Overall Beldfoil® Shielding • Orange PVC Jacket							
1327A	18	300	2	.44	11.18	-40 to +105	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
Stranded (7 x 26) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® + 65% TC Braid Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
1334A	18	300	1	.28	7.11	-50 to +105	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res IEC 60332-3-24 (Cat C)

* ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service.

TC = Tinned Copper • PVC = Polyvinyl Chloride • PO = Polyolefin • LSNH = Low Smoke No Halogen

Conductor Color Code: Blue, Orange, Numbered Pairs

Foundation Fieldbus

Foundation Fieldbus Type A

- Impedance 100 Ohm

Part No.	AWG	Voltage	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features /Ratings
				Inch	mm		
Stranded (7 x 26) TC Conductors • XLPO Insulation • TC Drain Wire • Individually Shielded Pairs and Overall Beldfoil® Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
2100A	18	300	1	.319	8.10	-55 to +90	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 C(UL) CIC Type TC Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
2101A	18	300	2	.512	13.00	-55 to +90	
2102A	18	300	5	.677	17.20	-55 to +90	
2103A	18	300	8	.800	20.32	-55 to +90	
2108A	18	300	50	1.947	49.45	-55 to +90	
Stranded (7 x 26) TC Conductors • XLPO Insulation • TC Drain Wires • Individually Shielded Pairs and Overall Beldfoil® Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
2118A*	18	600	1	.319	8.10	-55 to +90	TC-ER CMG CMX-Outdoor CEC: CMG FT4 C(UL) CIC Type TC Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
2119A*	18	600	2	.512	13.00	-55 to +90	
2120A*	18	600	5	.677	17.20	-55 to +90	
2121A*	18	600	8	.800	20.32	-55 to +90	
2126A	18	600	50	1.947	49.45	-55 to +90	
Stranded (7 x 24) TC Conductors • PO Insulation • TC Drain Wires • Individually Shielded Pairs and Overall Beldfoil® Shielding • Orange PVC Jacket							
1360A	16	300	1	.40	10.16	-50 to +105	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
1361A	16	300	2	.58	14.73	-40 to +105	
1362A	16	300	5	.75	19.05	-40 to +105	
1363A	16	300	8	.91	23.11	-40 to +105	
1367A	16	300	24	1.55	39.37	-40 to +105	
Stranded (7 x 26) TC Conductors • XLPO Insulation • TC Drain Wires • Individually Shielded Pairs and Overall Beldfoil® Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
2109A	16	300	1	.365	9.27	-55 to +90	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 C(UL) CIC Type TC Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
2110A	16	300	2	.629	15.98	-55 to +90	
2111A	16	300	5	.789	20.04	-55 to +90	
2112A	16	300	8	.982	24.94	-55 to +90	
2117A	16	300	36	1.952	49.58	-55 to +90	

* ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service.

Conductor Color Code: Blue, Orange, Numbered Pairs

TC = Tinned Copper • PVC = Polyvinyl Chloride • XLPO = Cross-Linked Polyolefin

Foundation Fieldbus

Foundation Fieldbus Type A

- Impedance 100 Ohm

Part No.	AWG	Voltage	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features /Ratings
				Inch	mm		
Stranded (7 x 24) TC Conductors • XLPO Insulation • TC Drain Wires • Individually Shielded Pairs and Overall Beldfoil® Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
2127A*	16	600	1	.365	9.27.	-55 to +90	TC-ER CMG CMX-Outdoor CEC: CMG FT4 C(UL) CIC Type TC Sunlight Res Oil Res IEC 60332-3-24 (Cat C)
2128A*	16	600	2	.629	15.98	-55 to +90	
2129A*	16	600	5	.789	20.04	-55 to +90	
2130A*	16	600	8	.982	24.94	-55 to +90	
2135A	16	600	36	1.952	49.58	-55 to +90	
Stranded (7 x 24) TC Conductors • PO Insulation • TC Drain Wire • Overall Beldfoil® + 65% TC Braid Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
1335A**	16	300	1	.34	8.64	-50 to +105	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res
Stranded (7 x 22) TC Conductors • PO Insulation • TC Drain Wire • Overall Beldfoil® + 65% TC Braid Shielding • Orange or Intrinsically Safe Blue PVC Jacket							
1336A**	14	300	1	.43	10.92	-50 to +105	PLTC/ITC-ER CMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res IEC 60332-1-2

* ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions

** Although Type A specification references nominal 18 AWG, Belden 1335A and 1336A meet all other Type A requirements.

Conductor Color Code: Blue, Orange, Numbered Pairs

TC = Tinned Copper • PVC = Polyvinyl Chloride • XLPO = Cross-Linked Polyolefin

Foundation Fieldbus

Foundation Fieldbus Type B

- Impedance 100 Ohm

Part No.	Impedance (Ohm)	AWG	Voltage	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features/ Ratings
					Inch	mm		
Stranded (7 x 30) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® Shielding • Orange PVC Jacket								
3077F	100	22	300	1	.196	4.97	-30 to +105	Foundation Fieldbus Type B NEC: PLTC/ITC CM • CEC: CM FT1 Sunlight Res Oil Res
Stranded (7 x 30) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® Shielding • Steel Wire Armor • FRNC Jacket								
3077ELS	100	22	300	1	.295/.512*	7.50/13.00*	-30 to +105	FOUNDATION Fieldbus Type B NEC: PLTC/ITC CM • CEC: CM FT1
Stranded (7 x 30) TC Conductors • PO Insulation • TC Drain Wire • Beldfoil® Shielding • FRNC Jacket								
3077ENH	100	22	300	1	.295	7.50	-30 to +105	FOUNDATION Fieldbus Type B NEC: PLTC/ITC CM • CEC: CM FT1

* Inner jacket/outer jacket

Conductor Color Code: Blue, Orange

TC = Tinned Copper • PVC = Polyvinyl Chloride • PO = Polyolefin • FRNC = Fire Retardant, Non-Corrosive

PROFIBUS

PROFIBUS PA

- Impedance 100 Ohm
- 300 V

Part No.	Shielding	Jacket	OD (Nom)		Operating Temperature (°C)	Additional Features
			Inch	mm		
18 AWG • Stranded (7 x 26) TC Conductors • 1 Pair • PO Insulation						
3076F	Overall Beldfoil®	PVC	.253	6.43	-40 to +105	PLTC/ITC-ERCMG CMX-Outdoor CEC: CMG FT4 Sunlight Res Oil Res IEC 60332-1-2
70001E	Overall Beldfoil® + 85% Braid	PVC	.295	7.5	-45 to +80	30 V UL AWM 20276 IEC 60332-1
3076ENH	Overall Beldfoil®	LSNH	.295	7.5	-45 to +80	NEC: CM • CEC: CM
18 AWG • Stranded (7 x 26) TC Conductors • 1 Pair • PO Insulation • Steel Wire Armor						
3076ELS	Overall Beldfoil®	LSNH	.295/.511	7.5/13	-45 to +80	Steel Wire Armor NEC: CM • CEC: CM LSNH Inner Jacket IEC 60332-1-2, IEC 60332-3-24

All construction have TC Drain Wire in their design.

Conductor Color Coding: 3076F, 3076ELS, 3076ENH: Blue, Orange, 70001E: Red, Green

TC = Tinned Copper • PVC = Polyvinyl Chloride • PO = Polyolefin • LSNH = Low Smoke No Halogen

PROFIBUS

PROFIBUS DP

- Impedance 150 Ohm
- 300 V

Part No.	Shielding	Jacket	OD (Nom)		Operating Temperature (°C)	Additional Features
			Inch	mm		
22 AWG • Solid BC Conductors • 1 Pair • Flame Retardant FMPE Insulation						
3079A*	Overall Beldfoil® + 65% Braid	PVC	.315	8.92	-30 to +75	NEC: CMG • CEC: CMG FT4 UL PLTC Sunlight Res Siemens Sinec L2 cable UL AWM 20201 (600 V, +75 °C)
3079ANH	Overall Beldfoil® + 65% Braid	LSNH	.315	8.0	-45 to +80	IEC 60332-3-24
22 AWG • Stranded (7 x 30) BC Conductors • 1 Pair • Flame Retardant FMPE Insulation						
3079E	Overall Beldfoil® + 65% Braid	PVC	.315	8.92	-30 to +75	NEC: CMG • CEC: CMG FT4 UL PLTC Sunlight Res UL AWM 20201 (600 V, +75 °C)
22 AWG • Solid BC Conductors • 1 Pair • Flame Retardant FMPE Insulation • Steel Wire Armor						
3079ALS	Overall Beldfoil® + 65% Braid	LSNH	.315/.488	8.00/12.40	-45 to +80	Steel Wire Armor IEC 60332-3-24 LSNH Inner Jacket
22 AWG • Solid BC Conductors • 1 Pair • Foamed XLPE						
50079L	Overall Beldfoil® + 65% Braid	LSZH	0.32	8.2	-40 to +90	IEC 60092-359, IEC 60092-360, Flame Retardent : IEC 60332-1-2 IEC 60332-3-22 Sunlight and Oil Resistant
22 AWG • Solid BC Conductors • 1 Pair • Foamed XLPE • Steel Wire Armored						
50079LS	Overall Beldfoil® + 65% Braid	LSZH	0.46	11.6	-40 to +90	IEC 60092-359, IEC 60092-360, Flame Retardent : IEC 60332-1-2, IEC 60332-3-22 Sunlight and Oil Resistant
22 AWG • Solid BC Conductors • 1 Pair • Foamed XLPE • Steel Wire Braid Armored						
50079LB	Overall Beldfoil® + 65% Braid	LSZH	0.44	11.2	-40 to +90	IEC 60092-359, IEC 60092-360, Flame Retardent : IEC 60332-1-2, IEC 60332-3-22 Sunlight and Oil Resistant

Conductor Color Coding: Red, Green

All construction have TC Drain Wire in their design.

* ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service

BC = Bare Copper • TC = Tinned Copper • PVC = Polyvinyl Chloride •LSNH = Low Smoke No Halogen • FRNC = Fire Retardant, Non-Corrosive • PE = Polyethylene • PUR = Polyurethane • FMPE = Foam Polyethylene

CANopen RS-485

Non-Plenum • Overall Foil/Braid Shield • RS-485

- Impedance 120 Ohm

Part No.	Pairs	OD (Nom)		Insulation Thickness		Jacket Thickness		Capacitance				Additional Features/ Ratings
								Cond.-Cond.		Cond.-Shield.		
		Inch	mm	Inch	mm	Inch	mm	pF/Ft	pF/m	pF/Ft	pF/m	
Stranded (7 x 32) TC Conductors • PE Insulation • Overall Beldfoil® + 90% TC Braid Shield • 24 AWG Stranded TC Drain Wire • Chrome PVC Jacket												
24 AWG • PE/PVC												
9841	1	.232	5.89	.023	.58	.035	.89	12.8	42.0	23.0	75.5	NEC: CM • CEC: CM UL AWM Style 2919 (30 V, +80 °C) ANSI E1.11 DMX512 120 Ω Nom. Impedance 66% Velocity of Prop. Conductor DCR (Nom): 24.0 Ω/1000' (78.7 Ω/km)
9842	2	.340	8.64	.022	.56	.035	.89	12.8	42.0	23.0	75.5	
9843	3	.360	9.14	.022	.56	.035	.89	12.8	42.0	23.0	75.5	
9844	4	.390	9.91	.022	.56	.035	.89	12.8	42.0	23.0	75.5	
Stranded (7 x 32) TC Conductors • PE Insulation • Overall Beldfoil® + 90% TC Braid Shield • 24 AWG Stranded TC Drain Wire • Chrome FRNC/LSNH Jacket												
24 AWG • PE/LSNH												
9841NH	1	.232	5.89	.023	.58	.035	.89	12.8	42.0	23.0	75.5	IEC 60332-3-24 ANSI E1.11 DMX512 120 Ω Nom. Impedance 66% Velocity of Prop. Conductor DCR (Nom): 24.0 Ω/1000' (78.7 Ω/km)
9842NH	2	.341	8.65	.022	.56	.035	.89	12.8	42.0	23.0	75.5	
9843NH	3	.358	9.10	.022	.56	.035	.89	12.8	42.0	23.0	75.5	
9844NH	4	.390	9.91	.022	.56	.035	.89	12.8	42.0	23.0	75.5	
Stranded (7 x 32) TC Conductors • PE Insulation • Chrome FRNC/LSNH Inner Jacket• Overall Beldfoil® + 90% TC Braid Shield • 24 AWG Stranded TC Drain Wire • Steel Wire Armor • Black Sunlight-Resistant FRNC/LSNH Outer Jacket												
24 AWG • PE/LSNH • Armored												
9841LS	1	.405	10.30	.023	.58	.035/ .051*	.89/ 1.30*	12.8	42.0	23.0	75.5	IEC 60332-3-24 ANSI E1.11 DMX512 120 Ω Nom. Impedance 66% Velocity of Prop. Conductor DCR (Nom): 24.0 Ω/1000' (78.7 Ω/km)
9842LS	2	.516	13.10	.022	.56	.035/ .051*	.89/ 1.30*	12.8	42.0	23.0	75.5	

* Inner jacket/outer jacket

TC = Tinned Copper • PVC = Polyvinyl Chloride • PE = Polyethylene • LSNH = Low Smoke No Halogen

CANopen RS-485

Plenum • Overall Foil/Braid Shield • RS-485

- Impedance 120 Ohm
- NEC: CMP
- CEC: CMP FT6

Part No.	Pairs	OD (Nom)		Insulation Thickness		Jacket Thickness		Capacitance				Additional Features/ Ratings
								Cond.-Cond.		Cond.-Shield.		
		Inch	mm	Inch	mm	Inch	mm	pF/Ft	pF/m	pF/Ft	pF/m	
Stranded (7 x 32) TC Conductors • Foam FEP Insulation • Overall Beldfoil® + 90% TC Braid Shield • 24 AWG Stranded TC Drain Wire • Natural Flamarrest Jacket												
24 AWG • FEP/Flamarrest®												
82841	1	.204	5.18	.025	.64	.015	.38	12	39.4	22	72.2	Plenum 300 V 120 Ω Nom. Impedance 76% Velocity of Prop. Conductor DCR (Nom): 24.0 Ω/1000' (78.7 Ω/km)
82842	2	.273	6.93	.019	.48	.015	.38	12	39.4	22	72.2	
Stranded (7 x 32) TC Conductors • Foam FEP Insulation • Overall Beldfoil® + 90% TC Braid Shield • 24 AWG Stranded TC Drain Wire • Red FEP Jacket												
24 AWG • FEP/FEP												
89841	1	.202	5.13	.025	.64	.014	.36	12	39.4	22	72.2	Plenum 300 V 120 Ω Nom. Impedance 76% Velocity of Prop. Conductor DCR (Nom): 24.0 Ω/1000' (78.7 Ω/km)
89842	2	.305	7.75	.023	.58	.014	.36	12	39.4	22	72.2	

Paired Cable • Shielded

- 24 AWG (41 x 40) BC Conductors
- Foam Polyethylene Insulation with Skin
- Overall Beldfoil® + 85% TC Braid Shield
- Green PVC Jacket
- 24 AWG (41 x 40) TC Drain Wire
- Impedance 120 Ohm
- Foam Polyethylene Insulation with Skin
- NEC: CM
- CEC: CM
- -20 °C to +60 °C
- -5 °C to +60 °C Flexing

Part No.	Pairs	OD (Nom)		Capacitance (Max) Cond.-Cond.		Additional Features/Ratings
		Inch	mm	pF/Ft	pF/m	
24 AWG (41 x 40) BC Conductors • FMPE Insulation with Skin • Overall Beldfoil® + 85% TC Braid Shield • 24 AWG (41 x 40) TC Drain Wire • Green PVC Jacket						
7200A	1	.240	6.10	15.0	49.2	Oil Res II
7201A	2	.322	.8.18	15.0	49.2	Oil Res II
7202A	3	.347	8.81	15.0	49.2	Oil Res II
7203A	4	.362	9.20	15.0	49.2	Oil Res II

Conductor Color Coding: One-Pair Cable: White, Blue

Multi-Pair Configurations: 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

TC = Tinned Copper • FEP = Fluorinated Ethylene Propylene • FRNC/LSNH = Fire Retardant, Non-Corrosive/Low Smoke, No Halogen • FMPE = Foam Polyethylene

CANopen RS-485

PLTC Cable

- Impedance 120 Ohm

Part No.	Pairs	OD (Nom)		Capacitance (Max) Cond.-Cond.		Operating Temperature (°C)	Additional Features/Ratings
		Inch	mm	pF/Ft	pF/m		
22 AWG (7 x 30) Stranded TC Conductors • Datalene® Insulation • TC Drain Wire • Overall Beldfoil® + 90% TC Braid Shielding • Black PVC Jacket							
3105A	1.0	.284	7.21	11	36.1	-20 to +60	NEC CM • CEC CM FT1 UL PLTC Sunlight Res Oil Res II 300 V 3015A and 3107A are DMX512 Type 3106A: Single conductor is under the braid shield; pair is under the Beldfoil® shield Also available with CPE jacket
3106A*	1.5	.300	7.62	11	36.1	-20 to +60	
3107A*	2.0	.356	9.04	11	36.1	-20 to +60	
3108A*	3.0	.420	10.67	11	36.1	-20 to +60	
3109A*	4.0	.448	11.38	11	36.1	-20 to +60	
22 AWG (7 x 30) Stranded TC Conductors • Datalene Insulation • TC Drain Wire • Overall Beldfoil® + 90% TC Braid Shielding • Armor • Black PVC Jacket							
123107A	2.0	.650	16.51	11	36.1	-40 to +60	Aluminum Interlocked Armor NEC CM • CEC CMG FT4 UL PLTC Sunlight Res Oil Res II 300 Vt

* ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service

BC = Bare Copper • TC = Tinned Copper • PVC = Polyvinyl Chloride

DeviceBus® for ODVA DeviceNet™

DeviceNet Communications Rate Table (Impedance 120 Ohm)

Communications Rate (kb/s)	Maximum Distance							
	3082A, 3082F, 3083A, 7897A		3082K, 7896A		7895A		3084F, 3084A, 3085A, 7900A	
	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
125	1640	500	1378	420	984	300	328	100
250	820	250	656	200	820	250	328	100
500	328	100	246	75	328	100	328	100

DeviceBus Cables

- Impedance 120 Ohm

Part No.	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features/ Ratings
		Inch	mm		
15 (19 x 28) and 18 (19 x 30) AWG Stranded TC Conductors • FEP (Data), PVC/Nylon (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Gray PVC Jacket					
7897A	2 1 pair data 1 pair power	.460	11.7	-20 to +75	ODVA Class 1 Thick, High Velocity, 600 V UL TC-ER Sunlight Res Oil Res
16 (19 x 29) and 18 (19 x 30) AWG Stranded TC Conductors • FR PP (Data), PVC/Nylon (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Gray PVC JacketFoil Shielded Pairs + Overall 65% TC Braid Shielding • Gray PVC Jacket					
7896A*	2 1 pair data 1 pair power	.525	13.34	-20 to +75	ODVA Class 1 Cable V, 600 V UL TC-ER Sunlight Res Oil Res
16 (19 x 29) and 18 (19 x 30) AWG Stranded TC Conductors • FR PP (Data), PVC/Nylon (Power) Insulation • Unshielded • Gray PVC Jacket					
3082A	2 1 pair data 1 pair power	.480	12.19	-20 to +75	ODVA Class 2 Thick, 300 V NEC: CMG • CEC: CMG FT4 C(UL) AWM I/II A UL AWM 20201 (600 V) UL PLTC-ER Sunlight Res Oil Res
15 (65 x 33) and 18 (65 x 36) AWG Stranded TC Conductors • FMPE (Data), PVC (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Gray or Red PVC Jacket					
3082F	2 1 pair data 1 pair power	.480	12.19	-20 to +75	ODVA Class 2 Thick, 300 V High Flex, NEC: CMG • CEC: CMG FT4 C(UL) AWM I/II A UL AWM 20201 (600 V) UL PLTC-ER Sunlight Res Oil Res

* ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service

Conductor Color Coding: Data: Blue, White, Power: Red, Black

TC = Tinned Copper • FEP = Fluorinated Ethylene Propylene • PVC = Polyvinyl Chloride • FMPE = Foam Polyethylene • PP = Polypropylene

DeviceBus® for ODVA DeviceNet™

DeviceBus Cables

- Impedance 120 Ohm

Part No.	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features/ Ratings
		Inch	mm		
15 (19 x 28) and 18 (19 x 30) AWG Stranded TC Conductors • FMPE (Data), PVC (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Yellow CPE Jacket					
3083A	2 1 pair data 1 pair power	. 475	12.07	-30 to +75	ODVA Class 2 Thick, 300 V NEC: CMG • CEC: CMG FT4 UL PLTC Sunlight Res Oil Res
22 (19 x 34) and 24 (19 x 36) AWG Stranded TC Conductors • FMPE (Data), PVC (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Gray PVC Jacket					
3084A	2 1 pair data 1 pair power	.280	7.11	-20 to +75	ODVA Class 2 Thin, 300 V NEC: CMG CL2 • CEC: CMG FT4, C(UL) AWM I/II A Sunlight Res Oil Res
22 (155 x 44) and 24 (105 x 44) AWG Stranded TC Conductors • FMPE (Data), PVC (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Gray PVC Jacket					
3084F	2 1 pair data 1 pair power	.275	6.00	-20 to +75	Class 2 Thin, 300 V High Flex NEC: CMG CL2 • CEC: CMG FT4, C(UL) AWM I/II A Sunlight Res Oil Res
22 (19 x 34) and 24 (19 x 36) AWG Stranded TC Conductors • FMPE (Data), PVC (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Yellow CPE Jacket					
3085A	2 1 pair data 1 pair power	.280	7.11	-30 to +75	ODVA Class 2 Thin, 300 V NEC: CL2 CMG • CEC: CMG FT4 Sunlight Res Oil Res
20 (19 x 32) and 18 AWG (19 x 30) Stranded TC Conductors • FMPE (Data), PVC (Power) Insulation • Individually Foil Shielded Pairs + Overall 65% TC Braid Shielding • Gray PVC Jacket					
7895A	2 1 pair data 1 pair power	.378	9.60	-20 to +75	OOVDA Class 2 Cable III, 300 V NEC: CMG • CEC: CMG FT4 UL AWM 20201 (600 V) UL PLTC Sunlight Res Oil Res

Conductor Color Coding: Data: Blue, White, Power: Red, Black

DeviceNet™ Flat Trunk Cable

DeviceNet™ Cables

- Impedance 120 Ohm

Part No.	Impedance (Ohm)	Cores	OD (Nom)		Operating Temperature (°C)	Additional Features/ Ratings
			Inch	mm		
4 Cores 16AWG Stranded TC, PVC (Cores A) / FMPE (Cores B), PVC Jacket, CMG-FT4, 300V						
50095PVC	120	4	.209(Height) x .760(width)	5.3(Height) x 19.3(width)	-25 to + 75	NEC:CL2 CEC: CMG CSA AWM I/II A/B FT4

Color Code: CoreA1/A2: Red/Black, CoreB1/B2: White/Blue

TC = Tinned Copper • PVC = Polyvinyl Chloride • TPE = Thermoplastic Elastomer • CPE = Chlorinated Polyetlyethylene • FMPE = Foamed Polyethylene

CC Link Fixed Cable

CC Link Cable

- Impedance 110 Ohm

Part No.	Pairs	Conductor		Nominal OD (mm)	Jacket	Shielding	Operating Temperature (°C)	Additional Features/ Ratings
		Solid	Stranded					
20 AWG (7 x 28) Stranded BC Conductors • Foam HDPE Insulation • TC Drain Wire • Overall Beldfoil® + 78% TC Braid Shielding • Red PVC Jacket								
1348A	3 Cond.	-	AWG 20 (7)	7.70	PVC	Foil Braid >78%	-30 to +60	3 Conductor, 300 V NEC: CM • CEC: CM
3 x 20 AWG (7 x 28) and 2 x 18 AWG (7 x 26) Stranded BC Conductors • Foam HDPE (Data), PVC (Power) Insulation • 3 Data cables: Overall Beldfoil® + 78% TC Braid Shielding, TC Drain Wire • Black PVC Inner Jacket • Red PVC Outer Jacket								
1349A	3 Cond. Data 2 Cond. Power	-	3 x 20 AWG (7) and 2 x 18 AWG (7)	13.00	PVC	Foil Braid >78%	-30 to +60	5 Conductor, 300 V NEC: CM • CEC: CM

Conductor Color Coding: Blue, Yellow, White (Data); Black, White (Power)

CC Link Movable Cable

CC Link Cable

- Impedance 110 Ohm
- Movable

Part No.	Conductors	Conductor		Nominal OD (mm)	Jacket	Shielding	Operating Temperature (°C)	Additional Features/ Ratings
		Solid	Stranded					
3 Conductor 0.5 mm² (3x33x0.08mm) Bare Copper, PE Insulation, Tinned Copper Braid Shield, PVC Outer Jacket, VW-1								
1348F	3	-	0.5mm2 (3x33x0.08)	8.0	PVC	TC Braid	-20 to +80	CC-Link Ref. Number 1109, UL 758, UL 1581 CSA C22.2 No.210, 5 million Drag Chain Cycles

Color Code: Blue, Yellow, White

BC = Bare Copper • TC = Tinned Copper • PVC = Polyvinyl Chloride • LSNH = Low Smoke No Halogen HDPE = High-Density Polyethylene

ControlNet™

RG6/U Type Quad Shielded Coaxial

- Impedance 75 Ohm

Part No.	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
	Inch	mm	Inch	mm		
18 AWG Solid BC-Covered Steel Conductor • FMPE Insulation • Duobond® IV* Quad Shield • PVC Jacket (Black or Intrinsically Safe Blue)						
3092A**	.180	4.57	.298	7.57	-30 to +75	Impedance: 75 Ω NEC: CMR CL2R • CEC: CMG FT4
18 AWG Solid BC-Covered Steel Conductor• Foam FEP Insulation • Duobond IV* Quad Shield • Fluorocopolymer Jacket (Black or Intrinsically Safe Blue)						
3093A	.170	4.32	.274	6.96	-20 to +150	Plenum Rated Impedance: 75 Ω NEC: CMP • CEC: CMP FT6
20 AWG Stranded (105 x 40) BC Conductor • FMPE Insulation • Duobond IV* Quad Shield • Black PVC Jacket						
3092F	.183	4.65	.303	7.70	-40 to +75	High Flex Impedance: 75 Ω NEC: CMR CL2R • CEC: CMG FT4
18 AWG Solid BC-Covered Steel Conductor • FMPE Insulation • Duobond IV* Quad Shield • PVC Inner Jacket • Armor • Black PVC Sunlight-Resistant Outer Jacket						
123092A	.180	4.57	.620	15.75	-40 to +75	Aluminum Interlocked Armor Impedance: 75 Ω NEC: CM • CEC: CMG FT4, HL

* Duobond IV is a four-layer shield: (1) Duobond II Foil, (2) Aluminium Braid (60%), (3) Duofoil® Foil, (4) Aluminium Braid (40%).

** ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service

BC = Bare Copper • PVC = Polyvinyl Chloride • FEP = Fluorinated Ethylene Propylene • FMPE = Foam Polyethylene

ControlNet™

Quad Shielded Coaxial

- Impedance 75 Ohm

Part No.	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
	Inch	mm	Inch	mm		
20 AWG Stranded (105 x 40) BC Conductor • FMPE Insulation • Duobond® IV* Quad Shielding • Black PVC Jacket						
3092F**	.183	4.65	.303	7.70	-40 to +75	High Flex Impedance: 75 Ω RG-6/U Type NEC: CMR CL2R • CEC: CMG FT4 IEEE 802.4 MAP/IEEE 802.7 Mini-MAP
18 AWG Solid BC-Covered Steel Conductor • Gas-Injected FMPE Insulation • Duobond IV* Quad Shielding • Gray PVC Jacket						
3131A	.189	4.57	.300	7.62	-30 to +75	Impedance: 75 Ω RG-6/U Type NEC: CMR CL2R • CEC: CMG FT4
14 AWG Solid BC-Covered Steel Conductor • Gas-Injected FMPE Insulation • Duobond IV* Quad Shielding • Gray PVC Jacket						
3094A	.280	7.11	.407	10.34	-30 to +80	Impedance: 75 Ω RG-11/U Type NEC: CMR CLR2 • CEC: CMG FT4 IEEE 802.4 MAP

* Duobond IV is a four-layer shield: (1) Duobond II Foil, (2) Aluminium Braid (60%), (3) Duofoil® Foil, (4) Aluminium Braid (40%).

** ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service

BC = Bare Copper • PVC = Polyvinyl Chloride • FEP = Fluorinated Ethylene Propylene FMPE = Foam Polyethylene

ControlBus™

Blue Hose® Industrial Twinax

- Impedance 78 Ohm

Part No.	Voltage	Nominal OD		Operating Temperature (°C)	Additional Features/ Ratings
		Inch	mm		
20 AWG Stranded (7 x 28) TC Conductors • PE Insulation • Overall Beldfoil® + 55% TC Braid Shielding • Blue Sunlight-Resistant PVC Jacket					
9463	300 V	.238	6.05	-40 to +80	NEC: CM CL2 • CEC: CM UL AWM 2464 MSHA Approved*
20 AWG Stranded (42 x 36) TC Conductors • PE Insulation • Overall Beldfoil® + 85% TC Braid Shielding • Blue Sunlight-Resistant PVC Jacket					
9463F	300 V	.154	3.91	-40 to +80	High Flex NEC: CM CL2 • CEC: CM UL AWM 2464 MSHA Approved*
20 AWG Stranded (42 x 36) TC Conductors • PE Insulation • Overall Beldfoil® + 85% TC Braid Shielding • Blue Sunlight-Resistant FRNC Jacket					
9463NH	300 V	.25	6.35	-45 to +80	IEC 60332-3-24
20 AWG Stranded (7 x 28) TC Conductors • PE Insulation • Overall Beldfoil® + 55% TC Braid Shielding • PVC Inner Jacket • Aluminium, Steel Interlock or Corrugated Armor • Blue Sunlight-Resistant PVC Jacket					
129463	300 V	.563	14.30	-40 to +60	Aluminum Armored NEC: CM CL2 • CEC: CM, HLBCD
139463	300 V	.563	14.30	-40 to +60	Steel Armored NEC: CM CL2 • CEC: CM, HLBCD

Conductor Color Codes: Blue, Clear

* MSHA = Mine Safety and Health Administration

TC = Tinned Copper • PVC = Polyvinyl Chloride • FEP = Fluorinated Ethylene Propylene • FRNC = Fire Retardant, Non-Corrosive

PE = Polyethylene

ControlBus™

Twinax Cables

Part No.	Impedance (Ohm)	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
		Inch	mm	Inch	mm		
20 AWG Stranded (7 x 28) TC Conductors • PE Insulation (Blue, Clear) • 93% TC Braid Shielding • Blue PVC Jacket							
9272	78	.156	3.96	.244	6.20	-20 to +60	NEC: CM • CEC: CM UL AWM Style 2092 (300 V, +60°C)
18 AWG Stranded (7 x 26) BC Conductors • PE Insulation (Clear, Clear) • PE Inner Jacket • 95% TC Double Braid Shielding • Black Non-contaminating PVC Outer Jacket							
9250	95	.285	7.24	.416	10.57	-40 to +80	RG-22B/U Type VW-1 One Conductor Has Tinned Center Strand
20 AWG Stranded (7 x 28) One TC, One BC Conductor • PE Insulation (Natural, Natural) • Polyethylene Inner Jacket • Duofoil® + 86% TC Braid Shielding • Black PVC Outer Jacket							
9207	100	.236	5.99	.330	8.38	-30 to +75	NEC: CMG CL2 • CEC: CMG FT4
25 AWG Stranded (7 x 33) TC Conductors • PE Insulation (Blue, Clear) • Beldfoil® • Blue PVC Jacket							
9271	124	.170	4.32	.240	6.10	-20 to +60	NEC: CM • CEC: CM UL AWM 2092 (300 V, +60 °C)
16 AWG Solid BC Conductors • FMPE Insulation (Blue, Clear) • Duofoil + 90% TC Braid Shielding • Black PVC Jacket							
9860	124	.322	8.18	.440	11.18	-20 to +60	NEC: CMX • CEC: CMX UL AWM 2448 (30 V, +60 °C) VW-1
22 AWG stranded (19 x 34) TC Conductors • Datalene® Insulation (Black, Yellow) • Duofoil Shielding • Black PVC Jacket • Stranded TC Drain Wire							
9182	150	.275	6.98	.345	8.76	-20 to +60	Impedance: 150 Ω NECL CL2X CMX • CEC: CMX UL AWM 2668 (30 V, +60 °C) VW-1
22 AWG Stranded (19 x 34) TC Conductors • Datalene® Insulation (Black, Yellow) • Duofoil Shielding • Black FRNC Jacket • Stranded TC Drain Wire							
9182NH	150	.275	6.98	.345	8.76	-45 to +80	IEC 60332-3-24
22 AWG stranded (19 x 34) TC Conductors • Foam FEP Insulation (Black, Yellow) • Duofoil Shielding • Black FEP Jacket • Stranded TC Drain Wire							
89182	150	.278	7.06	.307	7.80	-70 to +200	Plenum Rated NEC: CMP CL2P • CEC: CMP FT6

TC = Tinned Copper • BC = Bare Copper • PVC = Polyvinyl Chloride • FRNC = Fire Retardant, Non-Corrosive • FEP = Fluorinated Ethylene Propylene • FMPE = Foam Polyethylene • PE = Polyethylene

MODBUS for RS-232 Applications

Shielded Twisted Pair Cables

- Impedance 50 Ohm

Part No.	Pairs	OD (Nom)		Operating Temperature (°C)	Additional Features/ Ratings
		Inch	mm		
Stranded 22 AWG (7 x 30) TC Conductors • PP Insulation • TC Drain Wire • Individually Beldfoil® Shielded Pairs • Chrome PVC Jacket					
8777	3	.273	6.93	-20 to +80	NEC: CM • CEC: CM UL AWM 2919 (30 V, +80 °C)
Stranded 22 AWG (7 x 30) TC Conductors • PP Insulation • TC Drain Wire • Individually Beldfoil® Shielded Pairs • Chrome FRNC Jacket					
8777NH	3	.273	6.93	-45 to +80	IEC 60332-3-24
Stranded 22 AWG (7 x 30) TC Conductors • PP Insulation • TC Drain Wire • Individually Beldfoil® Shielded Pairs • Steel Wire Armor • Black FRNC Jacket					
8777LS	3	.55	13.9	-45 to +80	IEC 60332-3-24

Conductor Color Coding: Red/Black, White/Black, Green/Black

Part No.	Pairs	OD (Nom)		Insulation Thickness		Jacket Thickness		Capacitance				Additional Features/Ratings
								Cond.-Cond.		Cond.-Shield.		
		Inch	mm	Inch	mm	Inch	mm	pF/Ft	pF/m	pF/Ft	pF/m	
Stranded (7 x 30) TC Conductors • FEP Insulation • Individually Beldfoil® Shielded Pairs • 22 AWG TC Drain Wire • Natural Flamarrest Jacket												
22 AWG • FEP/Flamarrest®												
82777	3	.237	6.02	.011	.28	.017	.43	35	115	76	249	Plenum NEC: CMP • CEC: CMP FT6 46 Ω Nom. Impedance 62% Velocity of Prop. Conductor DCR (Nom): 14.7 Ω/1000' (48.2 Ω/km)

MODBUS II for RG-6 Type Coaxial Cables

Coaxial Cables

- Impedance 75 Ohm

Part No.	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
	Inch	mm	Inch	mm		
18 AWG Solid BC-Covered Steel Conductor • FMPE Insulation • Duobond® IV* Quad Shield • PVC Jacket (Black or Intrinsically Safe Blue)						
3092A	.180	4.57	.298	7.57	-30 to +75	Impedance: 75 Ω NEC: CMR CL2R • CEC: CMG FT4

TC = Tinned Copper • BC = Bare Copper • PVC = Polyvinyl Chloride • FRNC = Fire Retardant, Non-Corrosive • FEP = Fluorinated Ethylene Propylene • FMPE = Foam Polyethylene • PP = Polypropylene

MODBUS for RS-232 Applications

Part No.	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
	Inch	mm	Inch	mm		
18 AWG Solid BC-Covered Steel Conductor • Foam FEP Insulation • Duobond IV* Quad Shield • Fluorocopolymer Jacket (Black or Intrinsically Safe Blue)						
3093A	.170	4.32	.274	6.96	-20 to +150	Plenum Rated Impedance: 75 Ω NEC: CMP • CEC: CMP FT6
20 AWG Stranded (105 x 40) BC Conductor • Duobond IV* Quad Shield • FMPE Insulation • Black PVC Jacket						
3092F	.183	4.65	.303	7.70	-40 to +75	High Flex Impedance: 75 Ω NEC: CMR CL2R • CEC: CMG FT4

* Duobond IV is a four-layer shield: (1) Duobond II Foil, (2) TC Braid (94%), (3) Duofoil® Foil, (4) TC Braid (90%).

TC = Tinned Copper • BC = Bare Copper • PVC = Polyvinyl Chloride • FRNC = Fire Retardant, Non-Corrosive • FEP = Fluorinated Ethylene Propylene FMPE = Foam Polyethylene

DataTray® 600 V Twinaxial

DataTray® 600 V Twinax

Part No.	Impedance (Ohm)	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
		Inch	mm	Inch	mm		
18 AWG Stranded (7 x 26) TC Conductors • Flame-retardant PO Insulation (Natural, Blue) • Overall Beldfoil® + 55%TC Braid Shield • Blue Sunlight-resistant PVC Jacket • TC Drain Wire							
3072F*	78	.192	4.88	.324	8.23	-40 to +75	Impedance: 78 Ω NEC: CMG, ITC, TC, PLTC • CEC: CMG FT4 UL TC MSHA Approved**
3073F	100	.246	6.25	.388	9.86	-40 to +75	Impedance: 100 Ω NEC: CMG, ITC, TC, PLTC • CEC: CMG FT4 UL TC
3074F	124	.328	8.33	.460	11.86	-40 to +75	Impedance: 124 Ω NEC: CMG, ITC, TC, PLTC • CEC: CMG FT4 UL TC

** ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service

** MSHA = Mine Safety and Health Administration

TC = Tinned Copper • PO = Polyolefin • PVC = Polyvinyl Chloride

LonWorks

Paired Cable 300 V, +80 °C

- Impedance 100 Ohm
- Level IV Cables

Part No.	Pairs	Color Code	OD (Nom)		Insulation Thickness		Jacket Thickness		Additional Features
			Inch	mm	Inch	mm	Inch	mm	
22 AWG BC Conductors • FMPE Insulation • White LSNH Jacket									
Unshielded									
7701NH	1	White/Blue, Blue/White	.138	3.5	.009	.23	.018	.45	Flame Resitance IEC 60332-3 -24
Overall Beldfoil® Shield									
7703NH	1	White/Blue, Blue/White	.181	4.6	.015	.4	.018	.45	Flame Resitance IEC 60332-3-24

Backbone Cable • Plenum • 300 V, +80 °C • Unshielded

Part No.	Pairs	Color Code	OD (Nom)		Insulation Thickness		Jacket Thickness		Additional Features/ Ratings
			Inch	mm	Inch	mm	Inch	mm	
Stranded TC Conductors • PVC Insulation • Chrome PVC jacket									
16 AWG • 19 x 29 • PVC/PVC									
8471	1	Black/White	.274	6.96	.023	.58	.032	.81	NEC: CMG • CEC: CMG FT4 UL AWM Style 2598
Stranded BC Conductors • PE Insulation • Unshielded • LSNH Inner Jacket • Steel Wire Armor • Chrome LSNH Outer Jacket									
16 AWG • 19 x 29 • Armored									
8471LS	1	Black/White	.413	10.5	.022	.58	.035/ .051	.89/1.3	IEC 60332-3-24
Stranded BC Conductors • PE Insulation • Unshielded • Chrome LSNH Outer Jacket									
16 AWG • 19 x 29									
8471NH	1	Black/White	.28	7.1	.023	.58	.035	.89	IEC 60332-3-24

High-Temperature Backbone Cable 300 V, +150 °C • Unshielded

- VW-1

Part No.	Conductors	OD (Nom)		Insulation Thickness		Jacket Thickness	
		Inch	mm	Inch	mm	Inch	mm
Stranded (19 x 29) TC Conductors • Cabled • ETFE Insulation • Clear ETFE Jacket							
16 AWG • 19 x 29 • ETFE/ETFE							
85102	2	.21 1	5.36	.014	.36	.019	.48

BC = Bare Copper • TC = Tinned Copper • PVC = Polyvinyl Chloride • LSNH = Low Smoke No Halogen • ETFE = Ethylene/ Tetrafluoroethylene • FMPE = Foam Polyethylene • PE = Polyethylene

KNX/EIB Approved Cables

Part No.	Applicable Standard(s)	No. of Pairs	Color Code	Standard Lengths		Standard Unit Weight		Insulation Thickness		Outer Jacket Thickness		Nominal OD	
				ft	mm	lbs.	mm	Inch	mm	Inch	mm	Inch	mm
Solid BC • PVC Insulation • 100% Foil Screen • Green PVC Jacket KNX Reg. no. 109/7253/05 0.8 mm (0.5 mm² or AWG 20)													
YE00819	EN 50090 CEN/TC 247	1	Red/ Black	328 500 3280	100 500 1000	8.4 46.3 89.3	3.8 21.0 40.5	.012	.30	.043	1.10	.217	5.50
YE00820	EN 50090 CEN/TC 247	2	Red/ Black White/ Yellow	328 500 3280	100 500 1000	11.5 61.7 122.3	5.2 28.0 55.5	.012	.30	.043	1.10	.241	6.10
Solid BC • PE Insulation • 100% Foil Screen • Green LSNH Jacket KNX Reg. no. 109/7254/05													
YE00905	IEC 60189-2 IEC 60332-1	1	Red/ Black	328 1624 3280	100 500 1000	8.6 47.4 91.5	3.9 21.5 41.5	.016	.40	.043	1.10	.220	5.60
YE00906	IEC 60189-2 IEC 60332-1	2	Red/ Black White/ Yellow	328 1624 3280	100 500 1000	12.3 68.3 131.1	5.6 31.0 59.5	.016	.40	.043	1.10	.282	6.30

BC = Bare Copper • PVC = Polyvinyl Chloride • PE = Polyethylene • LSNH = Low Smoke No Halogen

DataTuff® Industrial Ethernet Cables

The comprehensive DataTuff® Industrial Ethernet cable range ensures the highest level of reliability, quality and performance. Specifiers can choose from products suitable for indoor and outdoor applications, for use underground, and for other harsh conditions

Applications

DataTuff® range is primarily built and designed for harsh/mission-critical applications. The products are used in automation, machine building, food/beverage, petro-chemical, and many more industrial markets

Product Features

- Industrial Ethernet and PROFINET designs
- PVC, polyethylene, FEP, FRNC/LSNH, PUR, or TPE jackets
- Twisted Pair or Bonded-Pair™ technology
- Shielded and unshielded designs
- Torsion resistant guaranteed for more than 5 million cycles
- Cables designed for trailing/drag chain applications tested for up to 10 million bending cycles
- Oil, abrasion and sunlight resistant designs
- Direct burial and CMX/outdoor rated cables
- Operation temperature from -70 °C up to +150 °C, designs suitable for high/low temperature installations

Benefits

Broadest Portfolio on the Market.

- Belden DataTuff® is offering the most comprehensive portfolio of Industrial Ethernet cable and connectivity products

Reliability

- Robust design: industrial grade jackets withstand exposure to oil, chemicals, rough handling, abrasion, UV and temperature variations, etc
- Product consistency: manufactured in ISO certified manufacturing facilities, Belden's state-of-the-art processes ensure quality in each product. Product consistency for ease of termination and assembly is a mainstay of our products

Future Proof

- Belden supports the migration of Ethernet networks to 10 Gb/s

DataTuff® Industrial Ethernet Cables

Introduction

Breadth of Line: Category 5e, Category 6/6A and Category 7 Cables

- Twisted Pair or Bonded-Pair™ technology
- Unshielded or shielded cables
- Solid or stranded conductors
- Plenum or non-plenum
- Polyolefin or FEP insulation
- PVC, polyethylene, FEP, FRNC/LSNH, PUR, or TPE jackets
- Heavy duty, double jacketed, or aluminum armored
- Halogen-free or Low Smoke Zero Halogen constructions
- Versions suitable for burial or outdoor use, gasoline resistance, high and low temperatures Jackets sequentially marked at regular intervals (typically 2 ft)
- Performance third-party verified to ANSI/TIA-568-B.2

Field-Proven Performance for Such Conditions as:

- Oil, sunlight and gasoline
- Temperature variations
- Abrasion and crushing
- Flexing
- EMI/RFI presence
- Weldsplatter resistance
- Fire resistance and circuit integrity

Approvals

- All RoHS approved
- Many are EtherNet/IP compliant
- Some MSHA approved for mining environments

Belden's Patented Bonded-Pair Technology

Most DataTuff cables feature Belden's Bonded-Pair technology, a patented cable construction which affixes the conductor insulation of the cable pairs along their longitudinal axes to ensure that no performance-robbing gaps can develop between the conductor pairs.

- No gaps between the conductor pairs ensures that the conductor-to-conductor spacing, or centricity, is always uniform
- With uniform centricity, the cable offers excellent and consistently reliable electrical performance
- Installable Performance® is achieved – the affixing of the insulation of the cable pairs and the uniform centricity translate to superior electrical performance, even after the cable has been subjected to the bending, pulling and twisting inherent in the installation process

Tests Prove the Post-Installation Effectiveness of Belden Bonded-Pair Cables

Belden performed tests that simulate the effects of the installation process, both on an industry-leading 350 MHz Cat 5e cable (a nonbonded-pair cable) and a Belden 350 MHz Cat 5e bonded-pair cable. For comparison, the cables were tested both right off the reel and after an installation stress test. Results showed that the nonbonded-pair cable had an RL degradation greater than 12 dB – over 15 times worse than its before-installation value. The Bonded-Pair cables showed greater integrity in maintaining RL performance.

*Also available in Steel Wire Braid Armor (SWB)

DataTuff® Industrial Ethernet

Permanent Installation Cables

Category 5e • 2 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 2 Pair • Unshielded and Shielded • PVC Outer Jacket											
72001E	Cat 5e	AWG 24 (1)	-	6.00	PVC	Overall Foil + 80% Braid	-	✓	-	-40 to +80	Heavy Shielded 300 V UL AWM 2464 Sunlight and Oil Resistant Flame Retardant
7933A	Cat 5e	AWG 24 (1)	-	5.77	PVC	Overall Foil	-	-	✓	-40 to +75	EtherNet/IP Compliant NEC: CMR • CEC: CMR FT4 Sunlight and Oil Resistant
7932A	Cat 5e	AWG 24 (1)	-	5.26	PVC	-	✓	-	✓	-40 to +75	EtherNet/IP Compliant NEC: CMR • CEC: CMR FT4 Sunlight and Oil Resistant
Category 5e • 2 Pair • Shielded • LSZH Outer Jacket											
72001NH	Cat 5e	AWG 24 (1)	-	7.00	LSZH	Overall Foil + 80% Braid	-	✓	-	-40 to +80	Heavy Shielded 300 V UL AWM 21286 Sunlight and Oil Resistant Flame Retardant

Conductor Color Codes: Pair 1: White/Blue Stripe & Blue, Pair 2: White/Orange Stripe & Orange
Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602
PVC = Polyvinyl Chloride • LSNH = Low Smoke No Halogen

DataTuff® Industrial Ethernet

Permanent Installation Cables

Category 5e • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 4 Pair • Unshielded and Shielded • PVC Outer Jacket											
74001E	Cat 5e	AWG 24 (1)	-	7.00	PVC	Overall Foil + 80% Braid	-	✔	-	-40 to +80	Heavy Shielded 300 V UL AWM 2464 Sunlight and Oil Resistant Flame Retardant
7921A	Cat 5e	AWG 24 (1)	-	8.38	PVC	Overall Foil + 70% Braid	-	-	✔	-40 to +75	Heavy Shielded EtherNet/IP Compliant NEC: CMR • CEC: CMR FT4 Sunlight and Oil Resistant
7957A	Cat 5e	AWG 24 (1)	-	8.38	PVC	Overall Foil + 70% Braid	-	-	✔	-40 to +75	EtherNet/IP Compliant NEC: CMR • CEC: CMR FT4 Sunlight and Oil Resistant
7923A	Cat 5e	AWG 24 (1)	-	5.84	PVC	-	✔	-	✔	-40 to +75	EtherNet/IP Compliant MSHA Approved* NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant
7918A	Cat 5e	AWG 24 (1)	-	5.84	PVC	-	✔	✔	-	-40 to +75	MSHA Approved* NEC: CMR, CMX-Outdoor CEC: CMR FT4
7929A	Cat 5e	AWG 24 (1)	-	6.73	PVC	Overall Foil	-	-	✔	-40 to +75	NEC: CMR, CMX-Outdoor CEC: CMR FT4 MSHA Approved* Sunlight and Oil Resistant

* Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification
Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

PVC = Polyvinyl Chloride

DataTuff® Industrial Ethernet

Permanent Installation Cables

121700R

Category 5e • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 4 Pair • Unshielded and Shielded • PVC Outer Jacket											
7958A	Cat 5e	AWG 24 (1)	-	6.73	PVC	Overall Foil	-	-	✓	-40 to +75	600 V UL AWM EtherNet/IP Compliant NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant
7919A	Cat 5e	AWG 24 (1)	-	6.73	PVC	Overall Foil	-	✓	-	-40 to +75	NEC: CMR, CMX-Outdoor CEC: CMR FT4 MSHA Approved* Sunlight and Oil Resistant CMX-Outdoor
11700A	Cat 5e	AWG 24 (1)	-	7.24	PVC	-	✓	-	✓	-40 to +75	Upjacketed - PVC InnerJacket EtherNet/IP Compliant MSHA Approved* NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant
121700A	Cat 5e	AWG 24 (1)	-	13.46	Double PVC	-	✓	-	✓	-40 to +75	Interlocked Aluminium Armor Upjacketed – PVC Inner JacketNEC: CM • CEC: HL, CMG FT4 Sunlight and Oil Resistant
121700R	Cat 5e	AWG 24 (1)		13.46	Double PVC	-	✓	-	✓	-40 to +75	Interlocked Aluminium Armor Upjacketed – PVC Inner Jacket -40 °C Cold Impact NEC: CM • CEC: HL, CMG FT4 Sunlight and Oil Resistant
7922A	Cat 5e	AWG 22 (1)		7.65	PVC	-	✓	-	✓	-40 to +75	UL PLTC NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant

* Pennsylvania Department of Environmental Resources and United States Mine Safety and Health Administration Certification
Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

PVC = Polyvinyl Chloride

DataTuff® Industrial Ethernet

Permanent Installation Cables

Category 5e • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 4 Pair • Unshielded and Shielded • LSZH Outer Jacket											
74001NH	Cat 5e	AWG 24 (1)	-	7.00	LSZH	Overall Foil + 80% Braid	-	-	-	-40 to +80	Heavy Shielded 300 V UL AWM 21286 Sunlight and Oil Resistant Flame Retardant
7935A	Cat 5e	AWG 24 (1)	-	5.84	LSZH	-	✓	-	✓	-40 to +75	NEC: CM • CEC: CM FT1 Sunlight Resistant
7936A	Cat 5e	AWG 24 (1)	-	6.73	LSZH	Overall Foil Shield	-	-	✓	-40 to +75	NEC: CM • CEC: CMG FT4 Sunlight Resistant
Category 5e • 4 Pair • Unshielded and Shielded • PE Outer Jacket											
7934A	Cat 5e	AWG 24 (1)	-	5.84	PE	-	✓	-	✓	-40 to +75	Waterblocked Burial Halogen Free Sunlight and Oil Resistan
7937A	Cat 5e	AWG 24 (1)	-	7.01	PE	Overall Foil Shield	-	-	✓	-40 to +75	Waterblocked Burial Halogen Free Sunlight and Oil Resistant
Category 5e • 4 Pair • Unshielded • FEP Outer Jacket											
7928A	Cat 5e	AWG 24 (1)	-	4.75	FEP	-	✓	-	✓	-75 to +150	High and Low Temp NEC: CMP •CEC: CMP FT6 Outstanding Oil Res I/II Gas Resistant Sunlight Resistant
Category 5e • 4 Pair • Shielded • PUR Outer Jacket											
74001PU	Cat 5e	AWG 24 (1)	-	6.60	PUR	Overall Foil + 80% Braid	–	✓	-	-40 to +80	Heavy Shielded 300 V UL AWM 20549 Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free
Category 5e • 4 Pair • Shielded • PVC Outer Jacket											
50105F	Cat 5e	AWG 24 (1)	-	6.00	PVC	Overall Foil Shield	–	✓	-	-20 to +75	Shielded 300V, Indoor/Outdoor Sunlight & Oil Resistant IEC 60332-3 Flame Retardant NEC: CM

Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

LSZH = Low Smoke Zero Halogen • PE = Polyethylene • FEP = Fluorinated Ethylene Propylene • PUR = Polyurethane

Conductor 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

DataTuff® Industrial Ethernet

Permanent Installation Cables

Category 6 • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 6 • 4 Pair • Unshielded • PVC Outer Jacket											
50106U	Cat 6	24 AWG	-	6.30	PVC	-	✓	✓	-	-20 to +75	300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-3 Flame Retadant NEC:CM
Category 6 • 4 Pair • Unshielded • LSZH Outer Jacket											
50106UL	Cat 6	24 AWG	-	6.30	LSZH	-	✓	✓	-	-20 to +75	300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-1 Flame Retardant NEC:CM
Category 6 • 4 Pair • Unshielded • Double LSZH Outer Jacket - Aluminium Tape Armored (ATA)											
50106UAL	Cat 6	24 AWG	-	9.00	Double LSZH	-	✓	✓	-	-20 to +75	Armored 300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-3 Flame Retardant NEC:CM
Category 6 • 4 Pair • Shielded • PVC Outer Jacket											
50106F	Cat 6	24 AWG	-	7.50	PVC	Overall Foil Shield	-	✓	-	-20 to +75	Shielded 300 V, Indoor Outdoor Sunlight & Oil Resistant IEC 60332-3 Flame Retardant NEC:CM
Category 6 • 4 Pair • Shielded • LSZH Outer Jacket											
50106FL	Cat 6	24 AWG	-	7.50	LSZH	Overall Foil Shield	-	✓	-	-20 to +75	Shielded 300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-1 Flame Retardant NEC:CM

LSZH = Low Smoke Zero Halogen • PVC = Poly Vinyl Chloride

DataTuff® Industrial Ethernet

Permanent Installation Cables

Category 6 • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/ Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 6 • 4 Pair • Shielded • Double LSZH Outer Jacket - Aluminium Tape Armored (ATA)											
50106FAL	Cat 6	24 AWG	-	9.50	Double LSZH	Overall Foil Shield	-	✓	-	-20 to +75	Shielded and Armored 300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-3 Flame Retardant NEC:CM
Category 6 • 4 Pair • Shielded • Double PVC Outer Jacket - Aluminium Tape Armored (ATA)											
50106FA	Cat 6	24 AWG	-	9.50	Double PVC	Overall Foil Shield	-	✓	-	-20 to +75	Shielded and Amored 300 V, Indoor/ Outdoor Sunlight &Oil Resitant IEC 60332-3 Flame Retardant NEC:CM
Category 6 • 4 Pair • Shielded • Double LSZH Jacket - Steel Wire Armored (SWA)											
50106FLS	Cat 6	23 AWG	-	12.3	Double LSZH	Overall Foil Shield	-	✓	-	-20 to +75	Amored 300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-3-24 Flame Retar-dant
Category 6 • 4 Pair • Shielded • Double LSZH Jacket - Steel Wire Braid Armored (SWB)											
50106FLB	Cat 6	23 AWG	-	10.5	Double LSZH	Overall Foil Shield	-	✓	-	-20 to +75	Armored 300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-3-24 Flame Retar-dant
Category 6 • 4 Pair • Unshielded • Double LSZH Jacket - Corrugated Steel Tape Armored (CST)											
50106UASL	Cat 6	24 AWG	-	10.4	Double LSZH	-	✓	✓	-	-20 to +75	Armored 300 V, Indoor/ Outdoor Sunlight & Oil Resistant IEC 60332-1 Flame Retardant NEC:CM

LSZH = Low Smoke Zero Halogen • PVC = Poly Vinyl Chloride

DataTuff® Industrial Ethernet

Permanent Installation Cables

7953A

Category 6 • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 6 • 4 Pair • Unshielded and Shielded • PVC Outer Jacket											
7953A*	Cat 6	AWG 23 (1)	-	8.64	Double PVC	Overall Foil	-	-	✓	-40 to +75	600 V UL AWM Shielded EtherNet/IP Compliant NEC: CMR, CMX-Outdoor•CEC: CMR FT4 Sunlight and Oil Resistant
7940A*	Cat 6	AWG 23 (1)	-	6.35	PVC	-	✓	-	✓	-40 to +75	EtherNet/IP Compliant NEC: CMR, CMX-Outdoor • CEC: CMR FT4 Sunlight and Oil Resistant
7927A	Cat 6	AWG 23 (1)	-	6.38 x 8.61	PVC	-	✓	-	✓	40 to +75	E-Spline Center Member for Mechanical Protection Tested to 600 MHz NEC: CMR • CEC:CMR FT4 Sunlight and Oil Resistant
11872A	Cat 6	AWG 23 (1)	-	12.07 x 6.73	Double PVC	-	✓	-	✓	-40 to +75	Upjacketed – PVC Inner Jacket NEC: CM• CEC: CM FT1
121872A	Cat 6	AWG 23 (1)	-	17.37	Double PVC	-	✓	-	✓	-40 to +75	Interlocked Aluminium ArmorNEC: CM• CEC: HL, CMG FT4 Sunlight Resistant
Category 6 • 4 Pair • Unshielded • FEP Outer Jacket											
7931A	Cat 6	AWG 23 (1)	-	5.44	FEP	-	✓	-	✓	-75 to +150	High and Low Temp NEC: Limited Combustible FHC 25/50, CMP • CEC: CMP FT6 Outstanding Oil Res I/II Gas Resistant Sunlight Resistant

** ABS and DNV-GL approved design also available. For more details please see Belden MarineTuff Offshore and Marine Cable Solutions brochure or consult Customer Service Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

LSZH = Low Smoke Zero Halogen • FEP = Fluorinated Ethylene Propylene

DataTuff® Industrial Ethernet

Permanent Installation Cables

Category 7 • 4 Pair • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 7 • 4 Pair • Shielded • PVC Outer Jacket											
74004E	Cat7	AWG 23 (1)	-	8.00	PVC	Overall Foil + 65% Braid	-	✓	-	-40 to +80	Heavy Shielded 30 V UL AWM 20276 Sunlight and Oil Resistant Flame Retardant
Category 7 • 4 Pair • Shielded • LSZH Outer Jacket											
74004NH	Cat7	AWG 23 (1)	-	8.00	LSZH	Overall Foil + 65% Braid	-	✓	-	-40 to +80	Heavy Shielded 30 V UL AWM 20851 Sunlight and Oil Resistant Flame Retardant – Bundle Flame Test IEC 60332-3-24 EN50266-2-4 cat C

Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

DataTuff® Industrial Ethernet

Moderate Flexing Cables

Category 5e • 2 Pair • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 2 Pair • Shielded • PVC Outer Jacket											
72002E	Cat 5e	-	AWG 26 (7)	6.00	PVC	Overall Foil + 80% Braid	-	✔	-	-40 to +80	Heavy Shielded 300 V UL AWM 2464 Sunlight and Oil Resistant Flame Retardant
Category 5e • 2 Pair • Shielded • LSZH Outer Jacket											
72002NH	Cat 5e	-	AWG 26 (7)	6.00	LSZH	Overall Foil + 80% Braid	-	✔	-	-40 to +80	Heavy Shielded 300 V UL AWM 21286 Sunlight and Oil Resistant Flame Retardant
Category 5e • 2 Pair • Shielded • PUR Outer Jacket											
72002PU	Cat 5e	-	AWG 26 (7)	6.00	PUR	Overall Foil + 80% Braid	-	✔	-	-40 to +80	Heavy Shielded 300 V UL AWM 20549 Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free AWM 20549

Moderate Flexing Cables

Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

PVC = Polyvinyl Chloride • LSZH = Low Smoke Zero Halogen • PUR = Polyurethane

DataTuff® Industrial Ethernet

Moderate Flexing Cables

Category 5e • 4 Pair • Unshielded and Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 4 Pair • Unshielded and Shielded • PVC Outer Jacket											
74002E	Cat 5e	-	AWG 26 (7)	6.50	PVC	Overall Foil + 80% Braid	-	✓	-	-40 to +80	Heavy Shielded 300 V UL AWM 2464 Sunlight and Oil Resistant Flame Retardant AWM 2464
7939A	Cat 5e	-	AWG 24 (7)	8.60	PVC	Overall Foil	-	-	✓	-40 to +75	NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant
7924A	Cat 5e	-	AWG 24 (7)	5.84	PVC	-	✓	-	✓	-40 to +75	NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant
7930A	Cat 5e	-	AWG 24 (7)	5.84	PVC	-	✓	✓	-	-25 to +75	NEC: CMR, CMX-Outdoor CEC: CMR FT4 Sunlight and Oil Resistant
Category 5e • 4 Pair • Shielded • LSZH Outer Jacket											
74002NH	Cat 5e	-	AWG 26 (7)	6.50	LSZH	Overall Foil + 80% Braid	-	✓	-	-40 to +80	Heavy Shielded 300 V UL AWM 21286 Sunlight and Oil Resistant Flame Retardant
Category 5e • 4 Pair • Shielded • PUR Outer Jacket											
74002PU	Cat 5e	-	AWG 26 (7)	6.50	PUR	Overall Foil + 80% Braid	-	✓	-	-40 to +80	Heavy Shielded 300 V UL AWM 20549 Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free AWM 20549

Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

PVC = Polyvinyl Chloride • LSZH = Low Smoke Zero Halogen • PUR = Polyurethane

DataTuff® Industrial Ethernet

Moderate Flexing Cables

Category 7 • 4 Pair • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 7 • 4 Pair • Shielded • PVC Outer Jacket											
74005E	Cat 7	-	AWG 26 (7)	6.80	PVC	Overall Foil + 65% Braid	-	✔	-	-40 to +80	Heavy Shielded 30 V UL AWM 20121 Sunlight and Oil Resistant Flame Retardant
Category 7 • 4 Pair • Shielded • LSZH Outer Jacket											
72005NH	Cat 7	-	AWG 26 (7)	6.80	LSZH	Overall Foil + 65% Braid	-	✔	-	-40 to +80	Heavy Shielded 30 V UL AWM 20851 Sunlight and Oil Resistant Flame Retardant Halogen Free
Category 7 • 4 Pair • Shielded • PUR Outer Jacket											
72005PU	Cat 7	-	AWG 26 (7)	6.80	PUR	Overall Foil + 65% Braid	-	✔	-	-40 to +80	Heavy Shielded 30 V UL AWM 21292 Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free
Category 7 • 4 Pair • Shielded • SHF1 Outer Jacket											
50007TSF	Cat 7	-	AWG 23	9.00	SHF1 LSZH	Indi-vidual Foil Shield + Overall Tinned Copper Braid	-	✔	-	-25 to +80	DNV Approved Ma-rine Cable Suitability For Indoor And Outdoor UV Resistant Oil Resistant

Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Conductor 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

PUR = Polyurethane

DataTuff® Industrial Ethernet

Continuous Flexing Cables

Category 5e • 4 Pair • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 5e • 4 Pair • Shielded • TPE Outer Jacket											
7938A	Cat 5e	-	AWG 24 (32)	8.74	TPE	Overall Foil + 85% Braid	-	-	✓	-40 to +80	10 Million Continuous Flex Cycles, Trailing Weldsplatter Resistant CEC: FT1 Sunlight and Oil Resistant AWM 20626
Category 5e • 4 Pair • Shielded • PUR Outer Jacket											
74003PU	Cat 5e	-	AWG 26 (19)	6.65	PUR	Overall Foil + 80% Braid	-	✓	-	-40 to +80	2 Million Continuous Flex Cycles, Trailing 300 V UL AWM 20549 Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free AWM 20549
74009PU	Cat 5e	-	AWG 26 (19)	6.40	PUR	Overall Foil + 80% Braid	-	✓	-	-40 to +80	2 Million Continuous Flex Cycles, Torsion 300 V UL AWM 20549 Weldsplatter Resistant Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free

Compatible with Belden Metal Body RJ45 Plugs R301601 and R301602

Category 6 • 4 Pair • Unshielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 6 • 4 Pair • Unshielded • PVC Jacket											
50106XU	Cat6	-	AWG 24 (7)	6.3	PVC	-	✓	✓	-	-20 to +75	2 Million Continuous Flex Cycles, 300 V, Indoor/Outdoor Sunlight and Oil Resistant IEC 60332-1-2 Flame Retardant

Conductor 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

TPE = Thermoplastic Elastomer • PUR = Polyurethane

DataTuff® Industrial Ethernet

Continuous Flexing Cables

Category 6 • 4 Pair • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Category 6 • 4 Pair • Shielded • PUR Jacket											
50106HFP	Cat 6	-	AWG 26 (19)	7.0	PUR	Overall Foil + 85% Braid	-	✓	-	-25 to +80	10 Million Continuous Flex Cycles, 300 V, Indoor/OutdoorSunlight and Oil Resistant Flame IEC 60332-1-2 and IEC 60332-3-25 Flame Retardant
Category 6 • 4 Pair • Shielded • PVC Jacket											
50106HSF	Cat 6	-	AWG 26 (19)	7.3	PVC	Overall Foil + 80% Braid	-	✓	-	-20 to +80	10 Million Continuous Flex Cycles, 300 V, Sun-light and Oil Resistant, FT2 Flame Retardant

Conductor 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

PUR = Polyurethane • PVC = Polyvinyl Chloride

DataTuff® Industrial Ethernet

Fire Resistant Ethernet Cables

Fire Resistant Category 5e • 4 Pair • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Fire Resistant Category 5e • 4 Pair • U/FTP • LSZH Jacket											
NH50105UFL	Cat 5e	AWG 23	-	10.8	LSZH	U/FTP	-	✔	-	-40 to +80	IEC 60331-23, BS EN 50200 PH120 Fire Resistant, 60332-1, 60332-3-22 Flame Retardant, Oil Resistant

Fire Resistant Category 5e • 4 Pair • S/FTP • LSZH Jacket											
NH50105SF	Cat 5e	AWG 23	-	11.0	LSZH	S/FTP	-	✔	-	-40 to + 80	IEC 60331-23 Fire Resistant, 60332-1, 60332-3-22 Flame Retardant, UV and Oil Resistant

Fire Resistant Category 5e • 4 Pair • Shielded • Armored

Fire Resistant Category 5e • 4 Pair • S/FTP • Double LSZH Jacket • Steel Wire Armored (SWA)											
NH50105SFA	Cat 5e	AWG 23	-	15.5	Double LSZH	S/FTP	-	✔	-	-40 to + 80	IEC 60331-23 Fire Resistant, 60332-1, 60332-3-22 Flame Retardant, , UV and Oil Resistant

Conductor 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

TPE = Thermoplastic Elastomer • PUR = Polyurethane

DataTuff® Industrial Ethernet

Fire Resistant Ethernet Cables

Fire Resistant Category 6 • 4 Pair • U/FTP • LSZH Jacket

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Fire Resistant Category 6 • 4 Pair • U/FTP • LSZH Jacket											
NH50106UFL	Cat 6	AWG 23	-	10.8	LSZH	U/FTP	-	✓	-	-40 to +80	IEC 60331-23, BS EN 50200 PH120, EN50200 Annex E Fire Resistant, , 60332-1, 60332-3-22 Flame Retardant, , Oil Resistant

Fire Resistant Category 6 • 4 Pair • Shielded • Anti-Rodent and Water-Block

Fire Resistant Category 6 • 4 Pair • U/FTP • LSZH Jacket • Anti-Rodent and Water-Block											
NH50106UFR	Cat 6	AWG 23	-	11.4	LSZH	U/FTP	-	✓	-	-40 to + 80	IEC 60331-23, BS EN 50200 PH120, Fire Resistant, 60332-1, 60332-3-22 Flame Retardant, UV and Oil Resistant

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded-Pair		
Fire Resistant Category 6 • 4 Pair • S/FTP • LSZH Jacket • Anti-Rodent and Water-Block											
NH50106SFR	Cat 6	AWG 23	-	11.9	LSZH	S/FTP	-	✓	-	-40 to + 80	IEC 60331-23, BS EN 50200 PH120, 60332-1, 60332-3-22 Flame Retardant, UV and Oil Resistant

Conductor 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

DataTuff® Industrial Ethernet

Fire Resistant Ethernet Cables

Fire Resistant Category 6 • 4 Pair • Shielded • Armored

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Design		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded	Twisted Pair	Bonded Pair		
Fire Resistant Category 6 • 4 Pair • U/FTP • Double LSZH Jacket • Steel Wire Armored (SWA)											
NH50106UFA	Cat 6	AWG 23	-	15.3	Double LSZH	U/FTP	-	✓	-	-40 to +80	IEC 60331-23, BS EN 50200 PH120 Fire Resistant, 60332-1, 60332-3-22 Flame Retardant, UV and Oil Resistant

Conductor 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

DataTuff® PROFINET - Type A

Permanent Installation Cables

Category 5e • 2 Pair (Quad) Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 2 Pair (Quad) • Shielded • PVC Outer Jacket									
70006E	Cat 5e	AWG 22 (1)	–	6.50	PVC	Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded 300 V AWM 2464 Oil Resistant Flame Retardant
7960A	Cat 5e	AWG 22 (1)	–	6.73	PVC	Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded Oil Resistant, Sunlight Resistant PLTC listed 600 V AWMC(UL) CMG FT4, IEEE1202/383, VW-1 and IEC 60332-1-2 flame ratings
Category 5e • 2 Pair (Quad) • Shielded • LSZH Outer Jacket									
70006NH	Cat 5e	AWG 22 (1)	–	6.50	LSZH	Overall Foil + 85% Braid	-	-40 to +70	Heavy Shielded 300 V UL AWM 21286 Sunlight and Oil Resistant VDE 60811-2-1 Flame Retardant

Category 6A • 4 Pair Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 6A • 4 Pair • Shielded • PVC Outer Jacket									
74010E	Cat 6A	AWG 22 (1)	–	8.7	PVC	Individual Overall Foil + 80% Braid	-	-40 to +80	Heavy Shielded 30V AC, AWM 20276 Oil Resistant ICE 60332-1-2 Flame Retardant
Category 6A • 4 Pair • Shielded • LSZH Outer Jacket									
74010NH	Cat 6A	AWG 22 (1)	–	8.7	LSZH	Individual Overall Foil + 80% Braid	-	-40 to +80	Heavy Shielded 30V AC, AWM 20851 Sunlight and Oil Resistant IEC 60332-1-2 Flame Retardant
Category 6A • 4 Pair • Shielded • PUR Outer Jacket									
74010PU	Cat 6A	AWG 22 (1)	–	8.7	PUR	Individual Overall Foil + 80% Braid	-	-40 to +80	Heavy Shielded 30V AC, AWM 21292 Sunlight and Oil Resistant Horizontal flame test: CSA FT2

PVC = Polyvinyl Chloride • LSZH = Low Smoke Zero Halogen • PUR = Polyurethane

DataTuff® PROFINET TYPE B

Moderate Flexing Cables

Category 5e • 2 Pair (Quad) Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 2 Pair (Quad) • Shielded • PVC Outer Jacket									
70007E	Cat 5e	-	AWG 22 (7)	6.50	PVC	Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded 300 V AWM 2464 Oil Resistant Flame Retardant
7961A	Cat 5e	-	AWG 22 (7)	6.91	PVC	Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded Oil Resistant, Sunlight Resistant PLTC listed 600 V AWMC(UL) CMG FT4, IEEE1202/383, VW-1 and IEC 60332-1-2 flame ratings
Category 5e • 2 Pair (Quad) • Shielded • LSZH Outer Jacket									
70007NH	Cat 5e	-	AWG 22 (7)	6.50	LSZH	Overall Foil + 85% Braid	-	-25 to +70	Heavy Shielded 300 V UL AWM 21286 Sunlight and Oil Resistant VDE Flame Retardant
Category 5e • 2 Pair (Quad) • Shielded • PUR Outer Jacket									
70007PU	Cat 5e	-	AWG 22 (7)	6.50	PUR	Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded 300 V UL AWM 20549 Sunlight and Oil Resistant Flame Retardant
Category 5 • 2 Pair (Quad) • Shielded • LSZH Outer Jacket • Fire Resistant									
BPB52L1F	Cat 5	-	AWG 22 (19)	7.3	LSZH	Overall Foil + 80% Braid	-	-40 to +80	Heavy Shielded, 300V, Flame Retardant IEC 60332-1-2 & IEC 60332-3-25, Fire Resistant IEC 60331-23, BS EN 50200 PH120

Category 6A • 4 Pair Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 6A • 4 Pair • Shielded • PVC Outer Jacket									
74011E	Cat 6A	-	AWG 23 (7)	8.7	PVC	Individual Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded 30V AC, AWM 20276 Oil Resistant IEC 60332-1-2 Flame Retardant
Category 6A • 4 Pair • Shielded • LSZH Outer Jacket									
74011NH	Cat 6A	-	AWG 23 (7)	8.7	LSZH	Individual Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded 30V AC, AWM 20851 Sunlight and Oil Resistant IEC 60332-1-2 Flame Retardant
Category 6A • 4 Pair • Shielded • PUR Outer Jacket									
74011PU	Cat 6A	-	AWG 23 (7)	8.7	PUR	Individual Overall Foil + 85% Braid	-	-40 to +80	Heavy Shielded 30V AC, AWM 21292 Sunlight and Oil Resistant Horizontal flame test: CSA FT2

PVC = Polyvinyl Chloride • LSZH = Low Smoke Zero Halogen • PUR = Polyurethane

DataTuff® PROFINET TYPE C

Continous Flexing Cables

Category 5e • 2 Pair (Quad) Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 2 Pair (Quad) • Shielded • PUR Outer Jacket									
70008PU	Cat 5e	-	AWG 22 (19)	6.50	PUR	Overall Foil + 85% Braid	-	-40 to +80	5 Million Continuous Flex Cycles, Trailing 300 V UL AWM 20549 Sunlight and Oil Resistant Flame Retardant FT2 Halogen Free AWM 20549
70009PU	Cat 5e	-	AWG 22 (19)	6.50	PUR	Overall Foil + 85% Braid	-	-40 to +80	2 Million Continuous Flex Cycles, Torsion 300 V UL AWM 20549 Sunlight and Oil Resistant Weldsplatter Resistant Flame Retardant FT2 Halogen Free AWM 20549
Category 5e • 2 Pair (Quad) • Shielded • TPE Outer Jacket									
7962A	Cat 5e	-	AWG 22 (19)	6.50	TPE	Individual Overall Foil + 85% Braid	-	-40 to +80	5 Million Continuous Flex Cycles, Trailing Heavy Shielded Oil Resistant, Sunlight Resistant Weldsplatter Resistant CMX Outdoor PLTC listed 600 V AWM C(UL) CM, FT1 flame ratings

Category 6A • 4 Pair Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 6A • 4 Pair • Shielded • PUR Outer Jacket									
50106AH1	Cat 6A	-	AWG 24 (7)	8.9	PUR	Individual Overall Foil + 85% Braid	-	-40 to +80	2.5 Million ContinuousFlex Cycles, Trailing,30V AC, AWM 20554 Sunlight & Oil Resistant Horizontal flame test: CSA FT2, IEC 60332-1-2

TPE = Thermoplastic Elastomer • PUR = Polyurethane

DataTuff® PROFINET Type R

For Robot Applications

Category 5e • 2 Pair (Quad) Design • Shielded

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 2 Pair (Quad) • Shielded • PUR Outer Jacket									
70010PU	Cat 5e	-	AWG 22 (19)	7.1	PUR	Overall Foil + 90% Braid	-	-20 to +80	5 Million Continuous Flex Cycles, Trailing, Torsion Million Reverse Bending 300V, AWM 20549 Sunlight & Oil Resistant Flame test: CSA FT2

• PUR = Polyurethane

DataTuff® CC-Link IE Field

Category 5e • 4 Pair Design • Shielded • Permanent Installation Cable

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 4 Pair Design • Shielded • PVC Outer Jacket									
IEF-FIX01	Cat 5e	AWG 24 (1)	-	6.7	PVC	Overall Foil + 80% Braid	-	-30 to +80	Heavy Shielded 300V Sunlight and Oil Resistan Flame Retardancy: IEC 60332-1 UL444(CM)

Category 5e • 4 Pair Design • Shielded • Moderate Flexing Cable

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 4 Pair • Shielded • PVC Outer Jacket									
IEF-FLX01	Cat 5e	-	AWG 25 (7)	6.7	PVC	Overall Foil + 80% Braid	-	-30 to +80	Heavy Shielded 300V Sunlight and Oil Resistan Flame Retardancy: IEC 60332-1 UL444(CM)

Category 5e • 4 Pair Design • Shielded • Continuous Flexing Cable

Part No.	Category	Conductor		Nominal OD (mm)	Jacket	Shielding		Operating Temperature (°C)	Additional Features/Ratings
		Solid	Stranded			Shielded	Unshielded		
Category 5e • 4 Pair • Shielded • PVC Outer Jacket									
IEF-MOV01	Cat 5e	-	AWG 26 (33)	6.9	PVC	Overall Foil + 90% Tinned Tinsel braid	-	-20 to +80	20 Million Continuous Flex Cycles, Trailing, Torsion and Reverse Bending. 30V, UL AWM 20276 Sunlight and Oil Resistant Flame Retardancy: UL VW-1, UL444(CM)

DataTuff® Single Pair Ethernet

Next Generation Technology Ethernet

DataTuff® Single Pair Ethernet cables provide fast data communication and power to the edge over a single twisted pair, simplifying network infrastructure while minimizing cable footprint.

Key Features

- Long distance reach (1km) with a bandwidth of 10 Mbps and frequency of 0.1-20 MHz
- Medium distance reach (40m) with a bandwidth of 1 Gbps and frequency of 1-600 MHz, providing up to 46% weight and size reduction vs. traditional 4-pairs cables
- Many Variations to fit a number of application needs
- Power over Data Line (PoDL) capability up to 52W
- Designed to withstrand harsh industrial environments with strong shielding and jacketing options
- Compliant with Ethernet protocol requirements for easy mainatence and maximum data visibility
- Supports Time Sensitive Networking technology to provide deterministic services
- Compatible with standard SPE connectors recommended by IEEE and TIA
- Easy to terminate
- **Extended reach up to 1km** , providing 10x the range compared to traditional 4-pairs Ethernet over 100m.
- **Optimized edge-to-cloud connectivity**, with power over Data Line (PoDL) capability , resulting in increased uptime, process efficiency and operational profit.
- **Universal protocol** compatibility with standard EtherNet/IP, eliminating the need for gateway devices

Benefits

- Single Pairs Ethernet (SPE) cables allow users to do more with less. Smaller, lighter and longer than traditional 4-pair Ethernet cables, they simlify network infrastructure while providing higher bandwidth and faster data Communication compared to most fieldbus cables.
- With edge-to-cloud communication, the SPE cables also carry power over Data line (PoDL)for sensors, actuators, cameras, lighting and more- building a simple yet versatile networks infrstructure for the industrial internet of Things (IIoT)
- SPE leverages universal Ethernet protocols,elminating the need for additional gateway devices to translate amongst various industrial protocols, instead, all data communication is via EtherNet /IP for simplicity, maximum visibility and IT/OT convergence.

DataTuff® Single Pair Ethernet

Markets

Due to its ability to bring Ethernet to the edge with PoDL capability , the single Pair Ethernet cable is an ideal solution for companies undergoing industry 4.0. It offers specific value in the machine building, water and wastwater, general manufacturing , mining transpotation , discrete and process automation sectors, where edge communication required under harsh conditions. The Single Pair Ethernet cable is also relevant for other industrial sectors, including material handling, packaging, wind and solor power, and food and beverage.

Applications

- In today's increasingly connected world, the Data Tuff Single Pairs Ethernet cables were designed to simplify industrial-network infrastructure while enabling power and data communication from field devices to the cloud.
- With a bandwidth of 1 Gbps and a 40m reach , the medium distance SPE is ideal for manufacturing ceils , on -machine and robotic applications, reducing cable weight and size. The two -conductor design also simplifies installation as well as minmizes the labor costsassociated with installation and troubleshooting.
- With a bandwidth of 10 Mbps and a 1 Km reach, the long distance SPE is best suiyed for the industrial edge, establishing Ilot infrastructure throughtout a facility, while consolidating eletronicdevices in a network. Bringing data from the edge to the control center or cloud provides maximum visibility, flexibilty and insights for process optimization .

Part Numbers

APAC PN	Data Rate	Reach	AWG	Conductor	Insulation	Jacket	Shielding	Application Area
74030E	1Gb/s	40 M	26	Solid Bare Copper	PP	PVC	AL Foil + Tinned Cu Braid	Tight space cabinet, machine building
74031E	1Gb/s	40 M	22	Solid Bare Copper	FMPE	PVC	AL Foil + Tinned Cu Braid	Mass transit platforms
74031NH	1Gb/s	40 M	22	Solid Bare Copper	FMPE	LSZH	AL Foil + Tinned Cu Braid	Mass transit platforms
74032PU	1Gb/s	40 M	24	Stranded Tinned Copper	PE	PUR	AL Foil + Tinned Cu Braid	Robotics
74033E	1Gb/s	40 M	22	Stranded Tinned Copper	PE	PVC	AL Foil + Tinned Cu Braid	Manufacturing cell
BE43910	1Gb/s	40 M	24	Stranded Tinned Copper	PP	XL-LSZH	AL Foil + Tinned Cu Braid	Rolling Stock
BE46830	1Gb/s	40 M	22	Stranded Tinned Copper	XLPE	SHF-1	AL Foil + Tinned Cu Braid	Marine and Offshore
BE46831	1Gb/s	40 M	22	Stranded Tinned Copper	XLPE	SHF-2	AL Foil + Tinned Cu Braid	Marine and Offshore
74040NH	10Mb/s	1 kM	18	Solid Bare Copper	FMPE	LSZH	AL Foil + Tinned Cu Braid	Long distance sensors in harsh environment at Industrial edge
74041E	10Mb/s	600M	22	Stranded Tinned Copper	FMPE	PVC	AL Foil + Tinned Cu Braid	Long distance sensors in harsh environment at Industrial edge
74041NH	10Mb/s	600M	22	Stranded Tinned Copper	FMPE	LSZH	AL Foil + Tinned Cu Braid	Long distance sensors in harsh environment at Industrial edge
74045NH	10Mb/s	400M	22	Solid Bare Copper	PE	LSZH	Unshielded	Long distance sensors in harsh environment at Industrial edge
74046NH	10Mb/s	400M	22	Stranded Bare Copper	PE	LSZH	Unshielded	Long distance sensors in harsh environment at Industrial edge

Coaxial Ethernet

Thinnet 10Base2 Ethernet

- Impedance 50 Ohm

Part No.	AWG	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
		Inch	mm	Inch	mm		
Stranded (19 x 32) TC Conductor • FMPE Insulation • Duobond® II Foil + 93% TC Braid Shielding • Gray PVC Jacket							
9907	20	.102	2.59	.185	4.70	-40 to +80	Impedance: 50 Ω RG-58 Type NEC: CM CL2 • CEC: CM UL AWM Style 1354 (30 V, +60 °C)
Stranded (19 x 32) TC Conductor • FMPE Insulation • Duobond II Foil + 93% TC Braid Shielding • Gray Fluorocopolymer Jacket							
89907	20	0.95	2.41	.160	4.06	-20 to +150	RG-58A/U Type Plenum Rated Impedance: 50 Ω NEC: CMP CL2P • CEC: CMP FT6 Outdoor and Direct Burial

Thicknet 10Base5 Ethernet

- Impedance 50 Ohm

Part No.	AWG	Core Diameter		OD (Nom)		Operating Temperature (°C)	Additional Features/Ratings
		Inch	mm	Inch	mm		
Solid BC Conductor • FMPE Insulation • Duobond IV* Quad Shielding • Yellow PVC Jacket							
9880	12	.243	6.17	.405	10.29	-40 to +60	Impedance: 50 Ω NEC: CM CL2 • CEC: CM UL AWM Style 1478 (30 V, +60 °C
Solid BC Conductor • Foam FEP Insulation • Duobond IV* Quad Shielding • Orange Fluorocopolymer Jacket							
89880	12	.245	6.22	.375	9.53	-25 to +150	Plenum Rated Impedance: 50 Ω NEC: CMP CL2P • CEC: CMP FT6 Outdoor and Direct Burial

* Duobond IV is a four-layer shield: (1) Duobond II Foil, (2) TC Braid (94%), (3) Duofoil® Foil, (4) TC Braid (90%).

BC = Bare Copper • TC = Tinned Copper • FEP = Fluorinated Ethylene Propylene • PVC = Polyvinyl Chloride • FMPE = Foam Polyethylene

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