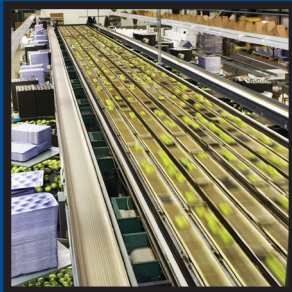


Line Card- Food and Beverage



Featured Brands



For the harsh conditions of food & beverage manufacturing – including wash-down zones, extreme temperatures and hygienic areas – look to Belden for the broadest portfolio of signal transmission solutions

Overcoming signal transmission challenges in the food & beverage industry

Addressing safety, regulatory and environmental (including washdown) concerns

Food & beverage production uniquely demands cabling and connectivity solutions that can withstand the potentially damaging effects of wet or moist environments, exposure to solvents, chemicals, and cleaning agents and extreme hot or cold temperatures.

Specify the cabling and connectivity solutions that best fit your facility's processes and environment with solutions tailored for the conditions found in food & beverage production and packaging. Belden offers the most comprehensive suite of end-to-end signal transmission products available, fulfilling the challenging needs of the industry.

- Cables for low voltage electronics, industrial Ethernet, data bus/protocol, VFD, lead wire, flex applications and control and instrumentation
- Patch cords and connectors for Ethernet integration including sealed IP67, IP68 and IP69K solutions for wet or washdown environments
- World class technical support, sales support and distribution network
- Cable selection tools, online catalog and additional resources for electrical and controls engineers

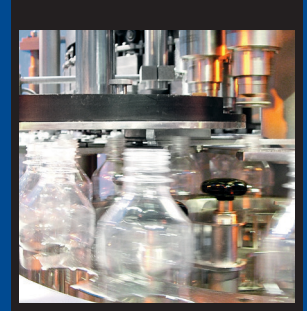
Lumberg Automation Industrial Connectivity

With a solution suite featuring factory-terminated cordsets, field-installable connectors, distribution boxes and I/O modules, L protect critical signaling from harsh physical environmental threats. Paired with the bulk cable and connectivity within the co

Industrial Connectivity

Splash Zone / Washdown Zone						
Type	Cable material	Conductor size of cable	Screw/Housing	Nominal current	Rated Voltage	
 Washdown series cordset	PP	0.25 mm ²	Hexagonal, stainless steel (V4A)	3A	60V (3 poles) 30V (4 poles)	A
	PP	0.25 mm ²	Hexagonal, stainless steel (V4A)	4A (3 to 5 poles) 2A (8 poles)	250 V (3 to 4 poles) 60V (5 poles) 30 V (8 poles)	A
 Distribution box Active I/O module	PVC	0.5 mm ² -1 mm ²	Stainless steel (V4A)	4 A / max. 12 A	10-30 V DC	A
	PVC	0.5 mm ² -1 mm ²	Stainless steel (V4A)	2 A / max. 4 A	29,5-31,6 V DC 10-30 V DC	A
No Contact Zone / Product Free Zone						
 Distribution box	PVC	0.5 mm ² -1 mm ⁵	Knurled	4 A / max. 12 A	11-30 V DC	y
	PVC	0.5 mm ² -1 mm ⁶	Knurled	4 A / max. 12 A	11-30 V DC	y
 PVC Classic series cordset	PVC	0.25 mm ² -0.34 mm ²	Hexagonal, stainless steel (V4A)	3A	60V (3 poles) 30V (4 poles)	
	PVC	0.25 mm ² -0.34 mm ²	Hexagonal, stainless steel (V4A)	4A	250 V	A
 Receptacle series	N/A	0.22 mm ² -0.5 mm ²	Stainless steel (V4A)	4A (4 to 5 poles) 2A (8 poles)	250 V (4 poles) 60V (5 poles) 30 V (8 poles)	
 360 degree shielded series cordset	PUR/PVC	0.25 mm ² -0.34 mm ²	Knurled (CuZn)	2A-4A	240 V (4 poles) 60V (5 poles) 30 V (8 poles)	
 Sensor/Actuator series cordset/attachable	PVC/PUR	0.08 - 0.34 mm ²	Knurled	N/A	63 V (3 poles) 36 V (4 poles)	
	PVC/PUR	0.14 - 0.5 mm ²	Knurled	4 A (3,4,5 poles) 6 A (8, 12 poles)	250 V (3, 4 poles) 63 V (5 poles) 32 V (8, 12 poles)	
 Receptacle series	N/A	0.22 mm ² -0.5 mm ²	Stainless steel (V4A)	4A (4 to 5 poles) 2A (8 poles)	250 V (4 poles) 60V (5 poles) 30 V (8 poles)	
 Valve connector cordset	PUR/PVC	0.5 mm ² -0.75 mm ²	M3 x 28	up to 10A	up to 250V	A
 Field attachable cordset	N/A	0.5 mm ² -0.75 mm ²	M3 x 28	up to 10A	up to 250V	A

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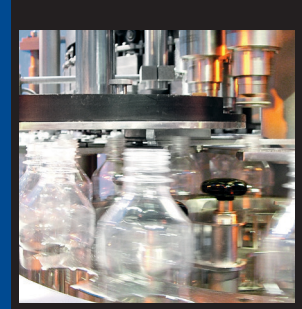
Belden Lumberg Automation fits on-machine application needs for food & beverage and other industries. Options for IP67, IP68, and IP69K connectors seal connection points and the complete portfolio, Belden becomes a single-source solution for all signal transmission needs for the food & beverage industry.

LED	Operating Temperature range	Protection degree	Shielding	Applications / Markets	Characteristics
Available	-40 °C to +105 °C	IP67, IP68, IP69K	N/A	Sensor Automation, Robotics, Material Handling, Actuator Automation	
Available	-40 °C to +105 °C	IP67, IP68, IP69K	N/A	Sensor Automation, Robotics, Material Handling, Actuator Automation	
Available	-25 °C to +70 °C shortly: +80 °C	IP67 / IP69K		Food Processing & Packaging, Material Handling	
Available	-25°C to +80°C	IP67 / IP69K		Food Processing & Packaging, Material Handling	
yes / no	-40°C to +80 °C drag chain: -25 °C to +60 °C UL: up to +60 °C	IP67	-	Robotics	
yes / no	-40°C to +80 °C drag chain: -25 °C to +60 °C UL: up to +60 °C	IP67	-	Robotics	
N/A	-25 °C to +70 °C	IP67, IP69K	N/A	Sensor Automation, Robotics, Material Handling, Actuator Automation	
Available	-25 °C to +70 °C	IP67, IP69K	N/A	Sensor Automation, Robotics, Material Handling, Actuator Automation	
N/A	-25 °C to +70 °C	IP67, IP69K	N/A	Sensor Automation, Robotics, Material Handling, Actuator Automation	
N/A	-25 °C to +85 °C	IP67, IP68, IP69K	Available	Sensor Automation, Robotics, Material Handling, Actuator Automation	
yes	-40 °C to +90 °C	IP67, IP68, IP69K	Available	Sensor Automation, Robotics, Material Handling, Actuator Automation	
yes	-40 °C to +85 °C	IP67, IP68, IP69K	Available	Sensor Automation, Robotics, Material Handling, Actuator Automation	
N/A	-25 C to +70 °C	IP67, IP69K	N/A	Sensor Automation, Robotics, Material Handling, Actuator Automation	
Available	-25°C to +85°C (optional -40°C to +105°C)	IP 65, IP 67, IP68, IP69K	N/A	Manufacturing, Robotics, Material Handling, Actuator/Sensor Automation	
Available	-25°C to +90°C (optional -40°C to +125°C)	IP 65, IP 67, IP68, IP69K	N/A	Manufacturing, Robotics, Material Handling, Actuator/Sensor Automation	

Industrial Active I/O Devices

Active Ethernet										
Type	Protocol	Housing	I/O Ports	Poles	I/O Variant	Output Current Channel/Module	Supply Voltage	Data Ethernet/Fieldbus Connection		
	PROFINET	LioN-R: Metal (Zinc Die-cast)	8 x M12	5-Pin	16 DI, 16 DO, 8DI/8DO	1.6 A/max. 9 A	19 to 30 V DC	2 x M12, 4 poles, D-coded	2	
		LioN-M: Plastic	8 x M12	5-Pin	16 DI, 16 DIO	1.6 A/max. 9 A (12 A)	19 to 30 V DC	2 x M12, 4 poles, D-coded	2	
		LioN-P: Metal (Zinc Die-cast)	8 x M12	5-Pin	8 IOL, 16 DI, 16 DO, 8DI/8DO	1.6 A/max. 9 A (16 A, M12 L-coded)	19 to 30 V DC	2 x M12, 4 poles, D-coded	2 2	
	EtherNet/IP	LioN-R: Metal (Zinc Die-cast)	8 x M12	5-Pin	16 DI, 16 DO, 8DI/8DO	1.6 A/max. 9 A	19 to 30 V DC	2 x M12, 4 poles, D-coded	2	
		LioN-M: Plastic	8 x M12	5-Pin	16 DI, 16 DIO	1.6 A/max. 9 A (12 A)	19 to 30 V DC	2 x M12, 4 poles, D-coded	2	
		LioN-P: Metal (Zinc Die-cast)	8 x M12	5-Pin	16 DI, 16 DO, 8DI/8DO	1.6 A/max. 9 A (16 A, M12 L-coded)	19 to 30 V DC	2 x M12, 4 poles, D-coded	2 2	
	Multi-Protocol	LioN-P: Metal (Zinc Die-cast)	8 x M12	5-Pin	16 DI, 16 DO, 8DI/8DO	1.6 A/max. 9 A (16 A, M12 L-coded)	19 to 30 V DC	2 x M12, 4 poles, D-coded	2 2	
	Active Fieldbus									
		PROFIBUS	LioN-R: Metal (Zinc Die-cast)	8 x M12	5 pin	16 DI, 16 DO, 8DI/8DO	1.6 A/max. 9 A	18 to 30 V DC	2 x M12, 5 poles, B-coded	2
LioN-S: Plastic			8 x M8	3 pin	8 DI, 8 DIO	0.5 A/max. 4 A	19 to 30 V DC	2 x M12, 5 poles, B-coded	1	
LioN-M: Plastic			8 x M12	5 pin	16 DI, 16 DIO	1.6 A/max. 9 A (12 A)	19 to 30 V DC	2 x M12, 5 poles, B-coded	2	
LioN-Classic: Plastic			8 x M12	5, 4 pin	8 DI, 16 DI, 8 DO, 16 DO, 8 DI/4DO, 8DI/8DO	2 A/max. 15 A; 2 A/max. 8 A; 0.7 A/max. 11.2 A; 0.7 A/max. 5.6 A	19 to 30 V DC	2 x M12, 5 poles, B-coded 2 x M23, 12 poles	1 1 1	
	DeviceNet	LioN-S: Plastic	8 x M8	3 pin	8 DI, 8 DIO	0.5 A/max. 4 A	11 to 30 V DC 19 to 30 V DC	2 x M12, 5 poles, A-coded	1	
		LioN-M: Plastic	8 x M12	5 pin	16 DI, 16 DIO	1.6 A/max. 9 A (12 A)	11 to 30 V DC 19 to 30 V DC	2 x 7/8, 5 poles	2	
		LioN-Classic: Plastic	8 x M12	5, 4 pin	16 DI, 8 DO, 16 DO, 8DI/8DO	2 A/max. 15 A 0.7 A/max. 11.2 A 0.7 A/max. 5.6 A	11 to 30 V DC 19 to 30 V DC	2 x M12, 5 poles, A-coded 2 x 7/8, 5 poles	1	
	CANopen	LioN-S: Plastic	8 x M8	3 pin	8 DI, 8 DIO	0.5 A/max. 4 A	11 to 30 V DC 19 to 30 V DC	2 x M12, 5 poles, A-coded	1	
		LioN-M: Plastic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		LioN-Classic: Plastic	8 x M12	5, 4 pin	16 DI, 8 DO, 16 DO, 8DI/8DO	2 A/max. 15 A; 0.7 A/max. 11.2 A; 0.7 A/max. 5.6 A	11 to 30 V DC 19 to 30 V DC	2 x M12, 5 poles, A-coded	1	
	Interbus	LioN-Classic: Plastic	8 x M12	5, 4 pin	Bus terminal, 8DI, 16 DI, 8DO, 8DI/4DO	2 A/max. 15 A 2 A/max. 8 A	19 to 30 V DC	2 x M23, 9 poles	1 1	
	AS-Interface	LioN-Classic: Plastic	4 x M8, 4 x M12, 8 x M12	3, 4, 5 pin	4 DI, 8 DI, 4 DO, 2 DI/2 DO, 4 DI/4 DO	2 A/max. 4 A	29.5 to 31.6 V DC 10 to 30 V DC	AS-i flat cable, yellow, 1, 2 x M12, 4 poles	AS 1,	
		LioN-Steel	8 x M12	3, 4 pin	4 DI/4 DO	2 A/max. 4 A	29.5 to 31.6 V DC 10 to 30 V DC	2 x M12, 4 poles	2	




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	Power Connection	LED	Operating Temperature Range	Protection Degree	Applications/Markets	Characteristics
n	2 x 7/8, 5 poles	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Robotics, Tooling Machines, Material Handling, Food & Beverage Processing	
	2 x 7/8, 5 poles	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Robotics, Tooling Machines, Material Handling	
	2 x 7/8, 5 poles or 2 X M12 L-coded, 5 poles	yes	-20° C to +70° C (Operation)	IP65, IP67, IP69K	Package/Container Manufacturing, Robotics, Tooling Machines, Material Handling, Food & Beverage Processing	
	2 x 7/8, 4 poles	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Material Handling	
	2 x 7/8, 4 poles	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Material Handling	
	2 x 7/8, 5 poles or 2 X M12 L-coded, 5 poles	yes	-20° C to +70° C (Operation)	IP65, IP67, IP69K	Package/Container Manufacturing, Robotics, Tooling Machines, Material Handling, Food & Beverage Processing	
	2 x 7/8, 5 poles or 2 X M12 L-coded, 5 poles	yes	-20° C to +70° C (Operation)	IP65, IP67, IP69K	Package/Container Manufacturing, Tooling Machines, Material Handling, Food & Beverage Processing	
v,	2 x 7/8, 5 poles	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Robotics, Material Handling	
	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Robotics, Material Handling	
	2 x 7/8, 5 poles	yes	-10 °C to +60 °C	IP67	Package/Container Manufacturing, Robotics, Material Handling	
	1 x M23, 6(5) poles 1 x M23, 6 (3) poles 1 x 7/8, 5 poles; 1 x 7/8, 3 poles	yes	0 °C to +60 °C	IP67	Package/Container Manufacturing, Robotics, Material Handling	
	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Material Handling, Consumer Packaging, Food & Beverage Processing	
	2 x 7/8, 4 poles	yes	-10 °C to +60 °C	IP67	Material Handling, Consumer Packaging, Food & Beverage Processing	
	1 x 7/8, 3 poles	yes	0 °C to +60 °C	IP67	Material Handling, Consumer Packaging, Food & Beverage Processing	
	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Tooling Machines, Material Handling	
	N/A	N/A	-10 °C to +60 °C	IP67	Tooling Machines, Material Handling	
	1 x 7/8, 3-poles	yes	0 °C to +60 °C	IP67	Tooling Machines, Material Handling	
	1 x M23, 6(5) poles 1 x M23, 6 (3) poles	yes	0 °C to +60 °C	IP67	Printing Industry	
	AS-i flat cable, black, 1, 2 x M12, 4 poles	yes	-15 °C to +60 °C -25 °C to +80 °C	IP67	Consumer Packaging, Food & Beverage Processing	
	2 x M12, 4 poles	yes	-25 °C to +80 °C	IP67/IP69K	Consumer Packaging, Food & Beverage Processing	

Electronics Cables

Belden electronic cables are designed and lab tested to perform reliably and maintain physical strength during and after exposure to moisture and solvents including acids, tensides, hydrogen peroxide and sodium hydroxide. Unparalleled breadth of options in terms of AWG size, conductor and pair count, insulation/jacketing and shielding enables engineers to match cable selection with very specific application needs.




Product Family	Flexibility	Temperature Range	Approvals	Environmental Resistance	Featured Items
 Control, Instrumentation and Audio: CM	-Solid or 7x stranding: fixed services -19x stranding: moderate flexing for frequent distribution/maintenance	-40°/-20° C to 60°/75°/80° C	AWM Style NEC/UL: CM or CMG	Water, Hydrogen Peroxide, Sodium Hydroxide, Nitric Acid, Phosphoric Acid, Ethanol, Tensides, Anionic Tensides, Caprylic Acid, Citric Acid, Formic Acid, Peracetic Acid, Weather/Sun, Flame, Oxidation,	8760: 1 PR #18 foil PE/PVC 8723: 2 PR #22 individual foil PP/PVC 8762: 1 PR #20 foil PE/PVC
 High-Temp Control, Instrumentation and Audio: CMP		-70°/-20° C to 75°/150°/200° C	NFPA 262 NEC/UL: CMP	All Above Plus Low Temp Flexibility, Degreaser Solvents (Halogenated Hydrocarbons), Alcohol, Oil, Aliphatic Hydrocarbons, Aromatic Hydrocarbons, Abrasion, Additional Water Resistance	88760: 1 PR #18 Plenum foil FEP/FEP 82760: 1 PR #18 Plenum foil FEP/Flamarrest
 Computer Cables (RS-232, RS-422, RS-423, RS-485)	-Solid or 7x stranding: fixed services	CM: -20°/-30° C to 80°/90° C CMP: -70°/-20° C to 150° C	AWM Style NEC/UL: CM, CMG, or CMP	Water, Hydrogen Peroxide, Sodium Hydroxide, Nitric Acid, Phosphoric Acid, Ethanol, Tensides, Anionic Tensides, Caprylic Acid, Citric Acid, Formic Acid, Peracetic Acid, Weather/Sun, Flame, Oxidation	9841: RS-485 1 PR #24 foil + braid PE/PVC 9729: RS-422 2 PR #24 foil Datalene/PVC 9533: RS-232 3C #24 foil PVC/PVC

Industrial Ethernet

As automation in food & beverage becomes increasingly sophisticated and prolific, devices demand higher-bandwidth solutions that can be integrated with existing networks and the enterprise at large.

Ethernet enables easier plug-and-play connectivity, provides diagnostics and allows for easier upgrades in accordance with users' data infrastructure. Belden's solutions stand out in their performance, reliability and breadth of options:

- Widest choice for the best fit - from cabinet to machine: cable, connectors, cordsets
- Meets bandwidth requirements: available in Cat 5e and Cat 6
- Robust designs and specialized options guarantee the highest levels of reliability and performance
- Cordsets and connectors come in RJ45 with IP20 or IP67 protection
- Belden's Bonded-Pair technology delivers uniform centricity to protect signal transmission
- M12 cordsets and connectivity are available (See Lumberg section.)

Picture	Product Family	Protocol	Insulation Material	Jacket Material	Temperature Range	Environmental Resistance	Featured Items
	Bulk Cables	TIA/EIA Cat 6, Cat 5e, EtherNet/IP, PROFINET	Polyolefin, FEP, Fluorocopolymer	PVC, FEP, LSZH, PE, TPE	Standard: -40° to 75°C Plenum: -70° to 150°C	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	7940A: Cat 6 unshielded bonded pairs 7953A: Cat 6 shielded bonded pairs, 600V AWM 7931A: Cat 6 unshielded extreme high/low temp plenum
	Cordsets	TIA/EIA Cat 6, Cat 5e, IP20, IP67 RJ45 Connectors	Polyolefin, Fluorocopolymer	PVC, TPE	Installation Temperature Range: -10°C to 60°C	IP67 cordsets and connectors protect connection from powerful water jets, water immersion up to 1m, dust and contact	E500002: Cat 5e IP67 RJ45 Cordset E600002: Cat 6 IP67 RJ45 Cordset E503002: Cat 5e IP20 RJ45 Cordset E601002: Cat 6 IP20 RJ45 Cordset
	Connectors	TIA/EIA Cat 6A, Cat 6, Cat 5e, IP20, IP67 RJ45	Zinc Diecast; Nickel Plated		Installation Temperature Range: -40°C to 85°C	IP20 metal body cordsets and connectors protect connection from vibration, rough handling and abrasion	E300501: Cat 5e Unshielded IP67 Washdown RJ45 Plug Kit E100501: Cat 5e Unshielded IP67 Washdown RJ45 Modular Jack R301602: Cat 6A Shielded or Unshielded Metal Body Field Installable IP20 RJ45 Plug Kit

Be Certain with Belden



Flex Cable

Continuous Flex Control, Data and Vision Cables for Moving Machinery

Belden's Infinity Cables provide a highly flexible and long-lasting solution that is ideal for automated motion equipment like robots, c-track systems, pick-and-place machines, multi-axis machine tools and conveyor systems. Options for 1 million or 10 million flex cycles ensure the cable will stand up to the mechanical stress that causes degradation and failure amongst standard control, data and vision cabling.

- Low cable memory neutralizes the impact of flexing and ensures longevity
- No Torque: conductors are cabled in opposite direction from preceding layer to eliminate torque and corkscrew
- Extreme flex life (1M or 10M flex cycles) enabled by fine strand TC conductors and Belflex TPE jacketing options
- Low Friction: talc-free inert slipper compound reduces friction and facilitates flexing without toxic irritant powders

Picture	Product Family	Flexibility	Temperature Range	Approvals	Featured Items
	C-TC+ 10M Flex	10 Million Flex Cycles	-50° C to +90° C	NFPA 79 for Industrial Machinery, UL MTW & AWM, Oil Res I & II, Class I & II Div 2 Hazardous Loc, C(UL) Type TC & CIC FT4, WTTTC	7101W: 3C #20 10M Flex PVCN/TPE 7111WS: 4C #18 Shielded 10M Flex PVCN/TPE
	FCC 1M Flex	1 Million Flex Cycles	-50° C to +90° C		7401WS: 3C #20 Shielded 1M Flex PVCN/TPE 7409W: 2C #18 1M Flex PVCN/TPE
	Flex Data 1M Flex	1 Million Flex Cycles	-20° C to +60° C	UL & C(UL) CM, Oil Res I & II, 300V RMS	7200A: 1 PR RS-232/RS-485 120 Ohm 7201A: 2 PR RS-232/RS-485 120 Ohm
	Flex Vision 1M Flex	1 Million Flex Cycles	-40° C to +80° C	UL AWM Style 1354, 30V CSA AWM I/II A/B FT1	7501: Mini #26 7503A: RG-6 #20
	Flex Ethernet	1 Million Flex Cycles	-40° C to +80° C	Cat 5e, UL VW1, CSA FT1	7938A: Cat 5e 10M flex 4 PR #24 Foil + Braid
	Flex VFD	Up to 10 Million Flex Cycles (#16 - #8)	-40° C to +90° C	1000V Flexible Motor Supply, Oil Res I & II	29502F: #12 10M Flex 300% Ground Foil + Braid XLPE/TPE 29500F: #16 10M Flex 300% Ground Foil + Braid XLPE/TPE

VFD

Food & beverage facilities use motors and variable frequency drives (VFD) for motion control in applications including valves, conveyors, robots and moving platforms. It is critical to use a cable designed for the motor-to-VFD connection to contain common-mode current and prevent radiated noise that can disrupt peripheral communication and instrumentation. VFD cable is also engineered to prevent capacitive coupling and reduce the energy of reflected wave voltage, preventing false drive trips and motor failure.

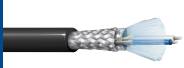
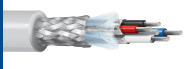

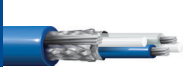

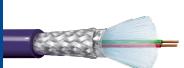
Picture	Product Family	Features	Insulation Material	Jacket Material	Temperature Range	Approvals	Featured Items
	Classic 300% Ground Foil/Braid	Foil + Braid Shield, Class D Strand Tinned Conductors, Full size insulated ground, segmented drain	XLPE	PVC (standard), LSZH (thermoplastic or thermoset)	-40° C to +90° C	600V TC-ER, 1000V Flexible Motor Supply, C(UL) 600V Type CIC TC	29502: #12 3C + Full Size Insulated Ground, Foil + Braid Shield, 300% Ground
	Classic 100% Symmetrical Ground	Dual Copper Tape Shield, 3 segmented grounds, Class D Strand Tinned Conductors	XLPE	PVC (standard), LSZH (thermoplastic or thermoset)	-40° C to +90° C	600V TC-ER, 1000V Flexible Motor Supply, C(UL) 600V RW90 TC	29529: 1/0 3C + 3x Segmented Ground, Dual Copper Tape Shield, 100% Ground
	Classic 300% Ground Foil/Braid with Signal Pair	Foil + Braid Shield, Class D Strand Tinned Conductors, Full size insulated ground, segmented drain, #16 signal pair with drain for brake	XLPE	PVC	-40° C to +90° C	600V TC-ER, 1000V Flexible Motor Supply, C(UL) 600V Type CIC TC	29512: #12 3C + Full Size Insulated Ground + #16 Signal Pair, Foil + Braid Shield, 300% Ground
	Flex VFD	Up to 10 Million Flex Cycles (#16 - #8)	XLPE	TPE	-40° C to +90° C	600V TC-ER, 1000V Flexible Motor Supply, C(UL) 600V Type CIC TC, NFPA 79 Continuous Flex (#16-#8)	29502F: #12 10M Flex 300% Ground Foil + Braid XLPE/TPE

Data Bus / Protocol Cable

Converging control to multiple devices over a single cable is critical to the efficiency of food & beverage facilities. Proprietary or open-source data bus systems are an effective and common alternative to industrial Ethernet for enabling a wide range of such network topologies. Depending on the manufacturer of the PLC/DCS equipment that is chosen, finding appropriate cables that meet application requirements can be cumbersome.

Fortunately, Belden specializes in data bus cables, providing standard products for the major fieldbus systems, with options to fit very specific needs.

- Largest product breadth available from one source
- Aluminum interlock or continuously corrugated armoring options
- Multi-pair solutions (up to 50 pair) for maximum signal capacity
- Extreme high-temperature options
- 300V PLTC and 600V TC ratings for cable tray installation
- PLC/DCS cross-reference tool for easy part number selection

Picture	Protocol	Insulation Material	Jacket Material	Temperature Range	Environmental Resistance	Featured Items
	EIA-485 (RS-485)	Foam PE for data	PVC (standard), CPE, LSZH (thermoplastic or thermoset)	-20°C to +60°C	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	3105A: #22 1-pair foil + braid PLTC DMX512 Type 3106A: #22 1-pair + 1 conductor foil + braid PLTC
	DeviceNet	Foam PE for data	PVC, TPE, CPE, LSZH (thermoplastic or thermoset)	-20°C to +75°C	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	3082A: #15 and #18 pairs (2-pair) ind foil + overall braid shield 3084A: #22 and #24 pairs (2-pair) ind foil + overall braid shield 7896A: #15 and #18 pairs (2-pair) ind foil + overall braid shield, 600V TC-ER
	ControlNet	Foam PE for data, Foam FEP	PVC, Fluorocopolymer, LSZH (thermoplastic or thermoset)	-30°C to +75°C (standard) -20° to 150°C (hi-temp)	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	3092A: #18 RG6/U quad shield coax 3093A: #18 RG6/U quad shield coax, high-temp plenum
	Data Highway (Blue Hose)	PE, FEP	PVC, LDPE, FEP	Standard: -40°C to +75°C Plenum: -70° to 200°C	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	9463: #20 1-pair twinax, foil + braid shield 9463DB: #20 1-pair twinax, continuously flooded water-block, foil + braid
	FOUNDATION Fieldbus	PO, XLPO, Foam HDPO	PVC (standard), LSZH (thermoplastic or thermoset)	Standard: -50°C to +105°C	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	3076F: Type A #18 1-pair, foil shield 300V PLTC 2118A: Typa A #18 1-pair, foil shield 600V TC 3078F: Type B & high-speed #22 1-pair
	PROFIBUS DP and PA	HDPE, Foam PE, PE	PVC (standard), LSZH (thermoplastic or thermoset)	Standard: -30°C to +75°C	Solvent, detergent, moisture, water, flame, oxidation, sun/UV, oil	3079A: PROFIBUS DP #22 1-pair, foil + braid 3076F: PROFIBUS PA #18 1-pair, foil

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