



Industrial Connectivity Solutions

Sensor/Actor Series																		
Body Type	Connector/ Cordset/I/O's	Interface	Coding	Orien- tation	Poles	Ports	Cable Material	Conductor Size of Cable	Screw/Housing	Nominal Current	Rated Voltage	LED	Operating Tem- perature Range	Protection Degree	Shielding	Applications/Markets	Characteristics	
M8	Cordset/Attachable	Sensor	N/A	Straight/ Angled	3, 4, 8	N/A	PVC/PUR TPE	0.08 to 0.34 mm²	Knurled or hexagonal	N/A	63 V (3 poles) 36 V (4 poles)	yes	-40 °C to +105 °C	IP67, IP68, IP69K	Available	Machine Building, Automotive Manufacturing, Robotics, Material Handling, Consumer Packaging, Food and Beverage		
M12	Cordset/Attachable	Sensor	A	Straight/ Angled	3, 4, 5, 8, 12	N/A	PVC/PUR TPE	0.14 to 0.5 mm²	Knurled or hexagonal	4 A (3, 4, 5 poles) 6 A (8, 12 poles)	250 V (3 to 4 poles) 63 V (5 poles) 32 V (6 to 12 poles)	yes	-40 °C to +105 °C	IP67, IP68, IP69K	Available	Machine Building, Automotive Manufacturing, Robotics, Material Handling, Consumer Packaging, Food and Beverage		
T-Adapters	Adapter *	Sensor	- (M8) A (M12)	Y-Form	M8: 3 M12: 4, 5	M8: 2x M12: 2x	N/A	N/A	Knurled	4 A (3, 4, 5 poles)	M8: 63 V M12: 250 V (3-4 poles), 63 V (5 poles)	no	-25 °C to +90 °C	IP67	N/A	Machine Building, Automotive Manufacturing, Robotics, Material Handling, Consumer Packaging, Food and Beverage, Sensor Automation		
Valve Connectors (Form A, B, C)	Cordset/Attachable	Actuator/ Sensor	A ...DIN B ...DIN/...IND C ...DIN/...IND	Angled	2+PE, 2+2PE, 3+PE	N/A	PVC/PUR	On Demand	M3 central screw Knurled Stainless steel	1 A up to 10 A	up to 250V	yes	-40 °C to +125 °C	IP65, IP67, IP68, IP69K	N/A	Machine Building, Automotive Manufacturing, Robotics, Material Handling, Actuator/Sensor Automation		
Power/Bus Series																		
M12	Cordset/Attachable	Sensor/ DeviceNet/ CAN Open/ Profibus/ Ethernet IP/ Profinet	A, B, D, X	Straight/ Angled	4, 5, 8	N/A	PVC/PUR	0.14 to 0.5 mm²	Knurled or hexagonal	4 A (4, 5 poles) 2 A (8 poles)	250 V (3-4 poles) 63 V (2, 3 poles) 32 V (6-12 poles)	no	-40 °C to +85 °C	IP67, IP68, IP69K	Available	Machine Building, Automotive Manufacturing, Robotics, Material Handling, Consumer Packaging, Food and Beverage, Data Transfer, I/O Modules, Sensor Automation		
7/8"	Cordset/Attachable	Power/Bus	A	Straight/ Angled	2, 3, 4, 5	N/A	PVC/PUR	On Demand	Knurled	12 A (2, 3 poles) 9 A (4, 5 poles)	250 V	no	-40 °C to +90 °C	IP67, IP68	Available	Machine Building, Automotive Manufacturing, I/O Modules Active Power/Data		
M23	Cordset/Attachable	Power/Bus	N/A	Straight/ Angled	6, 12, 19	N/A	PVC/PUR	On Demand	Knurled	20 A (6 poles) 8 A (12 poles) 8 to 10 A (19 poles)	300 V (6 poles) 250 V (12 poles) 125 V (19 poles)	no	-40 °C to +125 °C	IP67	Available	Machine Building, Automotive Manufacturing, I/O Modules Passive Power		
T-Adapters	Adapter *	Power/Bus/ CAN Open/ DeviceNet	A (M12)	Y-Form T-Form	M12: 5 7/8": 3, 5 M23: 6, 9 and 12	M12: 2x 7/8": 2x M23: 2x	N/A	N/A	Knurled	M12: 4 A (5 poles) 7/8": 8 A M23: 20 A	M12: 60 V 7/8": up to 600 V AC M23: 50 V DC	no	M12: -25 °C to +90 °C 7/8": -40 °C to +90 °C M23: -40 °C to +125 °C	IP67	N/A	Machine Building, Automotive Manufacturing, Robotics, Material Handling, Consumer Packaging, Food and Beverage		

* technical data refer to outlets of the adapter

Line Card – I/O Modules and
Connectivity Solutions for Industrial
Automation Applications



Be certain.
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Active and Passive I/O Modules,
Connectors and Cordsets and
Cordsets for Factory Automation,
Machine Building and Material Handling

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System Components for an Intelligent and Reliable Data Transmission

When your application demands the highest standards of reliability and effectiveness, while providing integrated communication systems, Belden brands Hirschmann and Lumberg Automation deliver best in class compact and modular I/O modules and high quality connectivity solutions. Offering standard and customized connectors, cordsets and corresponding accessories for Ethernet/IP, PROFINET and numerous industrial fieldbus systems, Belden is a partner, you can rely on.

For the use in harsh industrial environments of factory automation, machine building, material handling applications as well as consumer packaging and food & beverage applications, the IP67 modules provide features like metal casing, full potting, vibration and shock resistance and fulfill all necessary industrial standards.

The ruggedized I/O modules guarantee highest functional availability of machines and equipment with comprehensive diagnostics, easy, fast and flexible installation & operation characteristics for decentralized and economical wiring solutions.

	Active Ethernet														
	Actuator/Sensor							Data Ethernet/Fieldbus Connection	Power Connection	LED	Operating Temperature Range	Protection Degree	Applications/Markets	Characteristics	
	Type	Body Type	Ports	Poles	Function	Output Current Channel/Module	Rated Voltage								
	PROFINET	LioN-R: Metall	8 x M12	5 pin	16 DI, 16DO, 8DI/8DO	1.6 A/max. 9 A	19 to 30 V DC	2 x M12, 4 poles, D-coded	2 x 7/8", 5 poles	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing, Automotive Manufacturing, Robotics, Tooling Machines, Material Handling, Food & Beverage Processing	     	
		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 x 7/8", 5 poles	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing, Automotive Manufacturing, Robotics, Tooling Machines, Material Handling		
EtherNet/IP	LioN-R: Metall	8 x M12	5 pin	16 DI, 16DO, 8DI/8DO	1.6 A/max. 9 A	19 to 30 V DC	2 x M12, 4 poles, D-coded	2 x 7/8", 4 poles	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing Automotive Manufacturing, Material Handling	     		
	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 x 7/8", 4 poles	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing Automotive Manufacturing, Material Handling			
Active Fieldbus															
	PROFIBUS	LioN-R: Metall	8 x M12	5 pin	16 DI, 16DO, 8DI/8DO	1.6 A/max. 9 A	18 to 30 V DC	2 x M12, 5 poles, B-coded	2 x 7/8", 5 poles	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing, Automotive Manufacturing, Robotics, Material Handling	     	
		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 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing, Automotive Manufacturing, Robotics, Material Handling		
		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 x 7/8", 5 poles	yes	-10 °C to +60 °C	IP67	Discrete Manufacturing, Automotive Manufacturing, Robotics, Material Handling		
		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 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	Discrete Manufacturing, Automotive Manufacturing, Robotics, Material Handling		
	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 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Automotive Manufacturing, Material Handling, Consumer Packaging, Food & Beverage Processing	   	
		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 x 7/8", 5 poles	yes	-10 °C to +60 °C	IP67	Automotive Manufacturing, Material Handling, Consumer Packaging, Food & Beverage Processing		
		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 x 7/8", 3 poles	yes	0 °C to +60 °C	IP67	Automotive Manufacturing, Material Handling, Consumer Packaging, Food & Beverage Processing		
	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 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Mobile Machinery, Tooling Machines, Material Handling	  	
		LioN-M: Plastic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10 °C to +60 °C	IP67	Mobile Machinery, Tooling Machines, Material Handling		
		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 x 7/8", 3-poles	yes	0 °C to +60 °C	IP67	Mobile Machinery, Tooling Machines, Material Handling		
	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 x M23, 6(5) poles 1 x M23, 6 (3) poles	yes	0 °C to +60 °C	IP67	Automotive Manufacturing, Printing Industry	  	
	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-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		
		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 x M12, 4 poles	yes	-25 °C to +80 °C	IP67/IP69K	Consumer Packaging, Food & Beverage Processing	    	
Active Modular															
	PROFINET	LioN-M: Plastic	2 x M12	5 pin	Bushead	N/A	19 to 30 V DC	2 x M12, 4 poles, D-coded	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Machine Building	  	
	EtherNet/IP	LioN-M: Plastic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-10 °C to +60 °C	IP67	Machine Building		
	PROFIBUS	LioN-S: Plastic	2 x M12	5 pin	Bushead	N/A	19 to 30 V DC	2 x M12, 5 poles, B-coded	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Machine Building		
	DeviceNet	LioN-S: Plastic	2 x M12	5 pin	Bushead	N/A	11 to 30 V DC	2 x M12, 5 poles, A-coded	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Machine Building		
	CANopen	LioN-S: Plastic	2 x M12	5 pin	Bushead	N/A	11 to 30 V DC	2 x M12, 5 poles, A-coded	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Machine Building		
	Fieldbus independent I/O Modules	LioN-S: Plastic	4 x M12, 8 x M8	3, 5 pin	8 DI, 4 DO, 8 DIO, 4 AI, 8DI/4 IO-Link	0.5 A/max. 4 A; 1.6 A/max. 4 A; 2 A/max. 4 A	19 to 30 V DC	2 x M12, 5 poles, A-coded	1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Machine Building	  	
		LioN-M: Plastic	8 x M12	3, 5 pin	16 DI, 16 DO, 16 DIO 8 DI/4 Motion Drive Control	1.6 A/max. 9 A (12 A); 1.5 A/max. 7.2 A; 0.5 A/max. 6 A (3 A per group)	19 to 30 V DC	2 x M12, 5 poles, A-coded	2 x 7/8", 5-poles 1 x 7/8", 3-poles 1 x M12, 5 poles, A-coded	yes	-10 °C to +60 °C	IP67	Machine Building		
	Passive														
	Pluggable	LioN-R: Metall	4 x M12, 8 x M12	4, 5 pin	3+PE, 4+PE	4 A/max. 12 A	11 to 30 V DC	1 x M23, 12 poles 1 x M23, 19 poles	1 x M23, 12 poles 1 x M23, 19 poles	yes/no	-40 °C to +80 °C drag chain: -25 °C to +60 °C UL: up to +60 °C	IP67	Machine Building, Automotive Manufacturing, Robotics	     	
		LioN-S: Plastic	4, 6, 8, 10 x M8	3 pin	3 w/o PE	1.5 A/max. 1.5 A	10 to 30 V DC	1 x M12, 12 poles	1 x M12, 12 poles	yes	-25 °C to +70 °C	IP67	Machine Building, Automotive Manufacturing, Robotics		
		LioN-M: Plastic	8 x M12	5 pin	4+PE	0.5 A/max. 7.5 A	10 to 30 V DC	1 x M23, 19 poles	1 x M23, 19 poles	yes	0 °C to +60 °C	IP67	Machine Building, Automotive Manufacturing, Robotics		
		LioN-Classic: Plastic	4 x M8, 4, 6, 8 x M12	3, 4, 5 pin	3+PE, 4+PE	4 A/max. 12 A 4 A/max. 10 A 2 A/max. 2 A	60 V DC 10 to 30 V DC	1 x M12, 7 poles 1 x M23, 12 poles 1 x M23, 19 poles	1 x M12, 7 poles 1 x M23, 12 poles 1 x M23, 19 poles	yes/no	-15 °C to +80 °C	IP67	Machine Building, Automotive Manufacturing, Robotics		
	Wired	LioN-R: Metall	4, 8 x M12	4, 5 pin	3+PE, 4+PE	4 A/max. 12 A	11 to 30 V DC	7-, 11-, 19-wire cable	7-, 11-, 19-wire cable	yes/no	-40 °C to +80 °C drag chain: -25 °C to +60 °C UL: up to +60 °C	IP67	Machine Building, Automotive Manufacturing, Robotics	     	
		LioN-S: Plastic	4, 6, 8, 10, 12 x M8	3 pin	3 w/o PE	1.5 A/max. 1.5 A	10 to 30 V DC	6-, 8-, 10-, 12-, 14-wire cable	6-, 8-, 10-, 12-, 14-wire cable	yes	-25 °C to +70 °C	IP67	Machine Building, Automotive Manufacturing, Robotics		
		LioN-M: Plastic	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	IP67	Machine Building, Automotive Manufacturing, Robotics		
		LioN-Classic: Plastic	8 x M8, 4, 6, 8 x M12	3, 4, 5 pin	3+PE, 4+PE	4 A/max. 12 A 2 A/max. 2 A	60 V DC 10 to 30 V DC	7-, 9-, 10-, 11-, 15-, 19-wire cable	7-, 9-, 10-, 11-, 15-, 19-wire cable	yes/no	-15 °C to +90 °C -15 °C to +80 °C	IP67	Machine Building, Automotive Manufacturing, Robotics		
		LioN-Steel	8 x M12	4, 5 pin	3+PE, 4+PE	4 A/max. 12 A	10 to 30 V DC	11-, 19-wire cable	11-, 19-wire cable	yes	-25 °C to +70 °C; shortly: +80 °C	IP67/IP69K	Consumer Packaging, Food & Beverage Processing		