BELDEN
SENDING ALL THE RIGHT SIGNALS

I/O Systems

Industrial Connectivity Solutions

lumbergautomation
A BELDEN BRAND

- Distributed Control Units
- IO-Link Masters
- IO-Link Hubs
- Multiprotocol I/O
- Single Protocol I/O
- Passive Distribution Boxes
- Accessories

Be certain.
Belden.

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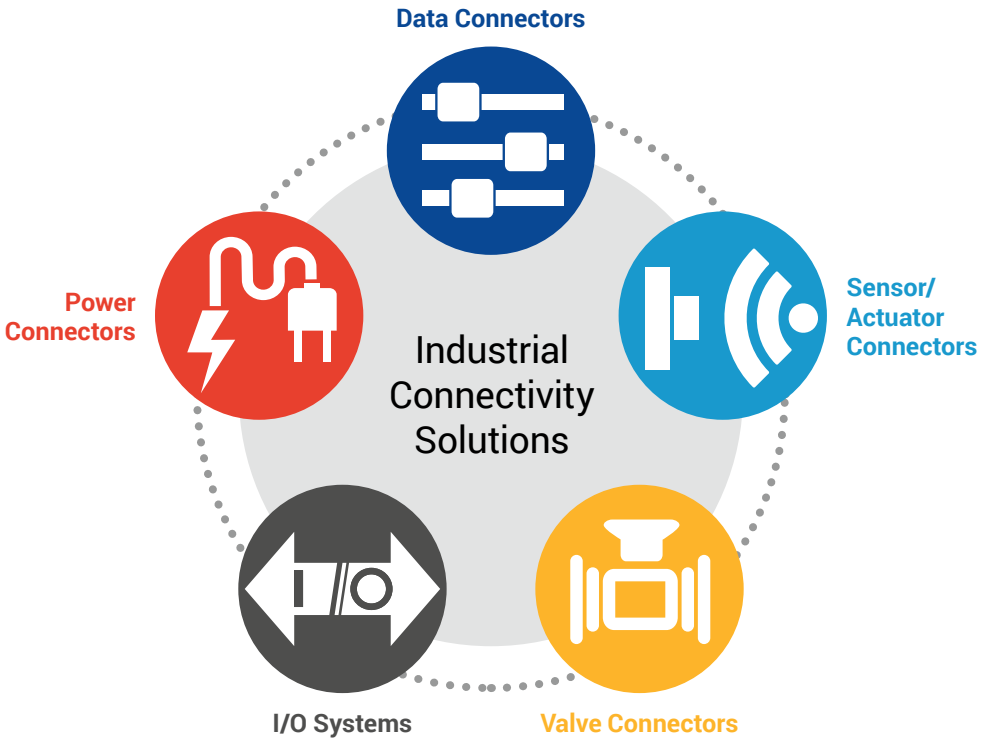
Industrial Connectivity Solutions from Belden

Founded in 1902, Belden's long-term proven solutions are in reliable operation worldwide. Our two leading brands – Hirschmann and Lumberg Automation – combine proven experience with innovation. And a focus on customer needs has made us the global leader in high-quality, end-to-end signal transmissions.

Developed with ease of use in mind, our industrial connectivity solutions are especially designed to stand up to surroundings characterized by dust, water and heavy vibrations.

Whether you want to transfer power, data, signals or all combined in the form of an intelligent I/O system, our diversified product portfolio offers you the right solution for every application.



We reserve the right to make technical changes.

I/O Systems

When it comes to intelligent and reliable data transmission, a flexible and cost-effective I/O system is essential. The choice of an appropriate I/O module depends on the nature of the application as well as on your specific requirements.

Ranging from passive distribution boxes to high performance fieldbus-independent modules, the Lumberg Automation I/O systems portfolio offers a broad variety of solutions to meet your individual needs.

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A Reliable Partner Who Understands Your Industry

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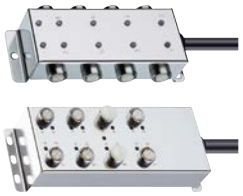
Product Overview

Active I/O Modules

Type	LioN-P (Slim)	LioN-P	LioN-R	LioN-M
General Data				
Housing	Metal, Zinc die-cast	Metal, Zinc die-cast	Metal, Zinc die-cast	Plastic, PBT
Potted Housing	Yes	Yes	Yes	No
Dimensions (W)	30 mm	60 mm	60 mm	60 mm
Ambient Temperature (Operation)	-20 °C to +70 °C	-20 °C to +70 °C	-10 °C to +60 °C	-10 °C to +60 °C
Protection Degree	IP65/IP67/IP69K	IP65/IP67/IP69K	IP65/IP67	IP67
Bus Systems/Protocols				
EtherCAT Slave		●		
EtherNet/IP Device	●	●	●	●
PROFINET Device	●	●	●	●
Multiprotocol Support	●	●		
IO-Link Master	●	●		
Available I/O Types				
Digital Inputs/DI		●	●	●
Digital Outputs/DO		●	●	
Digital In- and Outputs/DI DO		●	●	
Digital In-/Outputs (Universal)/DIO		●		●
IO-Link Masters/IOLM	●	●		
IO-Link I/O Hubs/IOLD		●		
I/O Technical Data				
Digital Inputs: Channel Type	Type 1	Type 1 or Type 3	Type 3	Type 3
Digital Inputs: Sensor Current Supply	max. 500 mA per port	max. 500 mA per port	max. 200 mA per port	max. 200 mA per port
Digital Outputs: Output Current	max. 500 mA per channel	max. 2 A per channel	max. 1.6 A per channel	max. 1.6 A per channel
Digital Outputs: Galvanic Isolation	No	Yes, depending on module	Yes, depending on module	No
I/O Connection				
M8, 5-poles	●			
M12, 5-poles	●	●	●	●
Power Connection				
7/8" 4-poles			● (9 A)	● (9 A)
7/8" 5-poles		● (9 A)	● (9 A)	● (9 A)
M12 Power L-coded	● (16 A)	● (16 A)		
M12 Hybrid Y-coded	● (6 A)			

Product Overview

Passive Distribution Boxes

Type	ASB-S	ASB-C	ASB-R	ASB-N
				
General Data				
Housing	Plastic, PBT	Plastic, TPU	Metal, Zinc die-cast	Stainless-steel
Potted Housing	No	No	Yes	Yes
Dimensions (W)	30 mm	30 or 60 mm	60 mm	60 mm
Ambient Temperature (Operation)	-25 °C to +70 °C	-15 °C to +80 °C	-40 °C to +80 °C	-25 °C to +70 °C
Protection Degree	IP67/NEMA 6P	IP67/NEMA 6P	IP65/IP67	IP67/IP69K
Electrical Data				
Nominal Voltage (Range)	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC
Nominal Current	max. 1.5 A per port	max. 2 A or 4 A per port	max. 4 A per port	max. 4 A per port
Circuit Logic	PNP	PNP or NPN	PNP	PNP
Status/Diagnostic Indicators	Yes, optional	Yes, optional	Yes, optional	Yes
Module Variants with Plug Interface				
I/O Connection	M8	M8 or M12	M12	—
I/O Connection Entry Point	Top entry	Top entry	Top entry	—
I/O Signals per Port	1 signal per port	1 or 2 signal(s) per port	1 or 2 signal(s) per port	—
Port Variants	4-, 6-, 8- or 10-ports	4- , 6- or 8-ports	4- or 8-ports	—
Plug Interface	M12	M12 or M23	M23	—
Module Variants with Control Cable				
I/O Connection	M8	M8 or M12	M12	M12
I/O Connection Entry Point	Top entry	Top entry	Top entry	Top or side entry
I/O Signals per Port	1 signal per port	1 or 2 signal(s) per port	1 or 2 signal(s) per port	1 or 2 signal(s) per port
Port Variants	4-, 6-, 8- ,10- or 12-ports	4- , 6- or 8-ports	4- or 8-ports	8-ports
Control Cable Material	PUR	PUR	PUR	PVC

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Coding Overview

Coding		Image Coding	Description	Purpose
M8	M8 A-coding		M8 A-coding Available with 3, 4 and 8 poles	Flexible solutions for almost every application including small power applications for servo drives
	M8 B-coding		M8 B-coding Available with 5 poles	Flexible solutions for almost every application including small power applications for servo drives
M12	M12 A-coding		M12 A-coding Available with 3, 4, 5, 8 and 12 poles	Flexible solutions for almost every sensor/actuator application including sensor data transmission
	M12 B-coding		M12 B-coding Available with 4 or 5 poles	Connection for sensors/actuators and PROFIBUS applications
	M12 C-coding		M12 C-coding Available with 3, 4 and 5 poles	Connection for sensors/actuators (also known as U-coding)
	M12 D-coding		M12 D-coding Available with 4 poles	Connection for Industrial Ethernet applications (e.g. PROFINET, EtherNet/IP, EtherCAT, ...)
	M12 K-coding		M12 K-coding Available with 5 poles	High power connection for field devices, drives, AC motors, frequency inverters and for the Lumberg Automation LioN-Power family
	M12 L-coding		M12 L-coding Available with 5 poles	
	M12 S-coding		M12 S-coding Available with 4 poles	
	M12 T-coding		M12 T-coding Available with 4 poles	
	M12 X-coding		M12 X-coding Available with 8 poles	Connector for Industrial Ethernet (10 Gbit/s, Cat6) applications
	M12 Y-coding		M12 Y-coding Available with 4 + 2 x 2 poles	Hybrid connector for automation industry
7/8"	7/8"		7/8" Available with 2, 3, 4 and 5 poles	Power connection for rough environments such as mining, automotive, machine building or subsea technologies
M23	M23		M23 Available with 12 and 19 poles	Power and signal transmission for engines, controls or drives such as lathe- or milling-machines

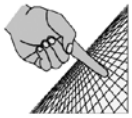
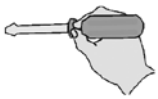
Cable Material Comparison

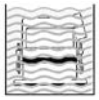
Material	High Temp	Low Temp	Flexibility	UV-Rays	Chemicals	Oil
PUR	●●●●	●●●○	●●●○	●●●○	●●●●	●●●○
PVC	●●○○	●●○○	●●○○	●●●○	●●●○	●●○○
TPE	●●●○	●●●●	●●●●	●●○○	●●○○	●●●○

●○○○ = Poor ●●○○ = Fair ●●●○ = Good ●●●● = Excellent

Please request datasheet for more detailed information

IP Code

Index		Degree of Protection
0		No protection against accidental contact, no protection against solid foreign bodies
1		Protection against contact with any large area by hand and against solid foreign bodies with Ø >50 mm
2		Protection against contact with the fingers, protection against solid foreign bodies with Ø >12 mm
3		Protection against tools, wires or similar objects with Ø >2.5 mm, protection against solid foreign bodies with Ø >2.5 mm
4		Just like 3 except for the size difference of Ø >1 mm
5		Full protection against contact, protection against interior injurious dust deposits
6		Total protection against contact, protection against penetration of dust

Index		Degree of Protection
0		No protection against water
1		Protection against vertical water drops
2		Protection against water drops (up to a 15° angle)
3		Protection against diagonal water drops (up to a 60° angle)
4		Protection against splashed water from all directions
5		Protection against water (out of a nozzle) from all directions
6		Protection against water penetration during temporary flooding
7		Protection against temporary submersion in water
8		Protection against permanent submersion in water
9K		Protection against water from high-pressure/steam jet cleaners

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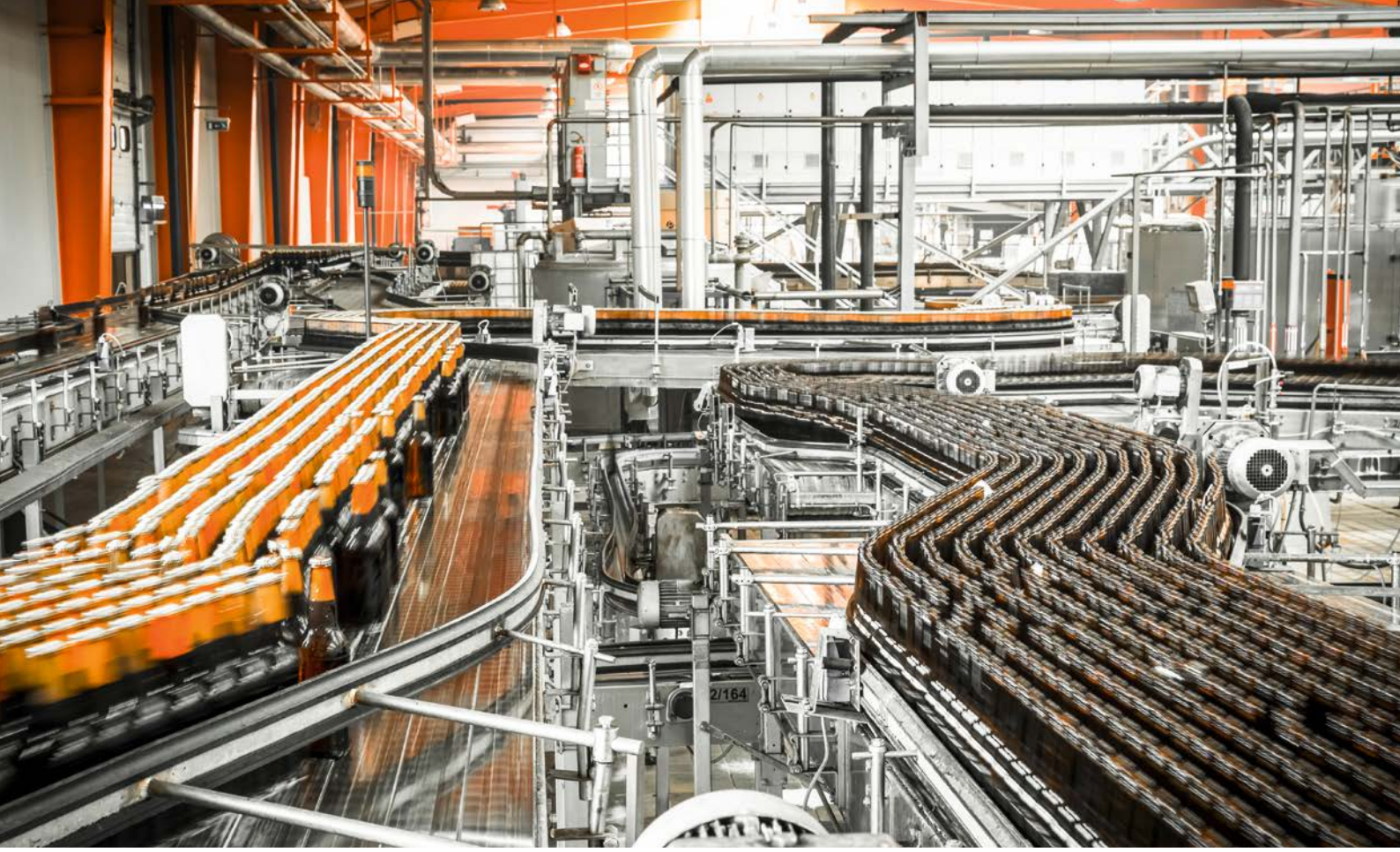
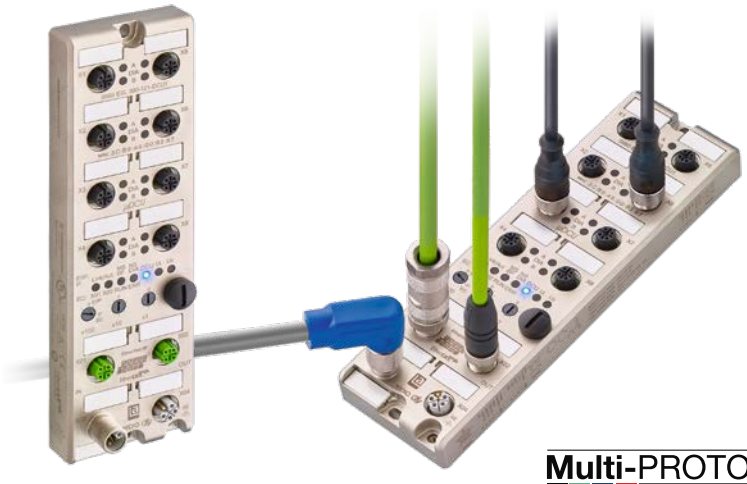


LioN-Power
Distributed Control Units

World‘s First Multiprotocol I/O Module with PLC Functionality

DCUs combine the benefits of a field-level (IP67) I/O module and a programmable logic controller (PLC) into one device for easy, customized performance of automation functions. Performs simple logical operations of more complex control systems, all without a higher-level PLC.



Multi-PROTOCOL
PROFINET INDUSTRIAL ETHERNET
EtherNet/IP
EtherCAT

The Benefits

Improve overall automation security through integrated intelligence to ensure control applications can run, even if there is a PLC failure

Replace modules faster – by using the universal channels as digital input or digital output, without any configuration necessary

Simplify machine transparency – by transforming fieldbus machines into Ethernet-ready devices that can work across a variety of protocols

Markets & Applications

- Material Handling/Packaging
- Machine Building
- Automation
- Automotive
- Food & Beverage Manufacturing[1)]
- Robotic Machinery

1) No direct contact with food

We reserve the right to make technical changes.

Technical Information

Type	8DI 8DO	16DIO
Order Designation	0980 ESL 393-121-DCU1	0980 ESL 390-121-DCU1
Product Description	LioN-P, Distributed Control Unit, LDmicro Programmable (Ladder), Multiprotocol (PROFINET, EtherNet/IP and EtherCAT) I/O device, industrial metal housing, 60 mm, up to IP69K, 8 digital input and 8 digital output channels (2 A) with galvanic isolation, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles	LioN-P, Distributed Control Unit, LDmicro Programmable (Ladder), Multiprotocol (PROFINET, EtherNet/IP and EtherCAT) I/O device, industrial metal housing, 60 mm, up to IP69K, 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles
General Data		
Housing	Metal, zinc die-cast, potted	
Dimensions (W x H x D)	60 mm x 31 mm x 200 mm	
Weight	ca. 500 g	
Ambient Temperature	-20 °C to +70 °C (Operation)	
Protection Degree	IP65, IP67, IP69K[1)]	
Shock/Vibration	50 g/15 g	
Power Supply	**1**	
Nominal Voltage	24 V DC (18 to 30 V DC)	
Connection	2 x M12, L-coded, 5-poles, up to 2 x 16 A	
Current Consumption	typ. 120 mA (at 24 V DC)	
Control System		
Programming	Programming via LDmicro in Ladder Logic (LAD)	
Program Deployment	via Webserver/HTTP	
Processor	200 MHz RISC CPU	
Performance	DCU cycle time of avg. 10 ms	
Program Memory	max. 99 Rungs/99 Bit Variables/99 Integer Variables	
Flash Memory	16 MB	
Operation Modes	Slave I/O, Standalone DCU mode, mixed DCU/PLC mode	
Bus System	**2**	
Protocol	Multiprotocol (PROFINET, EtherNet/IP and EtherCAT)	
Connection	2 x M12, D-coded, 4-poles	
PROFINET Features	PROFINET V2.3 (CC-C), Netload Class III, FSU, MRP	
EtherNet/IP Features	EtherNet/IP acc. to CIP Edition V3.11, EIP Adaption of CIP V1.12, DLR, Quick Connect	
EtherCAT Features	EtherCAT IO acc. to ETG.1000 V1.2, auto-increment and fixed addressing, CoE, EoE, FoE	
On-Board I/O		
I/O Function	8 digital inputs and 8 digital outputs, fixed configuration	16 digital in-/outputs (DIO), universal I/O option per channel
Connection	8 x M12, A-coded, 5-poles	
DI Channel Type	Type 3 acc. To IEC 61131-2, PNP (typ. 5 mA nominal input current)	
Sensor Current Supply	max. 200 mA per port	max. 500 mA per port
DO Output Current	max. 2 A per channel	
Galv. Isolated Outputs	Yes, all outputs	No
Protective Circuit	Electronically: Overload and short-circuit protection	

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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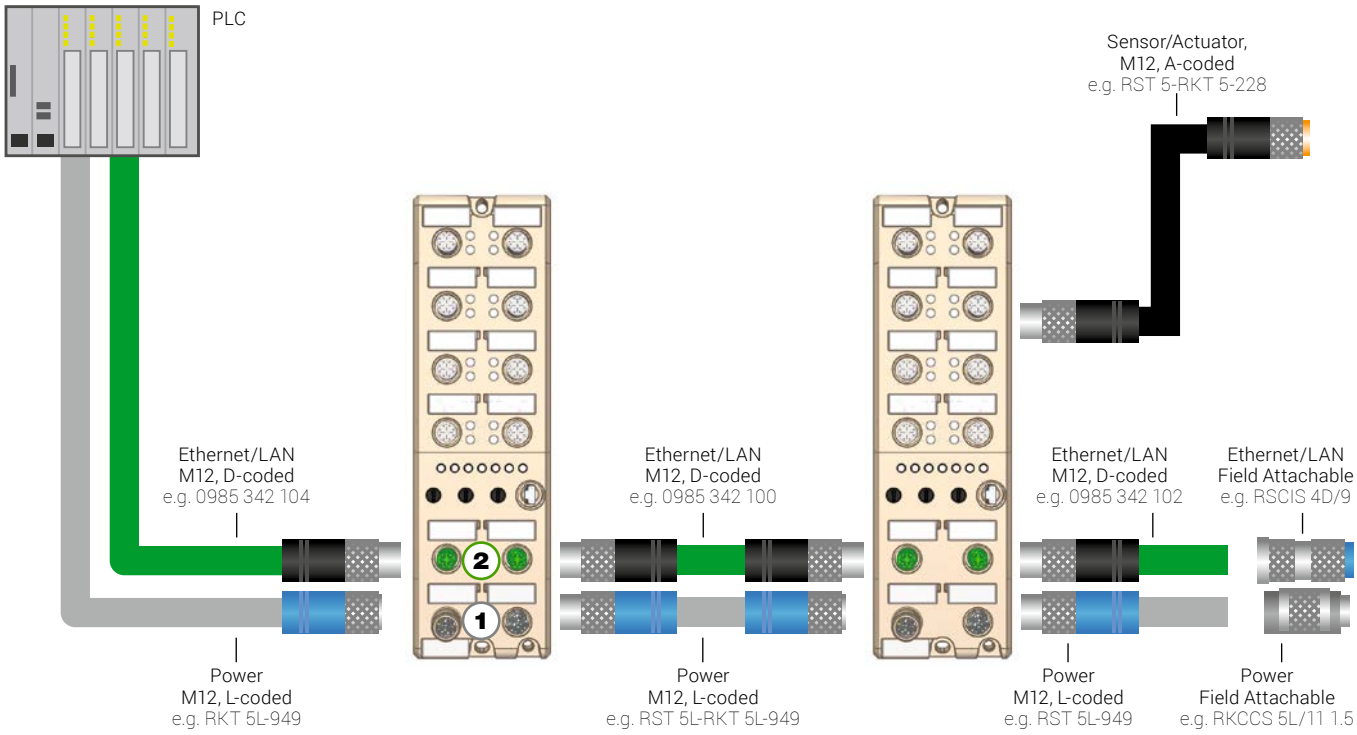
Connection Guide



1 Power – L-coded M12 Power, 5-poles		2 Data – D-coded M12 LAN/Ethernet, 4-poles	
	Male straight/Female straight RST 5L-RKT 5L-949/* M Shielded version: RSTS 5L-RKTS 5L-956/*M **Male angled/Female angled** RSWT 5L-RKWT 5L-949/* M Shielded version: RSWTS 5L-RKWTS 5L-956/*M		**Male straight/Male straight** 0985 342 100/* M **Male angled/Male angled** 0985 342 132/* M **Male angled/Male angled** 0985 342 131/* M
	Male straight/Open RST 5L-949/*M Shielded version: RSTS 5L-956/*M **Male angled/Open** RSWT 5L-949/*M Shielded version: RSWTS 5L-956/*M **Female straight/Open** RKT 5L-949/*M Shielded version: RKTS 5L-956/*M **Female angled/Open** RKWT 5L-949/*M Shielded version: RKWTS 5L-956/*M		**Male straight/Open** 0985 342 102/* M **Male angled/Open** 0985 342 130/* M
			M12-RJ45 Industrial Ethernet data cordset 0985 342 104/* M umspritzt **RJ45-RJ45 Industrial Ethernet data cordset** 0985 342 500/* M umspritzt
	Field attachable – Male straight Crimp type: RSCCS 5L/11 1.5 **Field attachable – Male angled** Crimp type: RSCWCS 5L/11 1.5 **Field attachable – Female straight** Crimp type: RKCCS 5L/11 1.5 **Field attachable – Female angled** Crimp type: RKCWCS 5L/11 1.5		**Field attachable – Male Straight** Clamping cage: RSCIS 4D/9 Spring type: 0986 EMC 102
			Adapter – M12/RJ45 0981 ENC 100

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

Order Information

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), M12 Power									
934879005	0980 ESL 393-121-DCU1	Multiprotocol	Metal	60 mm	IP65, IP67, IP69K	8DI 8DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934879008	0980 ESL 390-121-DCU1	Multiprotocol	Metal	60 mm	IP65, IP67, IP69K	16DIO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded

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LioN-Power
IO-Link Masters: M12 Power

Intelligent Communication Between Enterprise Resource Planning (ERP) and Sensor Level

As the world's first IO-Link Masters to provide multiprotocol support for PROFINET and EtherNet/IP in combination with the new M12 Power L-coded power supply connection, LioN-Power modules offer a major step forward in the miniaturization and future-proofing for intelligent industrial connectivity.

Multi-PROTOCOL

PROFINET INDUSTRIAL ETHERNET · EtherNet/IP · IO-Link

The Benefits

Gain flexibility in IO-Link smart device connectivity with **4 x Class A and 4 x Class B ports** as well as multiprotocol support

Implement preventive maintenance by transmitting diagnostic data of intelligent IO-Link sensors and actuators before a failure happens

Transmit up to 2 x 16 A per module with the **industry's first IO-Link System with M12 L-coding** power connection

Markets & Applications

- Process Visualization
- Valve Integration
- Machine Building
- Packaging
- Simplifying analog sensor connections

Technical Information

Type (IO-Link Master)	4DI 4DO 8IOL	4DI 8IOL (M12)	4DI 8IOL (M8)
Order Designation	0980 ESL 3x9-121[1)]	0980 ESL 1x9-121	0980 ESL 1x9-122
Product Description	LioN-P, IO-Link Master, PROFINET or Multiprotocol (PROFINET and EtherNet/IP), industrial metal housing, 60 mm, up to IP69K, 4 digital input and 4 digital output channels (2 A) with galvanic isolation and 8 IO-Link Master, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles	LioN-P, IO-Link Master, PROFINET or Multiprotocol (PROFINET and EtherNet/IP), industrial metal housing, 30 mm, up to IP69K, 4 digital input channels and 8 IO-Link Master, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles	LioN-P, IO-Link Master, PROFINET or Multiprotocol (PROFINET and EtherNet/IP), industrial metal housing, 30 mm, up to IP69K, 4 digital input channels and 8 IO-Link Master, 8 x M8 B-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles
General Data			
Housing	Metal, zinc die-cast, potted		
Dimensions (W x H x D)	60 mm x 31 mm x 200 mm	30 mm x 43 mm x 225 mm	30 mm x 43 mm x 204 mm
Weight	ca. 500 g	ca. 480 g	ca. 450 g
Ambient Temperature	-20 °C to +70 °C (Operation)		
Protection Degree	IP65, IP67, IP69K[2)]		
Shock/Vibration	50 g/15 g		
Power Supply	1		
Nominal Voltage	24 V DC (18 to 30 V DC)		
Connection	2 x M12, L-coded, 5-poles, up to 2 x 16 A		
Current Consumption	typ. 180 mA (at 24 V DC)		
IO-Link Master			
IO-Link Specification	V1.1 (COM 1 … 3)		
IO-Link Class A Ports	4 x (X1 to X4)		
IO-Link Class B Ports	4 x (X5 to X8)		
Nominal Current C/Q (Pin 4)	500 mA		
Nominal Current 1L+ (Pin 1)	500 mA		
Nominal Current 2L+ (Pin 2)	max. 2 A per Port	max. 4 A per Module	
Bus System	2		
Protocol	Multiprotocol (PROFINET, EtherNet/IP)		
Connection	2 x M12, D-coded, 4-poles		
PROFINET Features	PROFINET V2.3 (CC-C), Netload Class II, FSU, MRP, Shared Device		
EtherNet/IP Features	EtherNet/IP acc. to CIP Edition V3.11, EIP Adaption of CIP V1.12, DLR		
I/O Channels			
I/O Function	4 digital inputs, 4 digital outputs and 8 IO-Link Master (configurable as DI, DO, IOL)	4 digital inputs and 8 IO-Link Master (configurable as DI, DO, IOL)	
Connection	8 x M12, A-coded, 5-poles		8 x M8, B-coded, 5-poles
Digital Input Channels	max. 12 (4 x Pin 2 (Class A) and 8 x configurable via Pin 4)		
DI Channel Type	Type 1 acc. to IEC 61131-2, PNP		
Sensor Current Supply	max. 500 mA per port		
DO Output Current	max. 500 mA per channel via C/Q, max. 2 A per channel via 2L+ (Pin 2)	max. 500 mA per channel via C/Q	
Galv. Isolated Outputs	Yes, 2L+ (Pin 2) outputs	No	
Protective Circuit	Electronically: Overload and short-circuit protection		

1) Also available as: 0980 ESL 3x8-121 – With extra decoupling of Pin 2L+/Uaux with series diode against power feedback from L+ for maximum security. Nominal current of 2L+ (Pin 2) is limited to 1.6 A due to protective circuit.

2) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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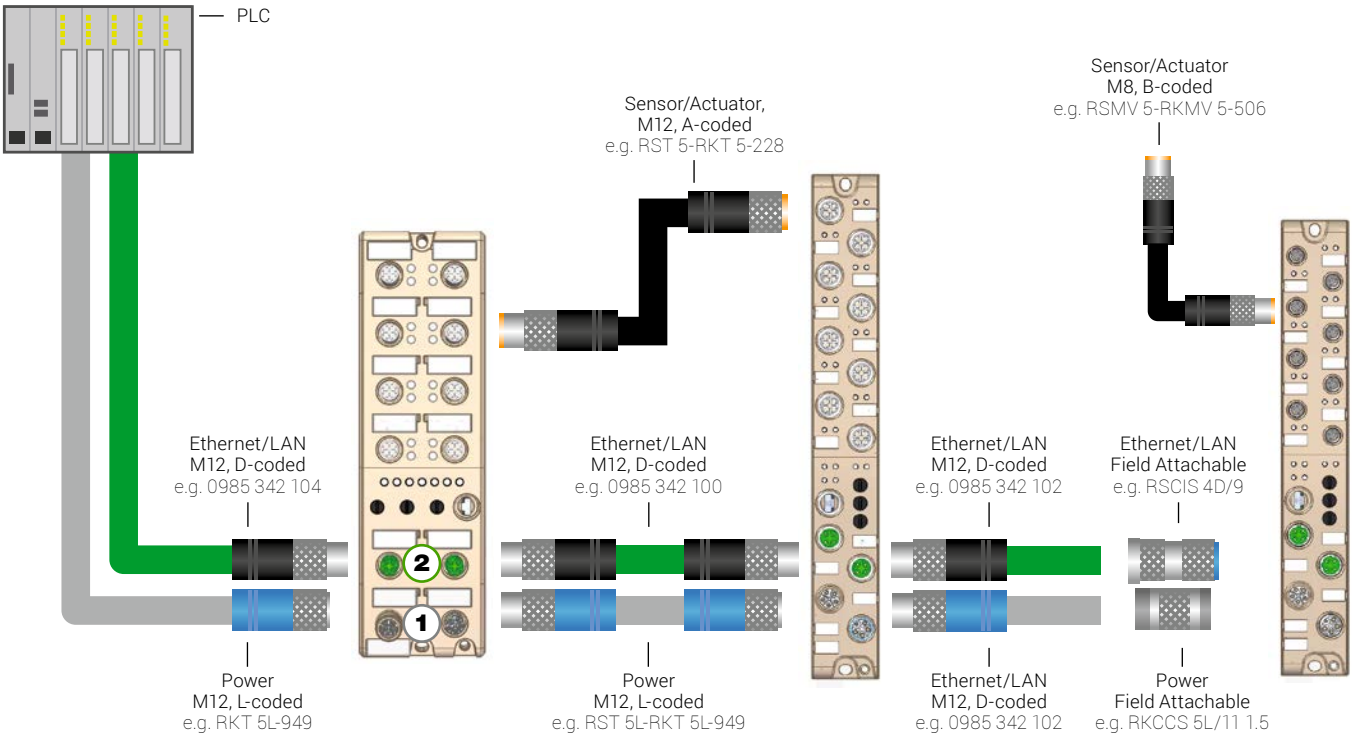
Connection Guide



1 Power – L-coded M12 Power, 5-poles		2 Data – D-coded M12 LAN/Ethernet, 4-poles	
	Male straight/Female straight RST 5L-RKT 5L-949/* M Shielded version: RSTS 5L-RKTS 5L-956/*M **Male angled/Female angled** RSWT 5L-RKWT 5L-949/* M Shielded version: RSWTS 5L-RKWTS 5L-956/*M		**Male straight/Male straight** 0985 342 100/* M **Male straight/Male angled** 0985 342 132/* M **Male angled/Male angled** 0985 342 131/* M
	Male straight/Open RST 5L-949/*M Shielded version: RSTS 5L-956/*M **Male angled/Open** RSWT 5L-949/*M Shielded version: RSWTS 5L-956/*M **Female straight/Open** RKT 5L-949/*M Shielded version: RKTS 5L-956/*M **Female angled/Open** RKWT 5L-949/*M Shielded version: RKWTS 5L-956/*M		**Male straight/Open** 0985 342 102/* M **Male angled/Open** 0985 342 130/* M
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	Field attachable – Male straight Crimp type: RSCCS 5L/11 1.5 **Field attachable – Male angled** Crimp type: RSCWCS 5L/11 1.5 **Field attachable – Female straight** Crimp type: RKCCS 5L/11 1.5 **Field attachable – Female angled** Crimp type: RKCWCS 5L/11 1.5		**Field attachable – Male Straight** Clamping cage: RSCIS 4D/9 Spring type: 0986 EMC 102
			Adapter – M12/RJ45 0981 ENC 100

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
IO-Link Master, PROFINET, M12 Power									
934861001	0980 ESL 109-121	PROFINET	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934857001	0980 ESL 109-122	PROFINET	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M8, B-coded
934878004	0980 ESL 309-121	PROFINET	Metal	60 mm	IP65, IP67, IP69K	4DI 4DO 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934878005	0980 ESL 308-121[1)]	PROFINET	Metal	60 mm	IP65, IP67, IP69K	4DI 4DO 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
IO-Link Master, Multiprotocol (PROFINET and EtherNet/IP), M12 Power									
934964004	0980 ESL 199-121	Multiprotocol	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934964003	0980 ESL 199-122	Multiprotocol	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M8, B-coded
934879004	0980 ESL 399-121	Multiprotocol	Metal	60 mm	IP65, IP67, IP69K	4DI 4DO 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934879009	0980 ESL 398-121[1)]	Multiprotocol	Metal	60 mm	IP65, IP67, IP69K	4DI 4DO 8IOL	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded

1) Also available as: 0980 ESL 3x8-121 – With extra decoupling of Pin 2L+/Uaux with series diode against power feedback from L+ for maximum security. Nominal current of 2L+ (Pin 2) is limited to 1.6 A due to protective circuit.

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LioN-Power
IO-Link Masters: M12 Hybrid

Streamline Power and Fast Ethernet Data in One Space-saving Module

Unlike traditional IO-Link Masters with two ports for data and two ports for power, M12 Hybrid IO-Link Masters combine data and power in one connector for a more compact device. This is possible with the standardized M12 Hybrid Y-coding according to IEC 61076-2-113.

Multi-PROTOCOL

PROFINET INDUSTRIAL ETHERNET · EtherNet/IP · IO-Link

The Benefits

Faster installation – minimize installation times significantly thanks to one small interface that combines data and power with up to 2 x 6 amps.

Reduce sources of installation errors – and efficiently use your limited installation space for machine automation

Bring efficient order to cable trays – especially helpful for drag-chain applications

Markets & Applications

- Robotics
- Machine Tools
- Pick and Place
- Process Visualization
- Valve Integration
- Machine Building
- Packaging

Technical Information

Type	4DI 8IOL (M12)	4DI 8IOL (M8)
Order Designation	0980 ESL 199-331	0980 ESL 199-332
Product Description	LioN-P, IO-Link Master, PROFINET or Multiprotocol (PROFINET and EtherNet/IP), industrial metal housing, 30 mm, up to IP69K, 4 digital input and 8 IO-Link Master, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 Y-coded bus and power supply connection, 8-poles	LioN-P, IO-Link Master, PROFINET or Multiprotocol (PROFINET and EtherNet/IP), industrial metal housing, 30 mm, up to IP69K, 4 digital input and 8 IO-Link Master, 8 x M8 B-coded I/O connection, 5-poles, 2 x M12 Y-coded bus and power supply connection, 8-poles
General Data		
Housing	Metal, zinc die-cast, potted	
Dimensions (W x H x D)	30 mm x 43 mm x 204 mm	30 mm x 43 mm x 183 mm
Weight	ca. 448 g	ca. 413 g
Ambient Temperature	-20 °C to +70 °C (Operation)	
Protection Degree	IP65, IP67, IP69K[1)]	
Shock/Vibration	50 g/15 g	
Power Supply	1	
Nominal Voltage	24 V DC (18 to 30 V DC)	
Connection	2 x M12, Y-coded, 8-poles, up to 2 x 6 A	
Current Consumption	typ . 180 mA (at 24 V DC)	
IO-Link Master		
IO-Link Specification	V1.1 (COM 1 ... 3)	
IO-Link Class A-Ports	4 x (X1 to X4)	
IO-Link Class B-Ports	4 x (X5 to X8)	
Nominal Current C/Q (Pin 4)	500 mA	
Nominal Current 1L+ (Pin 1)	500 mA	
Nominal Current 2L+ (Pin 2)	max. 4 A per Module	
Bus System	1	
Protocol	Multiprotocol (PROFINET, EtherNet/IP)	
Connection	2 x M12, Y-coded, 8-poles	
PROFINET Features	PROFINET V2.3 (CC-C), Netload Class II, FSU, MRP, Shared Device	
EtherNet/IP Features	EtherNet/IP acc. to CIP Edition V3.11, EIP Adaption of CIP V1.12, DLR	
I/O Channels		
I/O Function	4 digital inputs and 8 IO-Link Master (configurable as DI, DO, IOL)	
Connection	8 x M12, A-coded, 5-poles	8 x M8, B-coded, 5-poles
Digital Input Channels	max. 12 (4 x Pin 2 (Class A) and 8 x configurable via Pin 4)	
DI Channel Type	Type 1 acc. to IEC 61131-2, PNP	
Sensor Current Supply	max. 500 mA per port	
DO Output Current	max. 500 mA per channel via C/Q	
Galv. Isolated Outputs	No	
Protective Circuit	Electronically: Overload and short-circuit protection	

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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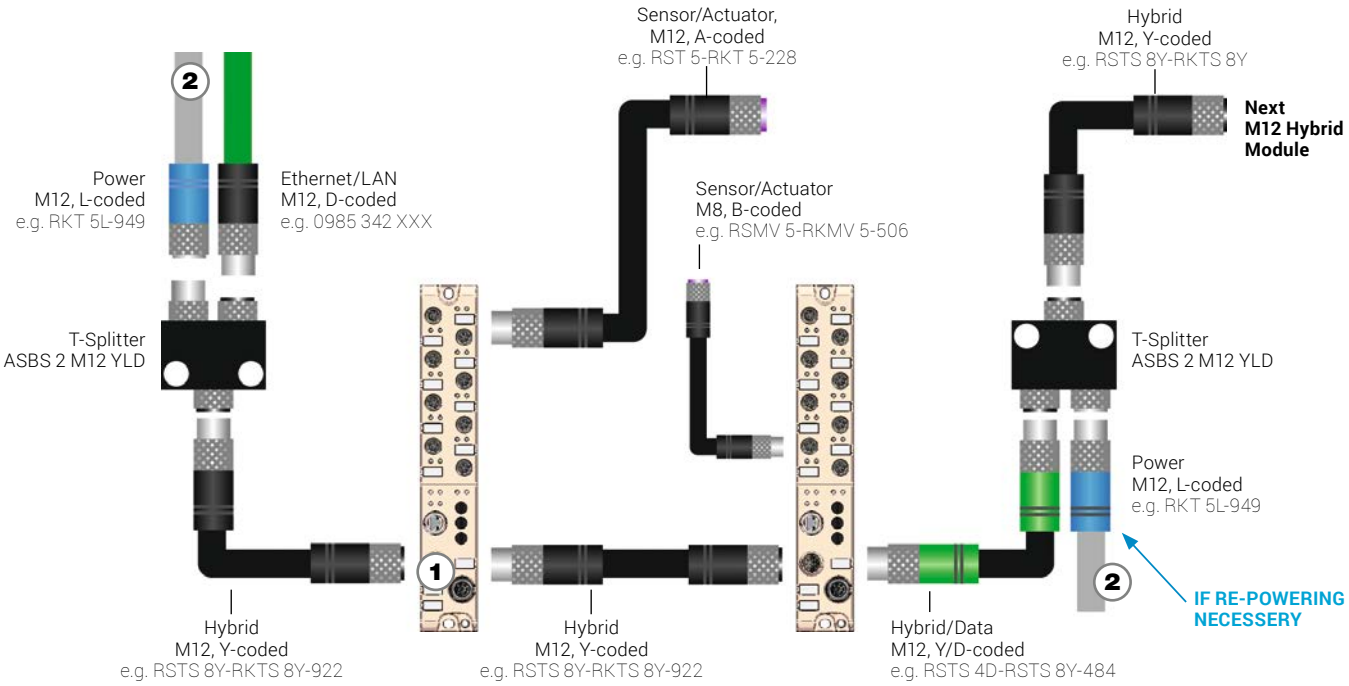
Connection Guide

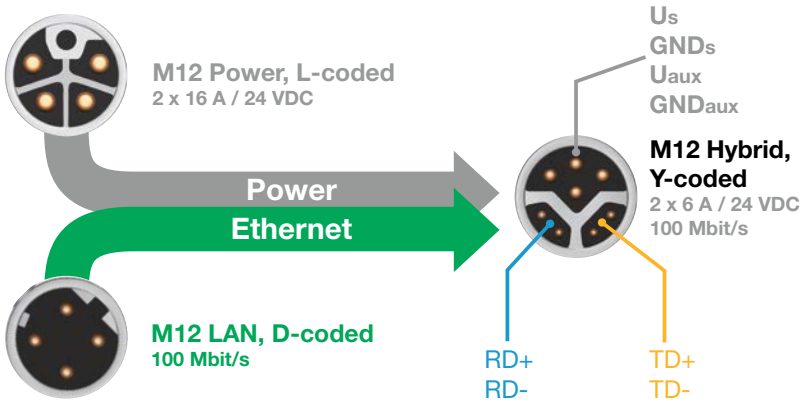


1 Hybrid – Y-coded M12 Power, 8-poles		2 Power – L-coded M12 Power, 5-poles	
	Male straight/Female straight, Shielded RSTS 8Y-RKTS 8Y-922/* M		**Male straight/Female straight** RST 5L-RKT 5L-949/* M Shielded version: RSTS 5L-RKTS 5L-956/*M **Male angled/Female angled** RSWT 5L-RKWT 5L-949/* M Shielded version: RSWTS 5L-RKWTS 5L-956/*M
	Male straight/Open, Shielded RSTS 8Y-922/*M **Female straight/Open, Shielded** RKTS 8Y-922/*M		**Male straight/Open** RST 5L-949/*M Shielded version: RSTS 5L-956/*M **Male angled/Open** RSWT 5L-949/*M Shielded version: RSWTS 5L-956/*M **Female straight/Open** RKT 5L-949/*M Shielded version: RKTS 5L-956/*M **Female angled/Open** RKWT 5L-949/*M Shielded version: RKWTS 5L-956/*M
	Hybrid/Ethernet – M12 Y to M12 D RSTS 4D-RSTS 8Y-484/* M		
	T-Connector – M12 L & M12 D to M12 Y ASBS 2 M12 YLD		**Field attachable – Male straight** Crimp type: RSCCS 5L/11 1.5 **Field attachable – Male angled** Crimp type: RSCWCS 5L/11 1.5 **Field attachable – Female straight** Crimp type: RKCCS 5L/11 1.5 **Field attachable – Female angled** Crimp type: RKCWCS 5L/11 1.5

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
IO-Link Master, PROFINET, M12 Hybrid									
934862001	0980 ESL 109-331	PROFINET	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	via bus connection	2 x M12, Y-coded	8 x M12, A-coded
934840001	0980 ESL 109-332	PROFINET	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	via bus connection	2 x M12, Y-coded	8 x M8, B-coded
IO-Link Master, Multiprotocol (PROFINET and EtherNet/IP), M12 Hybrid									
934964001	0980 ESL 199-331	Multiprotocol	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	via bus connection	2 x M12, Y-coded	8 x M12, A-coded
934964002	0980 ESL 199-332	Multiprotocol	Metal	30 mm	IP65, IP67, IP69K	4DI 8IOL	via bus connection	2 x M12, Y-coded	8 x M8, B-coded



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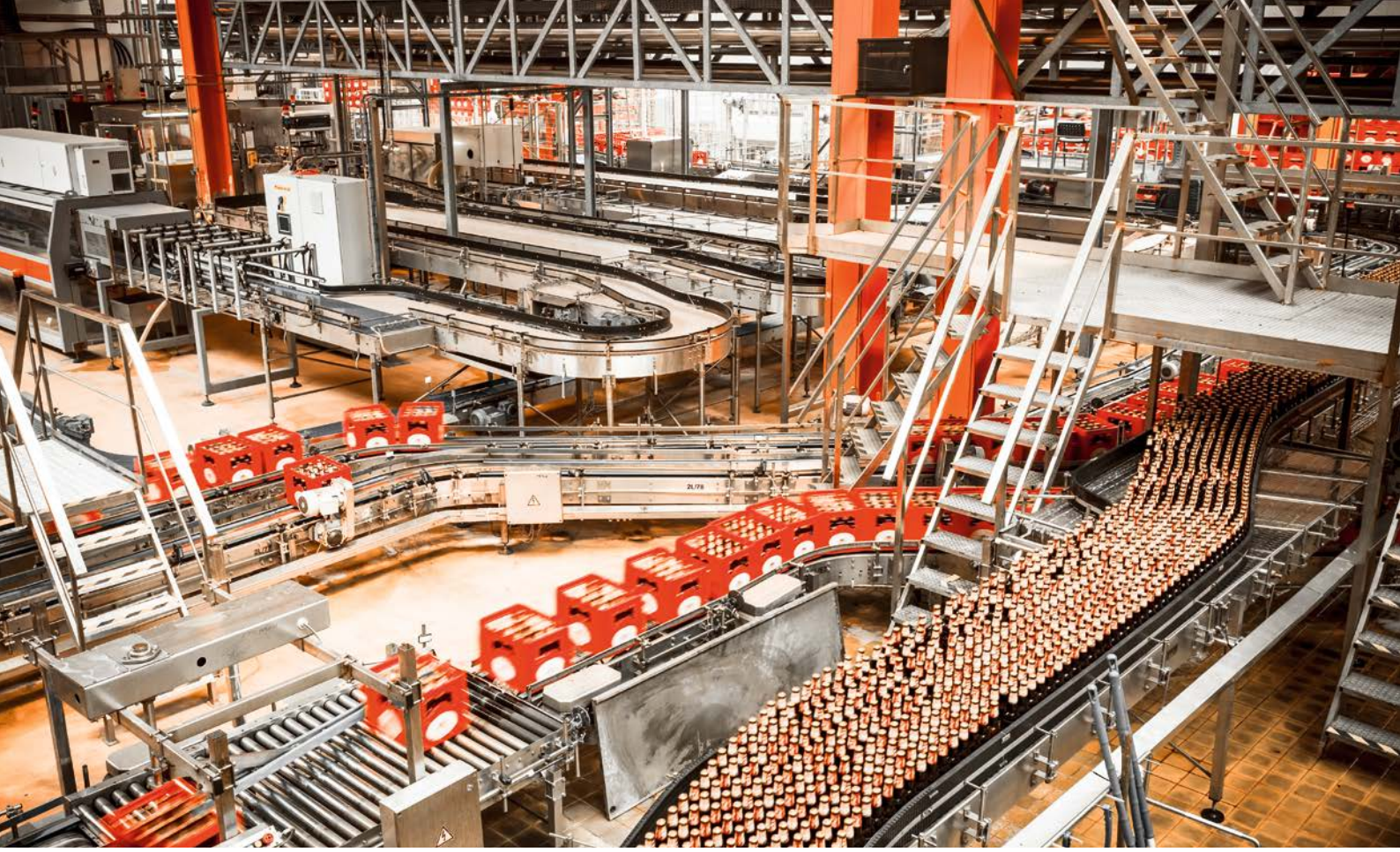

LioN-Power
IO-Link I/O Hubs

The Most Cost-Effective Active and Standardized Signal Transmission Method

IO-Link I/O Hubs collect up to 16 standard digital signals and transmit them through an IO-Link Master to the controller via the IO-Link protocol. This makes the hubs particularly suitable for applications which have many digital sensors and actuators in a restricted space.

IO-Link

The Benefits

Process up to 132 I/O signals per system by connecting IO-Link I/O Hubs with an IO-Link Master

I/O Hubs will only need **one bus address** (via the Masters) to variably group sensor data within an area of 20 m

You may only need **one A-coded M12 connector** to power the I/O Hub and collect and transmit the I/O data (depending on the I/O Hub selected)

Markets & Applications

- Passive to Active Hub Upgrade
- Machine Building
- Packaging

Technical Information

Type	16DI	10DI 6DO	16DIO
Order Designation	0960 IOL 381-001...	0960 IOL 385-001...	0960 IOL 380-021...
Product Description	LioN-P, IO-Link I/O Hub, IO-Link, industrial metal housing, 60 mm, up to IP69K, 16 digital input channels, 8 x M12 A-coded I/O connection, 5-poles, 1 x M12 A-coded IO-Link Class A connection, 5-poles	LioN-P, IO-Link I/O Hub, IO-Link, industrial metal housing, 60 mm, up to IP69K, 10 digital input and 6 digital output channels (0.5 A) with galvanic isolation, 8 x M12 A-coded I/O connection, 5-poles, 1 x M12 A-coded IO-Link Class B connection, 5-poles	LioN-P, IO-Link I/O Hub, IO-Link, industrial metal housing, 60 mm, up to IP69K, 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 1 x M12 A-coded IO-Link Class A connection, 5-poles, 1 x M12 L-coded power supply connection, 5-poles
General Data			
Housing	Metal, zinc die-cast, potted		
Dimensions (W x H x D)	60 mm x 31 mm x 159 mm		
Weight	ca. 280 g		
Ambient Temperature	-20 °C to +70 °C (Operation)		
Protection Degree	IP65, IP67, IP69K[1)]		
Shock/Vibration	50 g/15 g		
Power Supply	1	1	3
Nominal Voltage	24 V DC (18 to 30 V DC)		
Connection	1 x M12, A-coded, 5-poles		1 x M12, L-coded, 5-poles
Module Supply Voltage	1L+ (US), Pin 1/3		
Sensor Supply Voltage	1L+ (US), Pin 1/3		US via M12, L-coded
Actuator Supply Voltage	N/A	2L+ (Uaux), Pin 2/5	UL via M12, L-coded
Current Consumption	typ. 80 mA (at 24 V DC)		
Galv. Isolated	No	Yes	No
IO-Link	1	2	1
IO-Link Specification	V1.1.2		
COM Mode	COM 3		
IO-Link Class	Class A	Class B	Class A
Data Storage	Supported		
Digital Input Channels			
Connection	8 x M12, A-coded, 5-poles	5 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles
Digital Input Channels	16, fixed	10, fixed	max. 16, universal I/O
DI Channel Type	Type 1 acc. To IEC 61131-2, PNP		Type 3 acc. To IEC 61131-2, PNP
Nominal Input Current	typ. 4.6 mA		typ. 5.3 mA
Sensor Current Supply	max. 700 mA per module see below: IO-Link Master Limitation [2)]		max. 500 mA per port max. 16 A per hub
Supplied by	1L+ (US)		M12 Power: Pin 1/3
Digital Output Channels			
Connection	–	3 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles
Digital Output Channels	–	6, fixed	max. 16, universal I/O
DO Output Current	–	max. 500 mA see below: IO-Link Master Limitation [2)]	max. 2 A max. 16 A per hub
Supplied by	–	2L+/Uaux	M12 Power: Pin 2/4
Galv. Isolated Outputs	–	Yes, all outputs	
Protective Circuit	–	Electronically: Overload and short-circuit protection	

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

2) IO-Link Master Limitation	0980 ESL 3x8-121	0980 ESL 3x9-121	0980 ESL 1x9-12x	0980 ESL 1x9-33x
1L+, max.	max. 500 mA per Port			
2L+, max.	max. 1.6 A per Port	max. 2 A per Port	max. 4 A per Module	max. 4 A per Module

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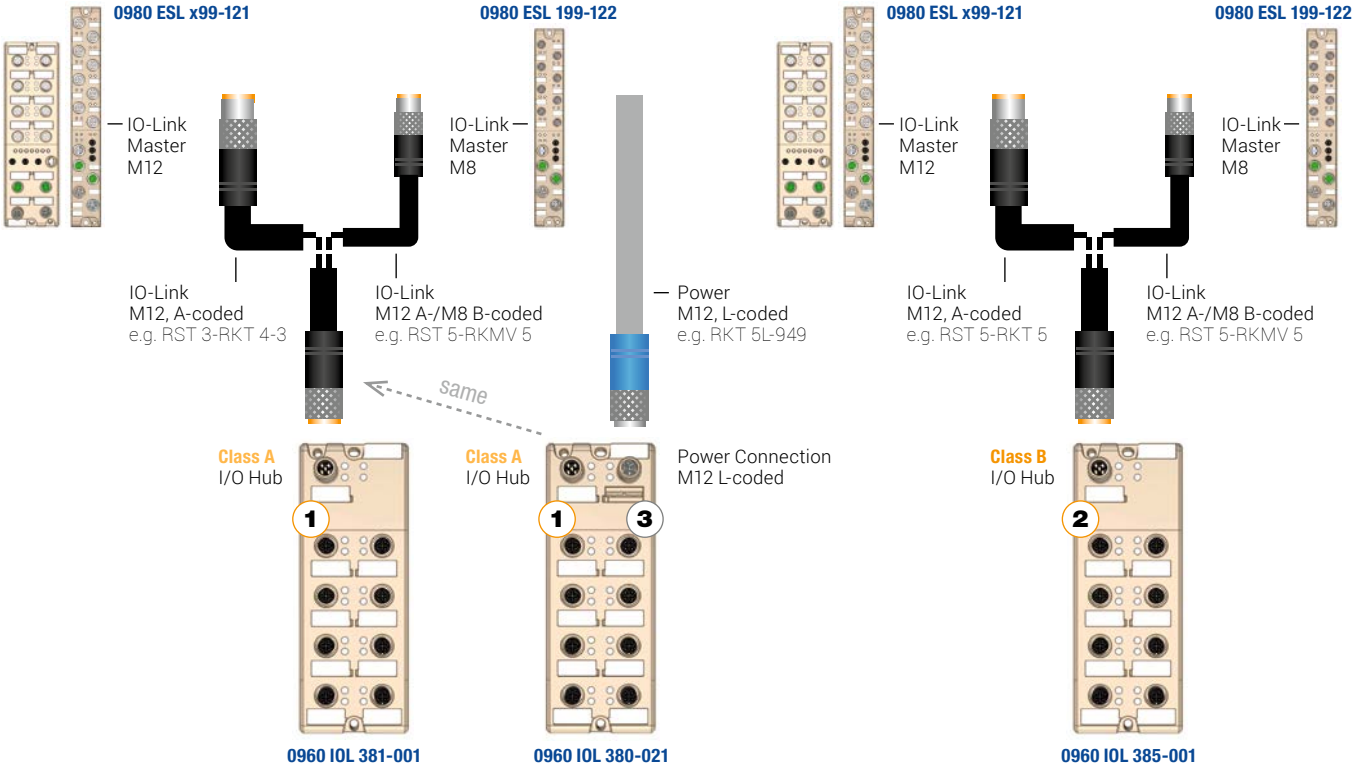

IO-Link	1 Class A	2 Class B	3 Power – L-coded M12 Power, 5-poles	
	Male straight/Female straight RST 3-RKT 4-3-224/* M **Male straight/Female angled** RST 3-RKWT 4-3-224/* M	RST 5-RKT 5-228/* M RST 5-RKWT 5-228/* M		**Male straight/Female straight** RST 5L-RKT 5L-949/* M Shielded version: RSTS 5L-RKTS 5L-956/*M **Male angled/Female angled** RSWT 5L-RKWT 5L-949/* M Shielded version: RSWTS 5L-RKWTS
	Male straight/Open RST 3-224/*M **Male angled/Open** RSWT 3-224/*M **Female straight/Open** RKT 4-3-224/*M **Female angled/Open** RKWT 4-3-224/*M	RST 5-228/* M RSWT 5-228/*M RKT 5-228/* M RKWT 5-228/* M		**Male straight/Open** RST 5L-949/*M Shielded version: RSTS 5L-956/*M **Male angled/Open** RSWT 5L-949/*M Shielded version: RSWTS 5L-956/*M **Female straight/Open** RKT 5L-949/*M Shielded version: RKTS 5L-956/*M **Female angled/Open** RKWT 5L-949/*M Shielded version: RKWTS 5L-956/*M
 	Male straight, Screw Type SW 15: RSC 3/7 SW 19: RSC 3/9 **Male straight, SpringType** SW 15: RSCQ 3/7 SW 19: RSCQ 3/9 **Male angled, Screw Type** SW 15: RSCW 3/7 SW 19: RSCQ 3/9 **Female straight, Screw Type** SW 15: RKC 4/3/7 SW 19: RKC 4/3/9 **Female angled, Screw Type** SW 15: RKCW 4/3/7 SW 19: RKCW 4/3/9	RSC 5/7 RSC 5/9 RSCW 5/7 RSCW 5/9 RKC 5/7 RKC 5/9 RKCW 5/7 RKCW 5/9	 	**Field attachable – Male straight** Crimp type: RSCCS 5L/11 1.5 **Field attachable – Male angled** Crimp type: RSCWCS 5L/11 1.5 **Field attachable – Female straight** Crimp type: RKCCS 5L/11 1.5 **Field attachable – Female angled** Crimp type: RKCWCS 5L/11 1.5

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

We reserve the right to make technical changes.

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
IO-Link I/O Hub[1)]									
934992002	0960 IOL 381-001	IO-Link	Metal	60 mm	IP65, IP67, IP69K	16DI	via bus connection	1 x M12, A-coded	8 x M12, A-coded
935001001	0960 IOL 385-001	IO-Link	Metal	60 mm	IP65, IP67, IP69K	10DI 6DO	via bus connection	1 x M12, A-coded	8 x M12, A-coded
934994001	0960 IOL 380-021	IO-Link	Metal	60 mm	IP65, IP67, IP69K	16DIO	1 x M12, L-coded	1 x M12, A-coded	8 x M12, A-coded
IO-Link I/O Hub, Basic Parameter Set I/O Hubs[2)]									
934992052	0960 IOL 381-001-PX0	IO-Link	Metal	60 mm	IP65, IP67, IP69K	16DI	via bus connection	1 x M12, A-coded	8 x M12, A-coded
935001052	0960 IOL 385-001-PX0	IO-Link	Metal	60 mm	IP65, IP67, IP69K	10DI 6DO	via bus connection	1 x M12, A-coded	8 x M12, A-coded
934994052	0960 IOL 380-021-PX0	IO-Link	Metal	60 mm	IP65, IP67, IP69K	16DIO	1 x M12, L-coded	1 x M12, A-coded	8 x M12, A-coded

1) As of November 2018 all our hubs are built according to the common profile specification.

2) Basic Parameter Set I/O hubs are especially designed for use without IODD or any need for configuration/parameterization.
They can be used out of the box and always work in their default settings. Perfectly suited for tool change applications or device exchange.

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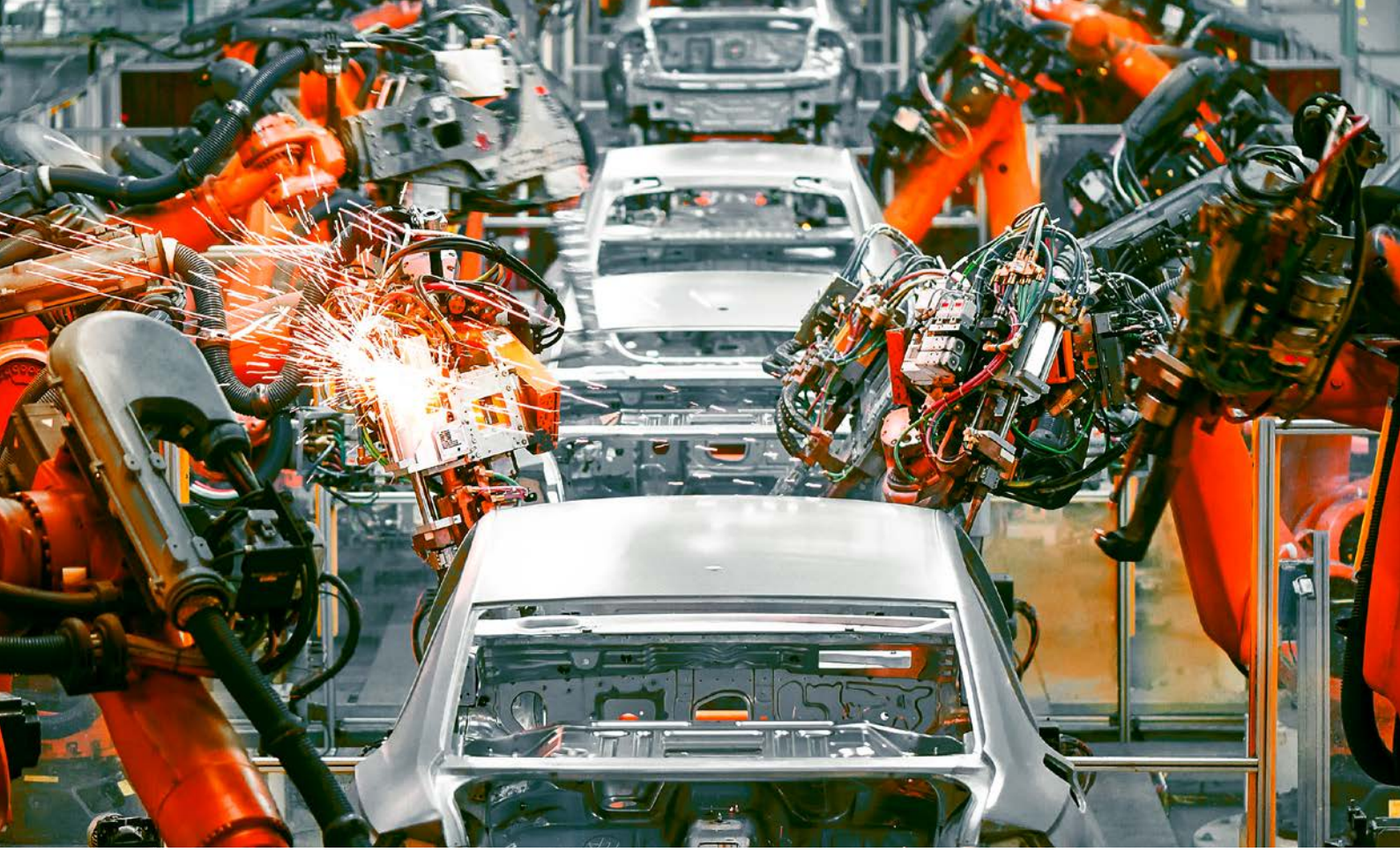

LioN-Power
Multiprotocol I/O: M12 Power

One Device Supports the Three Dominant Ethernet Protocols

The family of LioN-Power multiprotocol modules offer highly customizable features to deliver fieldbus-independent automation for the leading industrial Ethernet protocols. The modules' M12 power technology offers the highest current rating in the industry – unscaled 2 x 16 amps per module.

Multi-PROTOCOL

PROFINET INDUSTRIAL ETHERNET · EtherNet/IP · EtherCAT

The Benefits

Connect more field devices in a daisy-chain with the industry's only I/O module powerful enough to support 2 x 16 amps

Streamline your field devices through the industry's first multi-protocol I/O device for PROFINET, EtherNet/IP and EtherCAT protocols

Replace modules faster by using the universal channels as digital input or digital output, without any configuration

Markets & Applications

- Automation
- Automotive
- Machine Building
- Material Handling/Packaging
- Transportation
- Food & Beverage Manufacturing[1)]

1) No direct contact with food

We reserve the right to make technical changes.

Technical Information

Type	16DIO	16DI	16DO	8DI 8DO
Order Designation	0980 ESL 390-121	0980 ESL 391-121	0980 ESL 392-121	0980 ESL 393-121
Product Description	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP69K, 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP69K, 16 digital input channels, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP69K, 16 digital output channels (2 A) with galvanic isolation, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP69K, 8 digital input and 8 digital output channels (2 A) with galvanic isolation, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, w4-poles, 2 x M12 L-coded power supply connection, 5-poles
General Data				
Housing	Metal, zinc die-cast, potted			
Dimensions (W x H x D)	60 mm x 31 mm x 200 mm			
Weight	500 g			
Ambient Temperature	-20 °C to +70 °C (Operation)			
Protection Degree	IP65, IP67, IP69K[1)]			
Shock/Vibration	50 g/15 g			
Power Supply	1			
Nominal Voltage	24 V DC (18 to 30 V DC)			
Connection	2 x M12, L-coded, 5-poles, up to 2 x 16 A			
Current Consumption	typ. 120 mA (at 24 V DC)			
Bus System	2			
Protocol	Multiprotocol (PROFINET, EtherNet/IP and EtherCAT)			
Connection	2 x M12, D-coded, 4-poles			
PROFINET Features	PROFINET V2.3 (CC-C), Netload Class III, FSU, MRP			
EtherNet/IP Features	EtherNet/IP acc. to CIP Edition V3.11, EIP Adaption of CIP V1.12, DLR, Quick Connect			
EtherCAT Features	EtherCAT IO acc. to ETG.1000 V1.2, Auto-increment and fixed addressing, CoE, EoE, FoE			
Digital Input Channels				
Digital Input Channels	max. 16 (universal I/O)	16, fixed	-	8, fixed
Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	-	4 x M12, A-coded, 5-poles
DI Channel Type	Type 3 acc. To IEC 61131-2, PNP	Type 3 acc. to IEC 61131-2, PNP	-	Type 3 acc. To IEC 61131-2, PNP
Nominal Input Current	typ. 5 mA	typ. 5 mA	-	typ. 5 mA
Sensor Current Supply	max. 500 mA per port	max. 200 mA per port	-	max. 200 mA per port
Digital Output Channels				
Digital Output Channels	max. 16 (universal I/O)	-	16, fixed	8, fixed
Connection	8 x M12, A-coded, 5-poles	-	8 x M12, A-coded, 5-poles	4 x M12, A-coded, 5-poles
DO Output Current	max. 2 A per channel	-	max. 2 A per channel	max. 2 A per channel
DO Channel Type	p-switching	-	p-switching	p-switching
Galv. Isolated Outputs	No	-	Yes, all outputs	Yes, all outputs
Protective Circuit	Electronically: Overload and short-circuit protection	-	Electronically: Overload and short-circuit protection	Electronically: Overload and short-circuit protection

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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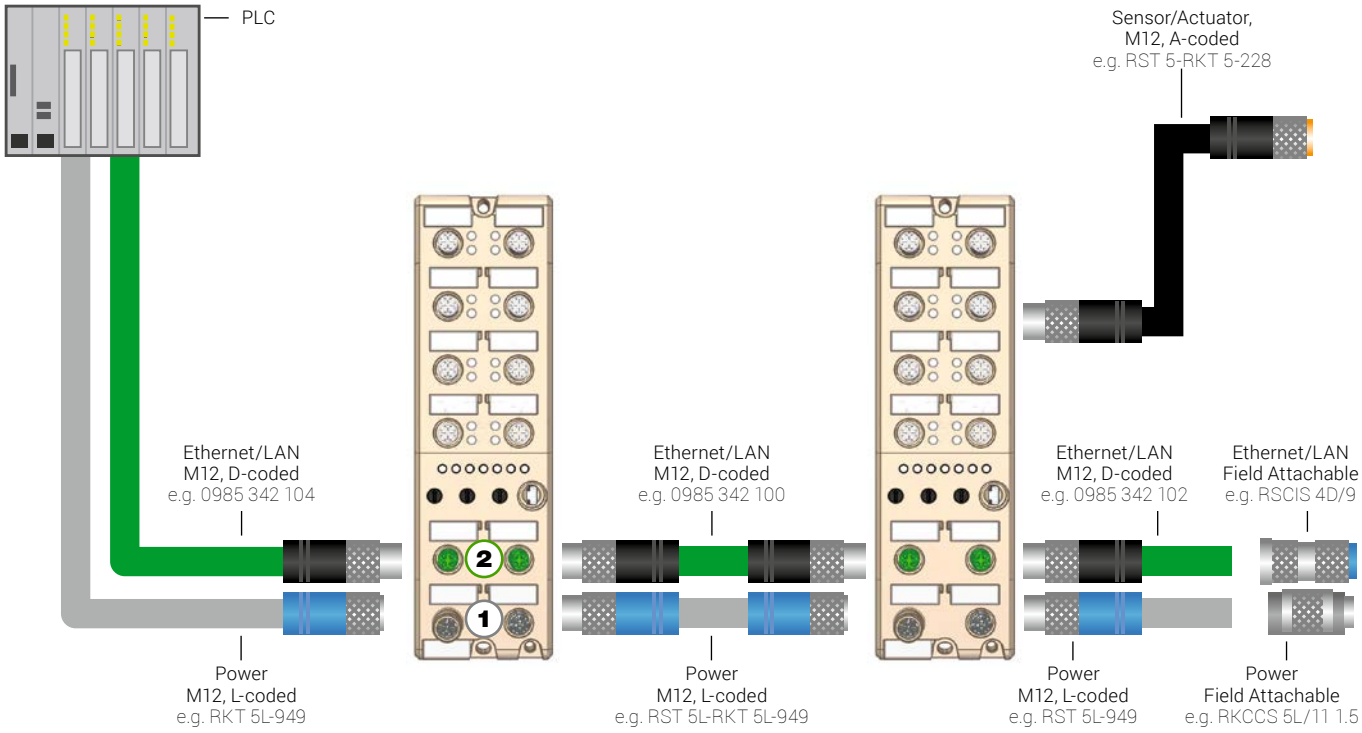
Connection Guide



1 Power – L-coded M12 Power, 5-poles		2 Data – D-coded M12 LAN/Ethernet, 4-poles	
	Male straight/Female straight RST 5L-RKT 5L-949/* M Shielded version: RSTS 5L-RKTS 5L-956/*M **Male angled/Female angled** RSWT 5L-RKWT 5L-949/* M Shielded version: RSWTS 5L-RKWTS 5L-956/*M		**Male straight/Male straight** 0985 342 100/* M **Male straight/Male angled** 0985 342 132/* M **Male angled/Male angled** 0985 342 131/* M
	Male straight/Open RST 5L-949/*M Shielded version: RSTS 5L-956/*M **Male angled/Open** RSWT 5L-949/*M Shielded version: RSWTS 5L-956/*M **Female straight/Open** RKT 5L-949/*M Shielded version: RKTS 5L-956/*M **Female angled/Open** RKWT 5L-949/*M Shielded version: RKWTS 5L-956/*M		**Male straight/Open** 0985 342 102/* M **Male angled/Open** 0985 342 130/* M
			M12-RJ45 Industrial Ethernet data cordset 0985 342 104/* M umspritzt **RJ45-RJ45 Industrial Ethernet data cordset** 0985 342 500/* M umspritzt
	Field attachable – Male straight Crimp type: RSCCS 5L/11 1.5 **Field attachable – Male angled** Crimp type: RSCWCS 5L/11 1.5 **Field attachable – Female straight** Crimp type: RKCCS 5L/11 1.5 **Field attachable – Female angled** Crimp type: RKCWCS 5L/11 1.5		**Field attachable – Male Straight** Clamping cage: RSCIS 4D/9 Spring type: 0986 EMC 102
			Adapter – M12/RJ45 0981 ENC 100

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), M12 Power									
934879001	0980 ESL 391-121	Multiprotocol	Metal	60 mm	P65, IP67, IP69K	16DI	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934879002	0980 ESL 392-121	Multiprotocol	Metal	60 mm	P65, IP67, IP69K	16DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934879003	0980 ESL 393-121	Multiprotocol	Metal	60 mm	P65, IP67, IP69K	8DI 8DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934879007	0980 ESL 390-121	Multiprotocol	Metal	60 mm	P65, IP67, IP69K	16DIO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded

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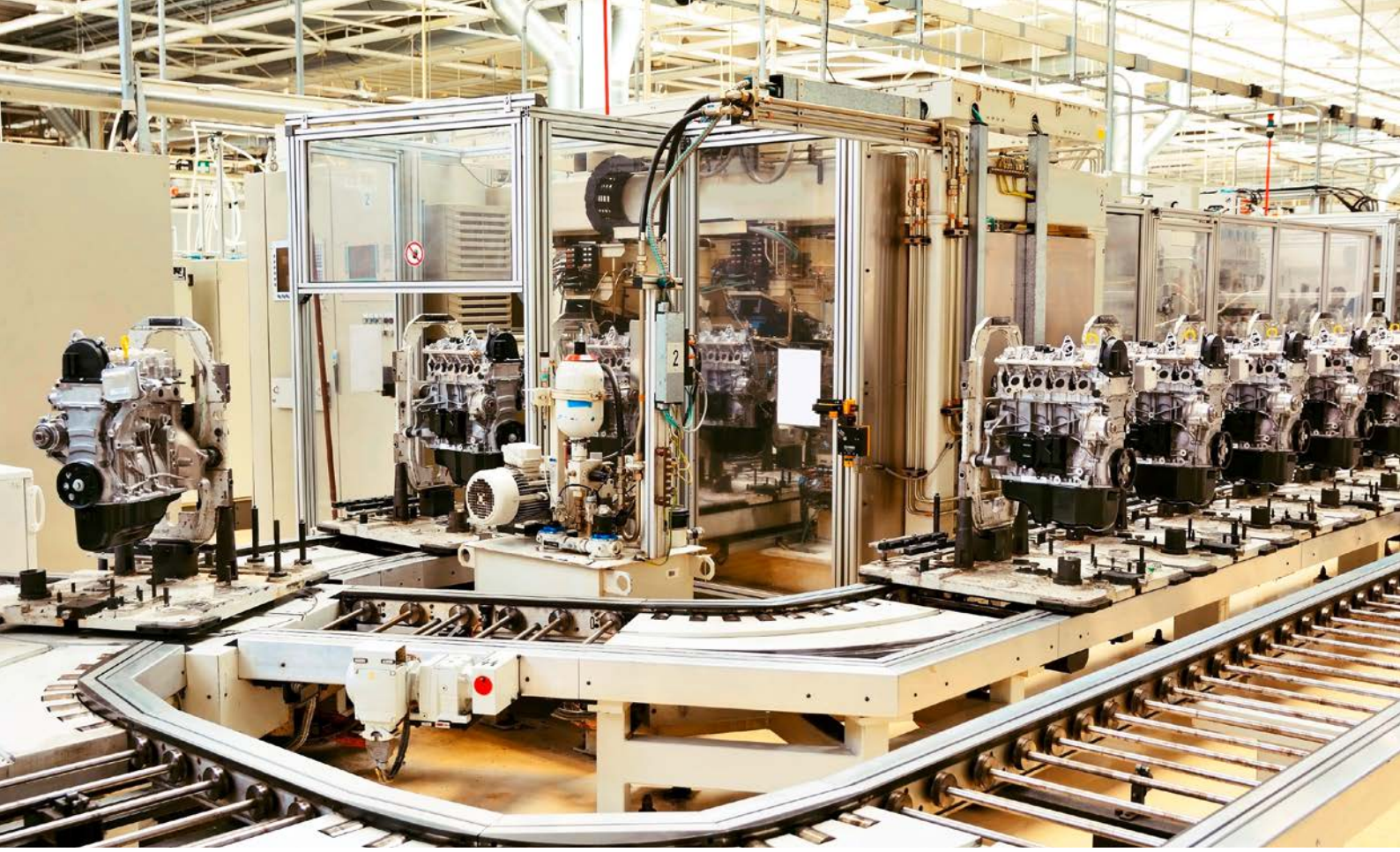

LioN-Power
Multiprotocol I/O: 7/8" Power

One Device Supports the Three Dominant Ethernet Protocols

The family of LioN-Power multiprotocol modules offers highly customizable features to deliver fieldbus-independent automation for the leading industrial Ethernet protocols. In addition to having the latest M12 power technology, the modules also offer standard 7/8" power technology.

Multi-PROTOCOL

PROFINET INDUSTRIAL ETHERNET · EtherNet/IP · EtherCAT

The Benefits

Straightforward retrofitting/ conversion of existing machines with LioN-Power multiprotocol modules

Streamline your field devices through the industry's first multi-protocol I/O device for PROFINET, EtherNet/IP and EtherCAT protocols

Replace modules faster by using the universal channels as digital input or digital output, without any configuration

Markets & Applications

- Retrofitting
- Automation
- Automotive
- Machine Building
- Material Handling/Packaging
- Transportation
- Food & Beverage Manufacturing[1)]

1) No direct contact with food

Technical Information

Type	16DIO	16DI	16DO	8DI 8DO
Order Designation	0980 ESL 390-111	0980 ESL 391-111	0980 ESL 392-111	0980 ESL 393-111
Product Description	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP67, 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 5-poles	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP67, 16 digital input channels, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 5-poles	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP67, 16 digital output channels (2 A) with galvanic isolation, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 5-poles	LioN-P, I/O device, Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), industrial metal housing, 60 mm, up to IP67, 8 digital input and 8 digital output channels (2 A) with galvanic isolation, 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 5-poles
General Data				
Housing	Metal, zinc die-cast, potted			
Dimensions (W x H x D)	60 mm x 27 mm x 206 mm			
Weight	ca. 520 g			
Ambient Temperature	-20 °C to +70 °C (Operation)			
Protection Degree	IP65, IP67[1)]			
Shock/Vibration	50 g/15 g			
Power Supply	1			
Nominal Voltage	24 V DC (18 to 30 V DC)			
Connection	2 x 7/8", 5-poles, up to 2 x 9 A			
Current Consumption	typ. 120 mA (at 24 V DC)			
Bus System	2			
Protocol	Multiprotocol (PROFINET, EtherNet/IP and EtherCAT)			
Connection	2 x M12, D-coded, 4-poles			
PROFINET Features	PROFINET V2.3 (CC-C), Netload Class III, FSU, MRP			
EtherNet/IP Features	EtherNet/IP acc. to CIP Edition V3.11, EIP Adaption of CIP V1.12, DLR, Quick Connect			
EtherCAT Features	EtherCAT IO acc. to ETG.1000 V1.2, Auto-increment and fixed addressing, CoE, EoE, FoE			
Digital Input Channels				
Digital Input Channels	max. 16, universal I/O	16, fixed	-	8, fixed
Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	-	4 x M12, A-coded, 5-poles
DI Channel Type	Type 3 acc. To IEC 61131-2, PNP	Type 3 acc. to IEC 61131-2, PNP	-	Type 3 acc. To IEC 61131-2, PNP
Nominal Input Current	typ. 5 mA	typ. 5 mA	-	typ. 5 mA
Sensor Current Supply	max. 500 mA per port	max. 200 mA per port	-	max. 200 mA per port
Digital Output Channels				
Digital Output Channels	max. 16, universal I/O	-	16, fixed	8, fixed
Connection	8 x M12, A-coded, 5-poles	-	8 x M12, A-coded, 5-poles	4 x M12, A-coded, 5-poles
DO Output Current	max. 2 A per channel	-	max. 2 A per channel	max. 2 A per channel
DO Channel Type	p-switching	-	p-switching	p-switching
Galv. Isolated Outputs	No	-	Yes, all outputs	Yes, all outputs
Protective Circuit	Electronically: Overload and short-circuit protection	-	Electronically: Overload and short-circuit protection	Electronically: Overload and short-circuit protection

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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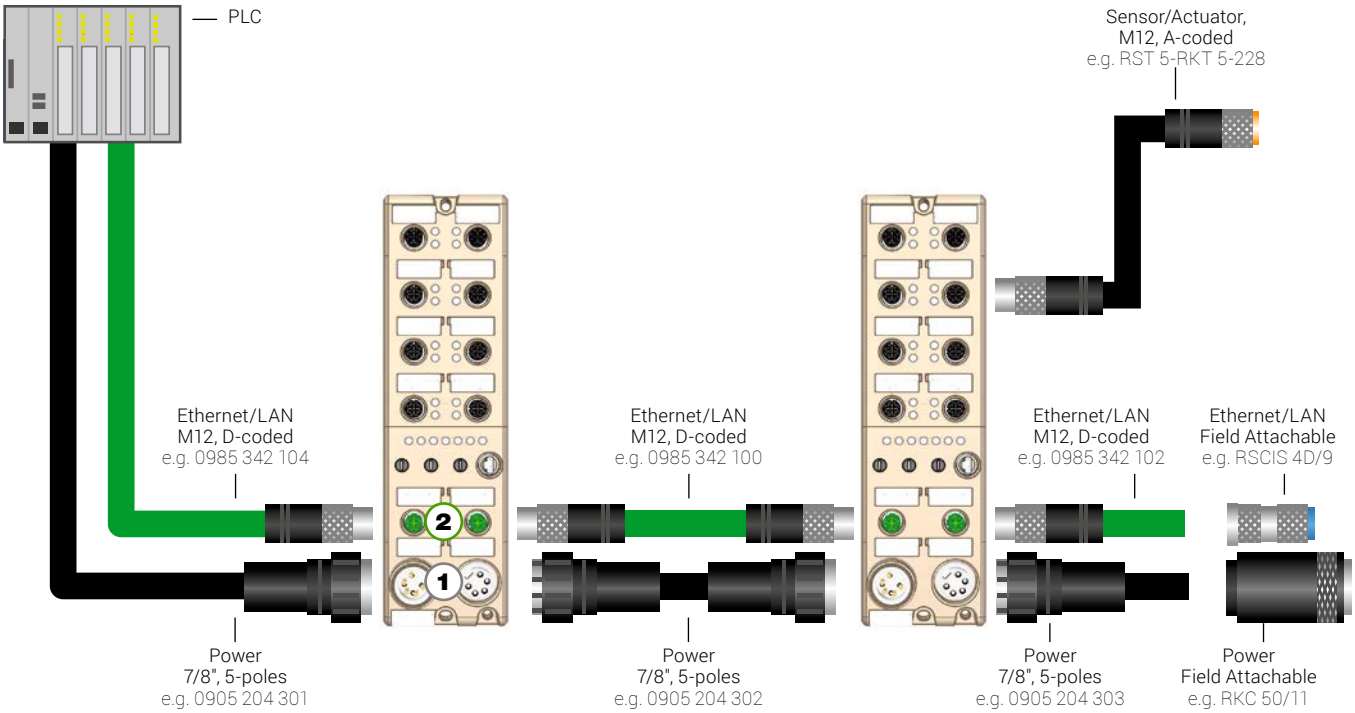
Connection Guide



1 Power – 7/8", 5-poles		2 Data – D-coded M12 LAN/Ethernet, 4-poles	
	Male straight/Female straight 0905 204 302/* M **Male angled/Female angled** 0905 204 309/* M		**Male straight/Male straight** 0985 342 100/* M **Male straight/Male angled** 0985 342 132/* M **Male angled/Male angled** 0985 342 131/* M
 	Male straight/Open 0905 204 303/* M **Male angled/Open** 0905 204 302/* M **Female straight/Open** 0905 204 301/* M **Female angled/Open** 0905 204 308/* M		**Male straight/Open** 0985 342 102/* M **Male angled/Open** 0985 342 130/* M
			M12-RJ45 Industrial Ethernet data cordset 0985 342 104/* M umspritzt **RJ45-RJ45 Industrial Ethernet data cordset** 0985 342 500/* M umspritzt
 	Field attachable – Male straight, Screw Type PG 9: RSC 50/9 PG 11: RSC 50/11 PG 13.5: RSC 50/13.5 PG 16: RSC 50/16 **Field attachable – Female straight, Screw Type** PG 9: RKC 50/9 PG 11: RKC 50/11 PG 13.5: RKC 50/13.5 PG 16: RKC 50/16		**Field attachable – Male Straight** Clamping cage: RSCIS 4D/9 Spring type: 0986 EMC 102
			Adapter – M12/RJ45 0981 ENC 100

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
Multiprotocol (PROFINET, EtherNet/IP and EtherCAT), 7/8" Power									
934882001	0980 ESL 391-111	Multiprotocol	Metal	60 mm	IP65, IP67	16DI	2 x, 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934882002	0980 ESL 392-111	Multiprotocol	Metal	60 mm	IP65, IP67	16DO	2 x, 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934882003	0980 ESL 393-111	Multiprotocol	Metal	60 mm	IP65, IP67	8DI 8DO	2 x, 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934882007	0980 ESL 390-111	Multiprotocol	Metal	60 mm	IP65, IP67	16DIO	2 x, 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded

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LioN-Power, LioN-R, LioN-M
Single Protocol I/O: EtherNet/IP

The Right Fit for Any EtherNet/IP Application

Lumberg Automation offers a broad variety of single protocol I/O modules for EtherNet/IP to meet the complex requirements of Industrial Ethernet applications in harsh environments.

EtherNet/IP™

The Benefits

Utmost flexibility and reliability for almost any industrial application

High operational reliability and system availability due to robust design

Guaranteed electrical performance due to outstanding vibration and shock resistance

Markets & Applications

- Automation
- Automotive
- Machine Building
- Material Handling/Packaging
- Transportation

Technical Information

Type	LioN-M	LioN-R	LioN-P: 7/8"	LioN-P: M12 L
Order Designation	0980 ESL 71x	0980 ESL 81x …	0980 ESL 31x-111	0980 ESL 31x-121
Product Description	LioN-M, I/O device, EtherNet/IP, industrial plastic housing, 60 mm, up to IP67, 16 digital input channels or 16 digital in-/output channels (universal I/O) (1.6 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 4-poles	LioN-R, I/O device, EtherNet/IP, industrial metal housing, 60 mm, up to IP67, 16 digital input channels, 8 digital input and 8 digital output channels (1.6 A) or 16 digital output channels (1.6 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 4-poles	LioN-P, I/O device, EtherNet/IP, industrial metal housing, 60 mm, up to IP67, 16 digital input channels, 8 digital input and 8 digital output channels (2 A), 16 digital output channels (2 A) or 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x 7/8" power supply connection, 4-poles	LioN-P, I/O device, EtherNet/IP, industrial metal housing, 60 mm, up to IP67, 16 digital input channels, 8 digital input and 8 digital output channels (2 A), 16 digital output channels (2 A) or 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 4-poles, 2 x M12 L-coded power supply connection, 5-poles
General Data				
Housing	Plastic, PBT	Metal, zinc die-cast, potted	Metal, zinc die-cast, potted	Metal, zinc die-cast, potted
Dimensions (W x H x D)	60 x 39.5 x 243 mm	59.6 x 26.2 x 206 mm	59.6 x 26.2 x 206 mm	59.6 x 30.7 x 200 mm
Weight	ca. 380 g	ca. 520 g	ca. 520 g	ca. 500 g
Ambient Temperature	-10 °C to +60 °C (Operation)	-10 °C to +60 °C (Operation)	-20 °C to +70 °C (Operation)	-20 °C to +70 °C (Operation)
Protection Degree	IP67	IP65, IP67	IP65, IP67	IP65, IP67, IP69K[1)]
Shock/Vibration	50 g/15 g	50 g/15 g	50 g/15 g	50 g/15 g
Power Supply	1	1	2	3
Nominal Voltage	24 V DC (18 to 30 V DC)			
Connection	2 x 7/8", 4-poles, up to 2 x 9 A	2 x 7/8", 4-poles, up to 2 x 9 A	2 x 7/8", 5-poles, up to 2 x 9 A	2x M12, L-coded, up to 2 x 16 A
Current Consumption	90 mA (+/- 20% at 24 V DC)	100 mA (+/- 20% at 24 V DC)	160 mA (+/- 20% at 24 V DC)	160 mA (+/- 20% at 24 V DC)
Bus System	4	4	4	
Protocol	EtherNet/IP	EtherNet/IP	EtherNet/IP	
Connection	M12, D-coded, 4-poles	M12, D-coded, 4-poles	M12, D-coded, 4-poles	
Features	DLR	DLR, Quick Connect	DLR, Quick Connect	
Digital Input Channels				
Digital Input Channels	max. 16	8 to max. 16	8 to max. 16	
Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	
DI Channel Type	Type 3 acc. To IEC 61131-2, PNP	Type 3 acc. To IEC 61131-2, PNP	Type 3 acc. To IEC 61131-2, PNP	
Nominal Input Current	typ. 5 mA	typ. 5 mA	typ. 5 mA	
Sensor Current Supply	max. 200 mA per Port	max. 200 mA per Port	max. 200 to 500 mA (16DIO) per port	
Digital Output Channels				
Digital Output Channels	max. 16	8 to max. 16	max. 16	
Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	
DO Output Current	max. 1.6 A per Channel	max. 1.6 A per Channel	max. 2 A per Channel	
DO Channel Type	p-switching	p-switching	p-switching	
Galv. Isolated Outputs	No	Yes, all outputs	Yes, all outputs (except 16DIO)	
Protective Circuit	Electronically: Overload and short-circuit protection	Electronically: Overload and short-circuit protection	Electronically: Overload and short-circuit protection	

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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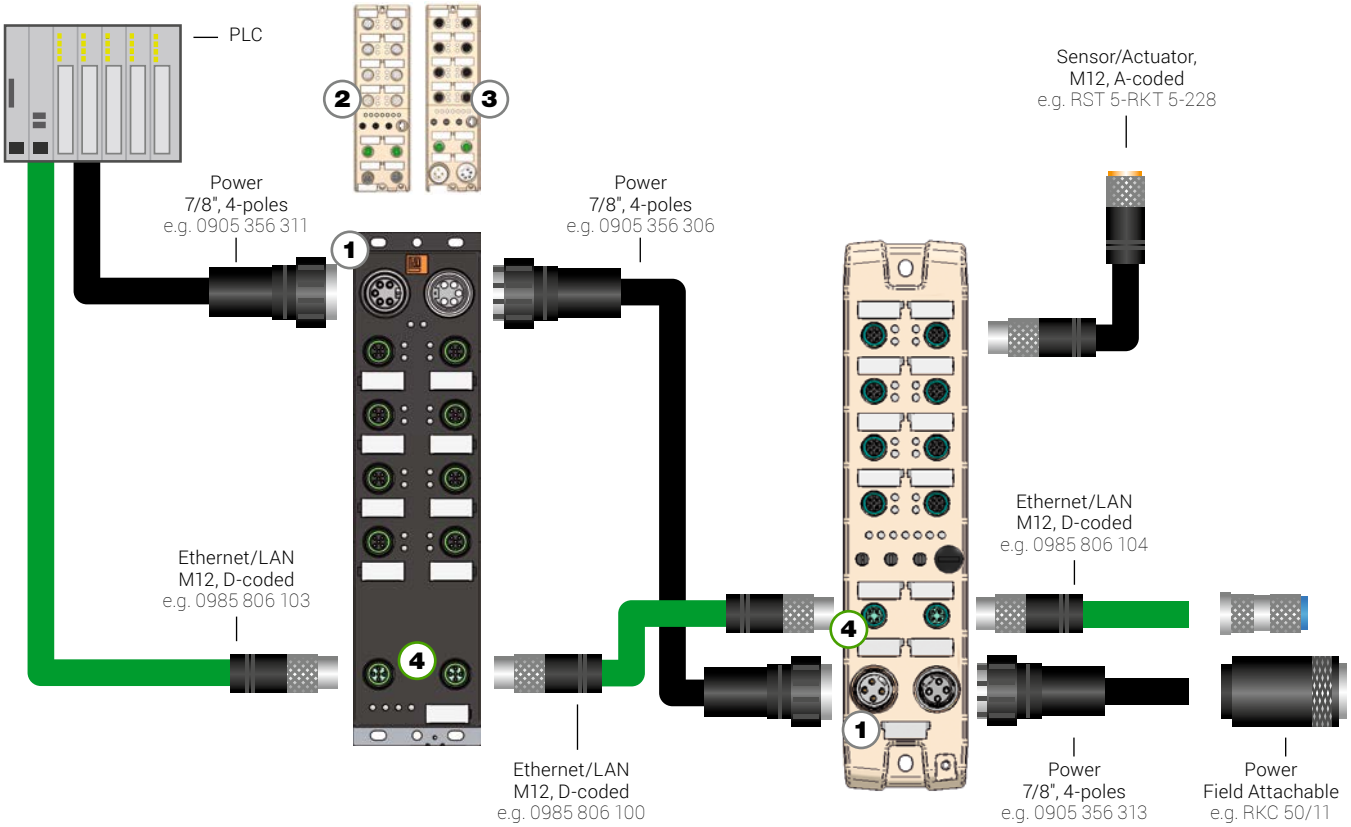
Connection Guide



1 Power – 7/8", 5-poles		2 7/8", 5-poles		4 Data – D-coded M12 LAN/Ethernet, 4-poles	
	Male straight/ Female straight 0905 356 311/* M **Male angled/ Female angled** 0905 204 309/* M	**Male straight/ Female straight** 0905 204 302/* M **Male angled/ Female angled** 0905 204 309/* M		**Male straight/Male straight** 0985 806 100/* M Shielded: 0985 YM57530 100/* M **Male straight/Male angled** 0985 806 125/* M **Male angled/Male angled** 0985 806 124/* M **Male straight/Female straight** 0985 806 102/* M **Male angled/Female straight** 0985 806 127/* M **Female straight/Female straight** 0985 806 112/* M
	Male straight/Open 0905 356 313/* M **Male angled/Open** 0905 356 306/* M **Female straight/Open** 0905 356 311/* M **Female angled/Open** 0905 356 304/* M	**Male straight/Open** 0905 204 303/* M **Male angled/Open** 0905 204 302/* M **Female straight/Open** 0905 204 301/* M **Female angled/Open** 0905 204 308/* M		**Male straight/RJ45** 0985 806 103/* M **Male angled/RJ45** 0985 806 124/* M **RJ45/RJ45** 0985 806 500/* M Shielded: 0985 YM57530 500/* M **Female Bulkhead/RJ45** 0985 806 104/* M Shielded: 0985 YM57530 104/* M
	Field attachable – Male straight, Screw Type PG 9: RSC 40/9 **Field attachable – Female straight, Screw Type** PG 9: RKC 40/9	**Field attachable – Male straight, Screw Type** PG 9: RSC 50/9 PG 11: RSC 50/11 PG 13.5: RSC 50/13.5 PG 16: RSC 50/16 **Field attachable – Female straight, Screw Type** PG 9: RKC 50/9 PG 11: RKC 50/11 PG 13.5: RKC 50/13.5 PG 16: RKC 50/16		

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

3 ** See page 26 for M12 Power connection guide

We reserve the right to make technical changes.

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
LioN-M, EtherNet/IP, 7/8" Power, 4-poles									
109630	0980 ESL 711	EtherNet/IP	Plastic	60 mm	IP67	16DI	2 x 7/8", 4-poles	2 x M12, D-coded	8 x M12, A-coded
109627	0980 ESL 710	EtherNet/IP	Plastic	60 mm	IP67	16DIO	2 x 7/8", 4-poles	2 x M12, D-coded	8 x M12, A-coded
LioN-R, EtherNet/IP, 7/8" Power, 4-poles									
934691001	0980 ESL 811-EIP 16DI-M12-R	EtherNet/IP	Metal	60 mm	IP65, IP67	16DI	2 x 7/8", 4-poles	2 x M12, D-coded	8 x M12, A-coded
934691002	0980 ESL 812-EIP 16DO-M12-R	EtherNet/IP	Metal	60 mm	IP65, IP67	16DO	2 x 7/8", 4-poles	2 x M12, D-coded	8 x M12, A-coded
934691003	0980 ESL 813-EIP 8DI/8DO-M12-R	EtherNet/IP	Metal	60 mm	IP65, IP67	8DI 8DO	2 x 7/8", 4-poles	2 x M12, D-coded	8 x M12, A-coded
LioN-P, EtherNet/IP, 7/8" Power, 5-poles									
934880001	0980 ESL 311-111	EtherNet/IP	Metal	60 mm	IP65, IP67	16DI	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934880002	0980 ESL 312-111	EtherNet/IP	Metal	60 mm	IP65, IP67	16DO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934880003	0980 ESL 313-111	EtherNet/IP	Metal	60 mm	IP65, IP67	8DI 8DO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934880007	0980 ESL 310-111	EtherNet/IP	Metal	60 mm	IP65, IP67	16DIO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
LioN-P, EtherNet/IP, M12 Power									
934839001	0980 ESL 311-121	EtherNet/IP	Metal	60 mm	IP65, IP67, IP69K	16DI	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934839002	0980 ESL 312-121	EtherNet/IP	Metal	60 mm	IP65, IP67, IP69K	16DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934839003	0980 ESL 313-121	EtherNet/IP	Metal	60 mm	IP65, IP67, IP69K	8DI 8DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934839007	0980 ESL 310-121	EtherNet/IP	Metal	60 mm	IP65, IP67, IP69K	16DIO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded

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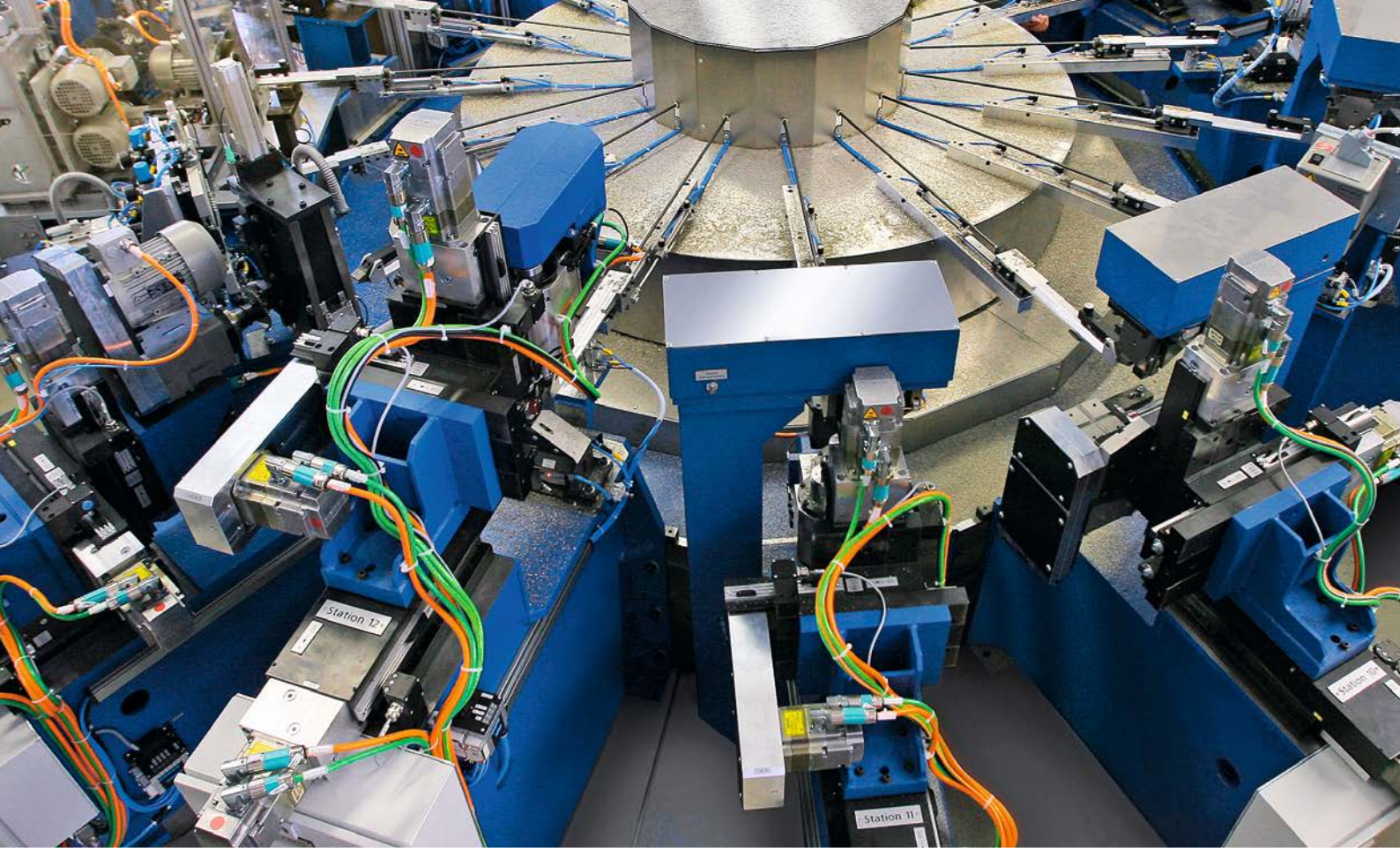

LioN-Power, LioN-R, LioN-M Single Protocol I/O: PROFINET

The Right Fit for Any PROFINET I/O Application

Lumberg Automation offers a broad variety of single protocol I/O modules for PROFINET to meet the complex requirements of Industrial Ethernet applications in harsh environments.

The Benefits

Utmost flexibility and reliability for almost any industrial application

High operational reliability and system availability due to robust design

Guaranteed electrical performance due to outstanding vibration and shock resistance

Markets & Applications

- Automation
- Automotive
- Machine Building
- Material Handling/Packaging
- Transportation

Technical Information

Type	LioN-M	LioN-R	LioN-P: 7/8"	LioN-P: M12 L
Order Designation	0980 ESL 70x	0980 ESL 80x …	0980 ESL 30x-111	0980 ESL 30x-121
Product Description	LioN-M, I/O device, PROFINET, industrial plastic housing, 60 mm, up to IP67, 16 digital input channels or 16 digital in-/output channels (universal I/O) (1.6 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 5-poles, 2 x 7/8" power supply connection, 5-poles	LioN-R, I/O device, PROFINET, industrial metal housing, 60 mm, up to IP67, 16 digital input channels, 8 digital input and 8 digital output channels (1.6 A) or 16 digital output channels (1.6 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 5-poles, 2 x 7/8" power supply connection, 5-poles	LioN-P, I/O device, PROFINET, industrial metal housing, 60 mm, up to IP67, 16 digital input channels, 8 digital input and 8 digital output channels (2 A), 16 digital output channels (2 A) or 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 5-poles, 2 x 7/8" power supply connection, 5-poles	LioN-P, I/O device, PROFINET, industrial metal housing, 60 mm, up to IP67K, 16 digital input channels, 8 digital input and 8 digital output channels (2 A), 16 digital output channels (2 A) or 16 digital in-/output channels (universal I/O) (2 A), 8 x M12 A-coded I/O connection, 5-poles, 2 x M12 D-coded bus connection, 5-poles, 2 x M12 L-coded power supply connection, 5-poles
General Data				
Housing	Plastic, PBT	Metal, zinc die-cast, potted	Metal, zinc die-cast, potted	Metal, zinc die-cast, potted
Dimensions (W x H x D)	60 x 39.5 x 243 mm	59.6 x 26.2 x 206 mm	59.6 x 26.2 x 206 mm	59.6 x 30.7 x 200 mm
Weight	ca. 380 g	ca. 520 g	ca. 520 g	ca. 500 g
Ambient Temperature	-10 °C to +60 °C (Operation)	-10 °C to +60 °C (Operation)	-20 °C to +70 °C (Operation)	-20 °C to +70 °C (Operation)
Protection Degree	IP67	IP65, IP67	IP65, IP67	IP65, IP67, IP69K[1)]
Shock/Vibration	50 g/15 g	50 g/15 g	50 g/15 g	50 g/15 g
Power Supply	1	1	1	2
Nominal Voltage	24 V DC (11 to 30 V DC)	24 V DC (18 to 30 V DC)	24 V DC (18 to 30 V DC)	24 V DC (18 to 30 V DC)
Connection	2 x 7/8", 5-poles, up to 2 x 9 A	2 x 7/8", 5-poles, up to 2 x 9 A	2 x 7/8", 5-poles, up to 2 x 9 A	2 x M12, L-coded, up to 2 x 16 A
Current Consumption	90 mA (+/- 20% at 24 V DC)	100 mA (+/- 20% at 24 V DC)	160 mA (+/- 20% at 24 V DC)	160 mA (+/- 20% at 24 V DC)
Bus System	3	3	3	
Protocol	PROFINET	PROFINET	PROFINET	
Connection	7/8" 4-poles (EIP) I 5-poles (PN)	7/8" 4-poles (EIP) I 5-poles (PN)	7/8" 5-poles	
PROFINET Features	CC-B, NC I	CC-B	CC-C, NC III, FSU, MRP	
EtherNet/IP Features	DLR	DLR, Quick Connect	DLR, Quick Connect	
Digital Input Channels				
Digital Input Channels	max. 16	8 to max. 16	8 to max. 16	
Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	
DI Channel Type	Type 3 acc. To IEC 61131-2 PNP	Type 3 acc. To IEC 61131-2 PNP	Type 3 acc. To IEC 61131-2 PNP	
Nominal Input Current	typ. 5 mA	typ. 5 mA	typ. 5 mA	
Sensor Current Supply	200 mA per Port	200 mA per Port	200 to 500 mA (16DIO) per port	
Digital Output Channels				
Digital Output Channels	max. 16	8 to max. 16	8 to max. 16	
Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles	
DO Output Current	max. 1.6 A per Channel	max. 1.6 A per Channel	max. 2 A per Channel	
DO Channel Type	p-switching	p-switching	p-switching	
Galv. Isolated Outputs	No	Yes, all outputs	Yes, all outputs (except 16DIO)	
Protective Circuit	Electronically: Overload and short-circuit protection	Electronically: Overload and short-circuit protection	Electronically: Overload and short-circuit protection	

1) Only if mounted and locked and in combination with Hirschmann/Lumberg Automation connector.

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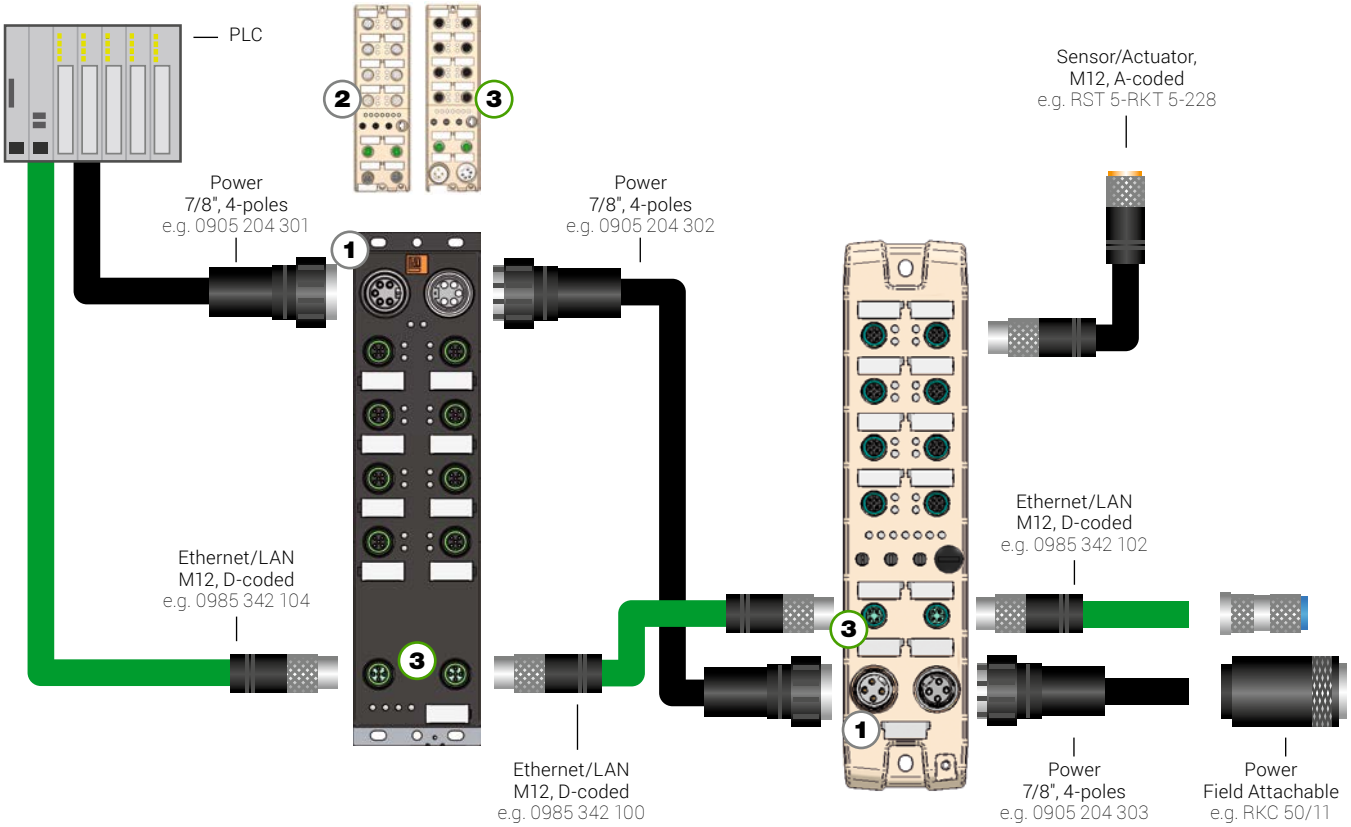
Connection Guide



1 Power – 7/8", 5-poles		3 Data – D-coded M12 LAN/Ethernet, 4-poles	
	Male straight/Female straight 0905 204 302/* M **Male angled/Female angled** 0905 204 309/* M		**Male straight/Male straight** 0985 342 100/* M **Male straight/Male angled** 0985 342 132/* M **Male angled/Male angled** 0985 342 131/* M
 	Male straight/Open 0905 204 303/* M **Male angled/Open** 0905 204 302/* M **Female straight/Open** 0905 204 301/* M **Female angled/Open** 0905 204 308/* M		**Male straight/Open** 0985 342 102/* M **Male angled/Open** 0985 342 130/* M
			M12-RJ45 Industrial Ethernet data cordset 0985 342 104/* M umspritzt **RJ45-RJ45 Industrial Ethernet data cordset** 0985 342 500/* M umspritzt
 	Field attachable – Male straight, Screw Type PG 9: RSC 50/9 PG 11: RSC 50/11 PG 13.5: RSC 50/13.5 PG 16: RSC 50/16 **Field attachable – Female straight, Screw Type** PG 9: RKC 50/9 PG 11: RKC 50/11 PG 13.5: RKC 50/13.5 PG 16: RKC 50/16		**Field attachable – Male Straight** Clamping cage: RSCIS 4D/9 Spring type: 0986 EMC 102
			Adapter – M12/RJ45 0981 ENC 100

* = Cable length in m (e.g. 30 cm -> 0.3 m). Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and connectors please contact **icos-sales@belden.com**

2 ** See page 26 for M12 Power connection guide.

We reserve the right to make technical changes.

Order Overview

Order Number	Order Designation	Bus Protocol	Housing	Width	IP	I/O	PWR Connection	Bus Connection	I/O Connection
LioN-M, PROFINET, 7/8" Power, 5-poles									
109629	0980 ESL 701	PROFINET	Plastic	60 mm	IP67	16DI	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
109628	0980 ESL 700	PROFINET	Plastic	60 mm	IP67	16DIO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
LioN-R, PROFINET, 7/8" Power, 5-poles									
934692001	0980 ESL 801-PNET 16DI-M12-R	PROFINET	Metal	60 mm	IP65, IP67	16DI	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934692002	0980 ESL 802-PNET 16DO-M12-R	PROFINET	Metal	60 mm	IP65, IP67	16DO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934692003	0980 ESL 803-PNET DI/8DO-M12-R	PROFINET	Metal	60 mm	IP65, IP67	8DI 8DO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
LioN-P, PROFINET, 7/8" Power, 5-poles									
934881001	0980 ESL 301-111	PROFINET	Metal	60 mm	IP65, IP67	16DI	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934881002	0980 ESL 302-111	PROFINET	Metal	60 mm	IP65, IP67	16DO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934881003	0980 ESL 303-111	PROFINET	Metal	60 mm	IP65, IP67	8DI 8DO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
934881007	0980 ESL 300-111	PROFINET	Metal	60 mm	IP65, IP67	16DIO	2 x 7/8", 5-poles	2 x M12, D-coded	8 x M12, A-coded
LioN-P, PROFINET, M12 Power									
934878001	0980 ESL 301-121	PROFINET	Metal	60 mm	IP65, IP67, IP69K	16DI	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934878002	0980 ESL 302-121	PROFINET	Metal	60 mm	IP65, IP67, IP69K	16DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934878003	0980 ESL 303-121	PROFINET	Metal	60 mm	IP65, IP67, IP69K	8DI 8DO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded
934878007	0980 ESL 300-121	PROFINET	Metal	60 mm	IP65, IP67, IP69K	16DIO	2 x M12, L-coded	2 x M12, D-coded	8 x M12, A-coded

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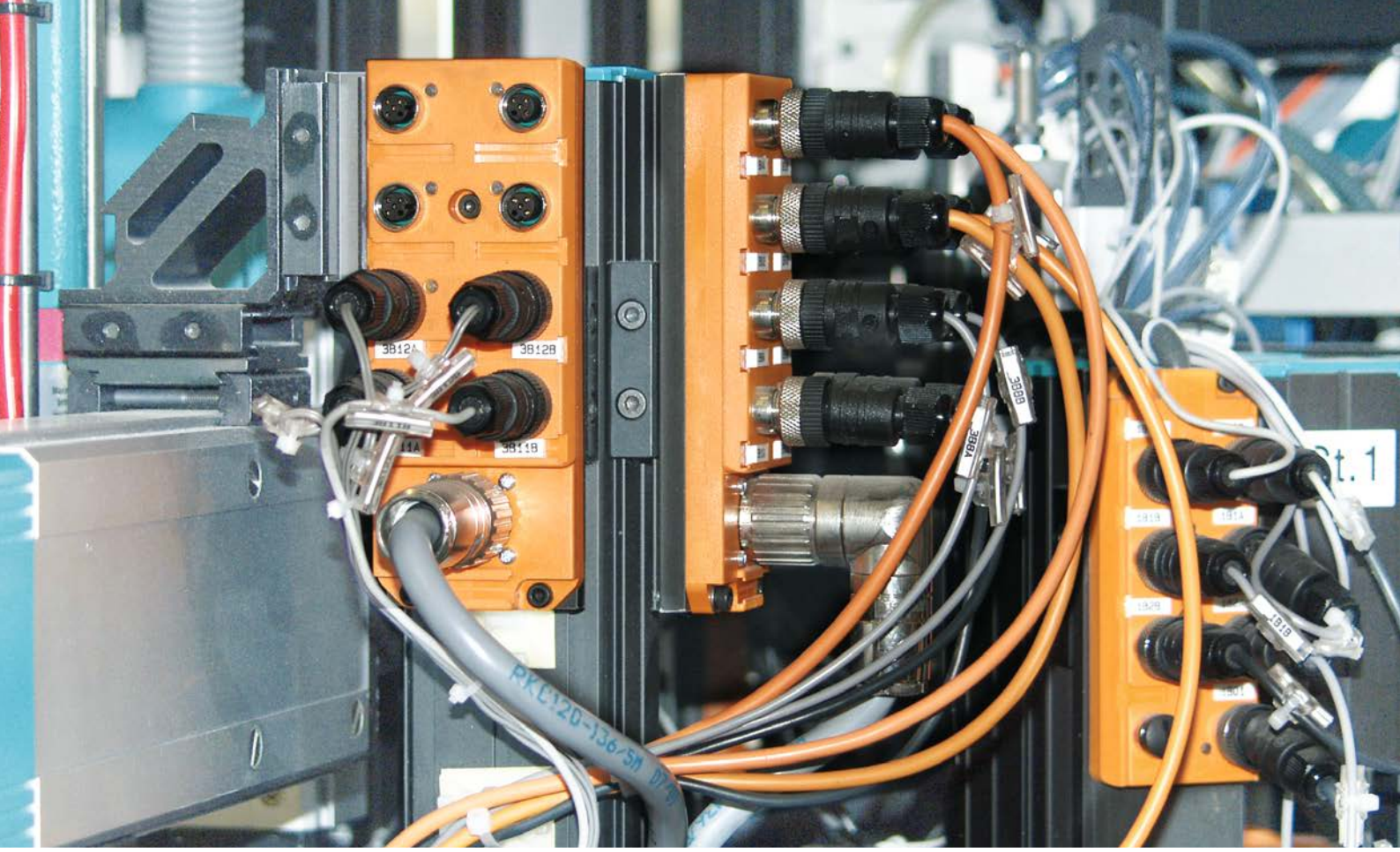

ASB-Series
Passive Distribution Boxes: Plug Connection

Rely on the Original Market-leading Solution That Revolutionized On-machine Connectivity

Many styles to choose from: 4-, 6-, 8-, or 10- ports, with or without LED operation and function indicators, M8 (pico) or M12 (micro) I/O connection, top-entry I/O mount, M12 or M23 connection for the control cable.

The Benefits

Extensive product range – offers flexible connection solutions

For the harshest conditions – the ASB-R line with its fully potted die-cast zinc housing can withstand even the most challenging environments

Built to your needs – our Connectivity Center will create a custom product to fit your application

Markets & Applications

- Automotive
- Automation
- Drag Chains
- Machine Building
- Material Handling/Packaging
- Robotic Machinery

Technical Information

Type	ASB-S	ASB-C	ASB-C	ASB-R
Order Designation	ASBSM …	SBS …	ASBS(V) …	ASBS(V)-R …
Product Description	Pluggable minuature actuator/sensor distribution box with or without LED operation and function indicators, top-entry, 4 to 10-ports, M8 socket, 3-poles, 1 signal per socket, M12 connection for the control cable	Pluggable minuature actuator/sensor distribution box with LED operation and function indicators, top-entry, 4-ports, M8 socket, 3-poles, 1 signal per socket, M12 connection for the control cable	Pluggable actuator/sensor distribution box with or without LED operation and function indicators, top-entry, 4 to 8-ports, combined FIXCON/M12 socket, 4- or 5-poles, 1 or 2 signal(s) per socket, M23 connection for the control cable	Pluggable rugged actuator/sensor distribution box with or without LED operation and function indicators, top-entry, 4- or 8-ports, M12 socket, 4- or 5-poles, 1 or 2 signal(s) per socket, M23 connection for the control cable
General Data				
Housing	Plastic, PBT	Plastic, TPU	Plastic, TPU	Metal, Zinc die-cast
Shielded Housing	Yes, optional	Yes, optional	No	Yes
Potted Housing	No	Yes	Yes	Yes
Dimensions (w)	30 mm	30 mm	60 mm	60 mm
Ambient Temperature	-25 °C to +70 °C	-15 °C to +90 °C	-15 °C to +80 °C	-40 °C to +80 °C
Protection Degree	IP67/NEMA 6P	IP67/NEMA 6P	IP67/NEMA 6P	IP65/IP67
Materials				
Contact Base Material	CuSn, pre-nickeled and gold-plated	CuSn, pre-nickeled and gold-plated	CuZn, pre-nickeled and gold-plated	CuZn, pre-nickeled and gold-plated
Contact Bearer Material	PA, self-extinguishing	M8: TPU, self-extinguishing/M12: PA	PA GF	M12: PA, M23: PBT
Threaded Sleeve Material	Brass, nickel-plated	Brass, nickel-plated	CuZn, nickeled	--- (No threads)
O-Ring Material	FKM	FKM	FKM	FKM
Electrical Data				
Nominal Voltage (Range)	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC
Nominal Current	1.5 A per port (max. 1.5 A total)	2 A per port (max. 2 A total)	4 A per port (max. 12 A total)	4 A per port (max. 12 A total)
Circuit Logic	PNP	PNP or NPN	PNP or NPN	PNP
Status/Diagnostic Indicators	Yes, optional	Yes	Yes, optional	Yes, optional
Module Variants				
I/O Connection	M8, 3-poles	M8, 3-poles	M12, 4- or 5-poles	M12, 4- or 5-poles
I/O Connection Entry Point	Top	Top	Top	Top
I/O Signals per Port	1 signal per port	1 signal per port	1 or 2 signal(s) per port	1 or 2 signal(s) per port
Port Variants	4-, 6-, 8- or 10-ports	4- or 8-ports	4- , 6- or 8-ports	4- or 8-ports
Plug Interface	M12	M12	M23	M23

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Order Overview

Type				ASB-S	ASB-C	ASB-C	ASB-R
Housing				Plastic, PBT	Plastic, TPU	Plastic, TPU	Metal, Zinc die-cast
Plug Interface				M12 Plug	M12 Plug	M23 Plug	M23 Plug
4-ports							
M8		1 Signal	PNP, LEDs	ASBSM 4/LED 3 Shielded Housing: ASBSM 4/LED 3 ESD	SBS 4/LED 3 Shielded Housing: SBS 4/LED 3 ESD	–	–
			NPN, LEDs	–	SBS 4/LED NPN 3	–	–
M12		1 Signal	PNP	–	–	–	ASBS-R 4 5-4
			PNP, LEDs	–	–	ASBS 4/LED 5-4	ASBS-R 4/LED 5-4
		2 Signals	PNP	–	–	ASBSV 4 5	ASBSV-R 4 5
			PNP, LEDs	–	–	ASBSV 4/LED 5	ASBSV-R 4/LED 5
6-ports							
M8		1 Signal	PNP, LEDs	ASBSM 6/LED 3 Shielded Housing: ASBSM 6/LED 3 ESD	–	–	–
M12		1 Signal	PNP	–	–	ASBS 6 5-4	–
			PNP, LEDs	–	–	ASBS 6/LED 5-4	–
		2 Signals	PNP	–	–	ASBSV 6 5	–
			PNP, LEDs	–	–	ASBSV 6/LED 5	–
8-ports							
M8		1 Signal	PNP, LEDs	ASBSM 8/LED 3 Shielded Housing: ASBSM 8/LED 3 ESD	–	–	–
M12		1 Signal	PNP	–	SBS 8/LED NPN 3	–	–
			PNP, LEDs	–	–	–	ASBS-R 8 5-4
			NPN, LEDs	–	–	ASBS 8/LED 5-4	ASBS-R 8/LED 5-4
		2 Signals	PNP	–	–	ASBSV 8 5	ASBSV-R 8 5
			PNP, LEDs	–	–	ASBSV 8/LED 5	ASBSV-R 8/LED 5
10-ports							
M8		1 Signal	PNP, LEDs	ASBSM 10/LED 3	–	–	–

We reserve the right to make technical changes.

Order Information

Order Number	Order Designation	Product Line	Interface	Housing Material	Housing Width	IP Rating	I/O Ports	I/O Connection	PNP/NPN	LED	Shielded Housing
M8 3-poles, 1 signal per port, with plug connection											
12124	SBS 4/LED 3	ASB-C	M12 Plug	TPU	30 mm	IP67	4x	M8 3-poles	PNP	Yes	No
67255	SBS 4/LED 3 ESD	ASB-C	M12 Plug	TPU	30 mm	IP67	4x	M8 3-poles	PNP	Yes	Yes
17787	SBS 4/LED NPN 3	ASB-C	M12 Plug	TPU	30 mm	IP67	4x	M8 3-poles	NPN	Yes	No
65305	ASBSM 4/LED 3	ASB-S	M12 Plug	PBT	30 mm	IP67	4x	M8 3-poles	PNP	Yes	No
106560	ASBSM 4/LED 3 ESD	ASB-S	M12 Plug	PBT	30 mm	IP67	4x	M8 3-poles	PNP	Yes	Yes
65346	ASBSM 6/LED 3	ASB-S	M12 Plug	PBT	30 mm	IP67	6x	M8 3-poles	PNP	Yes	No
934637891	ASBSM 6/LED3 ESD	ASB-S	M12 Plug	PBT	30 mm	IP67	6x	M8 3-poles	PNP	Yes	Yes
65347	ASBSM 8/LED 3	ASB-S	M12 Plug	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
106561	ASBSM 8/LED 3 ESD	ASB-S	M12 Plug	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	Yes
65348	ASBSM 10/LED 3	ASB-S	M12 Plug	PBT	30 mm	IP67	10x	M8 3-poles	PNP	Yes	No
M12 4-poles, 1 Signal per port, with plug connection											
11126	ASBS 4/LED 5-4	ASB-C	M23 Plug	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	No
934761001	ASBS-R 4 5-4	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	No	No
934761002	ASBS-R 4/LED 5-4	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	Yes	No
11127	ASBS 6 5-4	ASB-C	M23 Plug	TPU	60 mm	IP67	6x	M12 4-poles	PNP	No	No
11128	ASBS 6/LED 5-4	ASB-C	M23 Plug	TPU	60 mm	IP67	6x	M12 4-poles	PNP	Yes	No
11129	ASBS 8 5-4	ASB-C	M23 Plug	TPU	60 mm	IP67	8x	M12 4-poles	PNP	No	No
11130	ASBS 8/LED 5-4	ASB-C	M23 Plug	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
53499	ASBS 8/LED 5-4/4E-4A	ASB-C	M23 Plug	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
12474	ASBS 8/LED NPN 5-4	ASB-C	M23 Plug	TPU	60 mm	IP67	8x	M12 4-poles	NPN	Yes	No
934763001	ASBS-R 8 5-4	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	No	No
934763002	ASBS-R 8/LED 5-4	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	Yes	No
M12 4-poles, 2 Signals per port, with plug connection											
11133	ASBSV 4 5	ASB-C	M23 Plug	TPU	60 mm	IP67	4x	M12 5-poles	PNP	No	No
11134	ASBSV 4/LED 5	ASB-C	M23 Plug	TPU	60 mm	IP67	4x	M12 5-poles	PNP	Yes	No
934767001	ASBSV-R 4 5	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	4x	M12 5-poles	PNP	No	No
934767002	ASBSV-R 4/LED 5	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	4x	M12 5-poles	PNP	Yes	No
11135	ASBSV 6 5	ASB-C	M23 Plug	TPU	60 mm	IP67	6x	M12 5-poles	PNP	No	No
11136	ASBSV 6/LED 5	ASB-C	M23 Plug	TPU	60 mm	IP67	6x	M12 5-poles	PNP	Yes	No
11137	ASBSV 8 5	ASB-C	M23 Plug	TPU	60 mm	IP67	8x	M12 5-poles	PNP	No	No
11138	ASBSV 8/LED 5	ASB-C	M23 Plug	TPU	60 mm	IP67	8x	M12 5-poles	PNP	Yes	No
934769001	ASBSV-R 8 5	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	No	No
934769002	ASBSV-R 8/LED 5	ASB-R	M23 Plug	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	Yes	No

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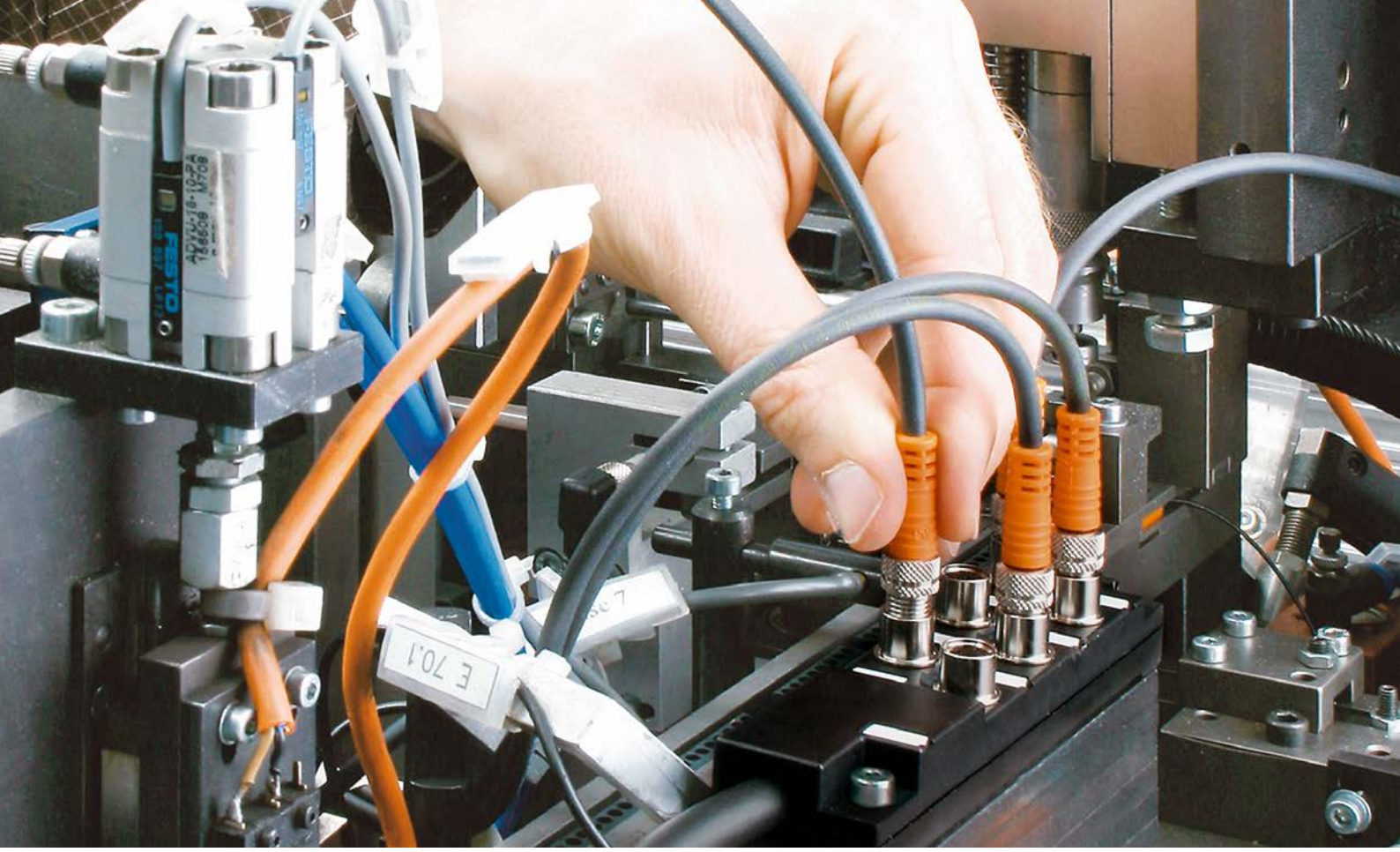

ASB-Series
Passive Distribution Boxes: Control Cable

Rely on the Original Market-leading Solution That Revolutionized On-machine Connectivity

Many styles to choose from: 4-, 6-, 8-, 10- or 12-ports, with or without LED operation and function indicators, M8 (pico) or M12 (micro) I/O connection, top- or side-entry I/O mount, with integrated control cable.

The Benefits

Extensive product range – a wide range of versions offers flexible connection solutions

For the food industry – the ASB-N line is designed to be corrosion resistant and easy to clean

Built to your needs – our Connectivity Center will create a custom product to fit your application

Markets & Applications

- Automotive
- Automation
- Drag Chains
- Food & Beverage Manufacturing
- Machine Building
- Material Handling/Packaging
- Robotic Machinery

Technical Information

Type	ASB-S	ASB-C	ASB-C	ASB-N	ASB-R
Order Designation	ASBM …	SB …	ASB(V)…	ASNB(V or L) …	ASB(V)-R …
Product Description	Miniature actuator/ sensor distribution box with or without LED operation and function indicators, top-entry, 4- to 12-ports, M8 socket, 3-poles, 1 signal per socket, with integrated control cable	Miniature actuator/sensor distribution box with LED operation and function indicators, top-entry, 4- to 8-ports, M8 socket, 3-poles, 1 signal per socket, with integrated control cable	Actuator/sensor distribution box with or without LED operation and function indicators, top-entry, 4- to 8-ports, combined FIXCON/ M12 socket, 3- to 5-poles, 1 or 2 signal(s) per socket, with integrated control cable	Actuator/sensor distribution box with LED operation and function indicators, top- or side-entry, 8-ports, M12 socket, 4- or 5-poles, 1 or 2 signal(s) per socket, with integrated control cable	Rugged actuator/sensor distribution box with or without LED operation and function indicators, top-entry, 4- or 8-ports, M12 socket, 4- or 5-poles, 1 or 2 signal(s) per socket, with integrated control cable
General Data					
Housing	Plastic, PBT	Plastic, PBT	Plastic, TPU	Stainless-steel	Metal, Zinc die-cast
Shielded Housing	Yes, optional	No	Yes, optional	No	No
Potted Housing	No	Yes	Yes	Yes	Yes
Dimensions (w)	30 mm	30 mm	60 mm	60 mm	60 mm
Ambient Temperature	-25 °C to +70 °C	-15 °C to +80 °C	-15 °C to +80 °C	-25 °C to +70 °C	-40 °C to +80 °C
Protection Degree	IP67/NEMA 6P	IP67/NEMA 6P	IP67/NEMA 6P	IP67/IP69K	IP65/IP67
Materials					
Contact Base Material	CuSn, pre-nickeled and gold-plated	CuSn, pre-nickeled and gold-plated	CuZn, pre-nickeled and gold-plated	CuSn, pre-nickeled and gold-plated	CuZn, pre-nickeled and gold-plated
Contact Bearer Material	PA, self-extinguishing	M8: TPU, self-extinguishing	PA GF, self-extinguishing	PVC	M12: PA, M23: PBT
Threaded Sleeve Material	Brass, nickel-plated	Brass, nickel-plated	CuZn, nickeled	Stainless-steel	--- (No threads)
O-Ring Material	FKM	FKM	FKM	EPDM	FKM
Electrical Data					
Nominal Voltage (Range)	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC	10 to 30 V AC/DC
Nominal Current	1.5 A per port (max. 1.5 A total)	2 A per port (max. 2 A total)	4 A per port (max. 12 A total)	4 A per port (max. 12 A total)	4 A per port (max. 12 A total)
Circuit Logic	PNP	PNP or NPN	PNP or NPN	PNP	PNP
Status/Diagnostic Indicators	Yes, optional	Yes	Yes, optional	Yes, optional	Yes, optional
Module Variants					
I/O Connection	M8, 3-poles	M8, 3-poles	M12, 3- to 5-poles	M12, 4- or 5-poles	M12, 4- or 5-poles
I/O Connection Entry Point	Top	Top	Top	Top or side	Top
I/O Signals per Port	1 signal per port	1 signal per port	1 or 2 signal(s) per port	1 or 2 signal(s) per port	1 or 2 signal(s) per port
Port Variants	4-, 6-, 8-, 10- or 12- ports	8-ports	4- , 6- or 8-ports	8-ports	4- or 8-ports
Plug Interface	PUR	PUR	PUR	PVC	PUR

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Order Overview

Type				ASB-S	ASB-C	ASB-C	ASB-N	ASB-R
Housing				Plastic, PBT	Plastic, PBT	Plastic, TPU	Stainless-steel	Metal, Zinc die-cast
Cable Material				PUR	PUR	PUR	PVC	PUR
4-ports								
M8		1 Signal	PNP, LEDs	ASBM 4/LED 3-343/* M	–	–	–	–
M12		1 Signal	PNP	–	–	ASBV 4 4-3-256/* M	–	–
		1 Signal	PNP	–	–	ASB 4 5-4-328/* M	–	ASB-R 4 5-4-328/* M
		1 Signal	PNP, LEDs	–	–	ASB 4/LED 5-4-328/* M Shielded Housing Variant: ASB 4/LED 5-4-328/* M ESD	–	–
		1 Signal	NP, LEDs			ASB 4/LED NPN 5-4-328/* M		
		2 Signals	PNP	–	–	ASBV 4 5-256/* M	–	ASBV-R 4 5-256/* M
		2 Signals	PNP, LEDs	–	–	ASBV 4/LED 5-256/* M	–	ASBV-R 4/LED 5-256/* M
6-ports								
M8		1 Signal	PNP	ASBM 6 3-344/* M	–	–	–	–
		1 Signal	PNP, LEDs	ASBM 6/LED 3-344/* M	–	–	–	–
M12		1 Signal	PNP	–	–	ASB 6 5-4-330/* M	–	–
		1 Signal	PNP, LEDs	–	–	ASB 6/LED 5-4-330/* M	–	–
		2 Signals	PNP	–	–	ASBV 6 5-332/* M	–	–
		2 Signals	PNP, LEDs	–	–	ASBV 6/LED 5-332/* M	–	–
8-ports								
M8		1 Signal	PNP	ASBM 8 3-345/* M	–	–	–	–
		1 Signal	PNP, LEDs	ASBM 8/LED 3-345/* M Shielded Housing Variant: ASBM 8/LED 3-345/* M ESD	SB 8/LED 3-333/* M		–	–
		1 Signal	NPN, LEDs	–	SB 8/LED NPN 3-333/* M	–	–	–
M12		1 Signal	PNP	–	–	ASBV 8 4-3-242/* M	–	–
		1 Signal	PNP	–	–	ASB 8 5-4-331/* M	–	ASB-R 8 5-4-331/* M
		1 Signal	PNP, LEDs	–	–	ASB 8/LED 5-4-331/* M	Side Mount Version: ASNBL 8/LED 5-4-320/* M	ASB-R 8/LED 5-4-331/* M
		1 Signal	NPN, LEDs	–	–	ASB 8/LED NPN 5-4-331/* M	–	–
		2 Signals	PNP	–	–	ASBV 8 5-242/* M	–	ASBV-R 8 5-242/* M
		2 Signals	PNP, LEDs	–	–	ASBV 8/LED 5-242/* M	ASNBV 8/LED 5-278/* M	ASBV-R 8/LED 5-242/* M
10-ports								
M8		1 Signal	PNP	ASBM 10 3-346/* M	–	–	–	–
		1 Signal	PNP, LEDs	ASBM 10/LED 3-346/* M	–	–	–	–
12-ports								
M8		1 Signal	PNP	ASBM 12 3-347/* M	–	–	–	–
		1 Signal	PNP, LEDs	ASBM 12/LED 3-347/* M	–	–	–	–

* = Cable length in m (e.g. 30 cm -> 0.3 m), Standard cable lengths: 0.3 m, 0.6 m, 1 m, 2 m, 5 m, 10 m, 15 m, 20 m, 30 m.
For other cable lengths and variants please contact **icos-sales@belden.com**

Control Cable Overview

Control Cable	Conductor Size	Cable Material	Jacket Color	Temperature Range Stationary/Flexible	Diameter	Bend Radius Stationary/ Flexible	Bending Cycles	Cable Shielding	Cable Characteristics
242	16x0.50mm² (AWG 20) + 3x1.0mm² (AWG 18)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 11.60 ±0.30 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
255	16x0.50mm² (AWG 20) + 3x1.0mm² (AWG 18)	PUR	Orange	-40°C to +90°C / -25°C to +90°C	ø 11.60 ±0.30 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
256	8x0.50mm² (AWG 20) + 3x1.0mm² (AWG 18)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 9.30 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
271	8x0.50mm² (AWG 20) + 3x1.0mm² (AWG 18)	PUR	Grey	-50°C to +90°C / -25°C to +90°C	ø 9.30 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
278	16x0.50mm² (AWG 20) +3x1.0mm² (AWG 18)	PVC	Black	-40°C to +80°C / +5°C to +80°C	ø 11.60 ±0.30 mm	> 5 x D / > 10 x D	> 1 Mio.	No	
320	8x0.34mm² (AWG 22) + 3x0.75mm² (AWG 19)	PVC	Black	-40°C to +90°C / +5°C to +90°C	ø 9.50 ±0.20 mm	> 5 x D / > 10 x D	> 1 Mio.	No	
328	4x0.34mm² (AWG 22) + 3x0.75mm² (AWG 19)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 6.80 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
330	6x0.34mm² (AWG 22) + 3x0.75mm² (AWG 19)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 7.60 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
331	8x0.34 mm² (AWG 22) + 3x0.75 mm² (AWG 19)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 8.0 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
332	12x0.50mm² (AWG 20) + 3x1.0mm² (AWG 18)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 9.10 ±0.30 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
333	8x0.34 mm² (AWG 22) + 2x0.50 mm² (AWG 20)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 8.0 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
343	6x0.25mm² (AWG 24)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 5.10 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
344	8x0.25mm² (AWG 24)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 6.0 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
345	10x0.25mm² (AWG 24)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 6.30 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
346	12x0.25mm² (AWG 24)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 6.40 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
347	14x0.25mm² (AWG 24)	PUR	Black	-50°C to +80°C / -25°C to +80°C	ø 7.20 ±0.20 mm	> 5 x D / > 10 x D	> 2 Mio.	No	
352	16x0.50mm² (AWG 20) +3x1.0mm² (AWG 18)	TPU	Black	-50°C to +80°C / -25°C to +80°C	ø 11.60 ±0.30 mm	> 5 x D / > 10 x D	> 2 Mio.	Yes	

Vibration and shock resistance
Oil, coolants, lubricants and emulsion resistance
UL-approved
Drag chain suitability
UV resistance
Welding sparks resistance

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Order Information

Order Number	Order Designation	Product Line	Interface	Housing Material	Housing Width	IP Rating	I/O Ports	I/O Connection	PNP/ NPN	LED	Shielded Housing
M8 3-poles, 1 signal per port, with control cable											
65349	ASBM 4/LED 3-343/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	4x	M8 3-poles	PNP	Yes	No
65350	ASBM 4/LED 3-343/10 M	ASB-S	Control Cable	PBT	30 mm	IP67	4x	M8 3-poles	PNP	Yes	No
65351	ASBM 4/LED 3-343/15 M	ASB-S	Control Cable	PBT	30 mm	IP67	4x	M8 3-poles	PNP	Yes	No
934637877	ASBM 6 3-344/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	6x	M8 3-poles	PNP	No	No
65352	ASBM 6/LED 3-344/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	6x	M8 3-poles	PNP	Yes	No
65353	ASBM 6/LED 3-344/10 M	ASB-S	Control Cable	PBT	30 mm	IP67	6x	M8 3-poles	PNP	Yes	No
65354	ASBM 6/LED 3-344/15 M	ASB-S	Control Cable	PBT	30 mm	IP67	6x	M8 3-poles	PNP	Yes	No
934636751	ASBM 8 3-345/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	No	No
934637875	ASBM 8 3-345/10 M	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	No	No
60637	SB 8/LED 3-333/5 M	ASB-C	Control Cable	TPU	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
60636	SB 8/LED 3-333/10 M	ASB-C	Control Cable	TPU	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
934637755	SB 8/LED 3-333/15 M	ASB-C	Control Cable	TPU	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
65355	ASBM 8/LED 3-345/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
65356	ASBM 8/LED 3-345/10 M	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
65357	ASBM 8/LED 3-345/15 M	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	No
106589	ASBM 8/LED 3-345/5 M ESD	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	Yes
106590	ASBM 8/LED 3-345/10 M ESD	ASB-S	Control Cable	PBT	30 mm	IP67	8x	M8 3-poles	PNP	Yes	Yes
61339	SB 8/LED NPN 3-333/5 M	ASB-C	Control Cable	TPU	30 mm	IP67	8x	M8 3-poles	NPN	Yes	No
61338	SB 8/LED NPN 3-333/10 M	ASB-C	Control Cable	TPU	30 mm	IP67	8x	M8 3-poles	NPN	Yes	No
934637878	ASBM 10 3-346/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	10x	M8 3-poles	PNP	No	No
65358	ASBM 10/LED 3-346/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	10x	M8 3-poles	PNP	Yes	No
65359	ASBM 10/LED 3-346/10 M	ASB-S	Control Cable	PBT	30 mm	IP67	10x	M8 3-poles	PNP	Yes	No
65360	ASBM 10/LED 3-346/15 M	ASB-S	Control Cable	PBT	30 mm	IP67	10x	M8 3-poles	PNP	Yes	No
934637879	ASBM 12 3-347/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	12x	M8 3-poles	PNP	No	No
65361	ASBM 12/LED 3-347/5 M	ASB-S	Control Cable	PBT	30 mm	IP67	12x	M8 3-poles	PNP	Yes	No
65362	ASBM 12/LED 3-347/10 M	ASB-S	Control Cable	PBT	30 mm	IP67	12x	M8 3-poles	PNP	Yes	No
65363	ASBM 12/LED 3-347/15 M	ASB-S	Control Cable	PBT	30 mm	IP67	12x	M8 3-poles	PNP	Yes	No
M12 3-poles, 1 signal per port, with control cable											
105568	ASBV 4 4-3-256/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 3-poles	PNP	No	No
105578	ASBV 4 4-3-256/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 3-poles	PNP	No	No
105865	ASBV 4 4-3-256/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 3-poles	PNP	No	No
105582	ASBV 8 4-3-242/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 3-poles	PNP	No	No
105583	ASBV 8 4-3-242/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 3-poles	PNP	No	No
105786	ASBV 8 4-3-242/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 3-poles	PNP	No	No

Standard cable lengths: 5 m, 10 m, 15 m.
For other cable lengths and variants please contact **icos-sales@belden.com**

Order Information

Order Number	Order Designation	Product Line	Interface	Housing Material	Housing Width	IP Rating	I/O Ports	I/O Connection	PNP/ NPN	LED	Shielded Housing
M12 4-poles, 1 signal per port, with control cable											
60640	ASB 4 5-4-328/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	No	No
60555	ASB 4 5-4-328/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	No	No
60587	ASB 4 5-4-328/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	No	No
934758001	ASB-R 4 5-4-328/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	No	No
934758002	ASB-R 4 5-4-328/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	No	No
60644	ASB 4/LED 5-4-328/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	No
60643	ASB 4/LED 5-4-328/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	No
60619	ASB 4/LED 5-4-328/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	No
69997	ASB 4/LED 5-4-328/5 M ESD	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	Yes
69998	ASB 4/LED 5-4-328/10 M ESD	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	Yes
108389	ASB 4/LED 5-4-328/15 M ESD	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	PNP	Yes	Yes
60629	ASB 4/LED NPN 5-4-328/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	NPN	Yes	No
60628	ASB 4/LED NPN 5-4-328/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 4-poles	NPN	Yes	No
934758003	ASB-R 4/LED 5-4-328/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	Yes	No
934758004	ASB-R 4/LED 5-4-328/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	Yes	No
934758005	ASB-R 4/LED 5-4-328/15 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 4-poles	PNP	Yes	No
60583	ASB 6 5-4-330/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 4-poles	PNP	No	No
60580	ASB 6 5-4-330/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 4-poles	PNP	No	No
60878	ASB 6 5-4-330/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 4-poles	PNP	No	No
60600	ASB 6/LED 5-4-330/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 4-poles	PNP	Yes	No
60656	ASB 6/LED 5-4-330/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 4-poles	PNP	Yes	No
60936	ASB 6/LED 5-4-330/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 4-poles	PNP	Yes	No
60585	ASB 8 5-4-331/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	No	No
60584	ASB 8 5-4-331/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	No	No
68942	ASB 8 5-4-331/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	No	No
934760001	ASB-R 8 5-4-331/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	No	No
934760002	ASB-R 8 5-4-331/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	No	No
60584	ASB 8/LED 5-4/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
11115	ASB 8/LED 5-4-95/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
11114	ASB 8/LED 5-4-95/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
17164	ASB 8/LED 5-4-271/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
17571	ASB 8/LED 5-4-271/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
1155	ASB 8/LED 5-4-271/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
60603	ASB 8/LED 5-4-331/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
60602	ASB 8/LED 5-4-331/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No
61037	ASB 8/LED 5-4-331/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	No

Standard cable lengths: 5 m, 10 m, 15 m.
For other cable lengths and variants please contact **icos-sales@belden.com**

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Order Information

Order Number	Order Designation	Product Line	Interface	Housing Material	Housing Width	IP Rating	I/O Ports	I/O Connection	PNP/ NPN	LED	Shielded Housing
M12 4-poles, 1 signal per port, with control cable											
69999	ASB 8/LED 5-4-331/5 M ESD	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	Yes
70000	ASB 8/LED 5-4-331/10 M ESD	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	PNP	Yes	Yes
61060	ASB 8/LED NPN 5-4-331/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	NPN	Yes	No
61058	ASB 8/LED NPN 5-4-331/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 4-poles	NPN	Yes	No
934760003	ASB-R 8/LED 5-4-331/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	No	No
934760004	ASB-R 8/LED 5-4-331/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	No	No
934760005	ASB-R 8/LED 5-4-331/15 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 4-poles	PNP	No	No
58453	ASNBL 8/LED 5-4-320/5 M	ASB-N	Control Cable	Stainless-steel	60 mm	IP65, IP67, IP69K	8x	M12 4-poles	PNP	Yes	No
58459	ASNBL 8/LED 5-4-320/10 M	ASB-N	Control Cable	Stainless-steel	60 mm	IP65, IP67, IP69K	8x	M12 4-poles	PNP	Yes	No
58460	ASNBL 8/LED 5-4-320/15 M	ASB-N	Control Cable	Stainless-steel	60 mm	IP65, IP67, IP69K	8x	M12 4-poles	PNP	Yes	No
M12 5-poles, 2 signals per port, with control cable											
60605	ASBV 4 5-256/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	No	No
60604	ASBV 4 5-256/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	No	No
61091	ASBV 4 5-256/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	No	No
934764001	ASBV-R 4 5-256/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 5-poles	PNP	No	No
934764002	ASBV-R 4 5-256/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 5-poles	PNP	No	No
11147	ASBV 4/LED 5-256/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	Yes	No
11145	ASBV 4/LED 5-256/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	Yes	No
11146	ASBV 4/LED 5-256/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	Yes	No
17170	ASBV 4/LED 5-271/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	Yes	No
18754	ASBV 4/LED 5-271/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	4x	M12 5-poles	PNP	Yes	No
934764003	ASBV-R 4/LED 5-256/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 5-poles	PNP	Yes	No
934764004	ASBV-R 4/LED 5-256/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	4x	M12 5-poles	PNP	Yes	No
60669	ASBV 6 5-332/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 5-poles	PNP	No	No
60666	ASBV 6 5-332/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 5-poles	PNP	No	No
61168	ASBV 6 5-332/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 5-poles	PNP	No	No
60674	ASBV 6/LED 5-332/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 5-poles	PNP	Yes	No
60672	ASBV 6/LED 5-332/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 5-poles	PNP	Yes	No
60673	ASBV 6/LED 5-332/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	6x	M12 5-poles	PNP	Yes	No
60671	ASBV 8 5-242/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	No	No
60670	ASBV 8 5-242/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	No	No
61204	ASBV 8 5-242/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	No	No
934765001	ASBV-R 8 5-242/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	No	No
934765002	ASBV-R 8 5-242/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	No	No

Standard cable lengths: 5 m, 10 m, 15 m.
For other cable lengths and variants please contact **icos-sales@belden.com**

Order Information

Order Number	Order Designation	Product Line	Interface	Housing Material	Housing Width	IP Rating	I/O Ports	I/O Connection	PNP/ NPN	LED	Shielded Housing
M12 5-poles, 2 signals per port, with control cable											
11167	ASBV 8/LED 5-242/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	Yes	No
11165	ASBV 8/LED 5-242/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	Yes	No
11166	ASBV 8/LED 5-242/15 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	Yes	No
11170	ASBV 8/LED 5-255/5 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	Yes	No
11168	ASBV 8/LED 5-255/10 M	ASB-C	Control Cable	TPU	60 mm	IP67	8x	M12 5-poles	PNP	Yes	No
934765003	ASBV-R 8/LED 5-242/5 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	Yes	No
934765004	ASBV-R 8/LED 5-242/10 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	Yes	No
934765007	ASBV-R 8/LED 5-242/15 M	ASB-R	Control Cable	Zinc die-cast	60 mm	IP65, IP67	8x	M12 5-poles	PNP	Yes	No
38552	ASNBV 8/LED 5-278/5 M	ASB-N	Control Cable	Stainless-steel	60 mm	IP65, IP67, IP69K	8x	M12 4-poles	PNP	Yes	No
30608	ASNBV 8/LED 5-278/10 M	ASB-N	Control Cable	Stainless-steel	60 mm	IP65, IP67, IP69K	8x	M12 4-poles	PNP	Yes	No
38551	ASNBV 8/LED 5-278/15 M	ASB-N	Control Cable	Stainless-steel	60 mm	IP65, IP67, IP69K	8x	M12 4-poles	PNP	Yes	No

Standard cable lengths: 5 m, 10 m, 15 m.
For other cable lengths and variants please contact **icos-sales@belden.com**

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Complete Automation Solution Package for Convenience, Functionality and Safety

Accessories from Lumberg Automation offer practical solutions and are perfectly tailored to each individual product series.

The Benefits

One stop shop – all the accessoires you need from a single supplier

Perfectly tailored – to the individual product series

High flexibility – thanks to a large selection

Product Offering

- Dust/Sealing Caps
- Labels and Labeling Pen
- Mounting Adapters, Clips, Nuts
- Tools

Dust/Sealing Caps/Labels and Labeling Pen

				Passive Distribution Boxes				Active I/O Modules		
Product Picture	Order Designation	Order Number	Description	ASB-C	ASB-N	ASB-R	ASB-S	LioN-M	LioN-P	LioN-R
	ZVKM	7116	Protective cap for unused M8 female ports (sockets), plastic, black	●			●		●	
	ZVK	12291	Protective cap for unused M12 female ports (sockets), plastic, black	●		●	●	●	●	●
	ZVKGY	934962001	Protective cap for unused M12 Power (L-coded) female ports (sockets), plastic, grey						● 3)	
	ZVKGN	934962002	Protective cap for unused M12 female ports (sockets), plastic, green	●		●	●	●	●	●
	PZVK	46005	Protective cap for unused M12 ports/ sockets, plastic (PVC), white. Especially suitable for use in food processing equipment	●	●	●	●	●	●	●
	RKV	11428	Protective cap for unused 7/8" female ports (sockets), metal, silver					●	● 4)	●
	RSV	12104	Protective cap for unused 7/8" male ports (plugs), metal, silver					●	● 4)	●
	0906 UAC 201	7659	Seal ring for M23 connectors, universal use for cables with Ø 2.5 to 10.5 mm	●		●				
	ZBR 5/10	71326	Labels in frame, 5 mm x 10 mm Pack size: 40 – 10 single labels per frame – 4 frames per package	● 1)			●		● 2)	
	ZBS 7/10	12285	Labels in frame, 7 mm x 14 mm Pack size: 10 – 10 single labels per frame – 1 frame per package	●		●				
	ZBR 8/40	7801	Labels in frame, 8 mm x 17 mm Pack size: 40 – 5 single labels per frame – 8 frames per package	●						
	ZBR 9/40	7799	Labels in frame, 9 mm x 20 mm Pack size: 40 – 5 single labels per frame – 8 frames per package					●		
	ZBR 8/20	935015	Labels in frame, 8 mm x 20 mm Pack size: 15 – 5 single labels per frame – 3 frames per package						● 3) 4)	
	ZBST	7800	Labeling pen, India ink recommendation for plotters: INK 2000 and Clean 2000	●		●	●	●	●	●

1) Suitable for all 30 mm modules
2) Suitable for all M8 modules (0980 ESL 1xx-1x2)
3) Suitable for all M12 Power modules (0980 ESL xxx-12x)
4) Suitable for all 7/8" Power modules (0980 ESL xxx-11x)

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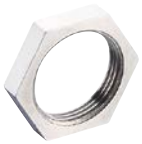
Mounting Adapters, Clips, Nuts

				Passive Distribution Boxes				Active I/O Modules		
Product Picture	Order Designation	Order Number	Description	ASB-C	ASB-N	ASB-R	ASB-S	LioN-M	LioN-P	LioN-R
	ZKS 2	74051	Mounting clip for M8 connectors	●			●		●	
	ZKS 1	74050	Mounting clip for M12 connectors	●		●		●	●	●
	RSKF 8	11644	Mounting nut for M8 male and female receptacle connectors, thread: M8 x 0.5						●	
	RSKF 9 RSKFM 16 RSKFM 20	11645 25049 25048	Mounting nut for M12 male and female receptacle connectors Thread sizes: RSKF 9: PG9 RSKFM 16: M16 x 1.5 RSKFM 20: M20 x 1.5					●	●	●
	RSKF 11 RSKF 13.5	11642 11643	Mounting nut for 7/8" male and female receptacle connectors Thread sizes: RSKF 11: PG11 RSKF 13.5: PG13.5	●	●	●		●	●	●
	STS-Clip	54643	Securing/retention clip for molded connectors to electrical equipment Suitable for use in areas with flammable dust as per EN 50281-1-1					●		●
	UMA 001 ZDC	934961001	Mounting adapter/screw-clip for fixing LioN-Power I/O modules						●	

Tools

				Passive Distribution Boxes				Active I/O Modules		
Product Picture	Order Designation	Order Number	Description	ASB-C	ASB-N	ASB-R	ASB-S	LioN-M	LioN-P	LioN-R
	AWKZ 3/4	61905	Stripping tool for 3 and 4-core/poles cables Especially suitable for stripping 224 and 225 cable	●	●	●	●	●	●	●
	AWKZ 5	61907	Stripping tool for 5-core/poles cables Especially suitable for stripping 228 cable	●	●	●	●	●	●	●
	AWKZ 12/19	61906	Cable stripping knife for quick stripping of all established types of circular cable from 4 to 15 mm Ø, automatic switch from circular cut to lengthwise cut using twisting internal blade	●	●	●	●	●	●	●
	DMWKZ	62068	Torque screwdriver for M8 and M12 connectors, including M12 Power connectors. Attachment for screwing M12 connectors included	●	●	●	●	●		●
	DMEWKZ 8	62069	Attachment for DMWKZ for screwing field attachable M8 connectors	●			●		●	
	DMEWKZ K 12	62072	Attachment for DMWKZ for screwing field attachable M12 connectors, including M12 Power connectors	●	●	●	●	●	●	●
	ZMS 19	7059	Installation wrench for 12 and 19-pin M23 male and female connectors	●	●	●				
	XZC 0703	932507004	Crimping tool for all M12 Power connectors						●	

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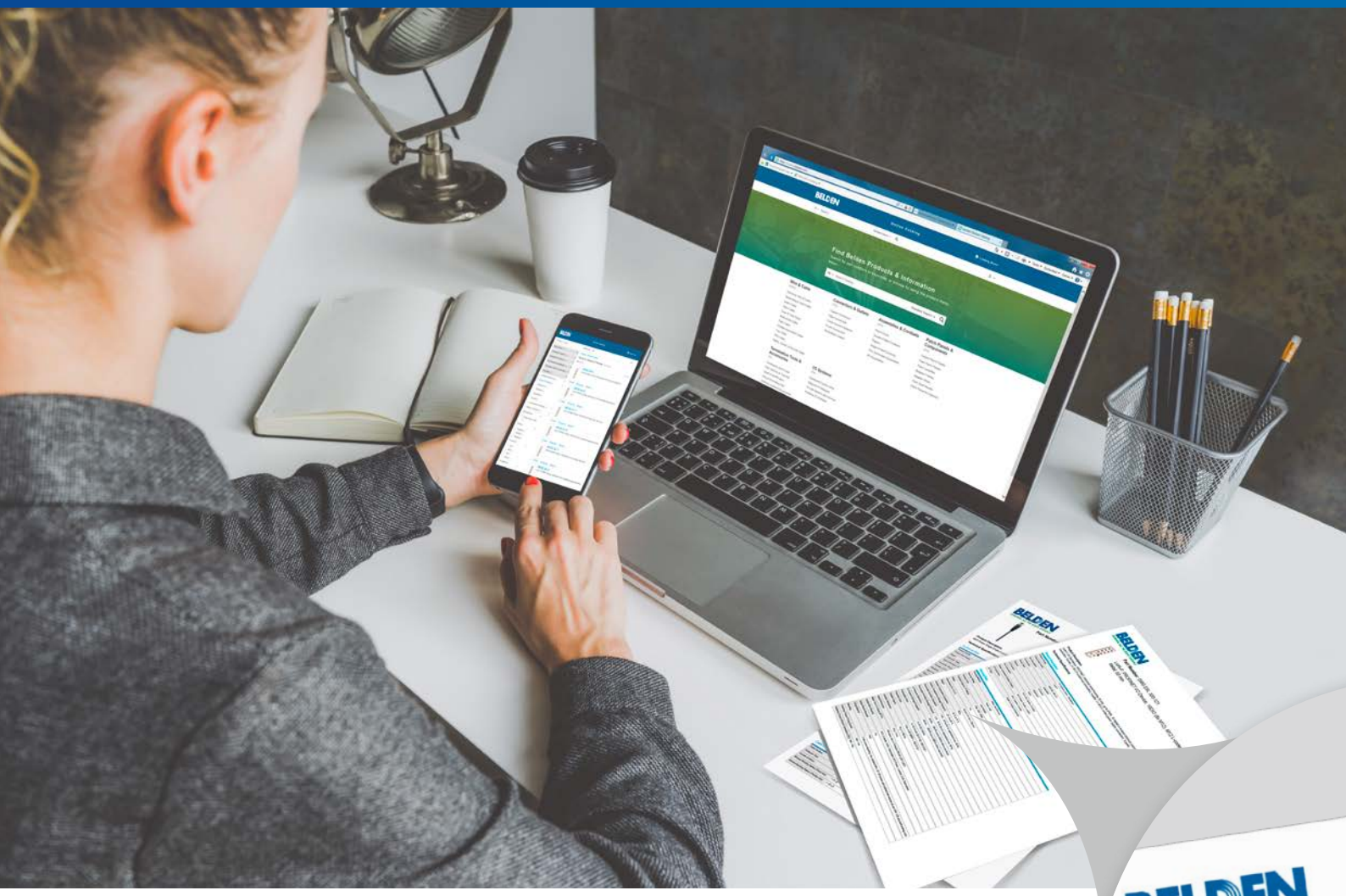

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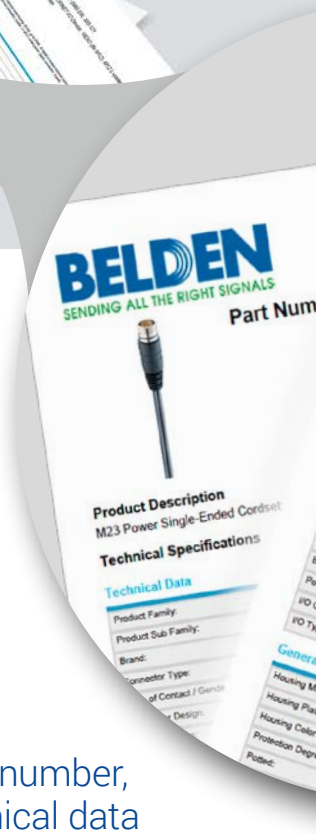

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Our Technical Support is Ready to Serve You

You can expect our full support from implementation to the optimization of everyday operations regardless of the technology you use.

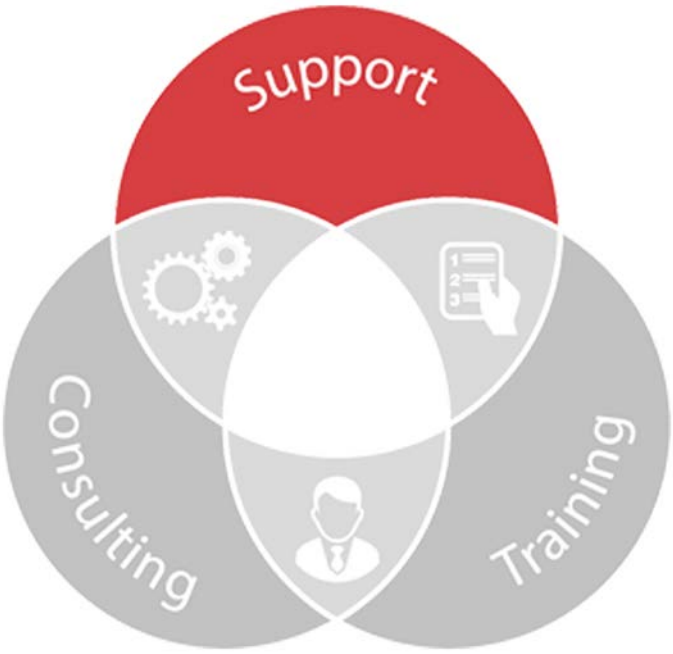
Welcome to our easy-to-use Helpdesk ticket system supporting Lumberg Automation Connectivity Products.

Lumberg Automation Connectivity customers can rely on Belden's technical support through a state-of-the-art Helpdesk ticket system. Our portal for technical support allow us to handle your requests fast and efficient.

Use your preferred access for immediate technical help. Your usual customer service representative remains at your disposal to either enter the ticket in your name or possibly answer your question straight away.

Easy to Use and Navigate Support System

Lumberg Automation Support Portal
https://lumberg-automation-support.belden.com



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Custom-made Connectivity Solutions

The Connectivity Center

When it comes to automation technologies, we are the experts for quality connectors and wiring components. With an extensive connectivity portfolio, Lumberg Automation and Hirschmann can offer you a wide range of standard solutions.

Require a specialized solution that does not yet exist or have a problem with your current solution?

Then you simply get in touch with our Connectivity Center: the platform for custom-made solutions developed specifically for your needs. By combining all of our knowledge and internal resources, we will deliver the exact solution you need to smooth out your production process, warrant continuity and reduce Total Cost of Ownership.

The Best Solutions … Fast!

With a dedicated team of experts, we can meet even the most demanding deadlines and technical challenges. Every month, the Connectivity Center delivers approximately 100 customized solutions for customers worldwide - some within just two weeks, hardly ever longer than three months. All solutions are guaranteed to have outstanding compact design, chemical resistance as well as high mechanical and electrical loading capacity.

Combined Strength of Three Belden Brands

Belden is a leader in the design, manufacture, and marketing of signal transmission products for data networking and a wide range of industrial connectivity products. Whenever necessary we combine the strength of all three powerful Belden brands: Belden, Hirschmann and Lumberg Automation.

Pushing Technology, Meeting Standards

insights trends developments

As a globally active technology leader we can translate the latest trends, insights and developments into custom-fit solutions that give you the competitive advantage you are looking for. Thanks to extensive prototyping and intensive testing in our own facilities, you can be sure national and international standards are met. You can put our solutions straight to work.

Add Value to Your Business

You can be certain we provide signal transmission solutions that make your company operate faster, better, longer, safer and more economically. It's our ambition to deliver all these benefits to you from a single source, building a lasting relationship that adds value to your business.

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BELDEN
SENDING ALL THE RIGHT SIGNALS

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us:
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