

# Multi-protocol – IO-Link Masters (30 mm, M12 Hybrid), 4 Digital Inputs, 8 IO-Link Channels, M12 or M8 I/O with M12 Hybrid Y-coded Data (LAN) and Power Supply Connection

Product Description							
Туре	0980 ESL 199-331	0980 ESL 199-332					
	NEW! UL 🎦 🖦 🖛	NEW! UL 🎦 🖦 🖛					
	EtherNet/IP OID-Link	EtherNet/IP OID-Link					
Description	LioN-P Multi-protocol module, PROFINET or EtherNet/IP device, 4 digital input channels, 8 IO-Link channels, M12 Hybrid Y-coded data (LAN) and power supply connection, 8-poles, 30 mm housing	LioN-P Multi-protocol module, PROFINET or EtherNet/IP device, 4 digital input channels, 8 IO-Link channels, M8 I/O, 5-poles, B-coded, M12 Hybrid Y-coded data (LAN) and power supply connection, 8-poles, 30 mm housing					
Order No.	934964001 934964002						
Technical Data							
Protection Degree	IP65, IP67, IP69K (only if mounted and locked in combination with Hirschmann/Lumberg connector)						
Ambient Temperature (Operation)	-20 °C to +70 °C						
Dimensions (W x H x D)	30 x 43 x 204 (mm)	30 x 43 x 183 (mm)					
Weight	448 g	413 g					
Housing Material	Metal, Zi	nc Die-cast					
Bus System							
Protocol	PROFINET IO Device/EtherNet/IP IO Device						
Connection	M12, Y-cc	ded, 8-poles					
Transmission Rate	Fast Ethernet (100 Mbit/s), Full Duplex						
Rotary Address Switches		No					
Power Supply							
Nominal Voltage	24 V DC (	SELV/PELV)					
Nominal Voltage Range	18 to	30 V DC					
Connection	M12, Y-coded, 8-poles						
Current Carrying Capacity of Connector		6 A					
Current Consumption (typ.)	180 mA (+/-2	20% at 24 V DC)					
IO-Link Master Channels							
Number of Channels		8					
Connection	M12, 5-poles, A-coded	M8, 5-poles, B-coded					
Number of A Ports (IOL)		I to X4)					
Number of B Ports (IOL)	4 (X5 to X8)						
Nominal Voltage (IOL)	24 V DC via US (system power supply)						
Nominal Current C/Q (Pin 4)	500 mA						
Nominal Current L+/L- (Pin 1 and 3)	500 mA						
Nominal Current Uaux (Pin 2, B Ports)	max. 4 A per module						
Input Channels							
Number of Channels		) + 8 x (Pin 4, configurable)					
Connection	M12, 5-poles, A-coded	M8, 5-poles, B-coded					
Channel Type	Type 1 acc. to IEC 61131-2						
Nominal Voltage	24 V DC via US (system power supply)						
Sensor Current Supply	500 mA per Port via L+/L-						
Sensor Type Output Channels		PNP					
Number of Channels	may 9 (Dia	4, configurable)					
Connection	M12, 5-poles, A-coded	M8, 5-poles, B-coded					
Channel Type							
Nominal Voltage	p-switching 24 V DC via Uaux (actuator power supply)						
Output Current per Channel	max. 500 mA (Pin 4)						
Output Current per Module	max. 9 A						
Protective Circuit	Electronicaly: Overload protection, short-circuit protection						
Galvanically Isolated		No					
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### Diagnostic Indication | 0980 ESL 199-331 and 0980 ESL 199-332

LED	Indicator	Condition		
18 A	Yellow	Channel status		
18 DIA A	Red	Periphery error		
18 B	White	Channel status		
18 DIA B	Red	Periphery error		
18 I/0-Link	Green Green blinking Off	No I/O-Link device connected I/O-Link communication available Port is not configured as I/O-Link		
P1 Lnk/Act	Green Green blinking Off	Connection to an Ethernet device I/O device exchanging data No connection to another device		
P2 Lnk/Act	Green Yellow blinking Off	Connection to an Ethernet device I/O device exchanging data No connection to another device		
BF	Red Off	Bus error, no data exchange with I/O controller No error message		
DIA	Red Red blinking Off	Common indicator for periphery errors Firmware update No error message		
MS (Module status)	Green Green blinking Red/green blinking Red blinking Off	Device is ready for operating Wrong configuration Self test is running Firmware update IP address is available		
NS (Network status)	Green blinking Green Red blinking Red Red/green blinking Off	IP address is available Connection to master is available At least one connection has timed out IP address is already being used by another device Self test is running Device is switched off/device has no IP address		
Us	Green	Voltage 19 V <= Us <= 30 V		
Uaux	Green Red	Voltage 19 V $<=$ UL $<=$ 30 V UL Voltage $<$ 19 V or UL $>$ 30 V		

### **Pin Assignment**

IO-Link Port Type A (X01X04), M12 A-coded / M8 B-coded		IO-Link Port Type B (X05X08), M12 A-coded / M8 B-coded					
$\frac{3}{0} + \frac{4}{0}$	1 = +24 V  2 = IN  3 = GND  4 = C/Q  5 = n.c.  M8		$\frac{3 \times 6^{4}}{5 \times 6^{2}}$	1 = +24 V 2 = +24 V AUX/OUT 3 = GND 4 = C/Q 5 = GND AUX/OUT	400 <sup>2</sup> 35 <sup>1</sup> M8		
M12 Hybrid Power Supply and Bus Function, Y-coded							
$\begin{array}{c} 5 & 4 \\ 6 & 88 \\ 7 & 8 \\ 7 & 1 \\ 3 & 8 \\ 2 & 7 \\ 1 \\ 7 \end{array}$	<b>Power Function</b> 5 = GND 6 = GND AUX 7 = +24 V 8 = +24 V AUX	<b>Bus Function</b> 1 = TD+ 2 = TD- 3 = RD+ 4 = RD-					

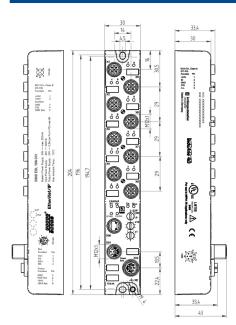
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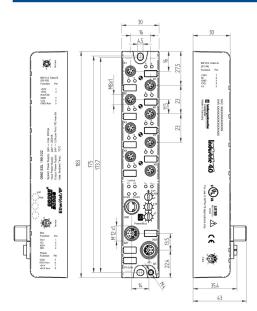
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#### **Technical Drawing**

0980 ESL 199-331



#### 0980 ESL 199-332





The application of these products in harsh environments should always be checked before use. Technical modifications reserved.

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