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		
Type	0980 ESL 199-331	0980 ESL 199-332
	NEW! UL · PROFINET · EtherNet/IP · IO-Link	NEW! UL · PROFINET · EtherNet/IP · IO-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, Zinc Die-cast	

Bus System		
Protocol	PROFINET IO Device/EtherNet/IP IO Device	
Connection	M12, Y-coded, 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 (+/-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)	4 (X1 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	max. 12, 4 x (Pin 2, fixed) + 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	PNP	

Output Channels		
Number of Channels	max. 8 (Pin 4, configurable)	
Connection	M12, 5-poles, A-coded	M8, 5-poles, B-coded
Channel Type	p-switching	
Nominal Voltage	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
1...8 A	Yellow	Channel status
1...8 DIA A	Red	Periphery error
1...8 B	White	Channel status
1...8 DIA B	Red	Periphery error
1...8 I/O-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
U_S	Green	Voltage 19 V <= U_S <= 30 V
U_{AUX}	Green Red	Voltage 19 V <= U_L <= 30 V U_L Voltage < 19 V or U_L > 30 V

Pin Assignment

IO-Link Port Type A (X01...X04), M12 A-coded / M8 B-coded		IO-Link Port Type B (X05...X08), M12 A-coded / M8 B-coded	
M12 / M8	1 = +24 V 2 = IN 3 = GND 4 = C/Q 5 = n.c.	M12 / M8	1 = +24 V 2 = +24 V AUX/OUT 3 = GND 4 = C/Q 5 = GND AUX/OUT

M12 Hybrid Power Supply and Bus Function, Y-coded

Power Function
5 = GND
6 = GND AUX
7 = +24 V
8 = +24 V AUX

Bus Function
1 = TD+
2 = TD-
3 = RD+
4 = RD-

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Technical Drawing

0980 ESL 199-331

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