





















LioN-Power Multi-protocol – 16 Digital Inputs, M12 L-coded or 7/8” Power Supply Connection, PROFINET, EtherNet/IP or EtherCAT

Product Description		
Type	0980 ESL 391-121	0980 ESL 391-111
	         	         
Description	LioN-P Multi-protocol module, PROFINET, EtherNet/IP or EtherCAT device, 16 digital input channels, M12 LAN connection, 4-poles, D-coded, M12 L-coded power supply, 5-poles	LioN-P Multi-protocol module, PROFINET, EtherNet/IP or EtherCAT device, 16 digital input channels, M12 LAN connection, 4-poles, D-coded, 7/8” power supply, 5-poles
Order No.	934879001	934882001
Technical Data		
Protection Degree	IP65, IP67, IP69K (only if mounted and locked in combination with Hirschmann/Lumberg connector)	IP65, IP67 (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)	59.6 x 30.7 x 200 (mm)	59.6 x 26.2 x 206 (mm)
Weight	500 g	520 g
Housing Material	Metal, Zinc Die-cast	
Bus System		
Protocol	PROFINET /EtherNet/IP/EtherCAT I/O Device	
Connection	M12 LAN connection, 4-poles, D-coded	
Transmission Rate	Fast Ethernet (10/100 Mbit/s), Full Duplex	
Rotary Address Switches	Yes, 3x	
Power Supply		
Nominal Voltage	24 V DC (SELV/PELV)	
Nominal Voltage Range	18 to 30 V DC	
Connection	M12, L-coded, 5-poles	7/8”, 5-poles
Current Carrying Capacity of Connector	16 A	9 A
Current Consumption (typ.)	160 mA (+/-20% at 24 V DC)	
Input Channels		
Number of Channels	16	
Connection	M12, 5-poles, A-coded	
Channel Type	Type 3 acc. to IEC 61131-2	
Nominal Voltage	24 V DC via US (system power supply)	
Sensor Current Supply	200 mA per Port	
Sensor Type	PNP	

Continued Next Page

Bit Assignment







Bit	7	6	5	4	3	2	1	0
M12 Input 16DI								
Byte 0	4B	4A	3B	3A	2B	2A	1B	1A
Byte 1	8B	8A	7B	7A	6B	6A	5B	5A

Lion-Power Multi-protocol – 16 Digital Inputs, M12 L-coded or 7/8” Power Supply Connection, PROFINET, EtherNet/IP or EtherCAT

Diagnostic Indication | 0980 ESL 391-121 and 0980 ESL 391-111

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
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
PROFINET		
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
EtherNet/IP		
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
EtherCAT		
RUN	Green	Device is in state OPERATIONAL
	Green blinking	Device is in state PRE-OPERATIONAL
	Green single flash	Device is in state SAFE-OPERATIONAL
	Green flickerng	Device is in state BOOTSTRAP
	Off	Device is in state INIT
ERR	Red	"An critical communication or application controller error has occurred "
	Red double flash	An application watchdog timeout has occurred.
	Red single flash	"Slave device application has changed the EtherCAT state autonomously, due to local error"
	Red blinking	General Configuration Error
	Red flickering	Booting Error was detected
	Off	No error
Us	Green	Voltage $19\text{ V} \leq U_s \leq 30\text{ V}$
	Red	$U_s \text{ Voltage} < 19\text{ V}$ or $U_s > 30\text{ V}$

Pin Assignment

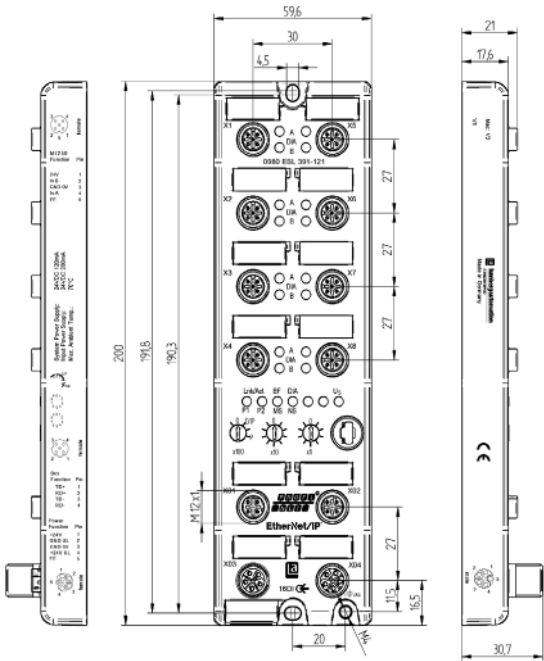
M12 I/O Port, A-coded	M12 Power Supply, L-coded	Power Supply 7/8"	M12 LAN Connection, D-coded
 <ul style="list-style-type: none"> 1 = +24 V 2 = IN B 3 = GND (0 V) 4 = IN A 5 = FE 	 <ul style="list-style-type: none"> 1 = +24 V 2 = GND UL 3 = GND (0 V) 4 = +24 V UL 5 = FE 	 <ul style="list-style-type: none"> 1 = GND UL 2 = GND (0 V) 3 = FE 4 = +24 V 5 = +24 V UL 	 <ul style="list-style-type: none"> 1 = TD+ 2 = RD+ 3 = TD- 4 = RD-
			

Continued Next Page

LioN-Power Multi-protocol – 16 Digital Inputs, M12 L-coded or 7/8” Power Supply Connection, PROFINET, EtherNet/IP or EtherCAT

Technical Drawing

0980 ESL 391-121



0980 ESL 391-111

