lumbergautomation
A BELDEN BRAND

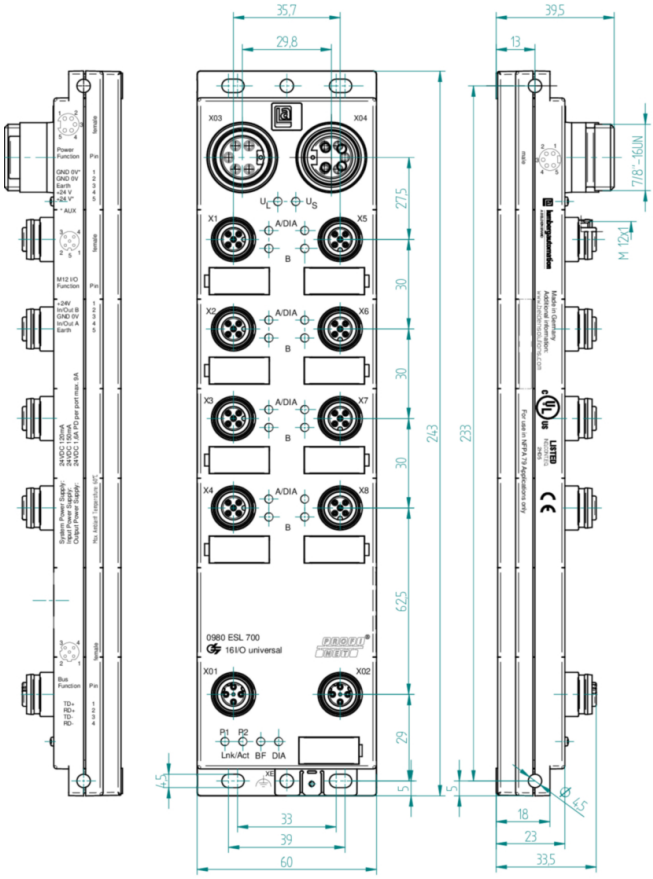
Product: 0980 ESL 700

LioN-M, PROFINET I/O Device, 16DIO (8x M12), 7/8" Power Supply, Plastic, 60 mm

Product Description

LioN-M M12-60, Plastic, PROFINET, 16 DIO, 7/8" Power Supply, 5-poles

Technical Drawing



Technical Specifications

Product Description

Brand:	Belden
Product Family:	I/O Systems: Active - Standalone
Product Sub Family:	LioN-M
Item Description:	0980 ESL 700
Part Number:	109628
Device Type:	I/O Module

Protocol:	PROFINET
I/O Function:	16DIO
Bus Connection:	M12, 4-poles, D-coded
Power Connection (System Supply):	7/8" Power, 5-poles
I/O Connection:	M12, 5-poles, A-coded
I/O Type:	Digital In-/Output (Universal)

General Data

Housing Material:	PBT + ASA
Housing Color:	Black
Protection Degree / IP Rating**:	IP67
Potted:	No
Dimensions (W x H x D):	60 mm x 40 mm x 243 mm
Weight:	390 g
Ambient Temperature (Operation)*:	-10 °C to 60 °C
Vibration Resistance:	10 g / 5 -500 Hz
Shock Resistance:	50 g / 11ms
Mean Time To Failure (MTTF):	529 years. acc. to Telcordia SR-332 (2011) 20°C
Contact Base Material:	M12, D-coded, CuSn, Gold-plated | 7/8" CuZn, Gold-plated
Contact Bearer Material:	PA / TPU
O-Ring Material:	FKM
Mounting:	2 hole screw mounting. Use standard M4 x 25 / 30 screws with toothed lock washer (as per DIN 125) and self-locking nuts.
Fastening Torque (Fixing Screw):	M4: 1 Nm
Fastening Torque (Ground Connection (FE)):	M4: 1 Nm
Fastening Torque (Bus Connection):	M12: 0.5 Nm
Fastening Torque (Power Connection):	7/8": 1.5 Nm
Fastening Torque (I/O Connection):	M12: 0.5 Nm
Included in Delivery:	Attachable Labels: 15x, Sealing Caps: 4x M12

PROFINET

Protocol:	PROFINET
Connection:	M12 LAN, 4-poles, D-coded
Number of Connections:	2
Specification:	V2.3X
Conformance Class:	B
Performance Class:	RT (switch supports IRT)
Netload Class:	I
Transmission Rate:	Fast Ethernet (10/100 Mbit/s), Full Duplex
Transmission Method:	100 BASE-TX, with auto negotiation and auto crossing
Cycle Time / Update Rate:	min. 4 ms
Addressing:	DCP
Shared Device:	Not Supported
Topology Detection:	LLDP, SNMP V1
Easy Device Replacement:	Supported, based on LLDP
Supported Network Protocols (Other):	ARP, HTTP, Ping, SNMP V1, TCP/IP

Power Supply

Connection Module Supply Voltage:	7/8" Power, 5-poles
Number of Connections:	2
Current Carrying Capacity of Connector:	max. 9 A
Module Supply Voltage (Nominal):	24 V DC (SELV/PELV)
Module Supply Voltage (Range):	19 V DC to 30 V DC
Current Consumption (typ.):	100 mA (at 24 V DC)
Reverse Polarity Protection:	Yes
Status Indicator (System Supply):	LED green
Diagnostic Indicator:	No
Connection Sensor Supply Voltage:	via Module Supply Connection

Current Carrying Capacity of Connector:	max. 9 A
Sensor Supply Voltage (Nominal):	24 V DC (SELV/PELV)
Sensor Supply Voltage (Range):	19 V DC to 30 V DC
Reverse Polarity Protection:	Yes
Status Indicator (Sensor Supply):	LED green
Diagnostic Indicator:	No
Connection Actuator Supply Voltage:	via Module Supply Connection
Current Carrying Capacity of Connector:	max. 9 A
Actuator Supply Voltage (Nominal):	24 V DC (SELV/PELV)
Actuator Supply Voltage (Range):	19 V DC to 30 V DC
Reverse Polarity Protection:	Yes
Status Indicator (Actuator Supply):	LED green
Diagnostic Indicator:	No

Digital Input Channels

Number of Digital Input Channels:	max. 16, universal
Connection:	M12, 5-poles, A-coded
Number of Ports:	8x, X1 to X8
Channel Type:	Type 3 acc. to IEC 61131-2
Input Wiring:	2-, 3-, 4-wire
Nominal Voltage:	24 V DC via US (module power supply)
Nominal Current:	typ. 5 mA
Sensor Current Supply:	max. 200 mA per port (at 30°C)
Sensor Type:	PNP
Input Voltage Range "0" signal:	-3 V DC …+5 V DC
Input Voltage Range "1" signal:	11 V DC … 30 V DC
Input Filter Time:	3 ms, fixed
Protective Circuit:	Electronicaly: Overload protection, short-circuit protection
Status Indicator (Inputs):	LED yellow per channel
Diagnostic Indicator:	LED red per port

Digital Output Channels

Number of Digital Output Channels:	max. 16, universal
Connection:	M12, 5-poles, A-coded
Number of Ports:	8x, X1 to X8
Channel Type:	p-switching
Output Wiring:	2-, 3-wire
Nominal Voltage:	24 V DC via UL (actuator power supply)
Output Current per Channel:	max. 1.6 A
Output Current per Module:	max. 9 A
Galvanically Isolated:	No
Protective Circuit:	Electronicaly: Overload protection, short-circuit protection
Overload Behavior:	Auto off and on switching
Status Indicator (Outputs):	LED yellow per channel
Diagnostic Idicator:	LED red per channel

Electrical Isolation

US (System Supply Voltage) / FE:	500 V DC
US / UL (Actuator Supply Voltage):	500 V DC
UL / FE:	500 V DC
Bus connection / FE:	2000 V DC

EMC Conformance

EMC Directive:	2014/30/EU
EN 61000-4-2 Electrostatic Discharge (ESD):	Criterion B; 4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 Electromagnetic Field:	Criterion A; Field intensity: 10 V/m
EN 61000-4-4 Fast Transients (Burst):	Criterion B, 2 kV

EN 61000-4-5 Surge Voltage:	Criterion B; DC supply lines: ±0.5 kV/±0.5 kV (symmetrical/asymmetrical); For I/O ports with cables ≤ 30m
EN 61000-4-6 Conducted immunity:	Criterion A; Test voltage 10 V
EN 55022 Radio Interference Properties:	Class A

Safety & Environmental Compliance

CE:	Yes
RoHS Compliant:	Yes

Approvals

UL:	cULus Listed, UL 508
UL-File:	E230848
PNO:	Yes

Notes

Protection Degree / IP Rating Note:	** only if mounted and locked in combination with Hirschmann / Lumberg Automation connector.
System Power Supply Connection Note:	*do not connect / disconnect under voltage!
Update and Revision:	Revision Number: 0.62 Revision Date: 05-24-2023