lumbergautomation
A BELDEN BRAND



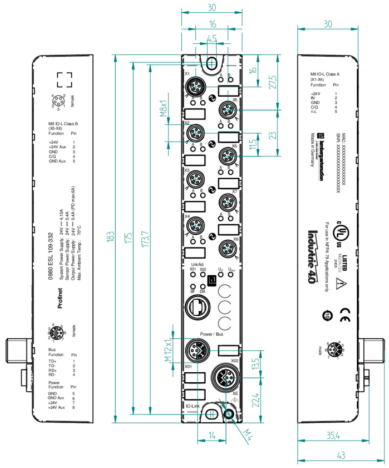
# Part Number: 0980 ESL 109-332

LioN-P, PROFINET IO-Link Master, 4DI 8IOL (8x M8), M12 Y-coded Power Supply, Metal, 30 mm

## Product Description

LioN-P, IO-Link Master, PROFINET, 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

## Technical Drawing



## Technical Specifications

### Product Description

| | |
|---|---|
| Product Family: | I/O Systems: Active - Standalone |
| Product Sub Family: | LioN-P |
| Item Description: | 0980 ESL 109-332 |
| Part Number: | 934840001 |
| Device Type: | IO-Link Master |
| Protocol: | PROFINET |
| I/O Function: | 4DI 8IOL |
| Bus Connection: | M12 Hybrid, 8-poles, Y-coded |
| Power Connection (System Supply): | M12 Hybrid, 8-poles, Y-coded |
| I/O Connection: | M8, 5-poles, B-coded |
| I/O Type: | IO-Link Master |

### General Data

| | |
|---|---|
| Housing Material: | Metal, Zinc Die-cast |
| Housing Plating: | Nickel, matt |
| Housing Color: | Grey Metallic |
| Protection Degree / IP Rating: | IP65, IP67, IP69K |
| Potted: | Yes |
| Dimensions (W x H x D): | 30 mm x 43 mm x 183 mm |

| | |
|---|---|
| Weight: | 415 g |
| Ambient Temperature (Operation): | -20 °C to 70 °C |
| Ambient Temperature (Storage/Transport): | -25 °C to 85 °C |
| Permissible Humidity (Operation): | 5 % ... 95 % (For UL applications max. 80 %) |
| Permissible Humidity (Storage/Transport): | 5 % ... 95 % (For UL applications max. 80 %) |
| Air Pressure (Operation): | 80 kPa … 106 kPa (up to 2000 m above sea level) |
| Air Pressure (Storage/Transport): | 80 kPa … 106 kPa (up to 2000 m above sea level) |
| Flammabilty Class: | UL 94 (IEC 61010) |
| Protection Class: | III, IEC 61140, EN 61140, VDE 0140-1 |
| Pollution Degree: | 3 acc. to EN 60664-1, VDE 0110-1 |
| Vibration Resistance: | 15 g / 5 -500 Hz |
| Shock Resistance: | 50 g / 11ms |
| Mean Time To Failure (MTTF): | 688 years. acc. to Telcordia SR-332 (2011) 20°C |
| Contact Base Material: | M12 Hybrid, Y-coded, CuSn, Gold-plated |
| Contact Bearer Material: | PA |
| 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): | M12: 0.5 Nm |
| Fastening Torque (I/O Connection): | M8: 0.3 Nm |
| Included in Delivery: | Attachable Labels: 15x, Sealing Caps: 5x M12 |

## PROFINET

| | |
|---|---|
| Protocol: | PROFINET |
| Connection: | M12 Hybrid, 8-poles, Y-coded |
| Number of Connections: | 2 |
| Specification: | V2.3X |
| Conformance Class: | C |
| Performance Class: | RT (switch supports IRT) |
| Netload Class: | II |
| 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. 1 ms |
| Addressing: | DCP |
| Fast Startup (FSU): | Supported, ≤ 2000 ms |
| Media Redundancy Protocol (MRP): | Supported, MRP client |
| Shared Device: | 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: | M12 Hybrid, 8-poles, Y-coded |
| Number of Connections: | 2 |
| Current Carrying Capacity of Connector: | max. 6 A |
| Module Supply Voltage (Nominal): | 24 V DC (SELV/PELV) |
| Module Supply Voltage (Range): | 18 V DC to 30 V DC |
| Current Consumption (typ.): | 180 mA (at 24 V DC) |
| Reverse Polarity Protection: | Yes |
| Status Indicator: | LED green |
| Diagnostic Indicator: | LED red |
| Connection Sensor Supply Voltage: | M12 Power, 5-poles, L-coded |
| Current Carrying Capacity of Connector: | max. 6 A |
| Sensor Supply Voltage (Nominal): | 24 V DC (SELV/PELV) |
| Sensor Supply Voltage (Range): | 18 V DC to 30 V DC |

| | |
|---|---|
| Reverse Polarity Protection: | Yes |
| Status Indicator: | LED green |
| Diagnostic Indicator: | LED red |
| Connection Actuator Supply Voltage: | via Module Supply Connection |
| Current Carrying Capacity of Connector: | max. 6 A |
| Actuator Supply Voltage (Nominal): | 24 V DC (SELV/PELV) |
| Actuator Supply Voltage (Range): | 18 V DC to 30 V DC |
| Reverse Polarity Protection: | Yes |
| Status Indicator: | LED green |
| Diagnostic Indicator: | LED red |

## IO-Link Master Channels

| | |
|---|---|
| Number of IO-Link Master Channels: | max. 8, configurable |
| Connection: | M8, 5-poles, B-coded |
| IO-Link Class A Ports: | 4x, X1 to X4 |
| IO-Link Class B Ports: | 4x, X5 to X8 |
| IO-Link Specification: | V1.1.2 |
| Parameter Storage: | Supported |
| Supported COM Modes: | 4.8 kBaud (COM 1), 38.4 kBaud (COM 2), 230.4 kBaud (COM 3) |
| Cycle Time / Update Rate: | min. 8 ms for all channels at 32 Byte IN / OUT |
| Nominal Voltage: | 24 V DC via US (system power supply) |
| Nominal Current C/Q (Pin 4): | max. 500 mA (via US) |
| Nominal Current 1L+ (Pin 1): | max. 500 mA (via US) |
| Nominal Current 2L+/Uaux (Pin 2, B Ports): | max. 4 A per module (via Uaux) |
| Perm. Conductor Length to Device: | ≤ 20 m |
| Status Indicator: | LED green per channel |
| Diagnostic Indicator: | LED red per port |

## Digital Input Channels

| | |
|---|---|
| Number of Digital Input Channels: | max. 12, configurable |
| Connection: | M8, 5-poles, B-coded |
| Number of Ports: | 8x, X1 to X8 |
| Channel Type: | Type 1 acc. to IEC 61131-2 |
| Input Wiring: | 2-, 3-wire |
| Nominal Voltage: | 24 V DC via US (module power supply) |
| Nominal Current: | typ. 3 mA |
| Sensor Current Supply: | max. 500 mA per port via 1L+ |
| Sensor Type: | PNP |
| Input Voltage Range "0" signal: | -0,3V DC ... 5 V DC |
| Input Voltage Range "1" signal: | 15 V DC ... 30 V DC |
| Protective Circuit: | Electronicaly: Overload protection, short-circuit protection |
| Status Indicator: | LED white or yellow per channel |
| Diagnostic Indicator: | LED red per port |

## Digital Output Channels

| | |
|---|---|
| Number of Digital Output Channels: | max. 8, configurable |
| Connection: | M8, 5-poles, B-coded |
| Number of Ports: | 8x, X1 to X8 |
| Channel Type: | p-switching |
| Output Wiring: | 2-wire |
| Nominal Voltage: | 24 V DC via US (system power supply) |
| Output Current per Channel: | max. 0.5 A (Pin 4) |
| Output Current per Module: | max. 6 A |
| Galvanically Isolated: | No |
| Protective Circuit: | Electronicaly: Overload protection, short-circuit protection |
| Overload Behavior: | Auto off and on switching / Manual restart |
| Status Indicator: | LED white or yellow per channel |

| | |
|---|---|
| Diagnostic Idicator: | LED red per port |

## Electrical Isolation

| | |
|---|---|
| US (System Supply Voltage) / FE: | 500 V DC |
| Uaux / 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 |
| China RoHS-Compliant: | Yes |

## Approvals

| | |
|---|---|
| UL: | cULus Listed, UL 61010-1 |
| UL-File: | E230848 |
| CSA: | Yes, via UL |
| IO-Link: | 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: 0.24 Revision Date: 08-29-2019 |

© 2019 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.