

Product: [0960 IOL 3858-001](#) 



LioN-X, IO-Link I/O Hub, 4x Analog Outputs, 8x Digital Inputs (8x M12), Class A, Metal, 60 mm

Product Description

LioN-X, IO-Link I/O Hub, IO-Link, industrial metal housing, 60 mm, up to IP69K, 4x universal analog output channels, 8x digital input channels, 8 x M12 A-coded I/O connection, 5-poles, 1x M12 A-coded IO-Link Class A connection, 5-poles

Technical Specifications

Product Description

Brand:	Belden
Product Family:	I/O Systems: Active - Standalone
Side 1 Product Sub Family:	LioN-X
Item Description:	0960 IOL 3858-001
Part Number:	935714001
Device Type:	I/O Hub Analog Output
Protocol Compatibility:	IO-Link
I/O Function:	4AO 8DI
Bus Connection:	M12, 5-poles, A-coded
Power Supply Connection:	M12, 5-poles, A-coded
I/O Connection:	M12, 5-poles, A-coded
I/O Type:	Analog Output + Digital In

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):	60 mm x 31 mm x 159 mm
Weight:	380 g
Ambient Temperature (Operation)*:	-40 °C to 70 °C
Ambient Temperature (Storage/Transport):	-40 °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)
Flammability Class:	UL 94 (IEC 61010)
Protection Class:	III, IEC 61140, EN 61140, VDE 0140-1
Side 1 Pollution Degree:	3 acc. to EN 60664-1, VDE 0110-1
Vibration Resistance:	15 g / 5 -500 Hz
Shock Resistance:	50 g / 11ms
Contact Base Material:	M12, A-coded, CuSn, Gold-plated M12 Power, L-coded, CuNi, Gold-plated
Contact Bearer Material:	PA
O-Ring Material:	FKM
Mount Type:	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):	M12: 0.5 Nm

IO-Links

Protocol:	IO-Link Device
Connection:	M12, 5-poles, A-coded
Number of Connections:	1
Specification:	v1.1.4, IEC 61131-9
IO-Link Class:	Class A
Transmission Rate / COM Mode:	COM 3 (230.4 kbps)
Cycle Time / Update Rate:	min. 2 ms
Parameter Storage:	Supported
Frame Type:	Type_2_V
Process Data Length:	8 Bytes Input Data, 8 Bytes Output Data
Configuration:	IODD, Process Data

Power Supply

Connection Module Supply Voltage:	M12, 5-poles, A-coded (IO-Link)
Number of Connections:	1
Current Carrying Capacity of Connector:	max. 4 A
Module Supply Voltage (Nominal):	24 V DC (SELV/PELV)
Module Supply Voltage (Range):	20 V DC to 30 V DC
Current Consumption (typ.):	80 mA (at 24 V DC)
Reverse Polarity Protection:	Yes
Status Indicator (System Supply):	LED green
Diagnostic Indicator:	LED red
Current Carrying Capacity of Connector:	max. 4 A

Digital Input Channels

Number of Digital Input Channels:	8
Connection:	M12, 5-poles, A-coded
Number of Ports:	4x, X1 to X4
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. 4 mA
Sensor Current Supply:	max. 400 mA per module (at 25°C)
Sensor Type:	PNP
Input Voltage Range "0" signal:	-3 V DC ... +5 V DC
Input Voltage Range "1" signal:	15 V DC ... 30 V DC
Input Filter Time:	0 to 3 ms, configurable
Protective Circuit:	Electronically: Overload protection, short-circuit protection
Status Indicator (Inputs):	LED white or yellow per channel
Diagnostic Indicator:	LED red per module

Analog Output Channels

Number of Analog Output Channels:	max. 4
Connection:	M12, 5-poles, A-coded
Number of Ports:	4 (A1 to A4)
Channel Type:	0/1-5V, 0/2-10V, +/-10V, 0/4-20mA
Accuracy / Precision:	< 0,15% (basic error at 25°C)
Temperature Fault:	< +/- 0,01%/K
Signal Delay:	300µs
Load Resistance:	voltage 1 kOhm, current < 500 Ohm

Data Format:	Standard, Extended (Siemens S7), NE43
Protective Circuit:	Suppressor diode
Permissible Conductor Length to Actuator:	max. 30 m
Status Indicator:	LED yellow per port
Diagnostic Indicator:	LED red per port
Operation Modes (Analog Output):	voltage, current
Output Type (Analog Output):	common ground
Error Total (Analog Output):	< 0,3%

Electrical Isolation

US (System Supply Voltage) / FE:	500 V DC
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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 ≤ 30 m
EN 61000-4-6 Conducted immunity:	Criterion A; Test voltage 10 V
EN 55032 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: 0.26 Revision Date: 07-09-2026

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