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A BELDEN BRAND

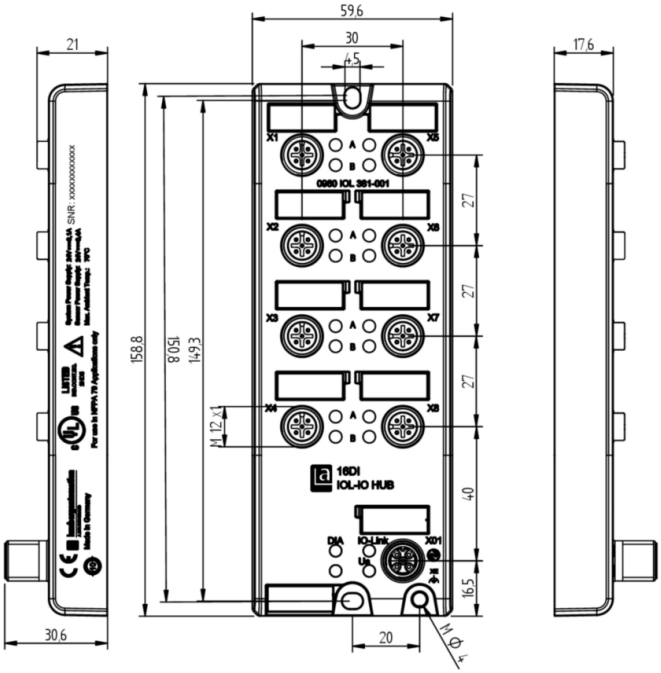
Product: 0960 IOL 381-001

LioN-P, IO-Link I/O Hub, 16DI (8x M12), Class A, Metal, 60 mm

Product Description

LioN-P, IO-Link I/O Hub, IO-Link, industrial metal housing, 60 mm, up to IP69K, 16 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 Drawing



Technical Specifications

Product Description

Brand:	Belden
Product Family:	I/O Systems: Active - Standalone
Product Sub Family:	LioN-P
Item Description:	0960 IOL 381-001
Part Number:	934992002

Product Life Cycle

Device Type:	IO-Link Hub
Protocol:	IO-Link
I/O Function:	16DI
Bus Connection:	M12, 5-poles, A-coded
Power Connection (System Supply):	M12, 5-poles, A-coded
I/O Connection:	M12, 5-poles, A-coded
Replacement for:	934992001
I/O Type:	Digital Input

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:	390 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):	2111 years. acc. to Telcordia SR-332 (2011) 20°C
Contact Base Material:	M12, A-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):	M12: 0.5 Nm

IO-Links

Protocol:	IO-Link
Connection:	M12, 5-poles, A-coded
Number of Connections:	1
Specification:	V1.1.2
IO-Link Class:	Class A
Transmission Rate / COM Mode:	COM 3 (230.4 kbps)
Cycle Time / Update Rate:	min. 1 ms
Parameter Storage:	Supported
Frame Type:	Type_2_V
Process Data Length:	4 Bytes Input Data, 4 Bytes Output Data
Configuration:	IODD, Process Data

Power Supply

Connection Module Supply Voltage:	M12, 5-poles, A-coded
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):	18 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
Connection Sensor Supply Voltage:	via Module Supply Connection
Current Carrying Capacity of Connector:	max. 4 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 (Sensor Supply):	LED green
Diagnostic Indicator:	LED red

Digital Input Channels

Number of Digital Input Channels:	max. 16, fixed
Connection:	M12, 5-poles, A-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. 5 mA
Sensor Current Supply:	max. 700 mA per module (Consider 1L+ limitation of connected IO-Link Master)
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
Input Filter Time:	0 to 3 ms, configurable
Protective Circuit:	Electronicaly: Overload protection, short-circuit protection
Status Indicator (Inputs):	LED white or yellow per channel

Electrical Isolation

US (System Supply Voltage) / FE:	500 V DC
Bus connection / FE:	500 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!

Variants

Item #	Item Description
934992002	0960 IOL 381-001

Update and Revision:	Revision Number: 0.88 Revision Date: 11-14-2022

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