

IO-Link Analog Hubs

Connect analog sensors to your digital IO-Link system.

Product Bulletin



Your existing analog sensors — temperature, vibration, pressure — still have a place in your IO system. The LioN-X IO-Link Analog Hubs connect them directly to any IO-Link network without replacement, using the same masters and configuration tools your team already knows.

- **Bridge analog and digital:** connect voltage, current, resistance, and thermocouple sensors to your IO-Link network through 4 configurable analog ports on one compact hub.
- **Simplify your wiring:** power the hubs directly over IO-Link with no separate M12L connection or additional power supply required, keeping machine-side installation clean and fast.
- **No retraining required:** the LioN-X IO-Link Analog Hubs use the same masters, form factor, and web-based configuration your team already uses across your LioN-X infrastructure.
- **Mix analog and digital on one device:** 8 digital input channels work alongside the 4 analog ports, so you can consolidate signal types at the machine edge without adding hardware.



Key Features

- IP67 and IP69K rated zinc die-cast housing for wash-down and harsh industrial environments
- Operating temperature range: -40°C to +70°C for extreme production conditions
- 4 configurable analog ports: supports voltage (± 10 V), current (0-20 mA), resistance, RTD, and thermocouple measurement types
- 8 digital input channels on the same device for mixed-signal consolidation at the machine edge
- Powered over IO-Link — no additional M12L connection or power supply required
- Configures via LioN-X Master web interface - no additional software or engineering tools needed
- IO-Link v1.1.4, Com 3 (230.4 kbps)
- Compatible with all IO-Link masters
- IO-Link Class A, 3-core M12 connection

The LioN-X IO-Link Analog Hubs are available in two variants: 4AI 8DI for analog input applications and 4AO 8DI for analog output. Both share the same compact zinc die-cast LioN-X form factor, power directly over IO-Link, and connect to any IO-Link master.



Your Benefits

- » Analog sensors represent a long-term investment in your production environment. Replacing them to adopt IO-Link isn't always practical or cost-effective. The LioN-X IO-Link Analog Hubs let you bring those sensors into your IO-Link network without touching the sensors themselves.
- » Four configurable analog ports support voltage, current, resistance, and thermocouple signal types. Eight digital inputs on the same device mean you're not adding hardware to handle mixed signals.
- » Power comes directly over IO-Link, so there's no extra cabling at the machine. And because they use the same LioN-X master, form factor, and web interface, your team already knows, there's no learning curve to manage.

Applications

- Monitoring temperature on production equipment and triggering automated alerts before limits are exceeded.
- Tracking vibration on conveyors and motors to catch wear before it causes downtime.
- Pressure and level sensing across process and material handling environments.
- Connecting existing analog actuators to digital control systems using the 4AO 8DI output variant.
- Consolidating mixed analog and digital signals at the machine edge on a single compact device.
- Retrofitting established analog sensor installations into IO-Link networks without sensor replacement.
- Suitable for fixed and mobile machine configurations in harsh industrial environments.

Markets

- **Automotive manufacturing**, where analog sensors remain embedded in legacy press, welding, and assembly lines.
- **Discrete and continuous manufacturing environments** with mixed signal infrastructure.
- **Warehousing and logistics operations** integrating conveyors, sortation systems, and AGV lines.
- **Consumer packaged goods facilities** managing fill levels, pressure, and temperature across high-throughput lines.
- **Machine builders and OEMs** designing flexible equipment for multiple end markets.
- **Semiconductor manufacturing environments** requiring precise process monitoring.
- **Energy applications** demanding reliable signal acquisition across wide temperature ranges.



LioN-X IO-Link Hub 4AO 8DI and LioN-X IO-Link Hub 4AI 8DI

Technical Information

Product Description

Type	LioN-X IO-Link Hub 4AO 8DI	LioN-X IO-Link Hub 4AI 8DI
		
Order Designation	0960 IOL 3858-001 / 935714001	0960 IOL 3857-001 / 935713001
Product Description	LioN-X, IO-Link I/O Hub 4AO 8DI, industrial metal housing, 60 mm, up to IP69K, 8 digital input / 4 Analog Output channels, 8 x M12 A-coded I/O connection, 5-poles, 1 x M12 A-coded IO-Link Class A connection, 5-poles	LioN-X, IO-Link I/O Hub 4AI 8DI, industrial metal housing, 60 mm, up to IP69K, 4 x universal analog input channels, 8 x digital input channels, 8 x M12 A-coded I/O connection, 5-poles, 1 x M12 A-coded IO-Link Class A connection, 5-poles

General Data

Housing	Metal, zinc die-cast, potted	Metal, zinc die-cast, potted
Dimensions (W x H x D)	60 mm x 31 mm x 159 mm	60 mm x 31 mm x 159 mm
Weight	380 g	380 g
Ambient Temperature	-40 °C to 70 °C (operation)	-40 °C to 70 °C (operation)
Protection Degree	IP65, IP67, IP69K	IP65, IP67, IP69K
Shock/Vibration	50 g/15 g	50 g/15 g

Power Supply

Nominal Voltage	24 V DC (SELV/PELV)	24 V DC (SELV/PELV)
Connection	M12, 5-poles, A-coded (IO-Link)	M12, 5-poles, A-coded (IO-Link)
Module Supply Voltage	24V	24V
Sensor Supply Voltage	24V, 1L+ (US), Pin 1/3	24V, 1L+ (US), Pin 1/3
Actuator Supply Voltage	N/A	N/A
Current Consumption	typ. 80 mA (at 24 V DC)	typ. 80 mA (at 24 V DC)
Galvanically Isolated	No	No

IO-Link

IO-Link Specification	v1.1.4	v1.1.4
COM Mode	COM 3	COM 3
IO-Link Class	Class A	Class A
Data Storage	Supported	Supported

Digital Input Channels

Connection	8 x M12, A-coded, 5-poles	8 x M12, A-coded, 5-poles
Digital Input Channels	max. 8	max. 8
DI Channel Type	Type 1 acc. To IEC 61131-2, PNP	Type 1 acc. To IEC 61131-2, PNP
Nominal Input Current	typ. 4 mA	typ. 4 mA
Sensor Current Supply	max. 400 mA per port max. 4 A per hub (with LioN-X Master)	max. 400 mA per port max. 4 A per hub (with LioN-X Master)
Supplied by	US	US

LioN-X IO-Link Hub 4AO 8DI and LioN-X IO-Link Hub 4AI 8DI

Technical Information		
Analog Output Channels		
Type	LioN-X IO-Link Hub 4AO 8DI	LioN-X IO-Link Hub 4AI 8DI
		
Connection	4 x M12, A-coded, 5-poles	N/A
Analog Output Channels	max. 4	N/A
Channel Type	0/1-5V, 0/2-10V, +/-10V, 0/4-20mA	N/A
Resolution (D/A)	16bit	N/A
Analog Input Channels		
Connection	N/A	4 x M12, A-coded, 5-poles
Analog Input Channels	N/A	max. 4
Channel Type	N/A	U (+/-100,500,1000mV, 0/2-10V, +/-10V) I (0/4-20mA,+/-20mA) PT 100,200,500,1000, Ni100, Ni1000 TC Type (K,B,E,J,N,R,S,T,C,G) R (0-100, 0-400, 0-2000, 0-4000 Ohm)
Resolution (A/D)	N/A	16 Bit
Accessories to order separately	T-Splitter ASBS 2 M12-5S F (US order # 6000027764 EMEA order # 27764) Sensor actuator cable - RST 5-RKT 5-228/5 M (US order # 600003338 EMEA order # 12023) Ethernet cable 0985 806 104/5M - unshielded (US order # 900004096) or 0985 YM57530 104/5M - shielded (US order # 900004159) EMEA 0985 342 104/5 M order # 12121	



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