AXL E IOL TC4/K M12 - Analog module

2702983

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CRA-READY



Axioline E IO-Link/analog converter with 4 analog TC inputs (type K/J), 2-conductor connection technology, 1 IO-Link A port, 24 V DC, IP65 degree of protection

Product description

The Axioline E IO-Link/analog converter is an IO-Link device that transfers analog signals from thermocouples (TCs) via the IO-Link protocol. The device offers you the option of using an IO-Link master to record the analog signals of conventional type K/J thermocouples (TC). It supports type K/J thermocouples in accordance with DIN EN 60584-1. The measured values are depicted in standardized representation format. The device is connected to an IO-Link master via an IO-Link A port. Use within different networks is possible via the IO-Link master.

Your advantages

- Connection to an IO-Link master with M12 connector (A-coded, 4-pos.)
- IO-Link A port
- IO-Link specification V1.1.2
- Status indicators
- 4 differential inputs for thermocouples
- Measuring range type K: -270°C ... +1,372°C
- Measuring range type J: -210 °C ... +1200 °C
- Selectable resolution 0.1 K/0.01 K
- Connection of sensors in 2-conductor technology
- M12 cable gland, Push-in Technology
- Diagnostic information in the process data word
- Supply of the module electronics via the IO-Link interface of the master
- Degree of protection IP65



Commercial data

Item number	2702983
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR04
Product key	DRI7Z5
GTIN	4055626447261
Weight per piece (including packing)	384.3 g
Weight per piece (excluding packing)	384.3 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Notes

Note on application	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Product properties

Product type	Interface converter
Product family	Axioline E
Type	Stand-alone
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)
	Plastic housing

Insulation characteristics

Pollution degree	2 (EN 60664-1)

Electrical properties

Supply: IO-Link

Designation	IO-Link port supply (L+)
Nominal voltage for I/O supply	24 V DC (Provided via the IO-Link interface of the IO-Link master.)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Nominal current per device	typ. 35 mA (±15% (at 24 V DC), max. 70 mA)
Protective circuit	Reverse polarity protection; yes
	Short-circuit protection; yes
	Overload protection; yes

Electrical isolation/isolation of the voltage ranges

Test voltage: IO-Link bus logic	500 V AC, 50 Hz, 1 min
Test voltage: Thermocouple I/O devices	500 V AC, 50 Hz, 1 min
Test voltage: Functional ground	500 V AC, 50 Hz, 1 min

Input data

Analog:

Input name	Analog TC inputs
Description of the input	Differential inputs
Number of inputs	4
Connection method	Push-in technology
Connection technology	2-conductor
A/D conversion time	typ. 40 ms
A/D converter resolution	24 bit

Sensor types that can be used (TC)	K/J
Tolerance, relative	typ. ± 0.2 % (of measuring range end value)
	max. ± 0.4 % (of measuring range end value)
Measuring principle	Sigma/Delta process
Measured value representation	16 bits
Protective circuit	Transient protection of inputs
	Overload protection
	Wire-break detection

IO-Link

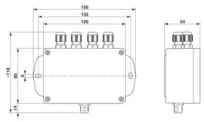
Number of ports	1
Connection method	M12 connector, A-coded
Connection technology	3-conductor
Port type	Class A
Specification	V1.1.2
Reverse polarity protection	yes
Transmission speed	230.4 kbps (COM3)
Amount of process data	64 bit (4x 16-bit input data)

Connection data

Thermocouples

Connection method	Push-in technology
Conductor cross-section, rigid	0.2 mm² ... 1.5 mm²
Conductor cross-section, flexible	0.2 mm² ... 1.5 mm²
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

Dimensions

Dimensional drawing	
Width	150 mm
Height	54 mm
Depth	118 mm
Note on dimensions	When installing, note the length of the M12 connector for the IO-Link cable and the bending radii of the TC cables.

Material specifications

Color (Housing)	light gray (RAL 7035)
Housing material	PC

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP65 (not UL-tested)
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (storage/transport)	5 % ... 95 %

Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	50g, 11 ms period, half-sine shock pulse
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

Standards and regulations

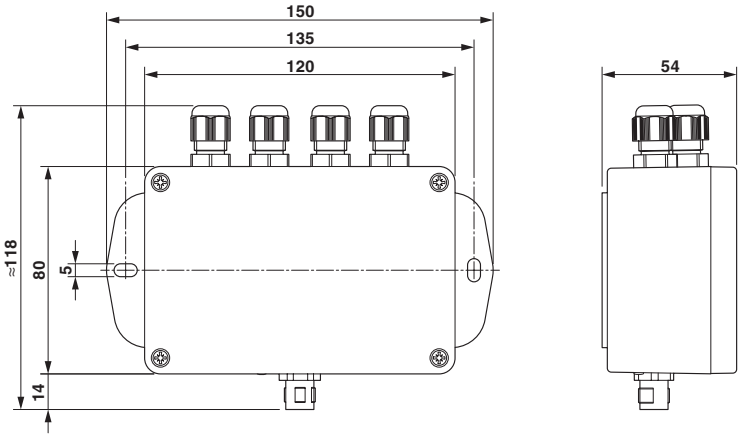
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Mounting

Mounting type	Screw mounting

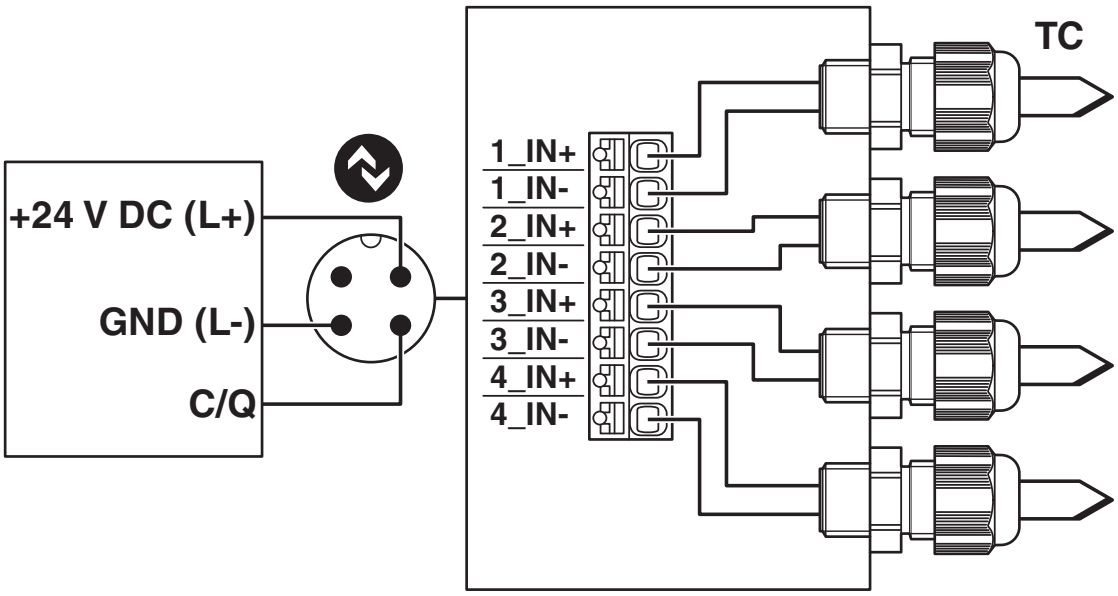
Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Connection example

Approvals

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cULus Listed
Approval ID: E238705

Classifications

ECLASS

ECLASS-13.0	27242601
ECLASS-15.0	27242601

ETIM

ETIM 10.0	EC001596

UNSPSC

UNSPSC 21.0	32151600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	26d555e4-3514-41b0-9dde-cd8953e32142

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