

AXL E IOL TC4/K M12 - Analog module



2702983

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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

| | |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

Utilization restriction

| | |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

Product properties

| | |
|--------------------|---------------------|
| Product type | Interface converter |
| Product family | Axioline E |
| Type | Stand-alone |
| Special properties | 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 ($\pm 15\%$ (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 |

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| | |
|------------------------------------|---|
| Sensor types that can be used (TC) | K/J |
| Tolerance, relative | typ. $\pm 0.2\%$ (of measuring range end value) |
| | max. $\pm 0.4\%$ (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

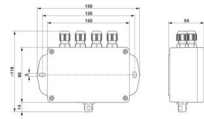
| | |
|-----------------------------|-------------------------------|
| Number of ports | 1 |
| Connection method | M12 connector, A-coded |
| Connection technology | 3-conductor |
| Port type | Class A |
| Specification | V1.1.2 |
| Reverse polarity protection | yes |
| Transmission speed | 230.4 kbps (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 mm ² ... 1.5 mm ² |
| Conductor cross-section, flexible | 0.2 mm ² ... 1.5 mm ² |
| 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

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| | |
|--|---|
| 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 (operation) | 5 % ... 95 % |
| Permissible humidity (storage/transport) | 5 % ... 95 % |

Standards and regulations

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

Mounting

| | |
|---------------|----------------|
| Mounting type | Screw mounting |
|---------------|----------------|

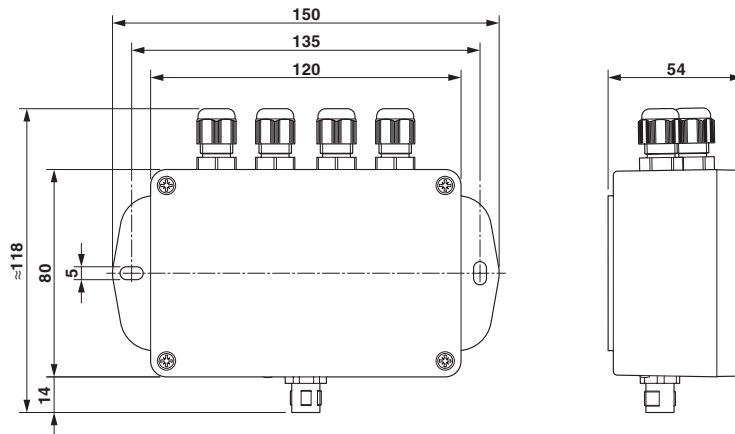
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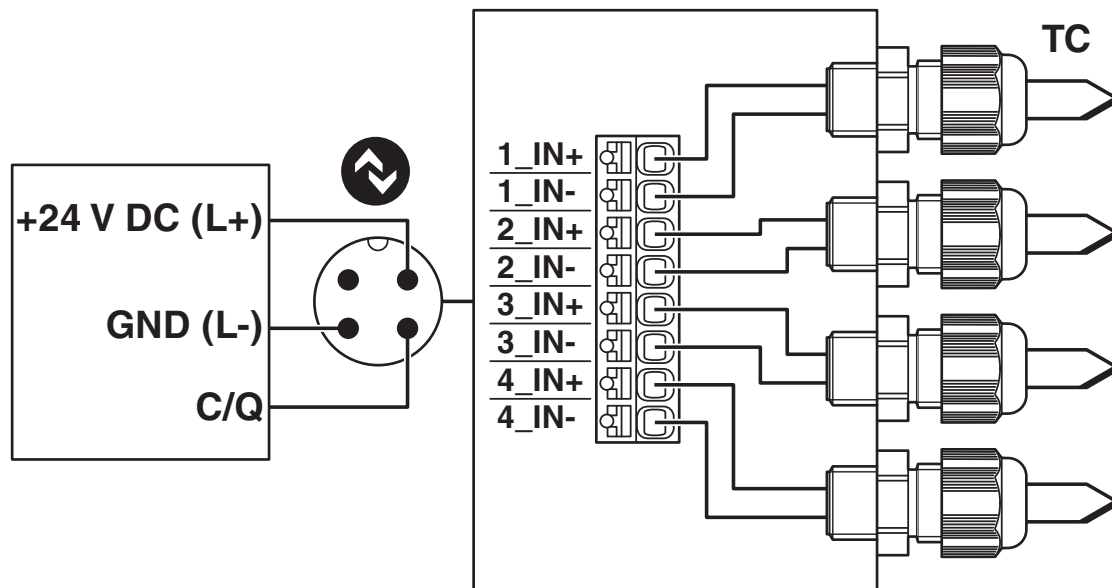
Drawings

Dimensional drawing



Dimensions (in mm)

Connection diagram



Connection example

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Approvals

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cULus Listed

Approval ID: E238705

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27242601 |
| ECLASS-15.0 | 27242601 |

ETIM

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|-----------|----------|
| ETIM 10.0 | EC001596 |
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UNSPSC

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| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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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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