

# AXL E IOL AI1 U M12 R - Analog module



2700273

<https://www.phoenixcontact.com/us/products/2700273>

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Axioline E IO-Link/analog converter for connecting an analog sensor, 0 V ... 10 V, M12 connectors, angled version



## Product description

The IO-Link/analog converter is an IO-Link device that converts analog signals into the IO-Link protocol. It therefore enables you to acquire the signals of analog sensors via an IO-Link master.

## Your advantages

- Connection to an IO-Link master with M12 connector (A-coded, 4-pos.)
- 1 IO-Link interface
- IO-Link A port
- IO-Link specification V1.1.1
- Angled version
- 1 analog input
- Connection of the actuator in 3-conductor technology via M12 connector (A-coded, 5-pos.)
- Voltage range: 0 V ... 10 V
- Functional ground connection for local connection to functional ground
- Supply of the module electronics and the sensor via the IO-Link interface of the IO-Link master
- Local status indicator
- IP65/IP67 degree of protection

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2700273       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DR04          |
| Product key                          | DRI7Z5        |
| GTIN                                 | 4046356782579 |
| Weight per piece (including packing) | 50.3 g        |
| Weight per piece (excluding packing) | 34 g          |
| Customs tariff number                | 85176200      |
| Country of origin                    | DE            |

## Technical data

### Notes

#### Note on application

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

### Product properties

|                      |                                                                                                             |
|----------------------|-------------------------------------------------------------------------------------------------------------|
| Product type         | Interface converter                                                                                         |
| Product family       | Axioline E                                                                                                  |
| Type                 | Stand-alone                                                                                                 |
|                      | Axioline E                                                                                                  |
| Diagnostics messages | Overrange or underrange Message in the diagnostic code (in the IB IL format)                                |
|                      | Measured value invalid/no valid measured value present Message in the diagnostic code (in the IB IL format) |
|                      | Module faulty Message in the diagnostic code (in the IB IL format)                                          |

#### Insulation characteristics

|                  |   |
|------------------|---|
| Pollution degree | 2 |
|------------------|---|

### Electrical properties

#### Supply: IO-Link

|                                        |                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------|
| Nominal voltage for I/O supply         | 24 V DC (This supply voltage is provided via the IO-Link interface of the IO-Link master.) |
| Nominal current for every IO-Link port | max. 100 mA                                                                                |
| Current consumption                    | typ. 16.5 mA $\pm$ 15 % (at 24 V DC)                                                       |
|                                        | max. 120 mA                                                                                |
| Protective circuit                     | Reverse polarity protection                                                                |
|                                        | Short-circuit protection                                                                   |
|                                        | Overload protection                                                                        |

### Input data

#### Analog:

|                                   |                                                                 |
|-----------------------------------|-----------------------------------------------------------------|
| Input name                        | Analog input                                                    |
| Number of inputs                  | 1 (voltage)                                                     |
| Connection method                 | M12 connector, A-coded                                          |
| Connection technology             | 3-conductor                                                     |
| Voltage input signal              | 0 V ... 10 V                                                    |
| Input resistance of voltage input | min. 100 k $\Omega$                                             |
| A/D converter resolution          | 12 bit                                                          |
| Data formats                      | IB IL, S7-compatible                                            |
| Filtering                         | None or mean value generation over 4, 16, or 32 measured values |

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## IO-Link

|                             |                                             |
|-----------------------------|---------------------------------------------|
| Number of ports             | 1                                           |
| Connection method           | M12 connector, A-coded                      |
| Connection technology       | 3-conductor                                 |
| Specification               | V1.1.1                                      |
| Reverse polarity protection | yes                                         |
| Cycle Time                  | min. 2 ms                                   |
| Amount of process data      | 16 bit (Input data)<br>16 bit (Output data) |

## Signaling

### Diagnostic messages

|             |                                                      |
|-------------|------------------------------------------------------|
| Diagnostics | Overrange or underrange                              |
| Message     | Message in the diagnostic code (in the IB IL format) |

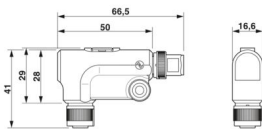
### Diagnostic messages

|             |                                                        |
|-------------|--------------------------------------------------------|
| Diagnostics | Measured value invalid/no valid measured value present |
| Message     | Message in the diagnostic code (in the IB IL format)   |

### Diagnostic messages

|             |                                                      |
|-------------|------------------------------------------------------|
| Diagnostics | Module faulty                                        |
| Message     | Message in the diagnostic code (in the IB IL format) |

## Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 16.6 mm                                                                              |
| Height              | 42 mm                                                                                |
| Depth               | 66.5 mm                                                                              |

## Material specifications

|                 |                            |
|-----------------|----------------------------|
| Color (Housing) | anthracite gray (RAL 7016) |
|-----------------|----------------------------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                   |
|-----------------------------------------|---------------------------------------------------|
| Ambient temperature (operation)         | -25 °C ... 60 °C                                  |
| Degree of protection                    | IP65/IP67                                         |
| 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 %                                      |

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

## Mechanical test

|                                                                    |                                                                     |
|--------------------------------------------------------------------|---------------------------------------------------------------------|
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | Operation: 2g                                                       |
|                                                                    | Storage/transport: 5g                                               |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27              | Operation: 30g, 11 ms, three shocks in each space direction         |
|                                                                    | Storage/transport: 50g, 11 ms, three shocks in each space direction |
| Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27   | 10g, 16 ms, 1000 shocks, in all space directions                    |

## Standards and regulations

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

## Mounting

|               |                             |
|---------------|-----------------------------|
| Mounting type | Screw mounting (M12 thread) |
|---------------|-----------------------------|

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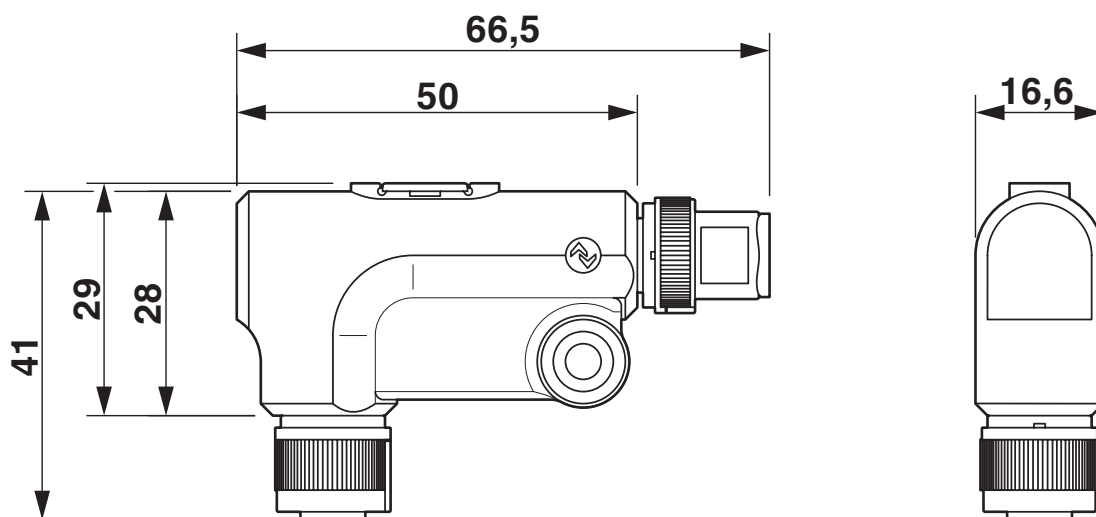
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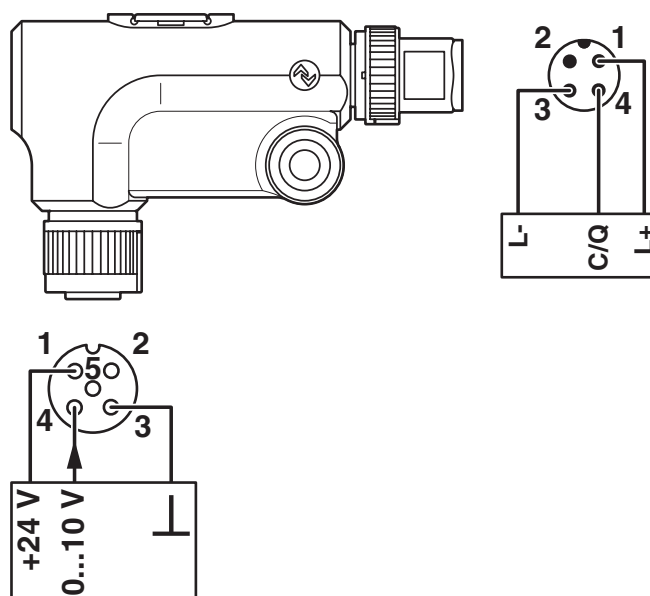


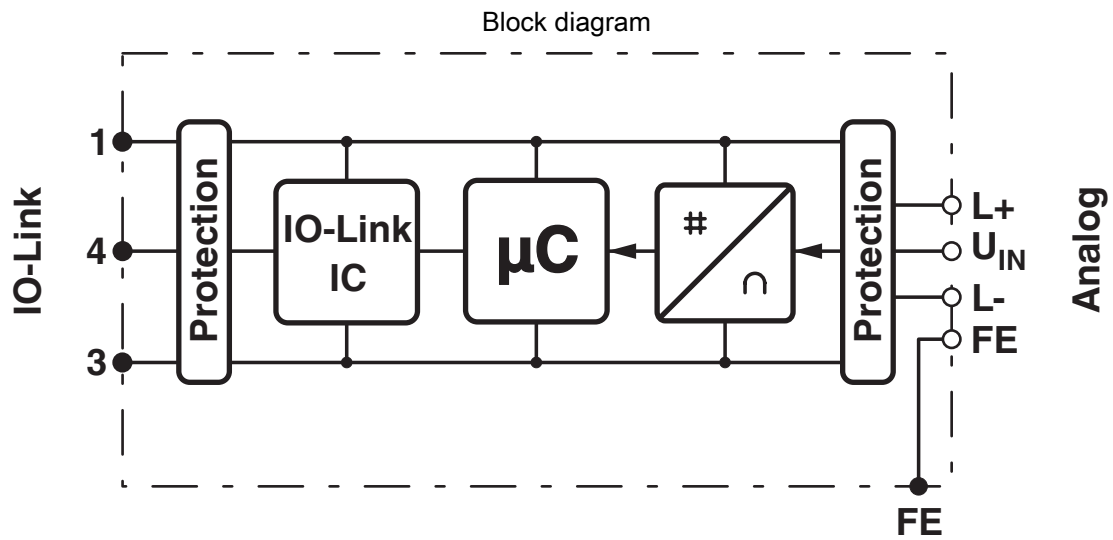
## Drawings

Dimensional drawing



Connection diagram





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## Approvals

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**cULus Listed**

Approval ID: E140324

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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



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## Environmental product compliance

### EU RoHS

|                                         |      |
|-----------------------------------------|------|
| Fulfills EU RoHS substance requirements | Yes  |
| Exemption                               | 6(c) |

### 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                                | 68bb59f5-4b92-4149-8761-8cb222c56bb6 |

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