

I/O module - AXL AO 8 - 2688080

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Axioline analog output module, 8 outputs: 0 - 10 V, ± 10 V, 0 - 5 V, ± 5 V, 0 - 20 mA, 4 - 20 mA, ± 20 mA, 2-wire connection method (including bus base module and connectors)

Product description


The module is designed for use within an Axioline F station. It is used to output analog voltage and current signals.

Why buy this product

- 8 analog, bipolar output channels for the connection of either voltage or current signals
- Connection of actuators in 2-wire technology
- Voltage ranges: 0 V ... 10 V, ± 10 V, 0 V ... 5 V, ± 5 V
- Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ± 20 mA
- Short-circuit-proof outputs
- Device rating plate stored
- Diagnostic and status indicators



Key commercial data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 046356 501446 |
| Weight per Piece (excluding packing) | 258.4 g |
| Custom tariff number | 85389091 |
| Country of origin | Germany |

Technical data

Dimensions

| | |
|--------------------|---|
| Width | 53.6 mm |
| Height | 126.1 mm |
| Depth | 54 mm |
| Note on dimensions | The depth is valid when a TH 35-7.5 DIN rail is used (according to EN 60715). |

Ambient conditions

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Technical data

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (according to DIN EN 61131-2) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (according to DIN EN 61131-2) |
| 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) |
| Degree of protection | IP20 |

General

| | |
|---------------------------------|---|
| Weight | 260 g |
| Note on weight specifications | with plugs and bus base module |
| Mounting type | DIN rail |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |
| Test section | 5 V communications power (logic), 24 V supply (I/O) 500 V AC 50 Hz 1 min |
| | 5 V supply (logic)/analog outputs 500 V AC 50 Hz 1 min |
| | 5 V supply (logic)/functional earth ground 500 V AC 50 Hz 1 min |
| | 24 V supply (I/O)/analog outputs 500 V AC 50 Hz 1 min |
| | 24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min |
| | Analog outputs/functional earth ground 500 V AC 50 Hz 1 min |
| Conformance with EMC directives | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge |
| | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m |
| | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; supply lines DC: ± 0.5 kV/ ± 0.5 kV (symmetrical/asymmetrical); ± 1 kV to shielded I/O cables |
| | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V |
| | Noise emission test according to EN 61000-6-3 Radio interference properties EN 55022 Class B |
| Mechanical tests | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5 g |
| | Shock in acc. with EN 60068-2-27/IEC 60068-2-27 25 g, 11 ms period, half-sine shock pulse |
| | Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10 g |

Interfaces

| | |
|--------------------|----------------------|
| Name | Axioline F local bus |
| Connection method | Bus base module |
| Transmission speed | 100 MBit/s |

Axioline potentials

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Technical data

Axioline potentials

| | |
|------------------------------------|---|
| Communications power U_{Bus} | 5 V DC (via bus base module) |
| Current consumption from U_{bus} | typ. 105 mA |
| | max. 130 mA |
| Supply of analog modules U_A | 24 V DC |
| Current consumption from U_A | typ. 50 mA (induced current consumption; no load, 0 V output) |
| | typ. 110 mA (8 voltage channels, 10 V output) |
| | max. 235 mA (8 current channels, 20 mA output) |

Analog outputs

| | |
|---------------------------------|--|
| Number of outputs | 8 |
| Connection method | Push-in technology |
| | 2-wire (shielded, twisted pair) |
| Output name | Analog outputs |
| D/A conversion time | 5 μ s |
| D/A resolution | 16 bit |
| Type of protection | Short-circuit and overload protection |
| | Transient protection |
| Protective circuit/component | Electronic |
| | Suppressor diode |
| Data formats | IB IL, S7-compatible |
| Representation of output values | 16 bits (15 bits + sign) |
| Process data update | 300 μ s |
| Current output signal | 0 mA ... 20 mA |
| | 4 mA ... 20 mA |
| | -20 mA ... 20 mA |
| Load/output load current output | to 500 Ω |
| Voltage output signal | 0 V ... 5 V |
| | -5 V ... 5 V |
| | 0 V ... 10 V |
| | -10 V ... 10 V |
| Load/output load voltage output | > 2 k Ω |
| Precision | typ. 0.1 % (of output range final value) |
| | typ. 0.1 % (of output range final value) |
| Permissible cable length | max. 250 m |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27240405 |
| eCl@ss 4.1 | 27240405 |
| eCl@ss 5.0 | 27242201 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 5.1 | 27242601 |
| eCl@ss 6.0 | 27242601 |
| eCl@ss 7.0 | 27242601 |
| eCl@ss 8.0 | 27242601 |

ETIM

| | |
|----------|----------|
| ETIM 3.0 | EC001599 |
| ETIM 4.0 | EC001599 |
| ETIM 5.0 | EC001596 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 43172015 |
| UNSPSC 7.0901 | 43201404 |
| UNSPSC 11 | 39121311 |
| UNSPSC 12.01 | 39121311 |
| UNSPSC 13.2 | 39121311 |

Approvals

Approvals

Approvals

UL Listed / cUL Listed / BSH / RINA / DNV / cULus Listed

Ex Approvals

Approvals submitted

Approval details

| |
|-----------|
| UL Listed |
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| cUL Listed |
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| BSH |
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Approvals

RINA

DNV

cULus Listed 

Accessories

Accessories

Connector set

Connector set - AXL CNS 4L-O/D/UA/E1/E2 - 2700984



Axioline F plug set (for e.g., AXL F AI8 1F, AXL F AO8 1F)

Device marking

Insert label - EMT (35X46)R - 0801604



Insert label, Roll, white, Unlabeled, Can be labeled with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1, Mounting type: snapped into marker carrier, Lettering field: 35 x 46 mm

DIN rail connector

Bus connector - AXL F BS F - 2688129



Axioline F bus base module for housing type F

Mounting material

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Accessories

Shield connection - AXL SHIELD SET - 2700518



Axiole shield connection set (contains 2 busbar holders and 2 SK 5 shield connection clamps)

Terminal marking

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

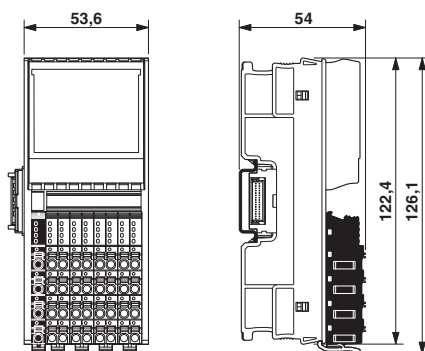
Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580



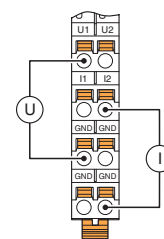
Zack marker strip, flat, in 10 mm pitch, unprinted, 10-section, for individual labeling with M-PEN 0,8, X-PEN, or CMS-P1-PLOTTER

Drawings

Dimensioned drawing



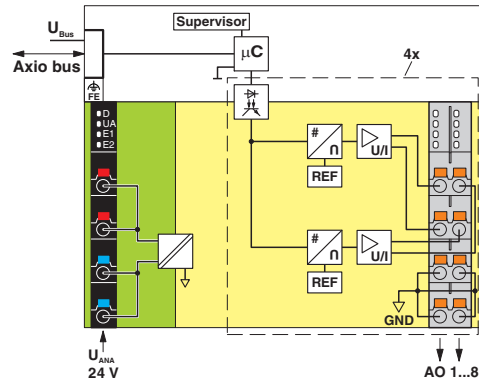
Connection diagram



Connection for voltage and current output

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Block diagram



Internal wiring of the terminal points