AXL P EX IS DO4 SD 24-48 1F - Digital module

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Product description

The module is an Axioline P I/O module for use in the Axioline P modular I/O system. The module is a modular I/O device that can be affixed to the Axioline P local bus, to communicate I/O data up to the Axioline P bus coupler, which forms the head of the station. As an intrinsic safety I/O module, this device allows direct connection from intrinsically safe field I/O to the terminals of the module. The module is fully hot-swappable on the Axioline P local bus, which also provides power to the module. The module digital output characteristics of 24 V DC and 48 mA allow the connection of up to four solenoid driven, digital output signals.

Your advantages

• Four 24 V DC - 48 mA digital output-powered control signals for solenoid drives
• Intrinsically safe digital outputs with connection to Zone 1, Zone 0 or Division 1
• Temperature range: -40 °C ... +70 °C
• Hot-swappable

Commercial data

<table>
<thead>
<tr>
<th>Item number</th>
<th>1087077</th>
</tr>
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<tbody>
<tr>
<td>Packing unit</td>
<td>1 pc</td>
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<tr>
<td>Sales key</td>
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<td>Product key</td>
<td>DRIP32</td>
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<td>Weight per piece (including packing)</td>
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<td>Weight per piece (excluding packing)</td>
<td>266.4 g</td>
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<td>Country of origin</td>
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## Technical data

### Dimensions

<table>
<thead>
<tr>
<th>Dimensional drawing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
</tr>
<tr>
<td>Height</td>
</tr>
<tr>
<td>Depth</td>
</tr>
<tr>
<td>Note on dimensions</td>
</tr>
</tbody>
</table>

### Notes

#### Utilization restriction

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

#### Material specifications

- **Color**: traffic grey A RAL 7042

### Interfaces

- **Axioline P local bus**
  - **Connection method**: Connection for bus base module
  - **Transmission speed**: 100 Mbps

### Output data

- **Digital**
  - **Output name**: Digital output
  - **Connection method**: Push-in connection
  - **Connection technology**: 2-conductor
  - **Number of outputs**: 4
  - **Protective circuit**: Polarity reversal protection of the outputs
  - **Output voltage**: 24 V
  - **Maximum output current per channel**: 48 mA
  - **Nominal output voltage**: 24 V DC
Type | block modular
---|---
Product type | I/O component
Product family | Axioline P
Mounting position | any (no temperature derating)
Scope of delivery | including bus base module and connectors

**Insulation characteristics**

| Overvoltage category | II
---|---
| Pollution degree | 2

**Electrical properties**

Potentials: Supply of the logic voltage $U_L$

| Supply voltage range | 19.2 V DC ... 30 V DC (via bus base module ($U_L$) at AXL P BK...)
---|---

Potentials: Supply of the Axioline P local bus $U_{Bus}$

| Supply voltage | 5 V DC (via bus base module)
| Current draw | max. 135 mA

Potentials: Axioline P extension module supply voltage

| Supply voltage | $U_L$ (via bus base module)
| Current draw | max. 455 mA (via bus base module)

**Electrical isolation/isolation of the voltage ranges**

| Test voltage: 5 V supply of the local bus ($U_{Bus}$) / functional ground | 500 V AC, 62 Hz, 1 min.
| Test voltage: 24 V supply (I/O) / functional ground | 500 V AC, 62 Hz, 1 min.
| Test voltage: Field to functional earth | 500 V AC, 62 Hz, 1 min.
| Test voltage: Field to 5 V and 24 V supplies | 1500 V AC, 62 Hz, 1 min.

**Connection data**

**Connection technology**

| Connection name | Axioline P connector
| Note on the connection method | Please observe the information provided on conductor cross sections in the "Axioline P: system and installation" user manual.

**Conductor connection**

| Connection method | Push-in connection
| 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

**Axioline P connector**

| Connection method | Push-in connection
| Note on the connection method | Please observe the information provided on conductor cross sections in the "Axioline P: system and installation" user manual.
| 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

Environmental and real-life conditions

Ambient conditions

Degree of protection: IP20
Ambient temperature (operation): -40 °C ... 70 °C (Standard)
Degree of protection: IP20
Air pressure (operation): 70 kPa ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport): 70 kPa ... 106 kPa (up to 2000 m above sea level)
Ambient temperature (storage/transport): -40 °C ... 85 °C
Permissible humidity (operation): 5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport): 5 % ... 95 % (non-condensing)

Standards and regulations

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

Approvals

ATEX

Identification: II 3(1) G Ex ec [ia Ga] IIC T4 Gc
Identification: II (1) D [Ex ia Da] IIIC
Certificate: DEMKO 20 ATEX 2370X

IECEx

Identification: Ex ec [ia Ga] IIC T4 Gc
Identification: [Ex ia Da] IIIC
Certificate: IECEx UL 20.0044X

UKCA Ex (UKEX)

Identification: II 3(1) G Ex ec [ia Ga] IIC T4 Gc
Identification: II (1) D [Ex ia Da] IIIC
Certificate: UL22UKEX2508X

Ex data

UL, USA / Canada

Ind. Cont. Eq. (E238705) also Listed
Ind. Cont. Eq. for haz. loc. E196811
Install in: Class I, Div. 2, Groups A, B, C, D T4
Intrinsically safe outputs for: Class I, Groups A, B, C, D; Class II,
Groups E, F, G; Class III; [Ex ia] Haz loc
Class I, Zone 2, AEx ec [ia Ga] IIC T4 Gc
[AEx ia Da] IIIC
Ex ec [ia Ga] IIC T4 Gc
[Ex ia Da] IIIC

Mounting

Mounting type: DIN rail mounting
Mounting position: any (no temperature derating)
### Ex data

#### Safety data

<table>
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<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>Max. output voltage $U_o$</td>
<td>27.3 V</td>
</tr>
<tr>
<td>Max. output current $I_o$</td>
<td>99 mA</td>
</tr>
<tr>
<td>Max. output power $P_o$</td>
<td>676 mW</td>
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<tr>
<td>Safety-related maximum voltage $U_m$</td>
<td>250 V</td>
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<td>A, B / IIC (A, B, or IIC): Max. external inductivity $L_o$ / Max. external capacitance $C_o$</td>
<td>0.088 µF</td>
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<tr>
<td>C/IIB, IIIC (C, IIB, or IIIC): Max. external inductivity $L_o$ / Max. external capacitance $C_o$</td>
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<td>D/IIA, E, F, G, Class III (D, E, F, G, Class III, or IIA): Max. external inductivity $L_o$ / Max. external capacitance $C_o$</td>
<td>2.28 µF</td>
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<td>A, B / IIC (A, B, or IIC): Max. external inductivity $L_o$ / Max. external capacitance $C_o$</td>
<td>1.189 mH</td>
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<td>C/IIB, IIIC (C, IIB, or IIIC): Max. external inductivity $L_o$ / Max. external capacitance $C_o$</td>
<td>12.9 mH</td>
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<td>D/IIA, E, F, G, Class III (D, E, F, G, Class III, or IIA): Max. external inductivity $L_o$ / Max. external capacitance $C_o$</td>
<td>27.41 mH</td>
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Drawings

Dimensional drawing

AXL P EX IS DO4 SD 24-48 1F - Digital module

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1087077

- **UL Listed**
  Approval ID: FILE E 238705

- **cUL Listed**
  Approval ID: FILE E 238705

- **IECEx**
  Approval ID: IECEx UL 20.0044X

- **CCC**
  Approval ID: 2021122316114727

- **cUL Listed**
  Approval ID: FILE E 196811

- **UL Listed**
  Approval ID: FILE E 196811

- **ATEX**
  Approval ID: DEMKO 20 ATEX 2370X

- **cULus Listed**

- **cULus Listed**
AXL P EX IS DO4 SD 24-48 1F - Digital module


Classifications

**ECLASS**

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<td>ECLASS-13.0</td>
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**ETIM**

| ETIM 9.0 | EC001599 |

**UNSPSC**

| UNSPSC 21.0 | 32151600 |

[1087077]
Environmental product compliance

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<tr>
<th>REACH SVHC</th>
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<tr>
<td></td>
<td>Dechlorane Plus</td>
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<table>
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<tr>
<th>China RoHS</th>
<th>Environmentally Friendly Use Period = 25;</th>
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<tr>
<td></td>
<td>For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”</td>
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Accessories

AXL P BS F2 - Bus connector

1052428

AXL SHIELD SET - Shield connection

2700518

AXL P bus base module for housing type F2

Axioline shield connection set (contains 2 shield bus holders and 2 SK 5 shield connection clamps)
AXL P EX IS DO4 SD 24-48 1F - Digital module

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AXL F/P IO EX PP - Separating plate

1100201

Axioline F/P partition plate for intrinsically safe modules

AXL P TERM PAIR - Termination block

2316402

Axioline P terminator pair
**ZB 20,3 AXL UNPRINTED - Zack marker strip**

0829579
https://www.phoenixcontact.com/us/products/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

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**AXL P TERM PAIR - Termination block**

2316402

Axioline P terminator pair
AXL P EX IS DO4 SD 24-48 1F - Digital module

1087077

AXL P BS F2 - Bus connector

1052428

Axioline P bus base module for housing type F2