

AXL E PN DI8 DO4 2A M12 6M - Digital module



2701518

<https://www.phoenixcontact.com/us/products/2701518>

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Axioline E, Digital I/O device, PROFINET, M12 connector, Digital inputs: 8, 24 V DC, connection technology: 4-conductor, Digital outputs: 4, 24 V DC, connection technology: 3-conductor, Metal housing, degree of protection: IP65/IP67

Product description

The Axioline E device is designed for use within a PROFINET network. It is used to acquire and output digital signals. The device is designed for use in systems manufacturing. The device is suitable for use without a control cabinet in harsh industrial ambient conditions. The Axioline E device can be used on tool platforms, directly on welding robots or in conveying technology, for example.

Your advantages

- Connection to PROFINET network using M12 connectors (D-coded)
- Transmission speed of 100 Mbps
- Connection of digital sensors and actuators using M12connectors (A-coded)
- Diagnostic and status indicators
- Short-circuit and overload protection of the sensor supply
- IP65/IP67 degree of protection

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2701518 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DR04 |
| Product key | DRI7PA |
| GTIN | 4046356763684 |
| Weight per piece (including packing) | 740.1 g |
| Weight per piece (excluding packing) | 740 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

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Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 60 mm |
| Height | 185 mm |
| Depth | 38 mm |
| Drill hole spacing | 198.5 mm |
| Note on dimensions | The height is 194.5 mm including the mounting panel. With fixing clips pulled out, the height is 212 mm. The depth is 38 mm including the mounting panel (30.5 mm without the mounting panel). |

Notes

Note on application

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

Material specifications

| | |
|------------------|---------------|
| Housing material | Die-cast zinc |
|------------------|---------------|

Interfaces

PROFINET

| | |
|-------------------------------|----------------------------------|
| Number of interfaces | 2 |
| Connection method | M12 connector |
| Note on the connection method | D-coded |
| Number of positions | 4 |
| Transmission speed | 100 Mbps (with auto negotiation) |

PROFINET

| | |
|---------------------------|-------------------------------|
| Equipment type | PROFINET-Device |
| System-specific protocols | PROFINET protocols LLDP |
| | PROFINET protocols MRP client |
| | PROFINET protocols DCP |
| | PROFINET protocols DCE/RPC |
| Protocols supported | SNMP v1 |
| | HTTP |
| | TFTP |
| | FTP |

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2701518

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Input data

Digital:

| | |
|-----------------------------------|--|
| Input name | Digital inputs |
| Description of the input | IEC 61131-2 types 1 and 3 |
| Number of inputs | 8 |
| Cable length | max. 30 m (to the sensor) |
| Connection method | M12 connector double occupancy |
| Connection technology | 4-conductor |
| Input voltage range "0" signal | 0 V DC ... 5 V DC |
| Input voltage range "1" signal | 11 V DC ... 30 V DC |
| Nominal input voltage U_{IN} | 24 V DC |
| Nominal input current at U_{IN} | typ. 3 mA |
| Sensor current per channel | typ. 75 mA (from U_S) |
| Total sensor current | max. 0.6 A (per device) |
| Input filter time | < 1000 μ s |
| Protective circuit | Overload protection, short-circuit protection of sensor supply |

Output data

Digital:

| | |
|---|--|
| Output name | Digital outputs |
| Connection method | M12 connector, A-coded |
| Connection technology | 3-conductor |
| Number of outputs | 4 |
| Protective circuit | Overload protection, short-circuit protection of outputs; yes |
| Output voltage | 24 V DC |
| Limitation of the voltage induced on circuit interruption | -28 V ... -17 V |
| Maximum output current per channel | 2 A |
| Nominal output voltage | 24 V DC (from voltage U_A) |
| Output voltage range | 18 V DC ... 31.2 V DC |
| Output voltage when switched off | max. 1 V |
| Output current when switched off | max. 20 μ A |
| Nominal load, inductive | 48 VA (1.2 H, 48 Ω , with nominal voltage) |
| Nominal load, ohmic | 48 W (48 Ω , with nominal voltage) |
| Switching frequency | max. 5500 per second (with at least 50 mA load current) max. 1 per second (with inductive load) |
| Reverse voltage resistance to short pulses | Reverse voltage proof |
| Behavior with overload | Auto restart |
| Signal delay | max. 150 μ s (when switched on) max. 200 μ s (when switched off) |
| Overcurrent shut-down | min. 2.2 A |

Product properties

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2701518

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| | |
|--------------------|---------------|
| Product type | I/O component |
| Product family | Axioline E |
| Type | Stand-alone |
| Special properties | Metal housing |

Electrical properties

Potentials

| | |
|--------------------------------|-------------------------|
| Voltage supply U_S | 24 V DC |
| Power supply at U_S | max. 4 A |
| Current consumption from U_S | typ. 8 mA max. 1.2 A |

Supply: Module electronics and sensors

| | |
|----------------------|--|
| Designation | Supply of module electronics and sensors (U_S) |
| Connection method | M12 connector, T-coded |
| Number of positions | 4 |
| Supply voltage | 24 V DC |
| Supply voltage range | 18 V DC ... 31.2 V DC (including all tolerances, including ripple) |
| Current consumption | typ. 140 mA \pm 15 % (at 24 V DC) max. 12 A |

Supply: Actuators

| | |
|----------------------|--|
| Designation | Supply of actuators (U_A) |
| Connection method | M12 connector, T-coded |
| Number of positions | 4 |
| Supply voltage | 24 V DC |
| Supply voltage range | 18 V DC ... 31.2 V DC (including all tolerances, including ripple) |
| Current consumption | typ. 30 mA \pm 15 % (at 24 V DC) max. 12 A |

Electrical isolation/isolation of the voltage ranges

| | |
|---|------------------------|
| Test voltage: 24 V supply (communications power and sensor supply, digital inputs)/bus connection (Ethernet 1) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply (communications power and sensor supply, digital inputs)/bus connection (Ethernet 2) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply (communications power and sensor supply, digital inputs)/FE | 500 V AC, 50 Hz, 1 min |
| Test voltage: Bus connection (Ethernet 1)/FE | 500 V AC, 50 Hz, 1 min |
| Test voltage: Bus connection (Ethernet 2)/FE | 500 V AC, 50 Hz, 1 min |
| Test voltage: Bus connection (Ethernet 1)/bus connection (Ethernet 2) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply (actuator supply, digital outputs)/24 V supply (communications power and sensor supply, digital inputs) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply (actuator supply, digital outputs)/bus connection (Ethernet 1) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply (actuator supply, digital outputs)/bus connection (Ethernet 2) | 500 V AC, 50 Hz, 1 min |

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| | |
|---|------------------------|
| Test voltage: 24 V supply (actuator supply, digital outputs)/FE | 500 V AC, 50 Hz, 1 min |
|---|------------------------|

Connection data

| | |
|-------------------|---------------|
| Connection method | M12 connector |
|-------------------|---------------|

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 % |
| 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 | 30g, 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

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

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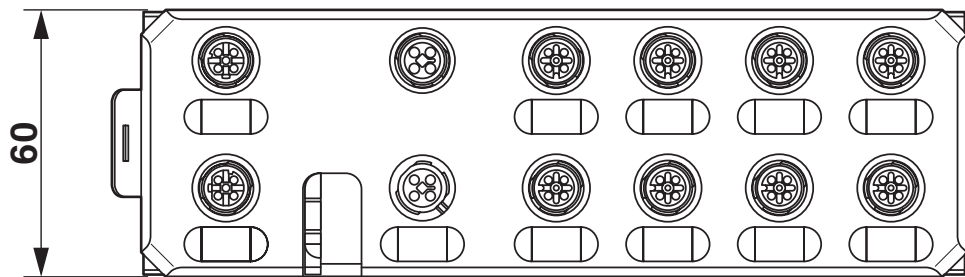


2701518

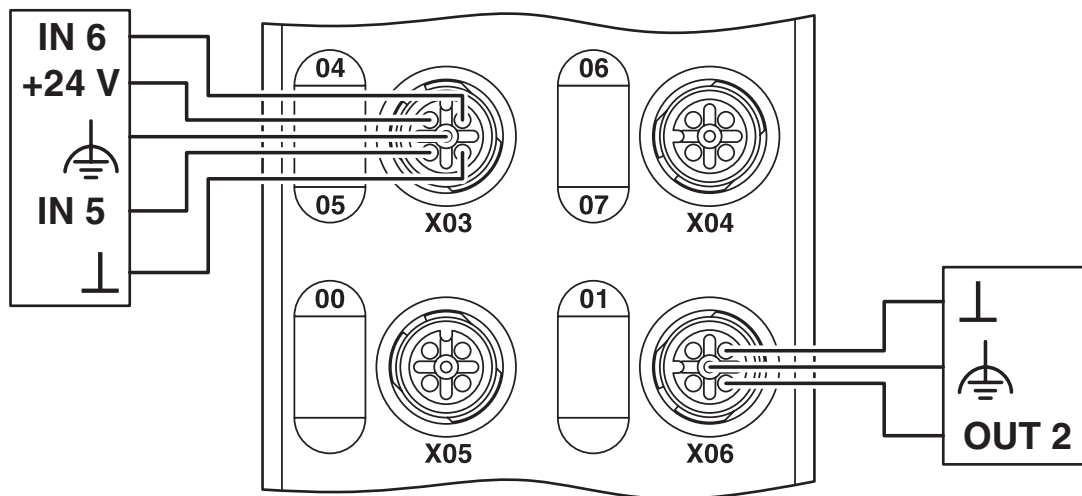
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Drawings

Dimensional drawing



Connection diagram



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Classifications

ECLASS

ECLASS-13.0

27242604

ETIM

ETIM 9.0

EC001599

UNSPSC

UNSPSC 21.0

32151600

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-25 |
| | 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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