

AXL E EC DI8 DO4 2A M12 6P - Digital module



2701523

<https://www.phoenixcontact.com/us/products/2701523>

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

Product description

The Axioline E device is designed for use within an EtherCAT® network. It is used to acquire and output digital signals.

Your advantages

- Connection to EtherCAT® 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 | 2701523 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DR04 |
| Product key | DRI7DE |
| GTIN | 4046356763738 |
| Weight per piece (including packing) | 555.13 g |
| Weight per piece (excluding packing) | 550 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 | 30.5 mm |
| Drill hole spacing | 198.5 mm |
| Note on dimensions | The height is 212 mm including fixing clips. |

Notes

Note on application

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

Material specifications

| | |
|------------------|------------|
| Housing material | Pocan® |
| Color | anthracite |

Interfaces

EtherCAT®

| | |
|-------------------------------|----------------------------------|
| No. of channels | 2 |
| Connection method | M12 connector |
| Note on the connection method | D-coded |
| Number of positions | 4 |
| Transmission speed | 100 Mbps (with auto negotiation) |

EtherCAT®

| | |
|---------------------------|---|
| Equipment type | EtherCAT® subdevice |
| System-specific protocols | Mailbox protocols CANopen® over EtherCAT® Mailbox protocols File access over EtherCAT® |
| Specification | ETG.1000 V1.02 |

Input data

Digital:

| | |
|--------------------------|---------------------------|
| Input name | Digital inputs |
| Description of the input | IEC 61131-2 types 1 and 3 |
| Number of inputs | 8 |

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| | |
|-----------------------------------|--|
| 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

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

Electrical properties

Potentials

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| | |
|--------------------------------|------------|
| 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 |
| 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

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| | |
|--|---|
| 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 % |

Standards and regulations

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

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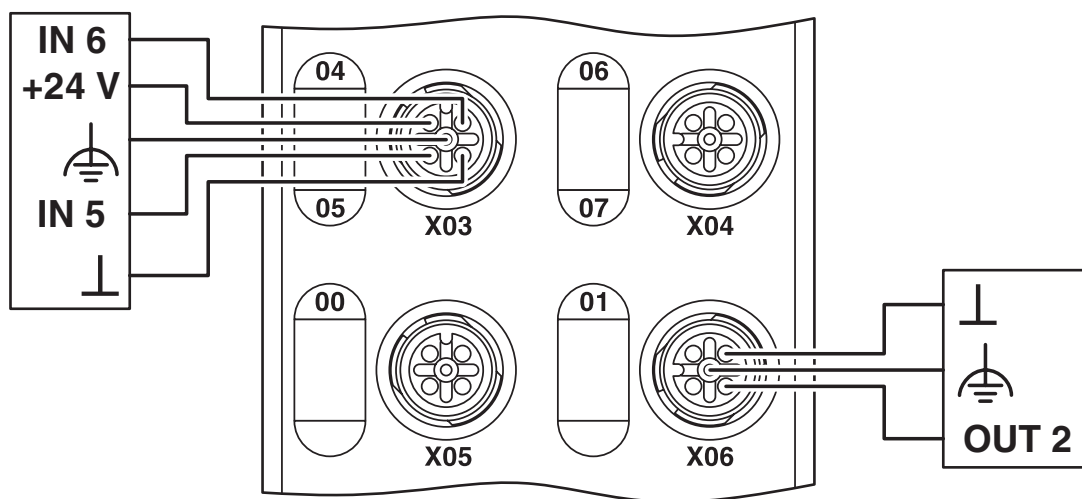
<https://www.phoenixcontact.com/us/products/2701523>

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 |
| Exemption | 6(c) |

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.) | Lead(CAS: 7439-92-1) |
| SCIP | b8da96d1-21fd-4d81-b589-176f3dfe673e |

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