

2701532

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Axioline E, Digital I/O device, Ethernet, M12 connector, Digital inputs: 8, 24 V DC, connection technology: 4-conductor, Digital outputs: 8, 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 Ethernet network (Modbus/TCP). It is used to acquire and output digital signals.

#### Your advantages

- · Connection to Ethernet network using M12 connectors (D-coded)
- Transmission speed of 10 Mbps and 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                          | 2701532       |
|--------------------------------------|---------------|
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DR04          |
| Product key                          | DRI7DB        |
| GTIN                                 | 4046356763806 |
| Weight per piece (including packing) | 560.2 g       |
| Weight per piece (excluding packing) | 542.3 g       |
| Customs tariff number                | 85176200      |
| Country of origin                    | DE            |



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#### Technical data

#### **Dimensions**

| Dimensional drawing | 212<br>185<br>198,5                          |
|---------------------|--|
| 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   |
|-------------------------|---|
| Utilization restriction |   |
| EMC note                | EMC: class A product, see manufacturer's declaration in the download area |

#### Material specifications

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

#### Interfaces

#### Ethernet

| Number of interfaces          | 2                                   |
|-------------------------------|-------------------------------------|
| Connection method             | M12 connector                       |
| Note on the connection method | D-coded                             |
| Number of positions           | 4                                   |
| Transmission speed            | 10/100 Mbps (with auto negotiation) |

#### Modbus/TCP

| Equipment type            | Modbus slave (server)       |
|---------------------------|-----------------------------|
| System-specific protocols | Modbus protocols Modbus/TCP |
| Protocols supported       | SNMP v1                     |
|                           | HTTP                        |
|                           | TFTP                        |
|                           | FTP                         |
|                           | BootP                       |



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|               | DHCP                              |
|---------------|-----------------------------------|
| Specification | Modbus application protocol V1.1b |

#### Input data

#### Digital:

| 2.9                                      |  |
|--|--|
| Input name                               | Digital inputs   |
| Description of the input                 | EN 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 <sub>IN</sub>    | 24 V DC  |
| Nominal input current at U <sub>IN</sub> | 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 µs  |
| Protective circuit                       | Overload protection, short-circuit protection of sensor supply |
|  |  |

#### Output data

#### Digital:

| Output name   | Digital outputs   |
|---|---|
| Connection method   | M12 connector double occupancy                                |
| Connection technology                                     | 3-conductor   |
| Number of outputs   | 8   |
| Protective circuit  | Overload protection, short-circuit protection of outputs; yes |
| Output voltage  | 24 V DC   |
| Limitation of the voltage induced on circuit interruption | -28 V17 V   |
| Maximum output current per channel                        | 500 mA  |
| Nominal output voltage                                    | 24 V DC (from voltage U <sub>A</sub> )                        |
| 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 μA  |
| Nominal load, inductive                                   | 12 VA (1.2 H, 48 Ω, with nominal voltage)                     |
| Nominal load, ohmic                                       | 12 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 μs (when switched on)                                |
|   | max. 200 μs (when switched off)                               |
| Overcurrent shut-down                                     | min. 0.7 A  |



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#### Product properties

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

#### Electrical properties

#### Potentials

| Voltage supply U <sub>S</sub>           | 24 V DC    |
|---|------------|
| Power supply at U <sub>S</sub>          | max. 4 A   |
| Current consumption from U <sub>S</sub> | typ. 8 mA  |
|   | max. 1.2 A |

#### Supply: Module electronics and sensors

| Designation          | Supply of module electronics and sensors (U <sub>S</sub> )     |
|----------------------|--|
| 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. 190 mA ±15 % (at 24 V DC)                                 |
|                      | max. 12 A  |

#### Supply: Actuators

| Designation          | Supply of actuators (U <sub>A</sub> )                          |
|----------------------|--|
| 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 ±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 |  |



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| 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  |   |
|   | -25 °C 60 °C  |
| Ambient conditions  | -25 °C 60 °C<br>IP65/IP67   |
| Ambient conditions  Ambient temperature (operation)   |   |
| Ambient conditions  Ambient temperature (operation)  Degree of protection   | IP65/IP67   |
| Ambient conditions  Ambient temperature (operation)  Degree of protection  Air pressure (operation)                                   | IP65/IP67 70 kPa 106 kPa (up to 3000 m above sea level)   |
| Ambient conditions  Ambient temperature (operation)  Degree of protection  Air pressure (operation)  Air pressure (storage/transport) | IP65/IP67  70 kPa 106 kPa (up to 3000 m above sea level)  70 kPa 106 kPa (up to 3000 m above sea level) |

# Mounting

Standards and regulations

Protection class

| Mounting type | Panel mounting |
|---------------|----------------|
|               | Mounting panel |

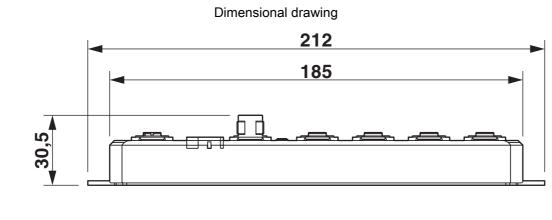
III (IEC 61140, EN 61140, VDE 0140-1)

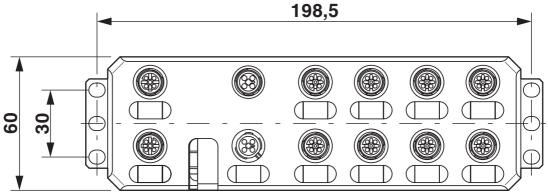


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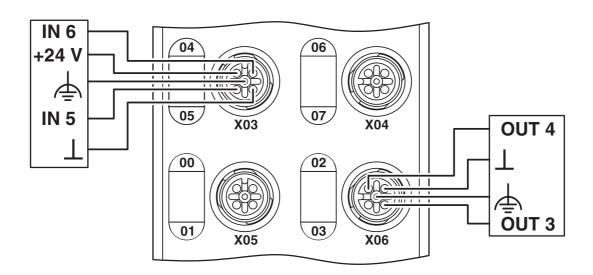
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### Drawings





#### Connection diagram





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#### **Approvals**

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2701532



cULus Listed

Approval ID: E140324



**cULus Listed** Approval ID: E199827



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#### Classifications

UNSPSC 21.0

#### **ECLASS**

|      | ECLASS-13.0 | 27242604 |  |
|------|-------------|----------|--|
|      | ECLASS-15.0 | 27242604 |  |
| ETIM |             |          |  |
|      | ETIM 9.0    | EC001599 |  |
| UI   | NSPSC       |          |  |

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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                                    | 4b1a0dc7-3f75-4f40-92bd-e8d220542814  |

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