

# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Axioline E, Digital I/O device, PROFINET, M12 connector, Digital inputs: 16, 24 V DC, connection technology: 4-conductor, Digital outputs: 16, 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	2701517
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR04
Product key	DRI7PA
GTIN	4046356763677
Weight per piece (including packing)	745 g
Weight per piece (excluding packing)	745 g
Customs tariff number	85176200
Country of origin	DE

2701517

<https://www.phoenixcontact.com/us/products/2701517>

## 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

Color (Housing)	gray (RAL 7042)
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

# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

## Input data

Digital:

Input name	Digital inputs
Description of the input	IEC 61131-2 types 1 and 3
Number of inputs	16
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. 1.2 A (per device)
Input filter time	< 1000 $\mu$ s
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	16
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	500 mA
Nominal output voltage	24 V DC (from voltage $U_S$ )
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 $\mu$ A
Nominal load, inductive	12 VA (1.2 H, 48 $\Omega$ , with nominal voltage)
Nominal load, ohmic	12 W (48 $\Omega$ , 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 $\mu$ s (when switched on) max. 200 $\mu$ s (when switched off)
Overcurrent shut-down	min. 0.7 A

## Product properties

# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

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, sensors, and actuators

Designation	Module electronics, sensors and actuators ( $U_S$ )
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. 190 mA $\pm$ 15 % (at 24 V DC)
	max. 12 A

### Supply: Actuators

Designation	Supply of actuators ( $U_A$ ) for additional devices
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. 3 mA $\pm$ 15 % (at 24 V DC)
	max. 12 A

### Electrical isolation/isolation of the voltage ranges

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

# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

Test voltage: 24 V supply (actuator supply)/bus connection (Ethernet 2)	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (actuator supply)/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

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

# AXL E PN DIO16 M12 6M - Digital module

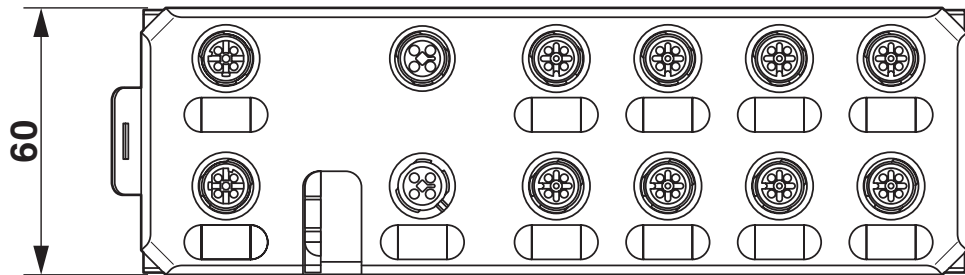
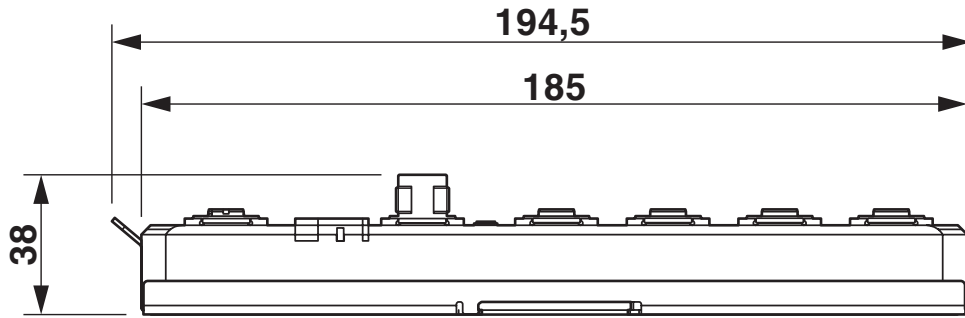


2701517

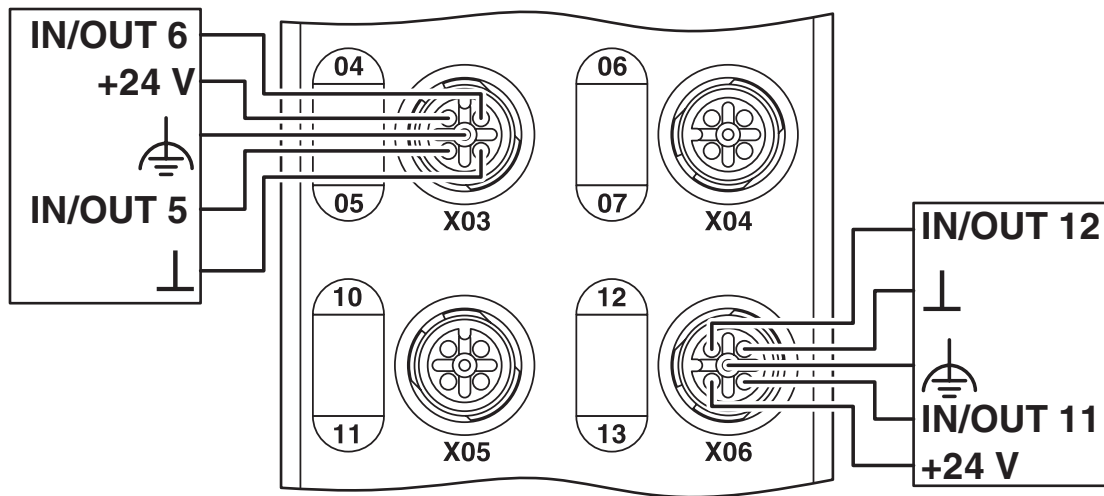
<https://www.phoenixcontact.com/us/products/2701517>

## Drawings

Dimensional drawing



Connection diagram



# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2701517>

### PROFINET

Approval ID: Z12259



### cULus Listed

Approval ID: E140324



### cULus Listed

Approval ID: E199827

# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

### ETIM

ETIM 10.0	EC001599
-----------	----------

### UNSPSC

UNSPSC 21.0	32151600
-------------	----------

# AXL E PN DIO16 M12 6M - Digital module



2701517

<https://www.phoenixcontact.com/us/products/2701517>

## 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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)