

## I/O module - AXL F DI16/1 DO8/2-2A 2H - 2702291

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Axioline F, Digital I/O module, Digital inputs: 16, 24 V DC, connection method: 1-wire, Digital outputs: 8, 24 V DC, 2 A, connection method: 2-wire, transmission speed in the local bus: 100 Mbps, including bus base module and Axioline F connectors

### Product Description

The module is designed for use within an Axioline F station.

It is used to acquire and output digital signals.

The filter times of the inputs can be adjusted to increase noise immunity.

Filter times of 100  $\mu$ s enable the user to implement a counter function with a maximum input frequency of 5 kHz in the application.


The outputs are protected against short circuit and overload.

### Why buy this product

- 16 digital inputs according to EN 61131-2 type 1 and type 3
- 24 V DC, 2.4 mA
- Connection of sensors in single-wire technology
- Filter times can be adjusted in three increments: < 100  $\mu$ s, 1000  $\mu$ s or 3000  $\mu$ s
- Maximum input frequency: 5 kHz
- 8 digital outputs
- 24 V DC, 2 A
- Connection of actuators in 2-wire technology
- Minimum update time of < 150  $\mu$ s
- Device rating plate stored



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 071848
GTIN	4055626071848

### Technical data

#### Dimensions

Width	35 mm
Height	129.9 mm

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## Technical data

### Dimensions

Depth	54 mm
Note on dimensions	The depth is valid when a TH 35-7,5 DIN rail is used (according to EN 60715).

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
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)
Degree of protection	IP20

### Connection data

Designation	Axiline F connectors (digital inputs)
Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axiline F: system and installation" user manual.
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

### General

Mounting type	DIN rail
Net weight	111 g
Note on weight specifications	with connectors and bus base module
Diagnostics messages	I/O supply failure Yes
	Short-circuit / overload of the digital outputs Yes

### Interfaces

Designation	Axiline F local bus
No. of channels	2
Connection method	Bus base module
Transmission speed	100 Mbps

### Axiline potentials

Designation	Axiline F local bus supply (U <sub>Bus</sub> )
Supply voltage	5 V DC (via bus base module)
Current consumption	max. 120 mA
Power consumption	max. 600 mW

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## Technical data

### Axioline potentials

Designation	Supply for digital input and output modules (U <sub>IO</sub> )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current consumption	max. 16 A (Provide external protection; if the total current of 8 A is exceeded, connect the supply at the power connector parallel via both terminal points.)
Power consumption	max. 480 W (of which 6.4 W internal losses)
Type of protection	Surge protection of the supply voltage
	Polarity reversal protection of the supply voltage
Protection	max. 16 A (polarity reversal protection up to 5 A)

### Digital inputs

Input name	Digital inputs
Description of the input	EN 61131-2 types 1 and 3
Connection method	Push-in connection
Connection technology	1-wire
Number of inputs	16
Type of protection	Polarity reversal protection of the inputs
Input filter time	3000 µs (default)
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Nominal input current at U <sub>IN</sub>	2.4 mA

### Digital outputs

Output name	Digital outputs
Connection method	Push-in connection
Connection technology	2-wire
Number of outputs	8
Type of protection	Short-circuit protection, overload protection of the outputs
Output voltage	24 V DC
Nominal output voltage	24 V DC
Maximum output current per channel	2 A
Maximum output current per module	16 A (external fuse)
Nominal load, inductive	max. 48 VA (1.2 H, 12 Ω, at nominal load)
Nominal load, lamp	max. 48 W (at nominal voltage)
Nominal load, ohmic	max. 48 W (12 Ω, at nominal load)

### Electrical isolation

Test section	5 V communications power (logic), 24 V supply (I/O) 500 V AC 50 Hz 1 min.
	5 V supply (logic)/functional earth ground 500 V AC 50 Hz 1 min.
	24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min.

### Standards and Regulations

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## Technical data

### Standards and Regulations

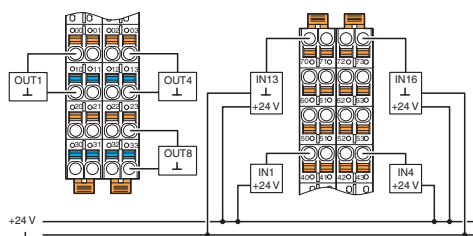
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

### Environmental Product Compliance

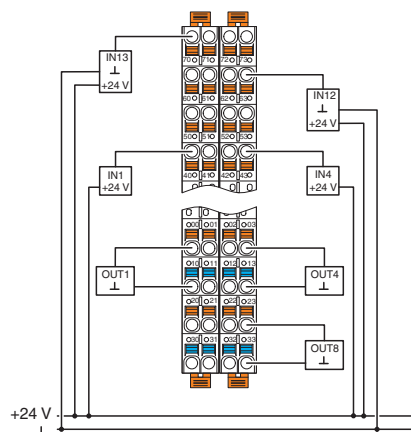
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Connection diagram

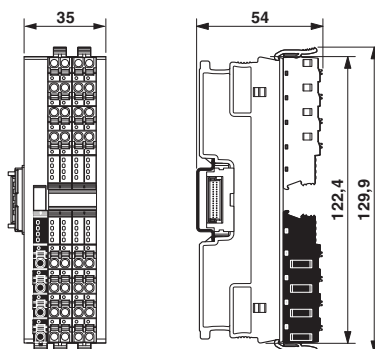


Connection diagram



Example of connection of sensors and actuators

Dimensional drawing



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## Approvals

### Approvals

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#### Approvals




UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

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### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cULus Listed			

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