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## I/O module - AXL F DI8/1 DO8/1 XC 1H - 2702017

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Axioline F XC, Digital I/O module, Digital inputs: 8, 24 V DC, connection method: 1-wire, Digital outputs: 8, 24 V DC, 500 mA, connection method: 1-wire, Extreme conditions version, transmission speed in the local bus: 100 Mbps, including bus base module and Axioline F connectors

The figure shows the standard item

### 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 counting 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

- 8 digital inputs
- 8 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in single-wire technology
- Minimum update time of < 100  $\mu$ s
- Device rating plate stored
- Diagnostic and status indicators
- Can be used under extreme ambient conditions
- Extended temperature range of -40°C ... +70°C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Partially coated PCBs



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 901246
GTIN	4046356901246

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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## Technical data

### Dimensions

Width	35 mm
Height	126.1 mm
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 (Standard)
	-40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
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 connector
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	133 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



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## Technical data

### Axioline potentials

Designation	Axioline F local bus supply ( $U_{Bus}$ )
Supply voltage	5 V DC (via bus base module)
Current consumption	max. 120 mA
Power consumption	max. 600 mW
Designation	Supply for digital input and output modules ( $U_{IO}$ )
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current consumption	max. 8 A (external fuse)
Power consumption	max. 97.35 W (of which 1.35 W internal losses)
Type of protection	Surge protection of the supply voltage
	Polarity reversal protection of the supply voltage
Protection	max. 8 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	8
Type of protection	Polarity reversal protection of the inputs
Input filter time	3000 $\mu$ s (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 $U_{IN}$	2.4 mA

### Digital outputs

Output name	Digital outputs
Connection method	Push-in connection
Connection technology	1-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	500 mA
Maximum output current per module	4 A (external fuse)
Nominal load, inductive	max. 12 VA (1.2 H, 48 $\Omega$ , with nominal voltage)
Nominal load, lamp	max. 12 W (at nominal voltage)
Nominal load, ohmic	max. 12 W (48 $\Omega$ , with nominal voltage)

### Electrical isolation

Test section	5 V communications power (logic), 24 V supply (I/O) 500 V AC 50 Hz 1 min.
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## Technical data

### Electrical isolation

	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

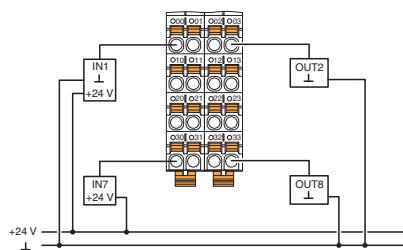
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

### Environmental Product Compliance

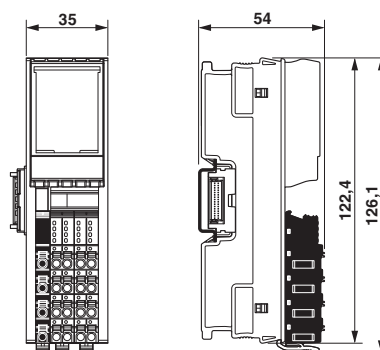
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Connection diagram

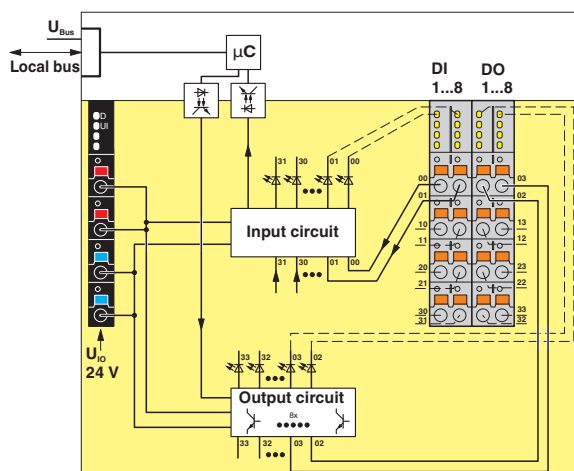


Dimensional drawing



Typical connection of sensors and actuators when using external busbars

Block diagram



Internal wiring of the terminal points

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## Approvals

### Approvals

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#### Approvals

LR / NK / UL Listed / cUL Listed / BV / DNV GL / PRS / BSH / KR / cULus Listed

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#### Ex Approvals

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#### Approval details

LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	14-20019
NK		<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	14A006
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
BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	36433/A2 BV
DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAA00000DF
PRS		<a href="http://www.prs.pl/">http://www.prs.pl/</a>	TE/2106/880590/16
BSH		<a href="http://www.bsh.de/de/index.jsp">http://www.bsh.de/de/index.jsp</a>	840
KR		<a href="http://www.krs.co.kr/eng/main/main.aspx">http://www.krs.co.kr/eng/main/main.aspx</a>	HMB17372-AC002

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### Approvals

cULus Listed



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