

## I/O module - AXL F DO16/3 2F - 2688048

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Axioline F, Digital output module, Digital outputs: 16, 24 V DC, 500 mA, connection method: 3-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 output digital signals. The outputs are protected against short circuit and overload.

### Why buy this product

- 16 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 2 and 3-wire technology
- Minimum update time of < 100 µs
- Device rating plate stored
- Approved for use in applications which meet functional safety requirements

### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 501583
GTIN	4046356501583

### Technical data

#### Dimensions

Width	53.6 mm
Height	129.9 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
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## Technical data

### Ambient conditions

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	Axioline F connector
Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline 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	234 g
Note on weight specifications	with connectors and bus base module

### Interfaces

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

### Axioline potentials

Designation	Axioline 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
Designation	Supply for digital output modules (U <sub>O</sub> )
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. 240 W (Of which 560 mW with internal losses)
Type of protection	Surge protection of the supply voltage
	Polarity reversal protection of the supply voltage

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## Technical data

### Axioline potentials

Protection	max. 8 A (polarity reversal protection up to 5 A)
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### Digital outputs

Output name	Digital outputs
Connection method	Push-in connection
Connection technology	3-wire
Number of outputs	16
Type of protection	Short-circuit protection, overload protection of the outputs
Output voltage	24 V
Nominal output voltage	24 V DC
Maximum output current per channel	500 mA
Maximum output current per module	8 A (external fuse)
Nominal load, inductive	max. 12 VA (1.2 H, 48 Ω, with nominal voltage)
Nominal load, lamp	max. 12 W (at nominal voltage)
Nominal load, ohmic	max. 12 W (48 Ω, with nominal voltage)

### 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

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

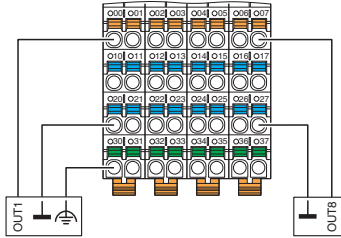
### Environmental Product Compliance

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

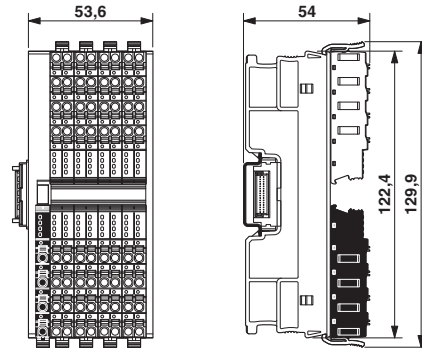
## Drawings

# I/O module - AXL F DO16/3 2F - 2688048

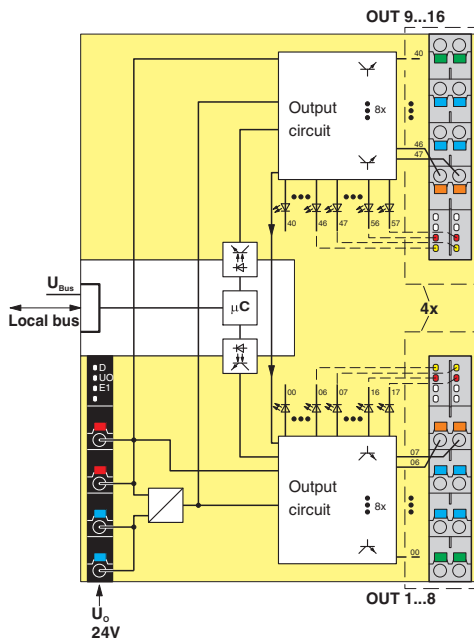
Connection diagram



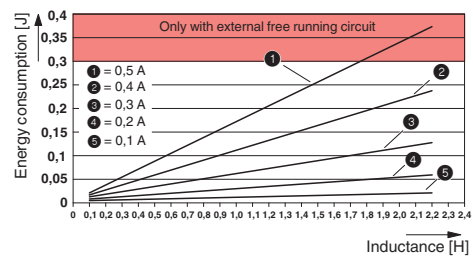
Dimensional drawing



Block diagram



Diagram



Maximum energy consumption of the outputs when switching off inductive loads

The diagram shows the maximum amount of energy that may be fed back into the corresponding output groups (outputs 1 to 4, 5 to 8, 9 to 12, 13 to 16) for each switch off procedure when switching off an inductive load without external freewheeling circuit.

The current data refers to the ohmic DC voltage component of the inductive load.

Note: Restrict freewheeling voltage to a maximum of -15 V when using an external freewheeling circuit. The external freewheeling circuit has no function in the event of a higher negative voltage.

Internal wiring of the terminal points

## Approvals

Approvals

Approvals










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

Ex Approvals

Approval details

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## Approvals

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
EAC			EAC-Zulassung
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	14-20019
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
ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	18-HG1767360-PDA
PRS		<a href="http://www.prs.pl/">http://www.prs.pl/</a>	TE/2106/880590/16
KR		<a href="http://www.krs.co.kr/eng/main/main.aspx">http://www.krs.co.kr/eng/main/main.aspx</a>	HMB17372-AC002
NK		<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	14A006
RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE0078216XG
BSH		<a href="http://www.bsh.de/de/index.jsp">http://www.bsh.de/de/index.jsp</a>	840
DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAA00000DF

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### Approvals

cULus Listed



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