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

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Axioline F digital output module, 16 outputs, 24 V DC, 500 mA, 2 or 3-wire connection method (including bus base module and 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.

### Product Features

- ✓ 16 digital outputs
- ✓ 24 V DC, 500 mA
- ✓ Connection of actuators in 2 and 3-wire technology
- ✓ Minimum update time of < 100  $\mu$ s
- ✓ Device rating plate stored
- ✓ Diagnostic and status indicators



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	280.0 GRM
Custom tariff number	85389091
Country of origin	Germany

### 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).

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## Technical data

### 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	Axioline F connector
Connection method	Push-in technology
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 stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max.	16
Stripping length	8 mm

### General

Weight	234 g
Note on weight specifications	with connectors and bus base module
Mounting type	DIN rail
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
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
Conformance with EMC directives	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge
	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m
	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
	Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; DC supply lines: ±0.5 kV/±0.5 kV (symmetrical/asymmetrical)
	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V
	Noise emission test according to EN 61000-6-3 Radio interference properties EN 55022 Class B



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## Technical data

### General

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
Diagnostics messages	I/O supply failure configurable
	Short-circuit / overload of the digital outputs Yes

### Interfaces

Designation	Axioline F local bus
Connection method	Bus base module
Transmission speed	100 MBit/s

### Axioline potentials

Communications power $U_{Bus}$	5 V DC (via bus base module)
Current consumption from $U_{Bus}$	max. 120 mA
Supply of digital output modules $U_O$	24 V DC
Current consumption from $U_O$	max. 8 A (external fuse)

### Digital outputs

Output name	Digital outputs
Connection method	Push-in technology
	2, 3-wire
Number of outputs	16
Protective circuit	Short-circuit protection, overload protection of the outputs Electronic
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 $\Omega$ ; with nominal voltage)
Nominal load, lamp	max. 12 W (at nominal voltage)
Nominal load, ohmic	max. 12 W (48 $\Omega$ ; with nominal voltage)

## Classifications

### eCl@ss

eCl@ss 4.0	27240404
eCl@ss 4.1	27240404
eCl@ss 5.0	27242204
eCl@ss 5.1	27242604
eCl@ss 6.0	27242604

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## Classifications

### eCl@ss

eCl@ss 7.0	27242604
eCl@ss 8.0	27242604

### ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	39121311

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / BSH / RINA / GL / DNV / BV / LR / GL-SW / ABS / cULus Listed / GL

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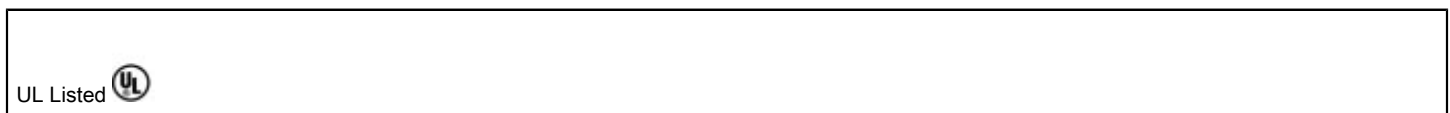
#### Ex Approvals

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#### Approvals submitted

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### Approval details



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

## Approvals

BSH

RINA

GL

DNV

BV

LR

GL-SW

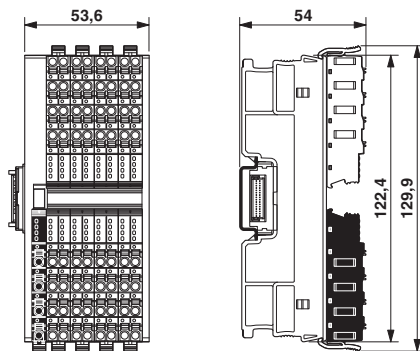
ABS

cULus Listed 

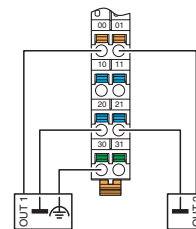
GL

## Drawings

Dimensioned drawing

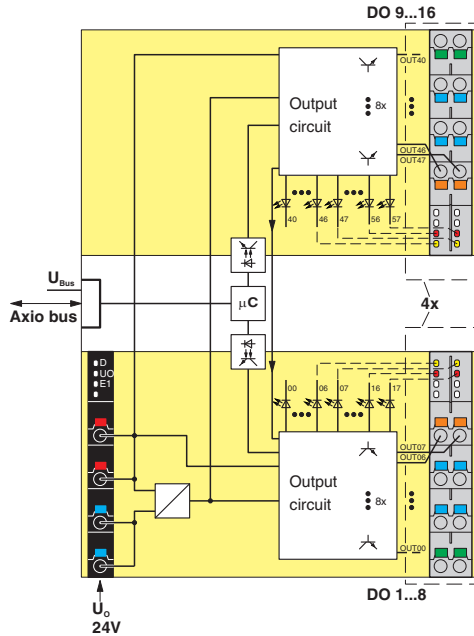


Connection diagram

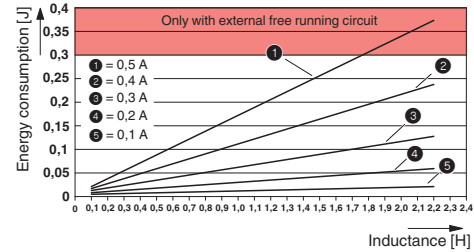


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Block diagram



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