

# AXL F DO8/2 2A 1H - Digital module



2688381

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Axioline F, Digital output module, Digital outputs: 8, 24 V DC, 2 A, connection technology: 2-conductor, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, 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.

## Your advantages

- 8 digital outputs
- 24 V DC, 2 A
- Connection of actuators in 2-conductor technology
- Minimum update time of < 100  $\mu$ s
- Device rating plate stored

## Commercial data

Item number	2688381
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI232
Catalog page	Page 76 (C-6-2019)
GTIN	4046356606479
Weight per piece (including packing)	183.633 g
Weight per piece (excluding packing)	183.633 g
Customs tariff number	85389091
Country of origin	DE

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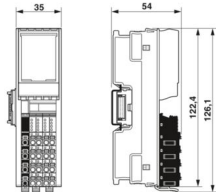


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## Technical data

### Dimensions

Dimensional drawing	
Width	35 mm
Height	126.1 mm
Depth	54 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

### Interfaces

#### Axioline F local bus

Number of interfaces	2
Connection method	Bus base module
Transmission speed	100 Mbps

### System properties

#### Module

ID code (hex)	none
Input address area	0 Byte
Output address area	1 Byte
Required parameter data	1 Byte
Required configuration data	6 Byte

### Output data

#### Digital

Output name	Digital outputs
Connection method	Push-in connection
Connection technology	2-conductor
Number of outputs	8
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V
Maximum output current per module	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.)
Nominal output voltage	24 V DC

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Load min.	10 kΩ
Output voltage when switched off	max. 1 V
Output current when switched off	max. 300 μA
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)
Switching frequency	max. 6000 per second (with nominal ohmic load, up to HW 02)
	max. 10000 per second (For min. 50 mA load current, from HW 03)
	max. 1 per second (with inductive load)
	max. 4 per second (with nominal lamp load)
Reverse voltage resistance to short pulses	limited protection up to 0.5 A for 1 s
Behavior with overload	Shutdown with automatic restart
Behavior with inductive overload	Output can be destroyed
Signal delay	max. 150 μs (When switching on, up to HW 02)
	max. 150 μs (When switching off, for min. 100 mA load current, up to HW 02)
	max. 100 μs (When switching on, from HW 03)
	max. 100 μs (When switching off, for min. 100 mA load current, from HW 03)
Overcurrent shut-down	as of 2.8 A
Output current with ground connection interrupt when switched off	< 1 mA
Output name	Digital outputs
Connection method	Push-in connection
Connection technology	2-conductor
Number of outputs	8
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V
Maximum output current per module	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.)
Nominal output voltage	24 V DC
Load min.	10 kΩ
Output voltage when switched off	max. 1 V
Output current when switched off	max. 300 μA
Nominal load, inductive	max. 48 VA (1.2 H, 12 Ω, at nominal load)
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Switching frequency	max. 6000 per second (with nominal ohmic load, up to HW 02)
	max. 10000 per second (For min. 50 mA load current, from HW 03)
	max. 1 per second (with inductive load)
	max. 4 per second (with nominal lamp load)
Reverse voltage resistance to short pulses	limited protection up to 0.5 A for 1 s

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Behavior with overload	Shutdown with automatic restart
Behavior with inductive overload	Output can be destroyed
Signal delay	max. 150 $\mu$ s (When switching on, up to HW 02)
	max. 150 $\mu$ s (When switching off, for min. 100 mA load current, up to HW 02)
	max. 100 $\mu$ s (When switching on, from HW 03)
	max. 100 $\mu$ s (When switching off, for min. 100 mA load current, from HW 03)
Overcurrent shut-down	as of 2.8 A
Output current with ground connection interrupt when switched off	< 1 mA

## Product properties

Type	block modular
Product type	I/O component
Product family	Axioline F
Mounting position	any (no temperature derating)
Scope of delivery	including bus base module and Axioline F connectors

## Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

## Electrical properties

Maximum power dissipation for nominal condition	4.25 W
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## Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 150 mA (up to HW 02)
	max. 60 mA (from HW 03)
Power consumption	max. 750 mW (up to HW 02)
	max. 300 mW (from HW 03)

## Potentials: Supply for digital output modules ( $U_O$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	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 3.5 W are internal losses)
Protective circuit	Surge protection; electronic (35 V, 0.5 s)
	Reverse polarity protection; parallel diode; with external 5 A fuse (only for commissioning)

## Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply of the local bus ( $U_{BUS}$ ) / 24 V supply (I/Os)	500 V AC, 50 Hz, 1 min.
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Test voltage: 5 V supply of the local bus ( $U_{BUS}$ ) / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min.

## Connection data

### Connection technology

Connection name	Axioline F connector
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline F: system and installation" user manual.

### Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	20 ... 16
Stripping length	8 mm

### 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, rigid	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	20 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating)

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## Classifications

### ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

### ETIM

ETIM 9.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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