

AXL F DO16/3 2F - Digital module

2688048

<https://www.phoenixcontact.com/us/products/2688048>



Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Axioline F, Digital output module, Digital outputs: 16, 24 V DC, 500 mA, connection technology: 3-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

- 16 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 2- and 3-conductor technology
- Minimum update time of < 100 µs
- Device rating plate stored

Commercial data

Item number	2688048
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI232
Catalog page	Page 77 (C-6-2019)
GTIN	4046356501583
Weight per piece (including packing)	299 g
Weight per piece (excluding packing)	234 g
Customs tariff number	85389091
Country of origin	DE

AXL F DO16/3 2F - Digital module

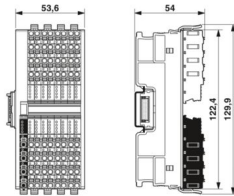
2688048

<https://www.phoenixcontact.com/us/products/2688048>



Technical data

Dimensions

Dimensional drawing	
Width	53.6 mm
Height	129.9 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

Input address area	0 Byte
Output address area	2 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	3-conductor
Number of outputs	16
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V
Limitation of the voltage induced on circuit interruption	-25.8 V ... -15 V
Maximum output current per module	max. 8 A (provide external protection)
Nominal output voltage	24 V DC
Load min.	10 kΩ
Output voltage when switched off	max. 1 V

AXL F DO16/3 2F - Digital module



2688048

<https://www.phoenixcontact.com/us/products/2688048>

Output current when switched off	max. 300 µA
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)
Switching frequency	max. 10000 per second (with at least 50 mA load current)
	max. 1 per second (with inductive load)
	max. 16 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. 100 µs (when switched on)
	max. 100 µs (when switched off, with at least 50 mA load current)
Overcurrent shut-down	as of 0.7 A
Output current with ground connection interrupt when switched off	< 1 mA
Output name	Digital outputs
Connection method	Push-in connection
Connection technology	3-conductor
Number of outputs	16
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V
Limitation of the voltage induced on circuit interruption	-25.8 V ... -15 V
Maximum output current per module	max. 8 A (provide external protection)
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. 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)
Switching frequency	max. 10000 per second (with at least 50 mA load current)
	max. 1 per second (with inductive load)
	max. 16 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. 100 µs (when switched on)
	max. 100 µs (when switched off, with at least 50 mA load current)
Overcurrent shut-down	as of 0.7 A
Output current with ground connection interrupt when switched off	< 1 mA

Product properties

Type	block modular
------	---------------

AXL F DO16/3 2F - Digital module



2688048

<https://www.phoenixcontact.com/us/products/2688048>

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	1.16 W
---	--------

Potentials: Axioline F local bus supply (U_{BUS})

Supply voltage	5 V DC (via bus base module)
Current draw	max. 120 mA (up to HW 04)
	max. 60 mA (from HW 05)
Power consumption	max. 600 mW (up to HW 04)
	max. 300 mW (from HW 05)

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. 8 A (provide external protection)
Power consumption	max. 240 W (of which 560 mW with 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.
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	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

AXL F DO16/3 2F - Digital module



2688048

<https://www.phoenixcontact.com/us/products/2688048>

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	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 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)
------------------	---------------------------------------

Mounting

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

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com