

AXL F DO16/2 2H - Digital module



1027904

<https://www.phoenixcontact.com/us/products/1027904>

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Axioline F, Digital output module, Digital outputs: 16, 24 V DC, 500 mA, 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

- 16 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 2-conductor technology
- Single-channel diagnostics
- Minimum update time of < 100 μ s
- Device rating plate stored

Commercial data

Item number	1027904
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI232
Catalog page	Page 77 (C-6-2019)
GTIN	4055626523767
Weight per piece (including packing)	212.8 g
Weight per piece (excluding packing)	212.8 g
Customs tariff number	85389091
Country of origin	DE

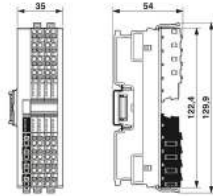
AXL F DO16/2 2H - Digital module

1027904

<https://www.phoenixcontact.com/us/products/1027904>

Technical data

Dimensions

Dimensional drawing	
Width	35 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	2-conductor
Number of outputs	16
Protective circuit	Short-circuit protection, overload protection of the outputs; electronic
Output voltage	24 V DC
Limitation of the voltage induced on circuit interruption	-32.8 V ... -15 V
Maximum output current per module	8 A (provide external protection)
Nominal output voltage	24 V DC
Load min.	10 k Ω
Output voltage when switched off	max. 1 V

AXL F DO16/2 2H - Digital module



1027904

<https://www.phoenixcontact.com/us/products/1027904>

Output current when switched off	max. 300 μ A
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 μ s (when switched on)
	max. 100 μ s (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
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	1.6 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. 60 mA
Power consumption	max. 300 mW

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 1.3 W constitute 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)

Connection data

Connection technology

AXL F DO16/2 2H - Digital module



1027904

<https://www.phoenixcontact.com/us/products/1027904>

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

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 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

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)

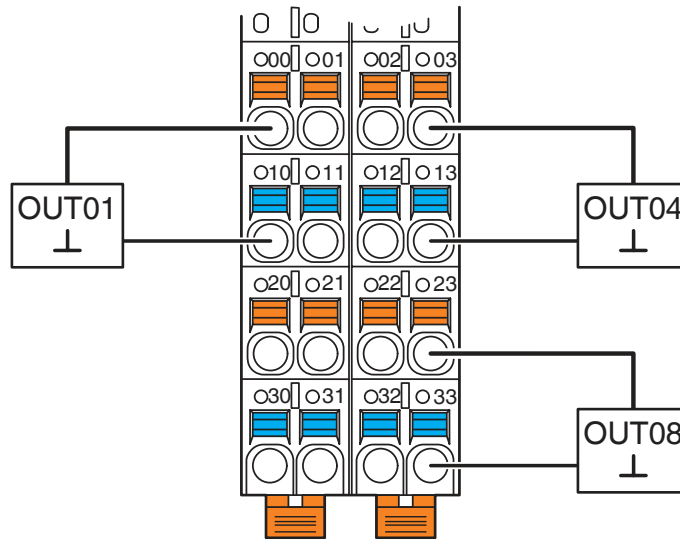
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1027904

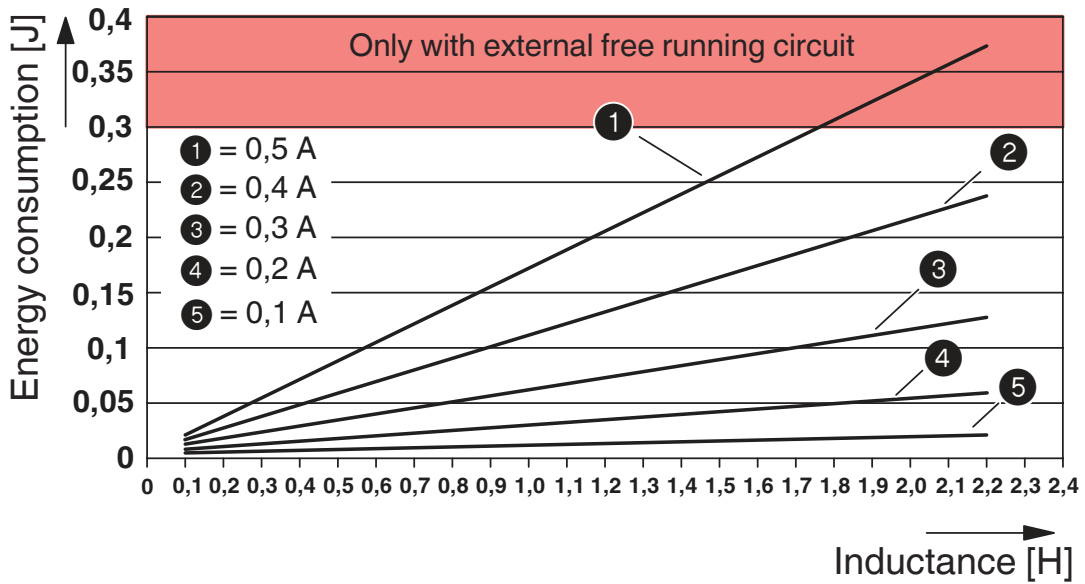
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Drawings

Connection diagram



Diagram



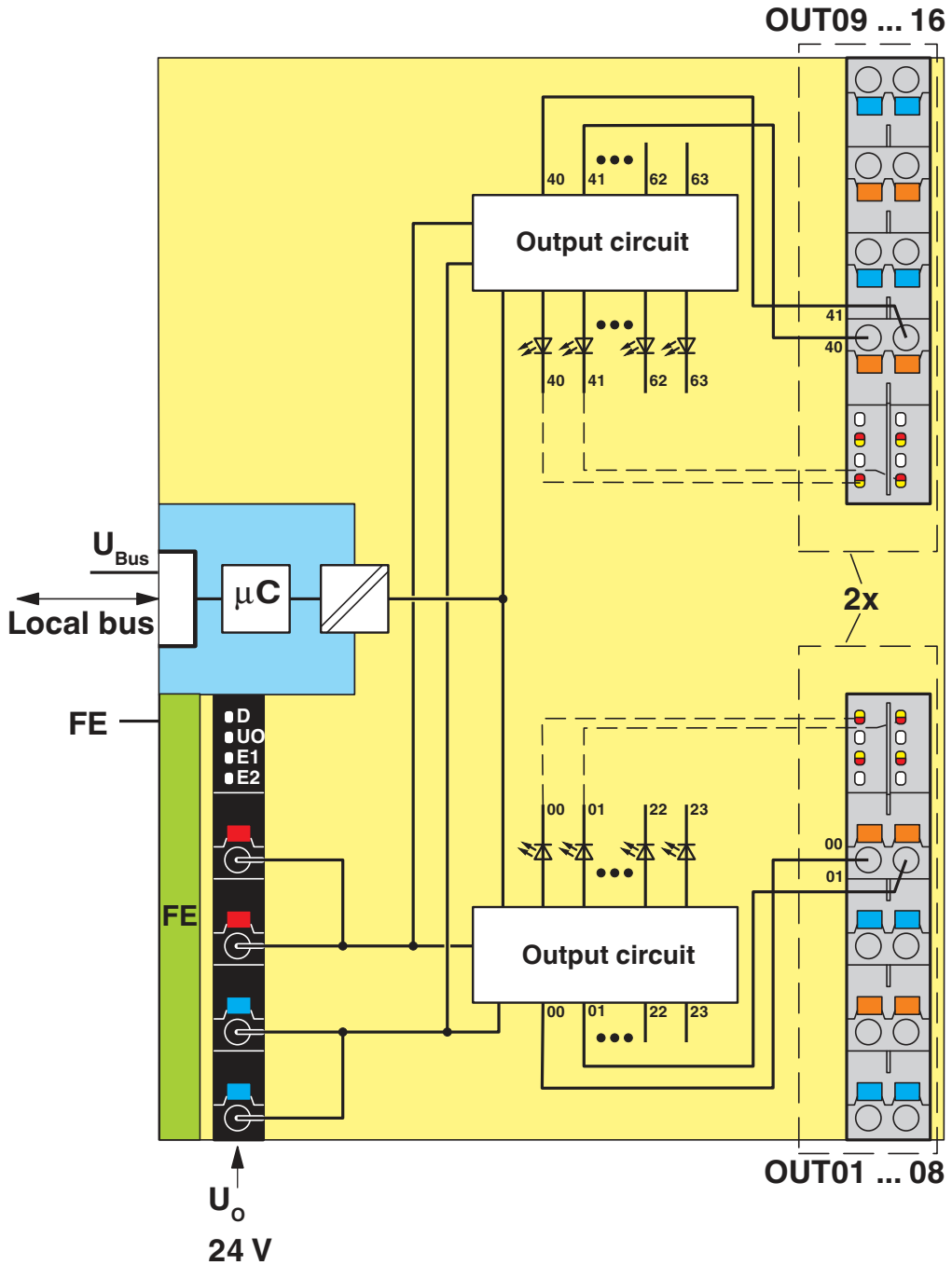
Maximum outputs power consumption when inductive loads are switched off

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Block diagram



Internal wiring of the terminal points

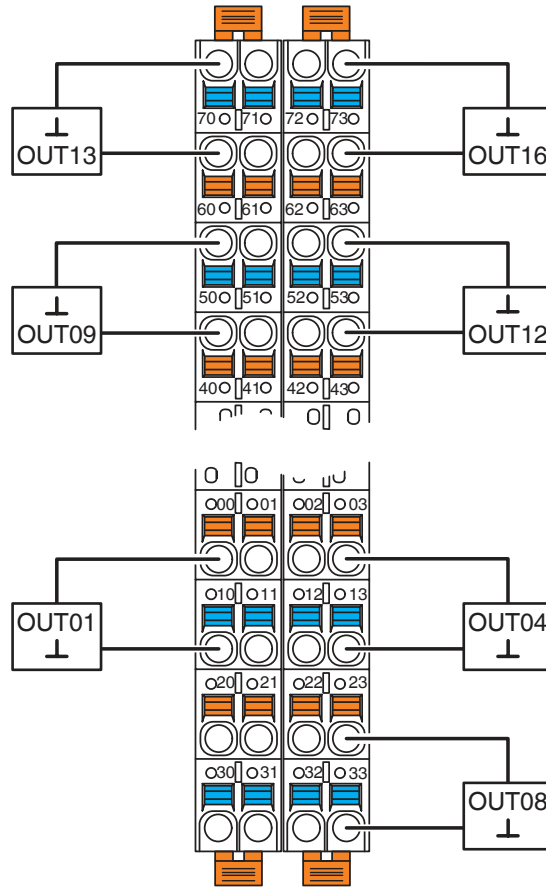
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Connection diagram



Connection in 2-conductor technology

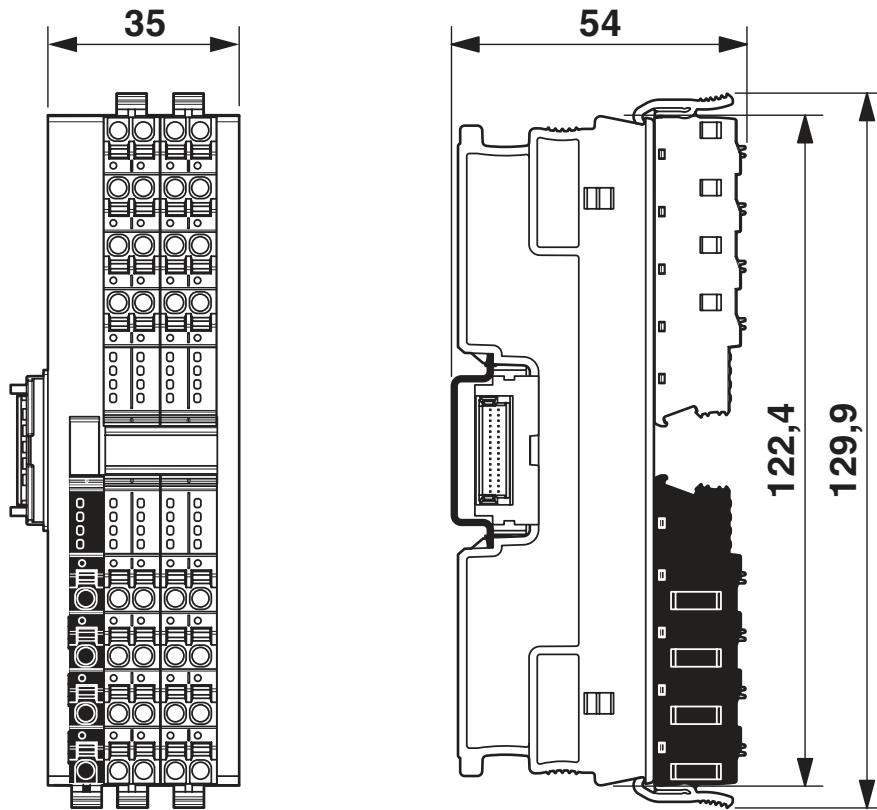
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Dimensional drawing



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Approvals

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DNV GL

Approval ID: TAA00000DF



LR

Approval ID: LR2001902TA



NK

Approval ID: 14A006



BV

Approval ID: 36433/B4 BV



PRS

Approval ID: TE/1020/880590/21



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705

BSH

Approval ID: 840



RINA

Approval ID: ELE283021XG

ABS

Approval ID: 21-2187864-PDA

Functional Safety

Approval ID: 968/EL 711.05/16

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UAE-RoHS

Approval ID: 23-02-63242

cULus Listed

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Classifications

ECLASS

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

ETIM

ETIM 8.0	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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Accessories

AXL F BS H - Bus connector

2700992

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Axioline F bus base module for housing type H



ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

<https://www.phoenixcontact.com/us/products/0829579>



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

AXL F DO16/2 2H - Digital module

1027904

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ZBF 10/5,8 AXL UNPRINTED - Zack Marker strip, flat

0829580

<https://www.phoenixcontact.com/us/products/0829580>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 10.15 mm, lettering field size: 4 x 10, 15 x 5 mm, 1 x 5.8 x 5 mm, Number of individual labels: 50

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