

AXL F DI16/4 2F - Digital module



2688022

<https://www.phoenixcontact.com/us/products/2688022>

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 input module, Digital inputs: 16, 24 V DC, connection technology: 4-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 acquire digital signals. You can adjust the filter times of the inputs to increase noise immunity. Filter times of 100 μ s enable you to implement a counter function with a maximum input frequency of 5 kHz in the application.

Your advantages

- 16 digital inputs in accordance with EN 61131-2 type 1 and type 3
- 24 V DC, 2.4 mA
- Connection of sensors in 2-, 3-, and 4-conductor technology
- Filter times can be adjusted in two increments: < 100 μ s or 500 μ s
- Maximum input frequency: 5 kHz
- Maximum permissible load current per sensor: 2 A
- Maximum permissible load current of the module: 4 A (2 A for each group of a max. 8 sensors)
- Minimum update time of < 100 μ s
- Device rating plate stored

Commercial data

Item number	2688022
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI231
GTIN	4046356501606
Weight per piece (including packing)	296.8 g
Weight per piece (excluding packing)	231 g
Customs tariff number	85389091
Country of origin	DE

AXL F DI16/4 2F - Digital module

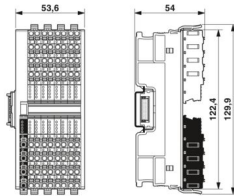


2688022

<https://www.phoenixcontact.com/us/products/2688022>

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).

Notes

Note on application	
Note on application	Only for industrial use

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	2 Byte
Output address area	0 Byte
Required parameter data	3 Byte
Required configuration data	6 Byte

Input data

Digital:	
Input name	Digital inputs
Description of the input	EN 61131-2 types 1 and 3
Number of inputs	16
Connection method	Push-in connection
Connection technology	4-conductor
Input voltage range "0" signal	-3 V DC ... 5 V DC

AXL F DI16/4 2F - Digital module



2688022

<https://www.phoenixcontact.com/us/products/2688022>

Input voltage range "I" signal	11 V DC ... 30 V DC
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	2.4 mA
Input filter time	500 μ s (Default) < 100 μ s
Protective circuit	Polarity reversal protection of the inputs; electronic

Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any (no temperature derating)
Scope of supply	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	2.3 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)

Potentials: Supply for digital input modules (U_I)

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 4 A (Sensor supply U_S)
Protective circuit	Surge protection; electronic (35 V, 0.5 s) Reverse polarity protection; parallel diode; with external 5 A fuse (only for commissioning)

Supply: Sensor supply (U_S)

Designation	Sensor supply (U_S)
Supply voltage	24 V DC (from U_I)

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

AXL F DI16/4 2F - Digital module



2688022

<https://www.phoenixcontact.com/us/products/2688022>

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)
------------------	---------------------------------------

Mounting

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

AXL F DI16/4 2F - Digital module

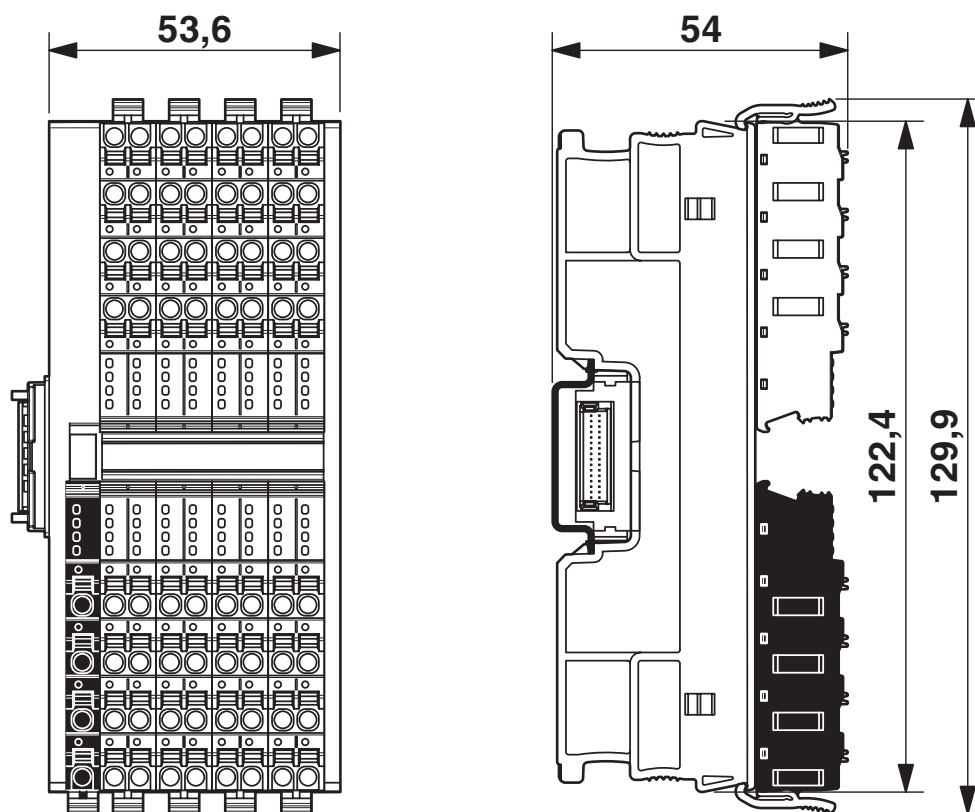
2688022

<https://www.phoenixcontact.com/us/products/2688022>



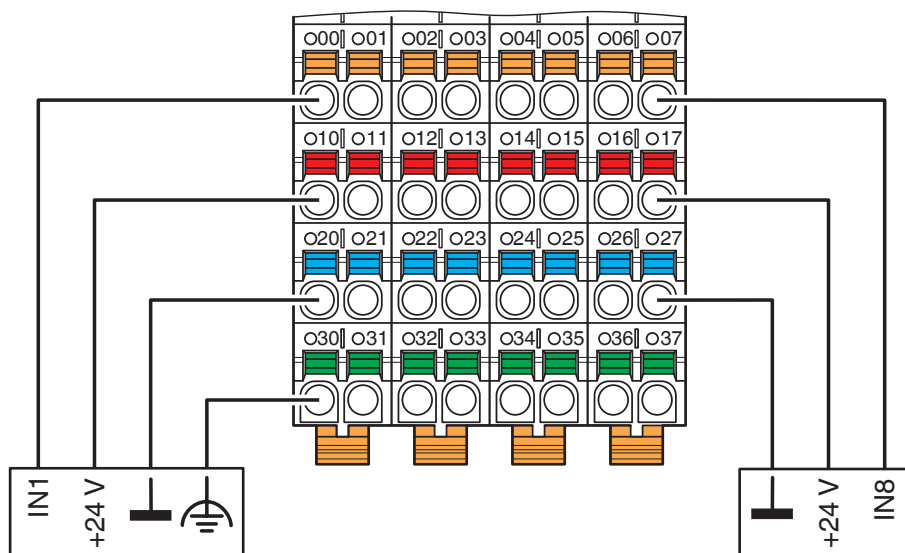
Drawings

Dimensional drawing



Dimensions

Connection diagram



Connection example

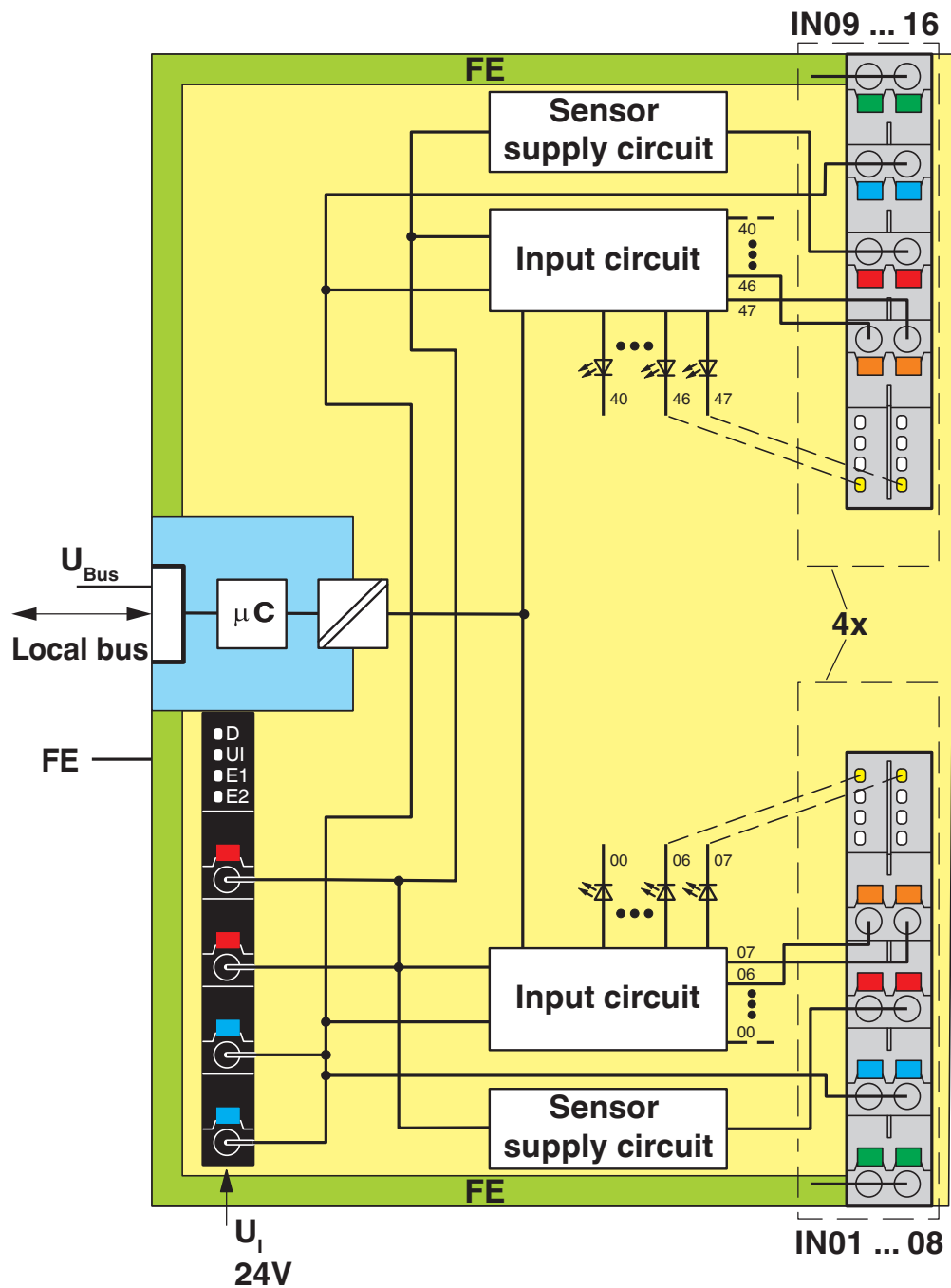
AXL F DI16/4 2F - Digital module

2688022

<https://www.phoenixcontact.com/us/products/2688022>



Block diagram



Internal wiring of the terminal points

AXL F DI16/4 2F - Digital module



2688022

<https://www.phoenixcontact.com/us/products/2688022>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2688022>



DNV GL

Approval ID: TAA00000DF



LR

Approval ID: LR2480202TA-02



PRS

Approval ID: TE/1020/880590/21

BSH

Approval ID: 840



RINA

Approval ID: ELE008423XG001

ABS

Approval ID: 20-2059154-PDA



cULus Listed

Approval ID: E238705



cULus Listed

Approval ID: E238705

AXL F DI16/4 2F - Digital module



2688022

<https://www.phoenixcontact.com/us/products/2688022>

Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 9.0	EC001599
----------	----------

UNSPSC

UNSPSC 21.0	32151600
-------------	----------

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	265d6a5b-2dc9-4af5-a8e9-7958ac2ce830