

# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

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: 8, 110 V DC / 220 V DC, connection technology: 2-conductor, corresponds to standard IEC 61850-3, 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 DC voltage signals in the low-voltage range. Low-voltage and extra-low-voltage modules can be used side by side within an Axioline F station.

## Your advantages

- 8 digital inputs according to EN 61131-2 type 1
- Connection of sensors in 2-conductor technology
- 110 V DC / 220 V DC, 1.5 mA
- Filter time of < 1 ms
- Inputs are reverse polarity protected
- Safe isolation in accordance with EN 61010-2-201/IEC 61010-2-201
- Device rating plate stored
- Diagnostic and status indicators
- Meets the requirements of IEC 61850-3 and IEEE 1613

## Commercial data

Item number	2700684
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI231
GTIN	4046356916448
Weight per piece (including packing)	218.6 g
Weight per piece (excluding packing)	173 g
Customs tariff number	85389091
Country of origin	DE

# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

## Technical data

### Dimensions

Dimensional drawing	
Width	53.6 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).

### Notes

#### Note on application

Note on application	Only for industrial use
---------------------	-------------------------

### Material specifications

Color (Housing)	gray (RAL 7042)
-----------------	-----------------

### Interfaces

#### Axioline F local bus

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

### System properties

#### Programming data (LocalbusSlave)

Input address area	1 Byte
Output address area	0 Byte

#### Fieldbus data telegram

Required parameter data	3 Byte
Required configuration data	6 Byte

### Input data

#### Digital:

Input name	Digital inputs
Description of the input	EN 61131-2 type 1
Number of inputs	8

# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

Connection method	Push-in connection
Connection technology	2-conductor
Input voltage	110 V DC (Nominal voltage)
	220 V DC (Nominal voltage)
	max. 300 V DC
Input voltage range	-300 V DC ... 300 V DC
Input voltage range "0" signal	-41 V DC ... 41 V DC
Input voltage range "1" signal	88 V DC ... 300 V DC
Nominal input voltage $U_{IN}$	110 V DC
	220 V DC
Nominal input current at $U_{IN}$	1.5 mA
Current flow	linear until nominal current is reached, then constantly approximately 1.5 mA
Input filter time	< 1 ms
Process data update	< 100 $\mu$ s
Protective circuit	Polarity reversal protection of the inputs

## Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any (observe temperature and voltage derating); Nominal mounting position: panel mounting on horizontal DIN rail
Scope of supply	including bus base module and Axioline F connectors
Special properties	corresponds to standard IEC 61850-3

## Insulation characteristics

Overvoltage category	III (EN 61010-2-201/UL 61010-2-201), up to 2000 m above sea level
	II (EN 61010-2-201/UL 61010-2-201), up to 3000 m above sea level
Pollution degree	2

## Electrical properties

Maximum power dissipation for nominal condition	3.25 W
---	--------

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

Supply voltage	5 V DC (via bus base module)
Current draw	max. 120 mA

### Potentials: Supply for digital input modules ( $U_I$ )

Protection	max. 8 A (for startup only)
------------	-----------------------------

### Electrical isolation/isolation of the voltage ranges

Test voltage: I/Os / logic	4 kV
	5 kV
Test voltage: I/O/functional ground	4 kV

# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

	5 kV
Test voltage: I/O / I/O (adjacent connectors)	2.5 kV
Test voltage: Logic/functional ground	1 kV

## 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.

### 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 <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Mounting position: panel mounting on horizontal DIN rail, input voltage: max. 264 V) -25 °C ... 55 °C (Mounting position: any)
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)

### Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	30g
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

## Standards and regulations

Developed according to standard	Immunity to ESD
	Immunity to EF
	Immunity to burst
	Immunity to surge
	Immunity to conducted interference
Standard designation	Ambient conditions
Standards/specifications	IEC 61850-3

# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

## Mounting

Mounting type	DIN rail mounting
Mounting position	any (observe temperature and voltage derating); Nominal mounting position: panel mounting on horizontal DIN rail

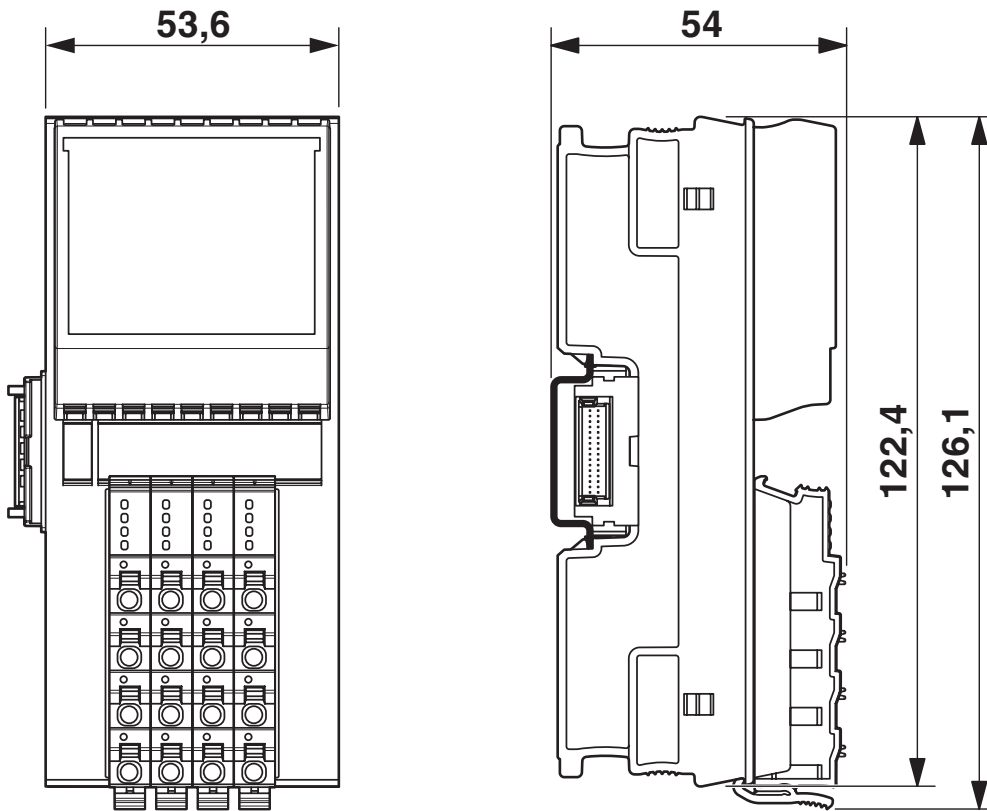
# AXL F DI8/2 110/220DC 1F - Digital module

2700684

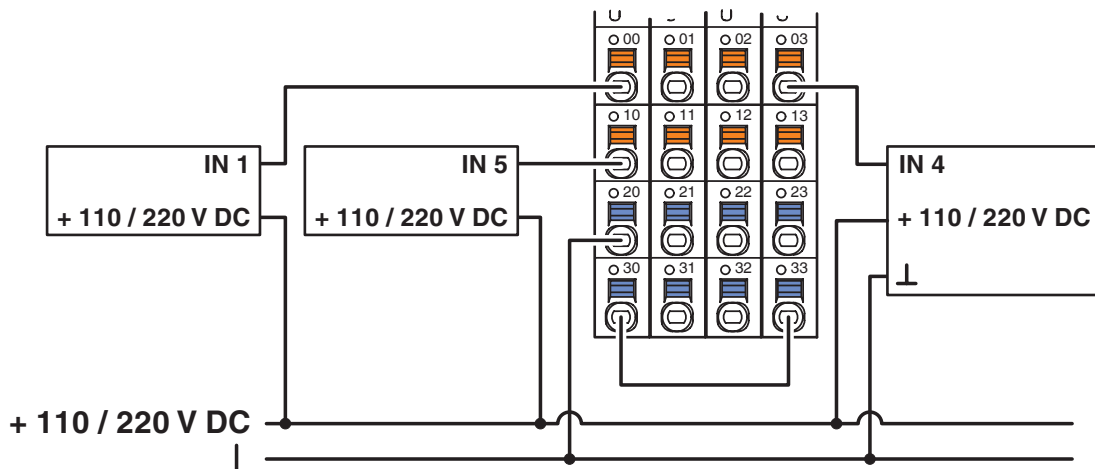
<https://www.phoenixcontact.com/us/products/2700684>

## Drawings

Dimensional drawing



Connection diagram



Connection of sensors when using external busbars



# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2700684>



**cULus Listed**

Approval ID: E238705

# AXL F DI8/2 110/220DC 1F - Digital module



2700684

<https://www.phoenixcontact.com/us/products/2700684>

## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

### ETIM

ETIM 10.0	EC001599
-----------	----------

### UNSPSC

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

2700684

<https://www.phoenixcontact.com/us/products/2700684>

## 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.)	Diboron trioxide(CAS: 1303-86-2)
	Lead monoxide (lead oxide)(CAS: 1317-36-8)
	Lead(CAS: 7439-92-1)
SCIP	1e9eb13f-4a07-41f8-8842-d4677b465e04

Phoenix Contact 2026 © - 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](mailto:info@phoenixcon.com)