

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



2700684

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

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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. You can use low-voltage and extra-low voltage modules directly next to each other 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
Catalog page	Page 74 (C-6-2019)
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

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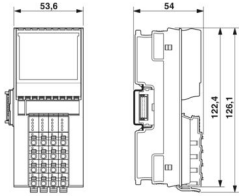


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Technical data

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).

Interfaces

Axioline F local bus

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

System properties

Module

Input address area	1 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 type 1
Number of inputs	8
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

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	220 V DC
Nominal input current at U_{IN}	1.5 mA
Input filter time	< 1 ms
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: wall mounting on horizontal DIN rail
Scope of delivery	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

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

Supply voltage	5 V DC (via bus base module)
Current draw	max. 120 mA
Power consumption	max. 600 mW

Electrical isolation/isolation of the voltage ranges

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

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

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Stripping length	8 mm
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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 (Mounting position: wall 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)

Standards and regulations

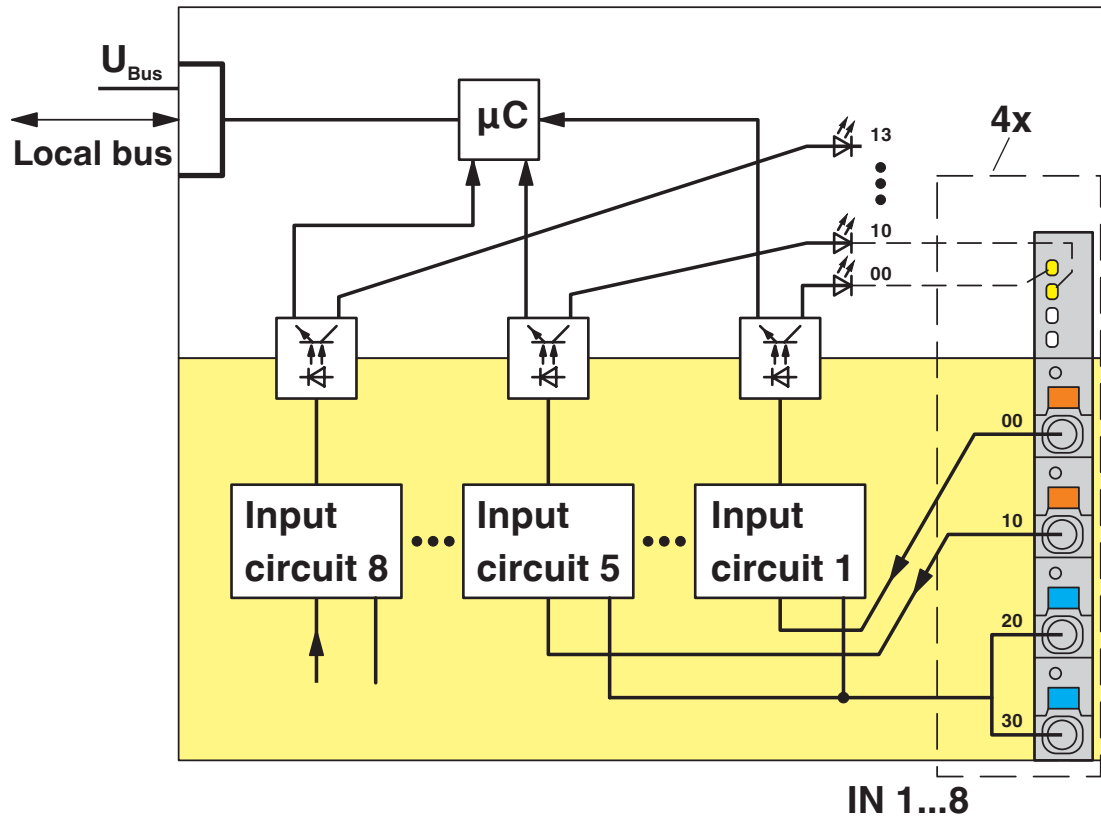
Standard designation	Ambient conditions
Standards/specifications	IEC 61850-3

Mounting

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

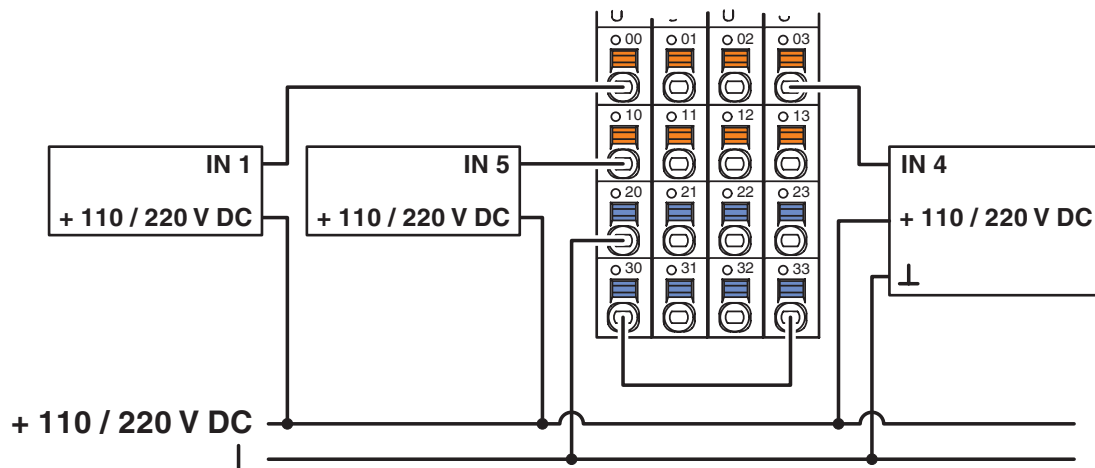
Drawings

Block diagram



Internal wiring of the terminal points

Connection diagram



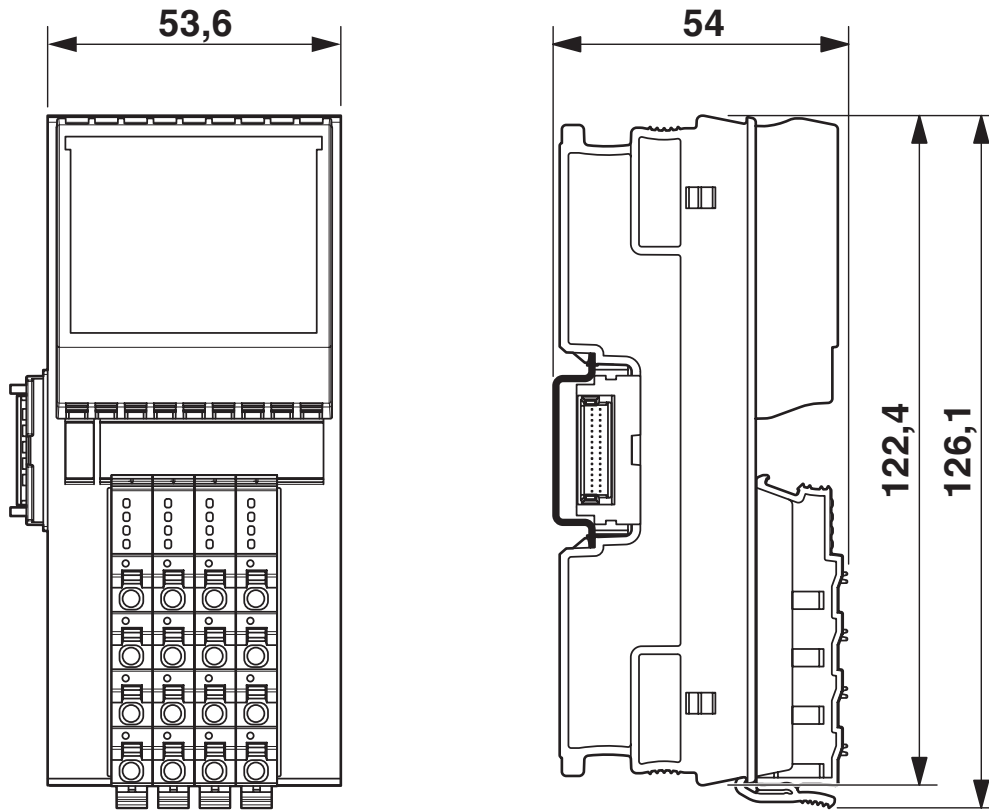
Connection of sensors when using external busbars

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Dimensional drawing



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Approvals

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UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705

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 9.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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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.

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Accessories

AXL F BS F - Bus connector

2688129

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Axioline F bus base module for housing type F

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

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ZBF 7,5:UNBEDRUCKT - Zack Marker strip, flat

0809942

<https://www.phoenixcontact.com/us/products/0809942>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 7.5 mm, lettering field size: 5.15 x 7.4 mm, Number of individual labels: 10

EMT (35X46)R - Insert label

0801604

<https://www.phoenixcontact.com/us/products/0801604>



Insert label, for marking the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, lettering field size: 35 x 46 mm, Number of individual labels: 500

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