

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. 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

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
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Material specifications

Color (Housing)	gray (RAL 7042)
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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 (PROFIBUS)

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

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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 μ 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
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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)
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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.

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: 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

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Mounting

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

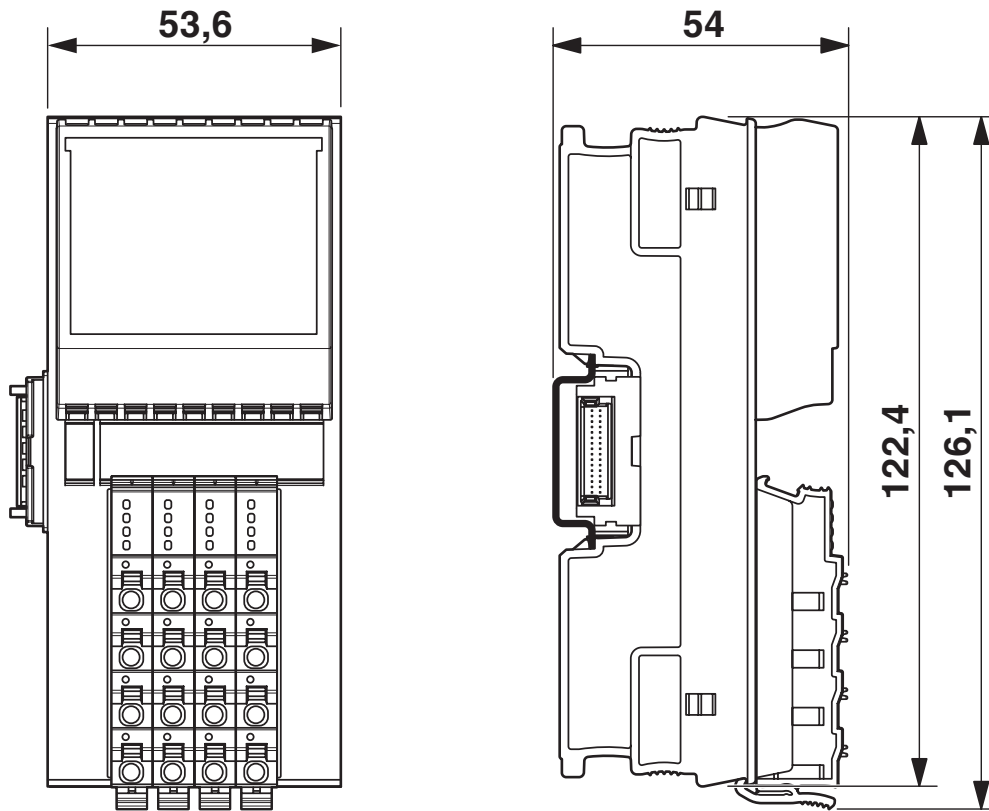
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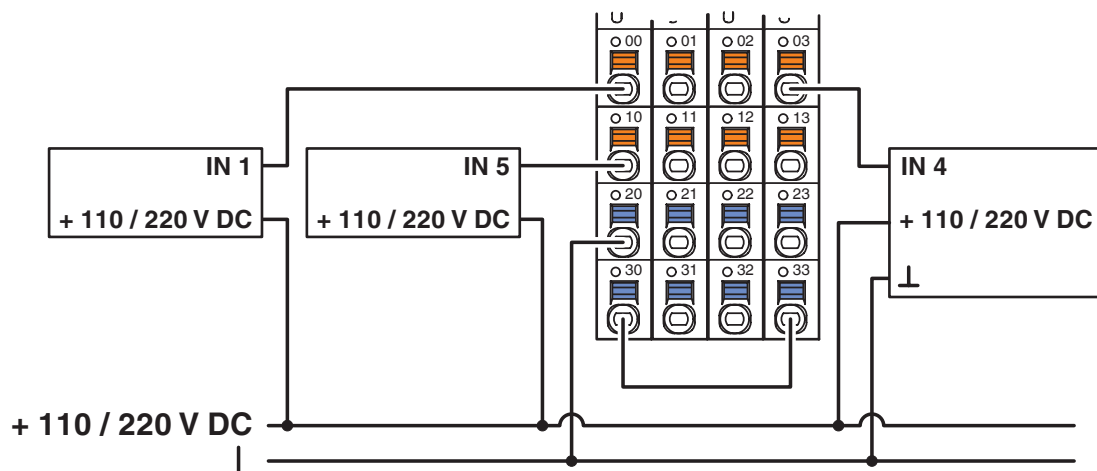
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Drawings

Dimensional drawing

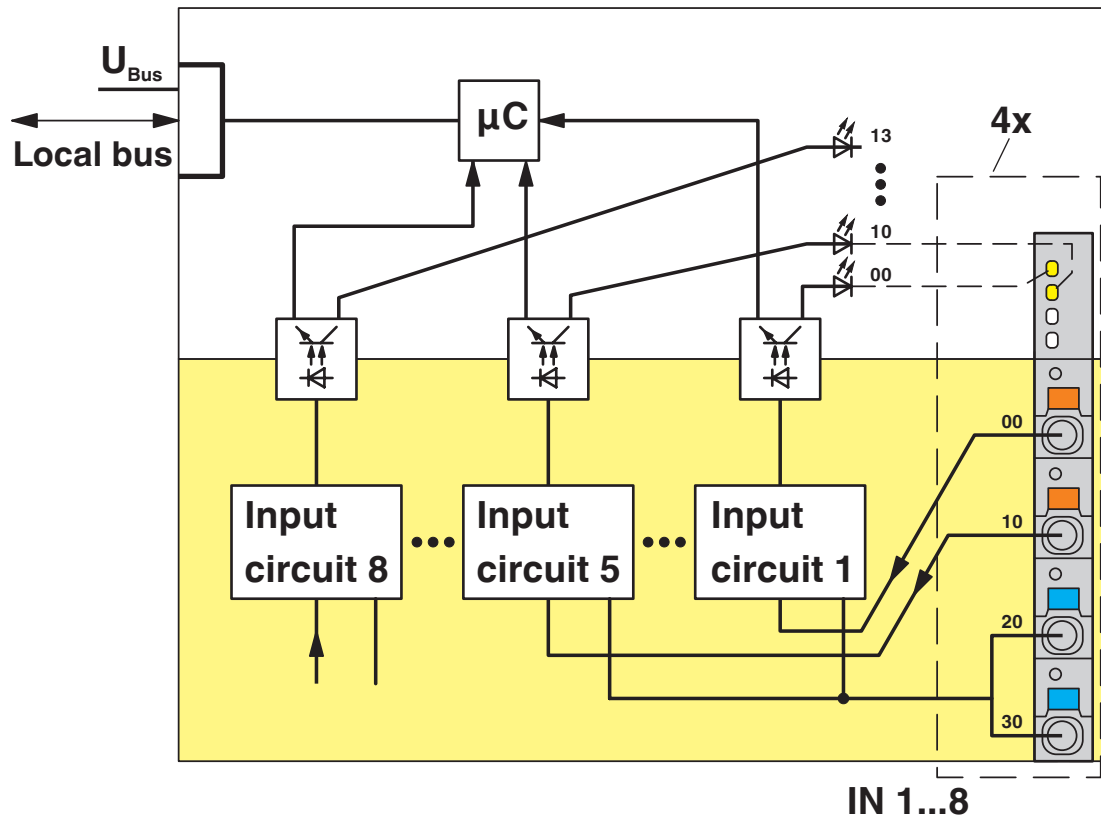


Connection diagram



Connection of sensors when using external busbars

Block diagram



Internal wiring of the terminal points

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Approvals

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cULus Listed

Approval ID: E238705

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Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 10.0	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.

EU REACH SVHC

REACH candidate substance (CAS No.)	Diboron trioxide(CAS: 1303-86-2)
	Lead(CAS: 7439-92-1)
	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)
SCIP	1e9eb13f-4a07-41f8-8842-d4677b465e04

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