AXL F DI8/2 48/60DC 1F - Digital module

2702654

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The figure shows the
AXL F DI8/2 100/220DC 1F

Axioline F, Digital input module, Digital inputs: 8, 48 V DC / 60 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
- 48 V DC / 60 V DC, 2.5 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

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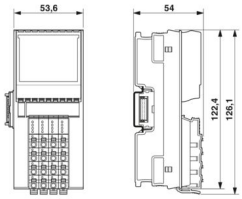
Commercial data

Item number	2702654
Packing unit	1 pc
Minimum order quantity	1 pc

Sales key	DR02
Product key	DRI231
GTIN	4055626276885
Weight per piece (including packing)	222 g
Weight per piece (excluding packing)	222 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

Mounting

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating) Nominal mounting position: panel mounting on horizontal DIN rail

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

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
Connection method	Push-in connection
Connection technology	2-conductor
Input voltage	48 V (Nominal voltage)
	60 V (Nominal voltage)
	max. 100 V DC
Input voltage range	-100 V DC ... 100 V DC
Input voltage range "0" signal	-12 V DC ... 12 V DC
Input voltage range "1" signal	32 V DC ... 100 V DC
Nominal input voltage U_{IN}	48 V DC
	60 V DC
Nominal input current at U_{IN}	2.5 mA
Current flow	linear until nominal current is reached, then constantly approximately 2.5 mA
Input filter time	< 1 ms
Process data update	< 100 µs
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 (no temperature 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/IEC 61010-2-201)
Pollution degree	2

Electrical properties

Maximum power dissipation for nominal condition	1.8 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
	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 mm² ... 1.5 mm²
Conductor cross-section, flexible	0.2 mm² ... 1.5 mm²
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)

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

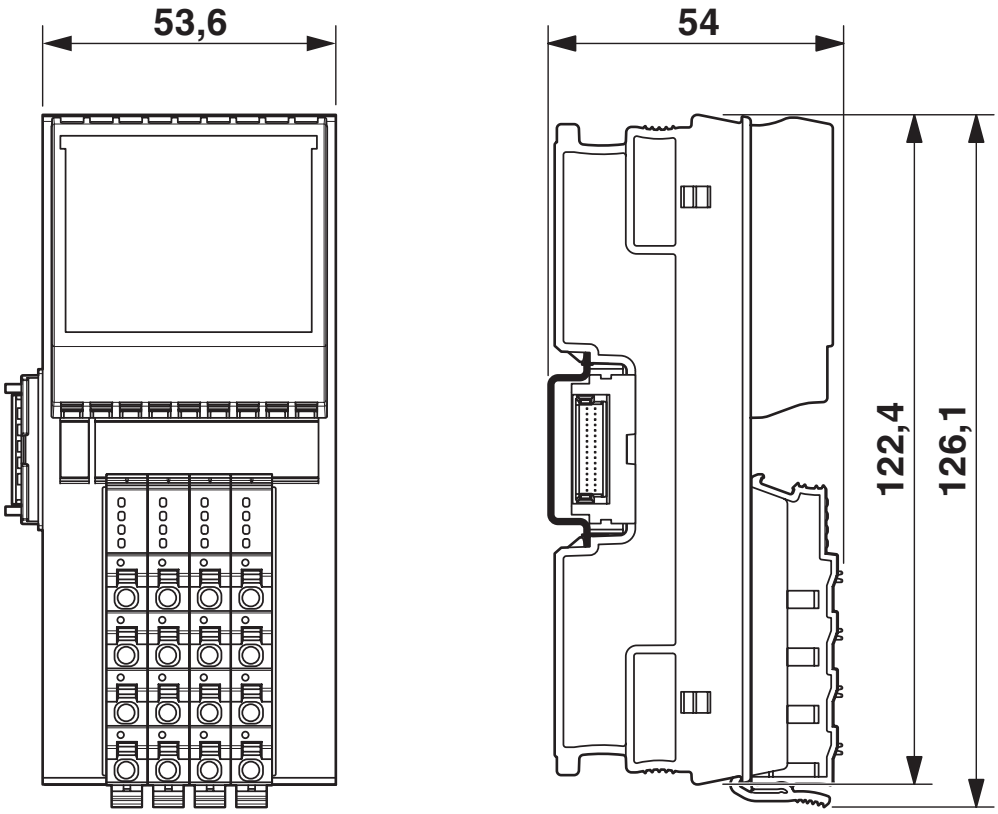
Standards and regulations

Developed according to standard	Immunity to ESD
	Immunity to EF
	Immunity to burst
	Immunity to surge
	Immunity to conducted interference
Standard designation	Ambient conditions

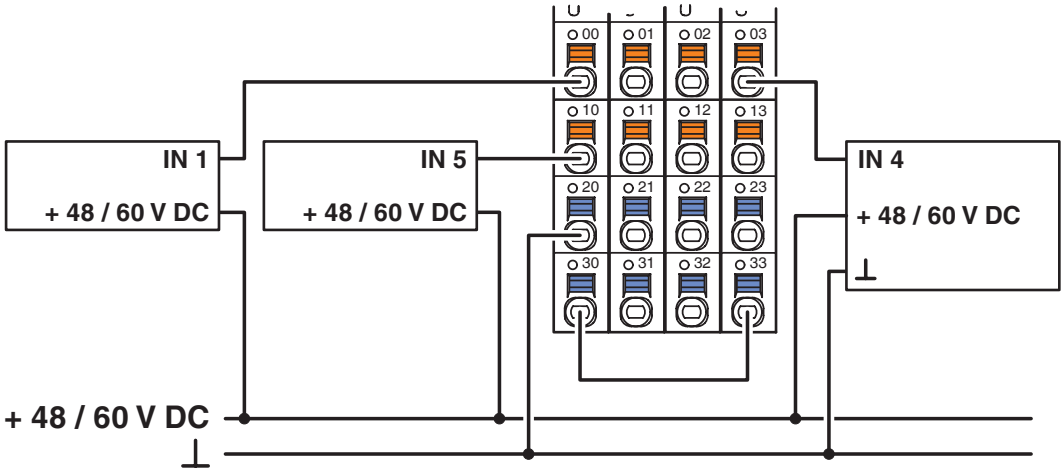
Standards/specifications	IEC 61850-3

Drawings

Dimensional drawing

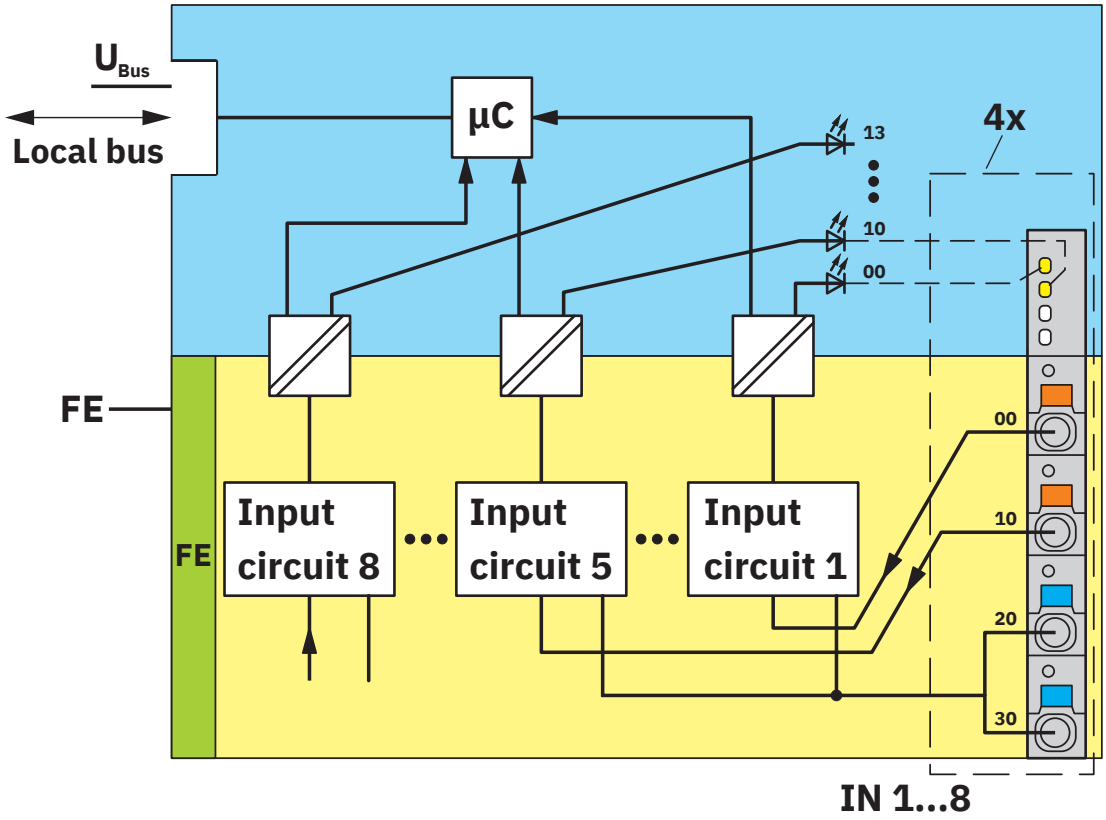


Connection diagram



Connection of sensors when using external busbars

Block diagram



Internal wiring of the terminal points

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2702654

cULus Listed
Approval ID: E238705

Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 10.0	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	0ce2b8bf-d008-4281-b50c-5ce36d28fb9f

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