

I/O module - AXL F DI16/4 2F - 2688022

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Axioline F digital input module, 16 inputs, 24 V DC, 2, 3 or 4-wire connection method (including bus base module and connectors)

Product description

The module is designed for use within an Axioline F station.

It is used to acquire digital signals.

The filter times of the inputs can be adjusted to increase noise immunity.

Filter times of 100 μ s enable the user to implement a counter function with a maximum input frequency of 5 kHz in the application.

Product Features

- 16 digital inputs according to EN 61131-2 type 1 and type 3
- 24 V DC, 2.4 mA
- Connection of sensors in single-wire technology
- Minimum update time of < 100 μ s
- Filter times can be adjusted in two increments: < 100 μ s or 500 μ s
- Maximum input frequency: 5 kHz
- Device rating plate stored
- Diagnostic and status indicators



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	280.0 GRM
Custom tariff number	85389091
Country of origin	Germany

Technical data

Dimensions

Width	53.6 mm
Height	129.9 mm
Depth	54 mm

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Technical data

Dimensions

Note on dimensions	The depth is valid when a TH 35-7.5 DIN rail is used (according to EN 60715).
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Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
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)
Degree of protection	IP20

Connection data

Designation	Axioline F connector
Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm

General

Weight	231 g
Note on weight specifications	with connectors and bus base module
Mounting type	DIN rail
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
Test section	5 V communications power (logic), 24 V supply (I/O) 500 V AC 50 Hz 1 min
	5 V supply (logic)/functional earth ground 500 V AC 50 Hz 1 min
	24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min
Conformance with EMC directives	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge
	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m
	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
	Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; DC supply lines: ±0.5 kV/±0.5 kV (symmetrical/asymmetrical)

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General

	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V
	Noise emission test according to EN 61000-6-3 Radio interference properties EN 55022 Class B
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Diagnostics messages	I/O supply failure Yes
	Overload of group 1 Yes
	Overload of group 2 Yes

Interfaces

Designation	Axioline F local bus
Connection method	Bus base module
Transmission speed	100 MBit/s

Axioline potentials

Communications power U_{Bus}	5 V DC (via bus base module)
Current consumption from U_{Bus}	max. 120 mA
Supply of digital input modules U_i	24 V DC
Current consumption from U_i	max. 4 A (2 A or each group of 8 inputs)

Digital inputs

Input name	Digital inputs
Description of the input	EN 61131-2 types 1 and 3
Connection method	Push-in technology
	2, 3, 4-wire
Number of inputs	16
Protective circuit	Polarity reversal protection of the inputs Electronic
Input filter time	500 μ s (default)
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Nominal input current at U_{IN}	2.4 mA

Classifications

eCl@ss

eCl@ss 4.0	27240404
eCl@ss 4.1	27240404

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Classifications

eCl@ss

eCl@ss 5.0	27242204
eCl@ss 5.1	27242604
eCl@ss 6.0	27242604
eCl@ss 7.0	27242604
eCl@ss 8.0	27242604

ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001599

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	39121311

Approvals

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GL / DNV / RINA / BSH / BV / LR / GL-SW / ABS / NK / GL

Ex Approvals

Approvals submitted

Approval details

GL

DNV

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Approvals

RINA

BSH

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LR

GL-SW

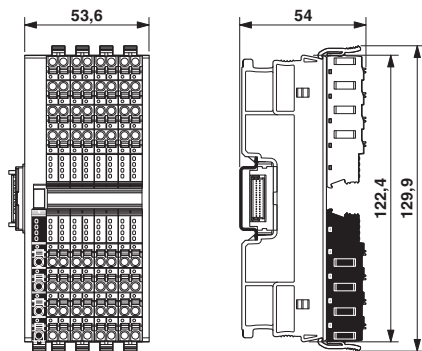
ABS

NK

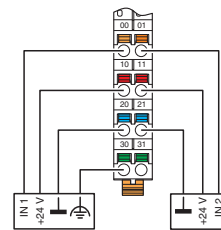
GL

Drawings

Dimensioned drawing

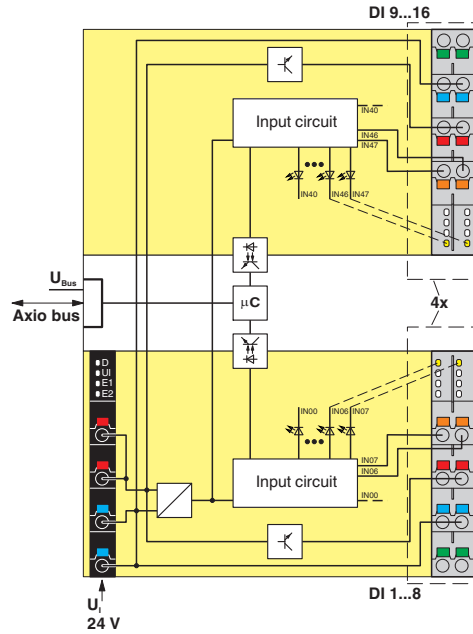


Connection diagram



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Block diagram



Internal wiring of the terminal points