

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

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Axioline F, Digital input module, Digital inputs: 16, 24 V DC, connection method: 4-wire, transmission speed in the local bus: 100 Mbps, 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 signals.

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


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

Why buy this product

- ✓ 16 digital inputs according to EN 61131-2 type 1 and type 3
- ✓ 24 V DC, 2.4 mA
- ✓ Connection of sensors in 2, 3, and 4-wire technology
- ✓ Minimum update time of < 100 µs
- ✓ Filter times can be adjusted in two increments: < 100 µs or 500 µs
- ✓ Maximum input frequency: 5 kHz
- ✓ Device rating plate stored
- ✓ Diagnostic and status indicators



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 501606
GTIN	4046356501606

Technical data

Dimensions

Width	53.6 mm
Height	129.9 mm
Depth	54 mm
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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Technical data

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 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 solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

General

Mounting type	DIN rail
Net weight	231 g
Note on weight specifications	with connectors and bus base module
Diagnostics messages	I/O supply failure Yes
	Overload of group 1 Yes
	Overload of group 2 Yes

Interfaces

Designation	Axioline F local bus
No. of channels	2
Connection method	Bus base module
Transmission speed	100 Mbps

Axioline potentials

Designation	Axioline F local bus supply (U _{Bus})
Supply voltage	5 V DC (via bus base module)
Current consumption	max. 120 mA
Power consumption	max. 600 mW
Designation	Supply for digital input modules (U _i)
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)

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Technical data

Axioline potentials

Current consumption	max. 4 A (2 A or each group of 8 inputs)
Power consumption	max. 120.8 W (Of which 800 mW with internal losses)
Type of protection	Surge protection of the supply voltage
	Polarity reversal protection of the supply voltage
Protection	max. 8 A (polarity reversal protection up to 5 A)

Digital inputs

Input name	Digital inputs
Description of the input	EN 61131-2 types 1 and 3
Connection method	Push-in connection
Connection technology	4-wire
Number of inputs	16
Type of protection	Polarity reversal protection of the inputs
Input filter time	500 µs (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

Electrical isolation

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.

Standards and Regulations

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
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

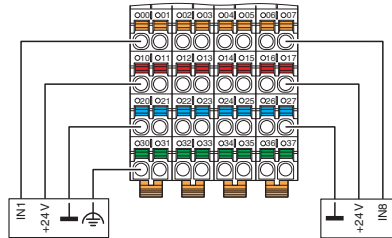
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

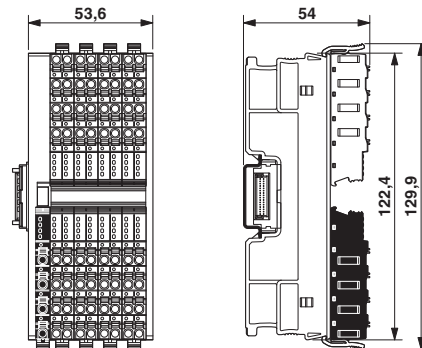
Drawings

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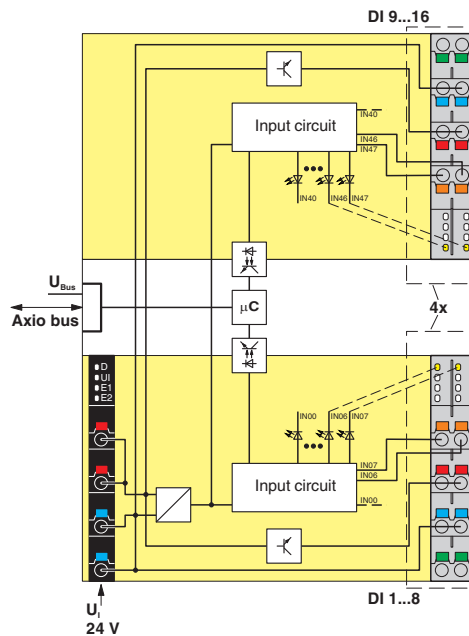
Connection diagram



Dimensional drawing



Block diagram



Internal wiring of the terminal points

Approvals

Approvals

Approvals

BV / LR / ABS / NK / EAC / UL Listed / cUL Listed / DNV GL / PRS / RINA / BSH / KR / cULus Listed

Ex Approvals

Approval details

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Approvals

BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	36433/A2 BV
LR		http://www.lr.org/en	14-20019
ABS		http://www.eagle.org/eagleExternalPortalWEB/	17-HG1669996-PDA
NK		http://www.classnk.or.jp/hp/en/	14A006
EAC			EAC-Zulassung
UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
DNV GL		http://exchange.dnv.com/tari/	TAA00000DF
PRS		http://www.prs.pl/	TE/2106/880590/16
RINA		http://www.rina.org/en	ELE0078216XG
BSH		http://www.bsh.de/de/index.jsp	840
KR		http://www.krs.co.kr/eng/main/main.aspx	HMB17372-AC002
cULus Listed			

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