

I/O module - AXL F AI8 1F - 2688064

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Axioline F, Analog input module, Analog inputs: 8, 0 V ... 5 V, -5 V ... 5 V, 0 V ... 10 V, -10 V ... 10 V, 0 mA ... 20 mA, 4 mA ... 20 mA, -20 mA ... 20 mA, connection method: 2-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 analog voltage and current signals.

Why buy this product

- ✓ 8 analog, bipolar input channels for the connection of either voltage or current signals
- ✓ Connection of sensors in 2-wire technology
- ✓ Voltage ranges: 0 V ... 10 V, ±10 V, 0 V ... 5 V, ±5 V
- ✓ Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA, ±20 mA
- ✓ Device rating plate stored
- ✓ Diagnostic and status indicators



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 501460
GTIN	4046356501460

Technical data

Dimensions

Width	53.6 mm
Height	126.1 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).

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

I/O module - AXL F AI8 1F - 2688064

Technical data

Ambient conditions

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	204 g
Note on weight specifications	with connectors and bus base module

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	typ. 105 mA
	max. 130 mA
Power consumption	typ. 0.525 W
Designation	Supply for analog modules (U _A)
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current consumption	typ. 35 mA
	max. 45 mA
Power consumption	max. 1.08 W
	typ. 1.365 W (at U _{Bus} and U _A)

I/O module - AXL F AI8 1F - 2688064

Technical data

Axioline potentials

	max. 1.605 W (at U_{Bus} and U_A)
Type of protection	Surge protection of the supply voltage
	Polarity reversal protection of the supply voltage
	Transient protection

Analog inputs

Description of the input	Differential inputs, voltage or current can be chosen separately
Input name	Analog inputs
Number of inputs	8
Connection method	Push-in connection
Connection technology	2-wire
Note regarding the connection technology	shielded, twisted pair
A/D conversion time	2 μ s
Resolution A/D	16 bit
Limit frequency (3 dB)	30 Hz
	12 kHz (in fast mode)
Type of protection	Transient protection of inputs
	Overload protection of the current inputs
	Overload protection of the voltage inputs
Data formats	IB IL, S7-compatible
Measured value representation	16 bits (15 bits + sign bit)
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Input resistance current input	104 Ω (typical)
Voltage input signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V
Input resistance of voltage input	268 k Ω (typical)
Common mode voltage range signal - ground	-50 V DC ... 50 V DC
Filtering	RFI filtering / passive TP 1st order
Input filter	30 Hz, 12 kHz and mean-value generation (can be parameterized)

Electrical isolation

Test section	Logic 500 V AC 50 Hz 1 min.
	Analog I/O 500 V AC 50 Hz 1 min.
	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

I/O module - AXL F AI8 1F - 2688064

Technical data

Standards and Regulations

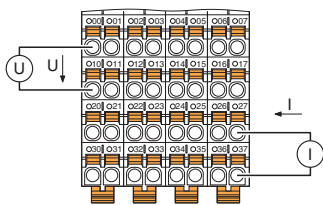
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

Environmental Product Compliance

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

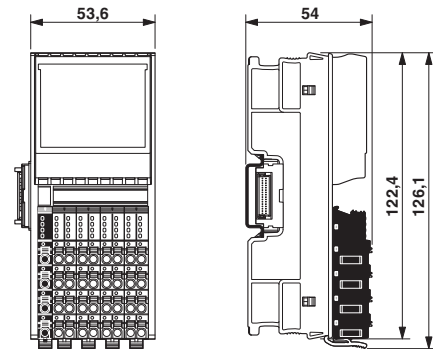
Drawings

Connection diagram

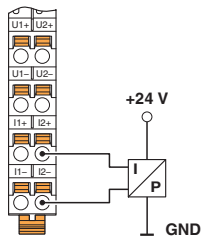


Connection for voltage and current measurement

Dimensional drawing

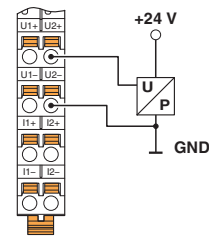


Connection diagram



Passive pressure sensor at a differential current input

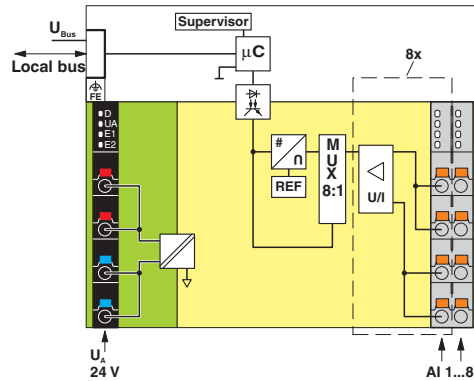
Connection diagram



Differential voltage input with active 3-wire transmitter

I/O module - AXL F AI8 1F - 2688064

Block diagram



Internal wiring of the terminal points

Approvals

Approvals

Approvals

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






Ex Approvals

Approval details

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
EAC			EAC-Zulassung
LR		http://www.lr.org/en	14-20019

I/O module - AXL F AI8 1F - 2688064

Approvals

BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	36433/A2 BV
ABS		http://www.eagle.org/eagleExternalPortalWEB/	17-HG1669996-PDA
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			

Phoenix Contact 2018 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>