

I/O module - AXL F AO8 1F - 2688080

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Axioline F, Analog output module, Analog outputs: 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, 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 output analog voltage and current signals.

Why buy this product

- 8 analog, bipolar output channels for the connection of either voltage or current signals
- Connection of actuators 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
- Short-circuit-proof outputs
- Device rating plate stored
- Diagnostic and status indicators
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Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 501446
GTIN	4046356501446
Weight per Piece (excluding packing)	260.000 g
Custom tariff number	85389091
Country of origin	Germany

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

Interfaces

Designation	Axioline F local bus
Connection method	Bus base module
Transmission speed	100 Mbps

Axioline potentials

Communications power U_{Bus}	5 V DC (via bus base module)
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Axioline potentials

Current consumption from U_{BUS}	typ. 105 mA
	max. 130 mA
Supply for analog modules U_A	24 V DC
Current consumption from U_A	typ. 50 mA (induced current consumption; no load, 0 V output)
	typ. 110 mA (8 voltage channels, 10 V output)
	max. 235 mA (8 current channels, 20 mA output)

Analog outputs

Number of outputs	8
Connection method	Push-in connection
Connection technology	2-wire
Note regarding the connection technology	Shielded, twisted pair
Output name	Analog outputs
D/A conversion time	5 μ s
D/A resolution	16 bit
Type of protection	Short-circuit and overload protection
	Transient protection
Protective circuit/component	Electronic
	Suppressor diode
Data formats	IB IL, S7-compatible
Representation of output values	16 bits (15 bits + sign)
Process data update	300 μ s
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Load/output load current output	to 500 Ω
Voltage output signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V
Load/output load voltage output	> 2 k Ω
Precision	typ. 0.1 % (of output range final value)
Permissible cable length	max. 250 m

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.

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Technical data

Standards and Regulations

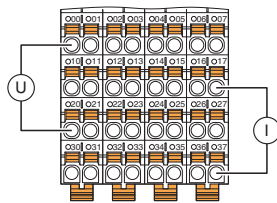
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

Environmental Product Compliance

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

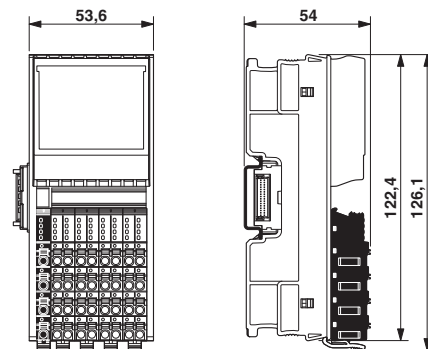
Drawings

Connection diagram

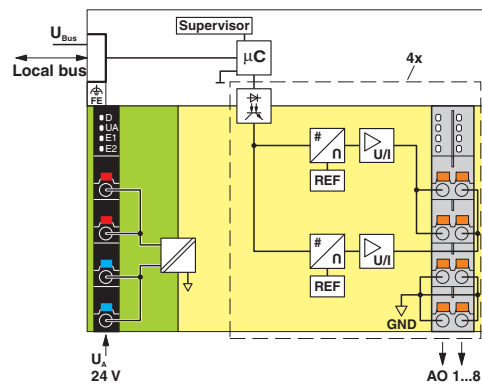


Connection for voltage and current output

Dimensional drawing



Block diagram



Internal wiring of the terminal points

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Classifications

eCl@ss

eCl@ss 4.0	27240405
eCl@ss 4.1	27240405
eCl@ss 5.0	27242201
eCl@ss 5.1	27242601
eCl@ss 6.0	27242601
eCl@ss 7.0	27242601
eCl@ss 8.0	27242601
eCl@ss 9.0	27242601

ETIM

ETIM 3.0	EC001599
ETIM 4.0	EC001599
ETIM 5.0	EC001596
ETIM 6.0	EC001596

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	32151602

Approvals

Approvals

Approvals

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








Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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Approvals

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
BSH		http://www.bsh.de/de/index.jsp	840
EAC			EAC-Zulassung
LR		http://www.lr.org/en	14-20019
BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	36433/A2 BV
ABS		http://www.eagle.org/eagleExternalPortalWEB/	17-HG1642658-PDA
DNV GL		http://exchange.dnv.com/tari/	TAA00000DF
PRS		http://www.prs.pl/	TE/2106/880590/16
RINA		http://www.rina.org/en	ELE078216XG-001
cULus Listed		http://www.gl-group.com/newbuilding/approvals/index.html	

Accessories

Accessories

Connector set

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Accessories

Connector set - AXL CNS 4L-O/D/UA/E1/E2 - 2700984



Axioline F connector set (for e.g., AXL F AI8 1F, AXL F AO8 1F)

Device marking

Insert label - EMT (35X46)R - 0801604



Insert label, for the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK S1.1, Mounting type: snapped into marker carrier, Lettering field: 35 x 46 mm

DIN rail connector

Bus connector - AXL F BS F - 2688129



Axioline F bus base module for housing type F

Mounting material

Shield connection - AXL SHIELD SET - 2700518



Axioline shield connection set (contains 2 busbar holders and 2 SK 5 shield connection clamps)

Software library

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Accessories

Function block - SAFE AI - 2400057



Function block library for safety-related analog value acquisition with standard I/O modules. Please contact the safety hotline (+49 5281 9-462777) before ordering the SAFE AI article.

Terminal marking

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580



Zack marker strip, flat, in 10 mm pitch, unprinted, 10-section, for individual labeling with M-PEN 0,8, X-PEN, or CMS-P1-PLOTTER