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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



I/O module - AXL F AI8 XC 1F - 2701232

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Axioline F XC, 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, Extreme conditions version, including bus base module and Axioline F connectors

The figure shows the standard item

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
- Can be used under extreme ambient conditions
- Extended temperature range of -40°C ... +70°C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Partially coated PCBs



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 730495
GTIN	4046356730495

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	53.6 mm
Height	126.1 mm

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Technical data

Dimensions

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 (Standard)
	-40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
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

General

Mounting type	DIN rail
Net weight	204 g
Note on weight specifications	with connectors and bus base module

Interfaces

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

Axoline potentials

Designation	Axoline 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)
	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

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Technical data

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 µs
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 kΩ (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	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
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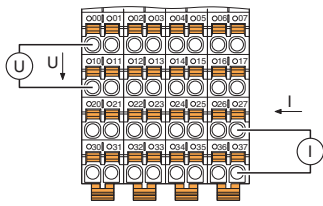
Technical data

Environmental Product Compliance

	No hazardous substances above threshold values
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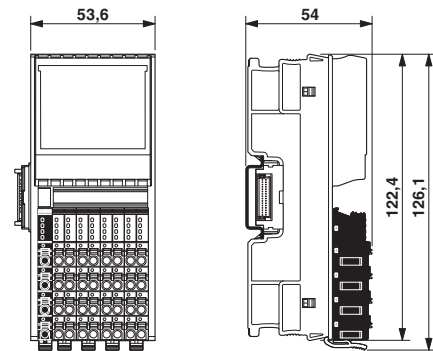
Drawings

Connection diagram

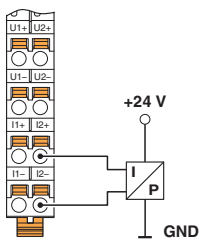


Connection for voltage and current measurement

Dimensional drawing

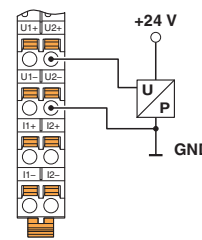


Connection diagram



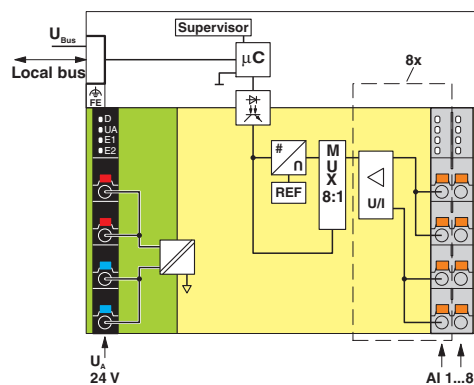
Passive pressure sensor at a differential current input

Connection diagram



Differential voltage input with active 3-wire transmitter

Block diagram



Internal wiring of the terminal points

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Approvals

Approvals

Approvals

UL Listed / cUL Listed / LR / NK / BV / DNV GL / PRS / 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
LR		http://www.lr.org/en	14-20019
NK		http://www.classnk.or.jp/hp/en/	14A006
BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	36433/A2 BV
DNV GL		http://exchange.dnv.com/tari/	TAA00000DF
PRS		http://www.prs.pl/	TE/2106/880590/16
BSH		http://www.bsh.de/de/index.jsp	840
KR		http://www.krs.co.kr/eng/main/main.aspx	HMB17372-AC002

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Approvals

cULus Listed



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