

I/O module - AXL F SGI2 1H - 2702911

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Axioline F, Strain gauge capture module, 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. Used to evaluate strain gauges that may be located in weighing cells or load cells, for example. You can connect the strain gauges using 6- or 4-conductor technology.

Your advantages

- 2 high-precision inputs for strain gauge
- Measuring ranges adjusted with nominal characteristic values upon delivery
- Manual entry of characteristic values
- Process data update can be parameterized in increments between 200 µs and 100 ms
- Path adjustment in the process environment
- 2-point adjustment
- Connection of strain gauges in 6- and 4-conductor technology
- Advanced wire-break detection
- Sensor supply of up to 115 mA (8 load cells with 350 Ω per channel)
- Per channel: low-resistance, floating N/O contact
- Channels are parameterized independently of one another via the bus system
- Tara device

COMPLETE line

Key Commercial Data

Packing unit	1 pc
GTIN	 4 0 5 5 6 2 6 4 5 9 2 8 8
GTIN	4055626459288
Weight per Piece (excluding packing)	180.000 g
Custom tariff number	85389091
Country of origin	Germany

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Technical data

Dimensions

Width	35 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

General

Mounting type	DIN rail
Color	traffic grey A RAL 7042
Net weight	187.7 g
Note on weight specifications	with connectors and bus base module
Operating mode	Process data mode with 6 words
Mounting position	any (no temperature derating)

Interfaces

Designation	Axioline F local bus
Number	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. 65 mA
	max. 75 mA
Power consumption	typ. 325 mW
	max. 375 mW
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)

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Axioline potentials

Current consumption	typ. 25 mA (with typical load: 1 weighing cell with 350 Ω, only one channel loaded)
	typ. 55 mA (with maximum load: 8 weighing cells with 350 Ω, only one channel loaded)
	typ. 110 mA (with maximum load: 8 weighing cells with 350 Ω per channel)
Power consumption	typ. 2.6 W (with maximum load: 8 weighing cells with 350 Ω per channel)
Protective circuit	Surge protection Suppressor diode
	Reverse polarity protection Polarity protection diode
Power consumption	typ. 1.5 W (entire device)
	max. 3 W (entire device)

Contacts

Description	Floating N/O contact
Quantity	2 ($K_{a1}-K_{b1}$, $K_{a2}-K_{b2}$)
Contact resistance	< 1 Ω (typical)
Typical response time	typ. 0.2 ms (opening)

Analog inputs

Description of the input	Input channels for strain gauge
Number of inputs	2
Connection technology	6 or 4-wire, twisted pair shielded cable
Bridge difference U_d	Measuring range specified by selecting the characteristic
Bridge voltage U_0	5 V
Characteristics	can be parameterized: 350 µV/V ... 6500 µV/V
Measured value representation	32 bits

Analog outputs

Output description	Jumper supply
Number of outputs	2
Impedance	> 43 Ω (per channel)
Output voltage	typ. 5 V
Output current	max. 115 mA (per channel)

Electrical isolation

Test section	Logic 500 V AC 50 Hz 1 min.
	24 V supply (I/O) 500 V AC 50 Hz 1 min.
	Analog inputs 500 V AC 50 Hz 1 min.
	N/O contact $K_{a1} - K_{b1}$ 500 V AC 50 Hz 1 min.
	N/O contact $K_{a2} - K_{b2}$ 500 V AC 50 Hz 1 min.
	Functional ground 500 V AC 50 Hz 1 min.

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Standards and Regulations

Immunity to ESD	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
Immunity to EF	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
Immunity to burst	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
Immunity to surge	Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, supply lines DC: $\pm 0.5 \text{ kV}/\pm 0.5 \text{ kV}$ (symmetrical/asymmetrical), $\pm 1 \text{ kV}$ to shielded I/O cables
Immunity to conducted interference	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
Interference emission	Noise emission test according to EN 61000-6-3 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
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

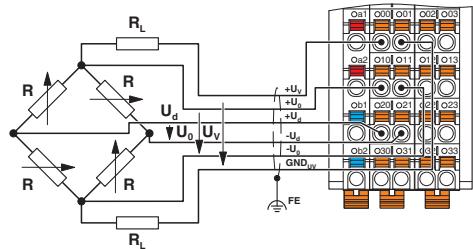
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

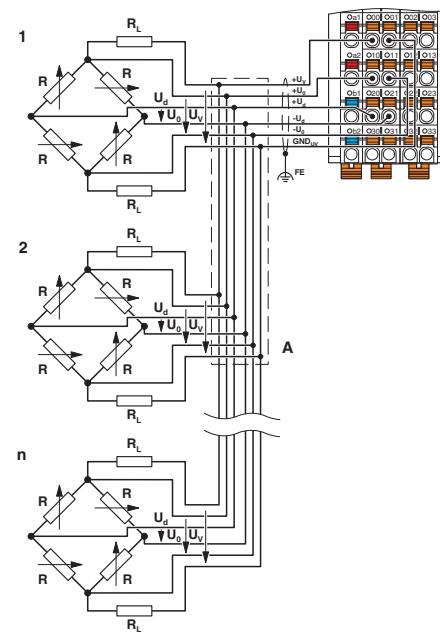
Drawings

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Connection diagram

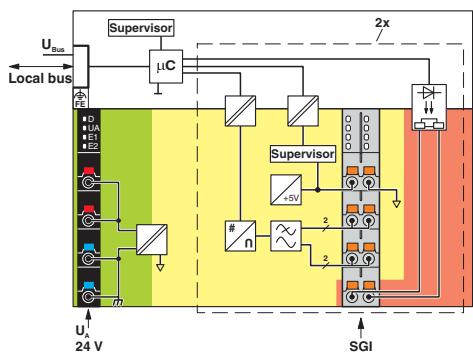


Connection diagram

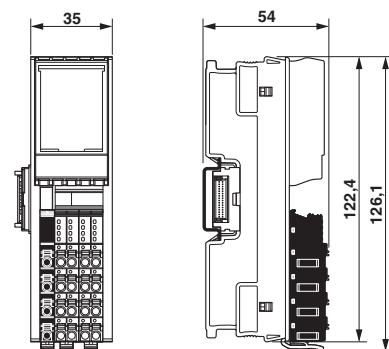


Connection of several strain gauges in 6-conductor technology

Block diagram



Dimensional drawing



Internal wiring of the terminal points

Classifications

eCl@ss

eCl@ss 10.0.1	27242601
eCl@ss 11.0	27242601

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Classifications

eCl@ss

eCl@ss 6.0	27242600
eCl@ss 7.0	27242601
eCl@ss 9.0	27242601

ETIM

ETIM 6.0	EC001596
ETIM 7.0	EC001596

Accessories

Accessories

Device marking

Insert label - EMT (35X28)R - 0801602



Insert label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: snapped into marker carrier, lettering field size: 35 x 28 mm, Number of individual labels: 500

DIN rail connector

Bus connector - AXL F BS H - 2700992



Axioline F bus base module for housing type H

Shield connection

Shield connection - AXL SHIELD SET - 2700518



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

Terminal marking

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Accessories

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, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 10.15 mm, lettering field size: 4 of 10.15 x 5 mm and 1 of 5.8 x 5 mm, Number of individual labels: 50
