

Analog module - AXL SE AO4 I 4-20



1088123

<https://www.phoenixcontact.com/pc/products/1088123>

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Axioline Smart Elements, Analog output module, Analog outputs: 4, 4 mA ... 20 mA, connection technology: 2-conductor, degree of protection: IP20

Product Description

You can integrate Axioline Smart Elements into systems with the Smart Element interface. This Smart Element emits analog current signals.

Your advantages

- 4 analog output channels
- Connection of actuators in 2-conductor technology
- Current range: 4 mA ... 20 mA
- Data format: standardized representation
- Resolution: 12 bits
- Wire-break detection
- Substitute value behavior can be parameterized for each output
- Device rating plate stored

Commercial Data

Item number	1088123
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DRIB42
GTIN	4055626887821
Weight per Piece (including packing)	38.966 g
Weight per Piece (excluding packing)	35 g
Customs tariff number	85389091
Country of origin	DE

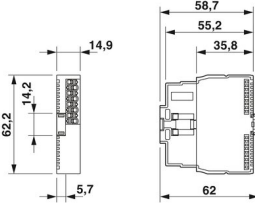
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Technical Data

Dimensions

Dimensional drawing	
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Material specifications

Color	traffic grey A RAL 7042
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Interfaces

Smart Element interface

Number of interfaces	1
Connection method	Card edge connector
Transmission speed	See system in which you use the Smart Element.
Start time until ready to operate	< 1000 ms

System properties

Module

ID code (hex)	none
Process data channel	64 Bit
Input address area	8 Byte
Output address area	8 Byte
Required parameter data	24 Byte
Required configuration data	7 Byte

Output data

Analog

Output name	Analog outputs
Connection method	Push-in technology

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Connection technology	2-conductor
Note regarding the connection technology	shielded, twisted pair
Number of outputs	4
D/A converter resolution	12 bit
Protective circuit	Short-circuit and overload protection; electronic Transient protection
Data formats	Standardized representation
Representation of output values	16 bits
Process data update	typ. 1 ms
Current output signal	4 mA ... 20 mA
Load/output load current output	max. 500 Ω
Permissible cable length	max. 250 m

Product properties

Type	modular
Product type	I/O component
Mounting position	See the system in which the Smart Element is used.

Insulation characteristics

Overvoltage category	II (IEC 60664-1)
Pollution degree	2 (EN 60664-1)

Electrical properties

Potentials: Communications power supply of the Smart Elements (U_{SE})

Supply voltage	using card edge connectors
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Potentials: I/O supply (U_P)

Supply voltage	24 V DC (using card edge connectors)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 120 mA typ. 100 mA
Current consumption	min. 30 mA (without connected peripherals)
Power consumption	max. 2.88 W min. 720 mW
Protective circuit	Surge protection; See the system in which the Smart Element is used. Reverse polarity protection; Polarity protection diode

Connection data

Connection technology

Connection name	I/O
Note on the connection method	Please observe the information provided on conductor cross sections in the "AxioLine Smart Elements" user manual.

Conductor connection

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Connection method	Push-in connection
Conductor cross section solid	0.25 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Stripping length	8 mm

I/O

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "AxioLine Smart Elements" user manual.
Conductor cross section, rigid	0.25 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Stripping length	8 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
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)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

Mounting type	Smart Element slot
Mounting position	See the system in which the Smart Element is used.

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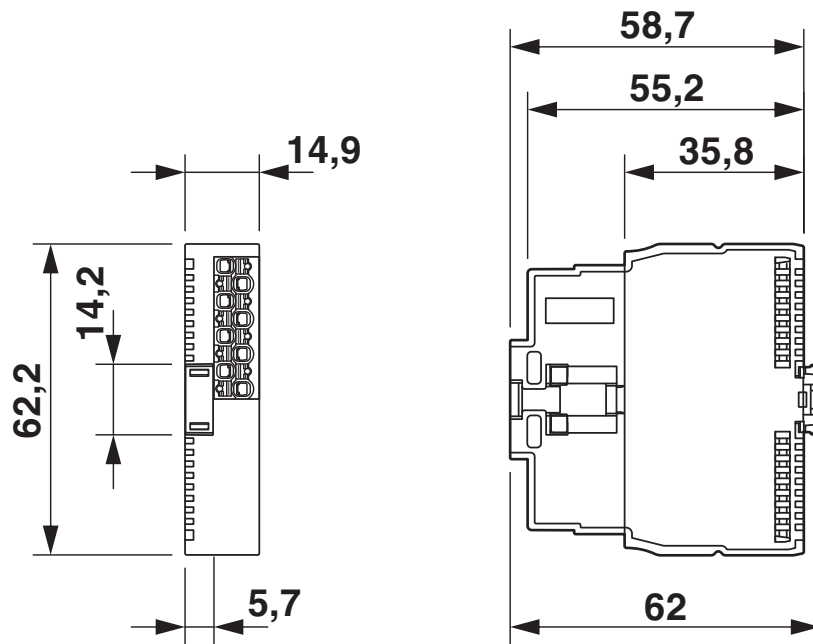
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Drawings

Dimensional drawing

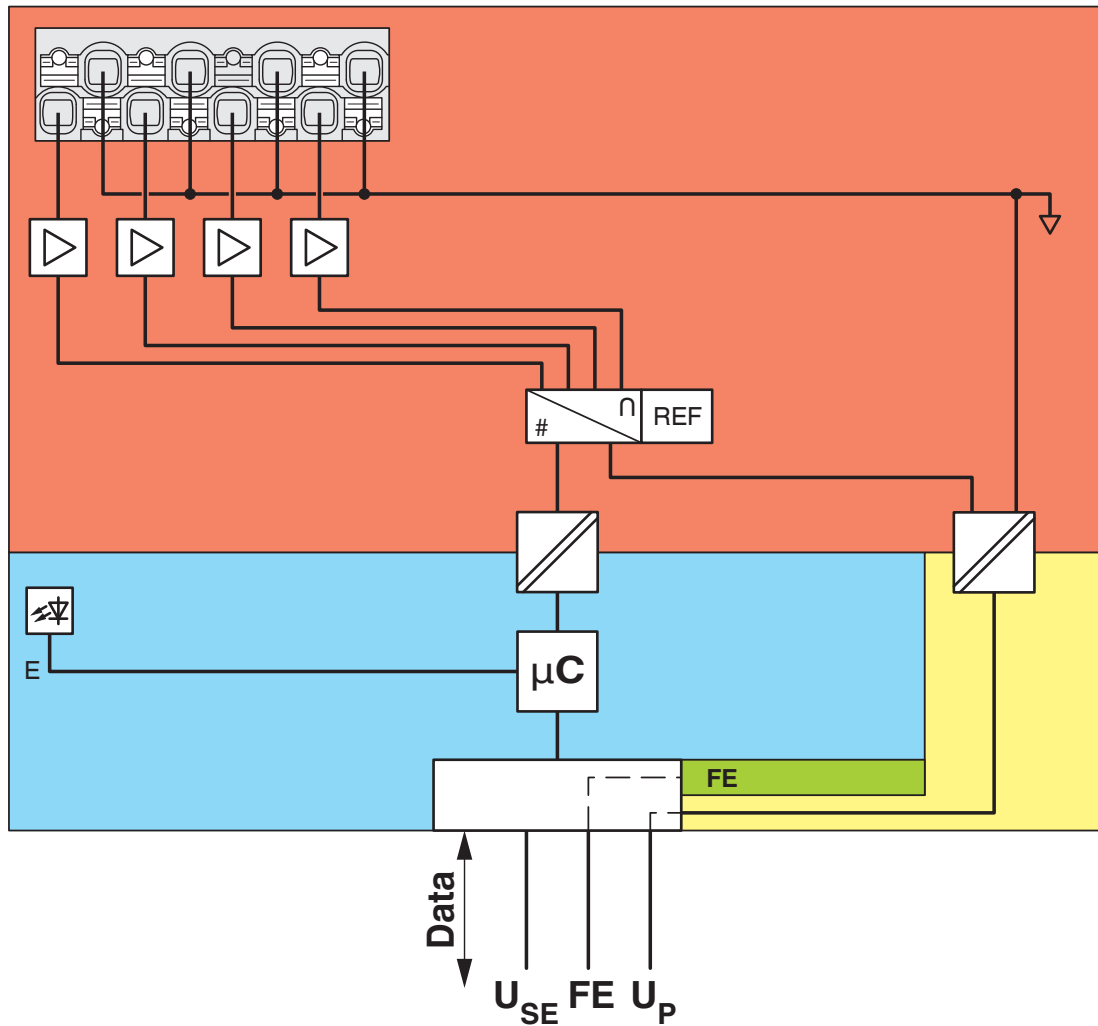


Dimensions

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Block diagram



Internal wiring of the terminal points

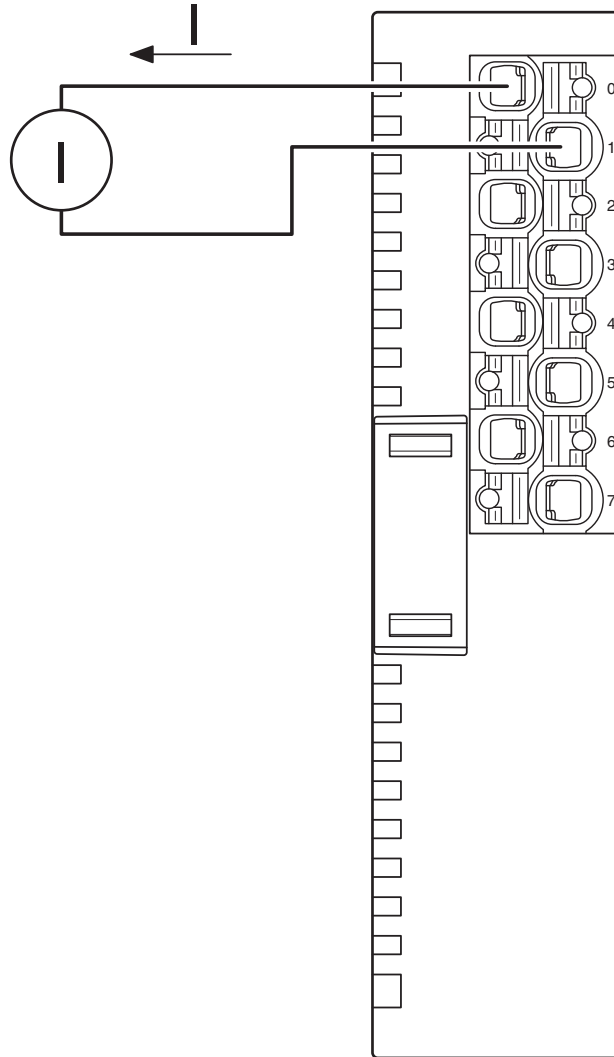
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Connection diagram



Connection example

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Approvals



UL Listed

Approval ID: FILE E 238705

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Classifications

ECLASS

ECLASS-9.0	27242601
ECLASS-10.0.1	27242601
ECLASS-11.0	27242601
ECLASS-12.0	27242601

ETIM

ETIM 8.0	EC001596
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UNSPSC

UNSPSC 21.0	32151600
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Mandatory Accessories

Module carrier

Module carrier - AXL F BP SE4 - 1088135

<https://www.phoenixcontact.com/pc/products/1088135>

Axioline F, Backplane, 4 slots for Axioline Smart Elements, transmission speed in the local bus: 100 Mbps, degree of protection: IP20



Module carrier

Module carrier - AXL F BP SE6 - 1088136

<https://www.phoenixcontact.com/pc/products/1088136>

Axioline F, Backplane, 6 slots for Axioline Smart Elements, transmission speed in the local bus: 100 Mbps, degree of protection: IP20



Accessories

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Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

<https://www.phoenixcontact.com/pc/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

Crimping pliers

Crimping pliers - CRIMPFOX 6 - 1212034

<https://www.phoenixcontact.com/pc/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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Crimping pliers

Crimping pliers - CRIMPFOX DUO 10 - 1031721

<https://www.phoenixcontact.com/pc/products/1031721>



Crimping pliers, type of contact: Insulated and uninsulated ferrules, min. cross section: 0.14 mm^2 , max. cross section: 10 mm^2 , for TWIN ferrules up to $2 \times 4 \text{ mm}^2$, automatic cross section adjustment, rotating die, lateral and frontal insertion, compression: Trapezoidal crimp, black/green

Crimping pliers

Crimping pliers - CRIMPFOX 10T-F - 1134913

<https://www.phoenixcontact.com/pc/products/1134913>



Crimping pliers, type of contact: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, min. cross section: 0.14 mm^2 , max. cross section: 10 mm^2 , For TWIN ferrules up to $2 \times 4 \text{ mm}^2$, automatic cross section adjustment, frontal insertion, compression: Trapezoidal crimp, black

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Label

Label - MM-TML (EX4,2)R C1 TR/BK - 0803979

<https://www.phoenixcontact.com/pc/products/0803979>



Label, Roll, transparent, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, for terminal block width: 8000 mm, lettering field size: continuous x 3.2 mm

Marker strip

Marker strip - SK 5,0 WH:REEL - 0805221

<https://www.phoenixcontact.com/pc/products/0805221>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm, Number of individual labels: 90000

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Marker for terminal blocks

Marker for terminal blocks - UM6M-TM (5X12) - 0830928

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Markers for marking terminal blocks from ABB/Entelec, 24-section, unmarked, can be marked with THERMOMARK CARD and BLUEMARK, color: white



Marker for terminal blocks from the SNK series from ABB

Marker for terminal blocks from the SNK series from ABB - UCT6M-TM 5 - 0830756

<https://www.phoenixcontact.com/pc/products/0830756>

Marker for terminal blocks from the SNK series from ABB, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, THERMOMARK CARD 2.0, THERMOMARK PRIME, BLUEMARK ID, BLUEMARK ID COLOR, TOPMARK LASER, TOPMARK NEO, mounting type: snapped, for terminal block width: 5.2 mm, lettering field size: 4.17 x 11.3 mm



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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com