AXL SE AI4 I 0-20 - Analog module

1296378

https://www.phoenixcontact.com/gb/products/1296378

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Axioline Smart Elements, Analog input module, Analog inputs: 4, 0 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 detects analog current signals.

Your advantages

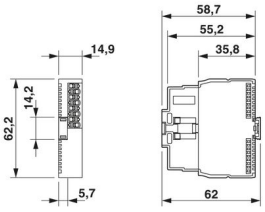
- 4 analog input channels
- Connection of sensors in 2-conductor technology
- Current range: 0 mA ... 20 mA
- Data format: standardized representation
- Resolution: 12 bits
- Device rating plate stored

Commercial data

Item number	1296378
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DRIB41
Product key	DRIB41
GTIN	4063151534301
Weight per piece (including packing)	36.87 g
Weight per piece (excluding packing)	34.17 g
Customs tariff number	85389091
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

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	6 Byte

Input data

Analog

Input name	Analog inputs
Description of the input	Single-ended inputs, current
Number of inputs	4
A/D converter resolution	12 bit
Connection method	Push-in technology
Connection technology	2-conductor
Note regarding the connection technology	shielded, twisted pair
Current input signal	0 mA ... 20 mA
Input resistance current input	max. 60 Ω
Data formats	Standardized representation

Measured value representation	16 bits
Protective circuit	Transient protection

Product properties

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

Insulation characteristics

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

Electrical properties

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

Supply voltage	using card edge connectors

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. 20 mA
	typ. 15 mA
Current consumption	min. 12 mA (without connected peripherals)
Power consumption	max. 480 mW
	min. 288 mW
Protective circuit	Surge protection; See the system in which the Smart Element is used.
	Reverse polarity protection; Polarity protection diode

Electrical isolation/isolation of the voltage ranges

Test voltage: Communications supply / 24 V supply (I/O)	500 V AC, 50 Hz, 1 min.
Test voltage: Communications supply / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min.

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

Connection method	Push-in connection
Conductor cross section rigid	0.25 mm² ... 1.5 mm²
Conductor cross section flexible	0.25 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic	0.25 mm² ... 1.5 mm²

sleeve	
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
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 mm² ... 1.5 mm²
Conductor cross section, flexible	0.25 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²
Stripping length	8 mm

Environmental and real-life conditions

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

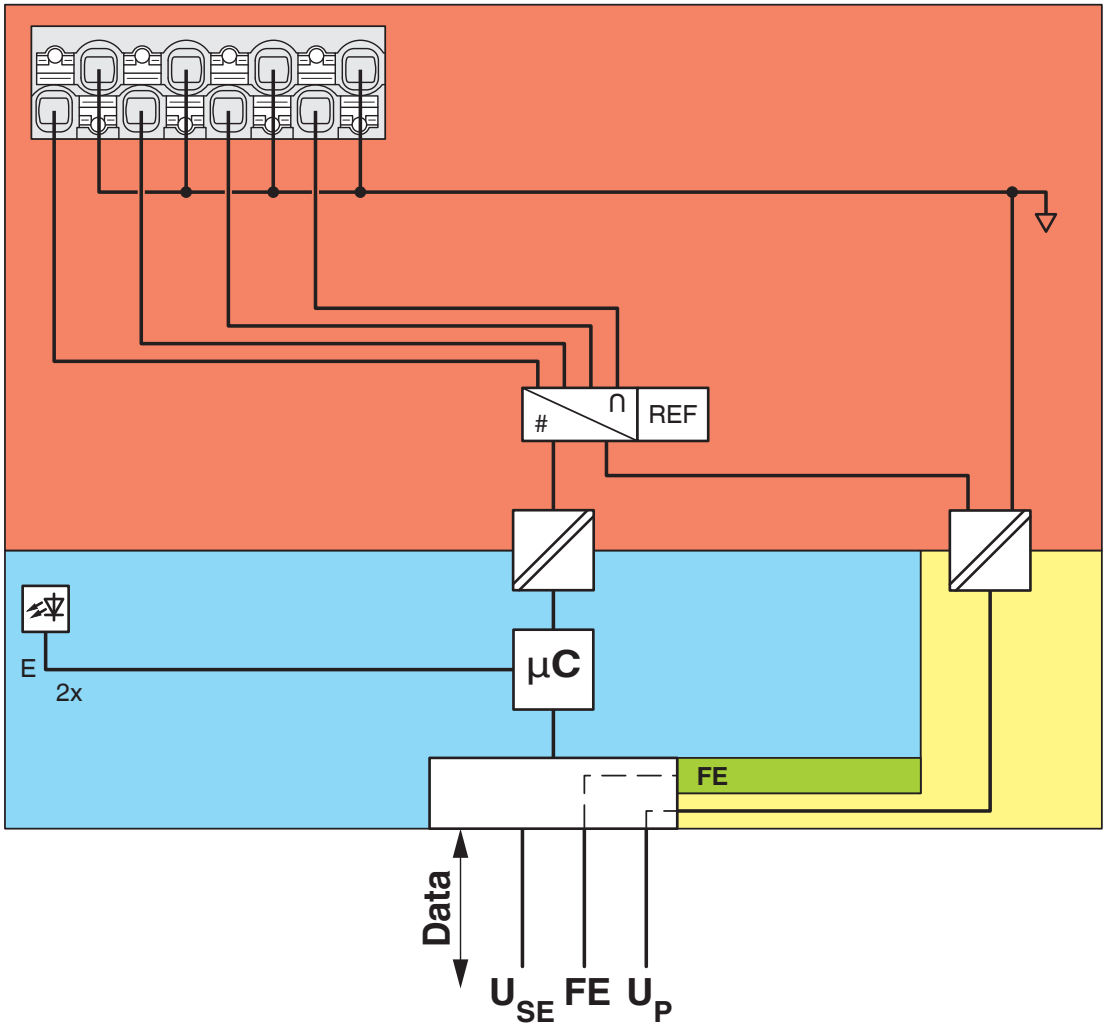
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Mounting

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

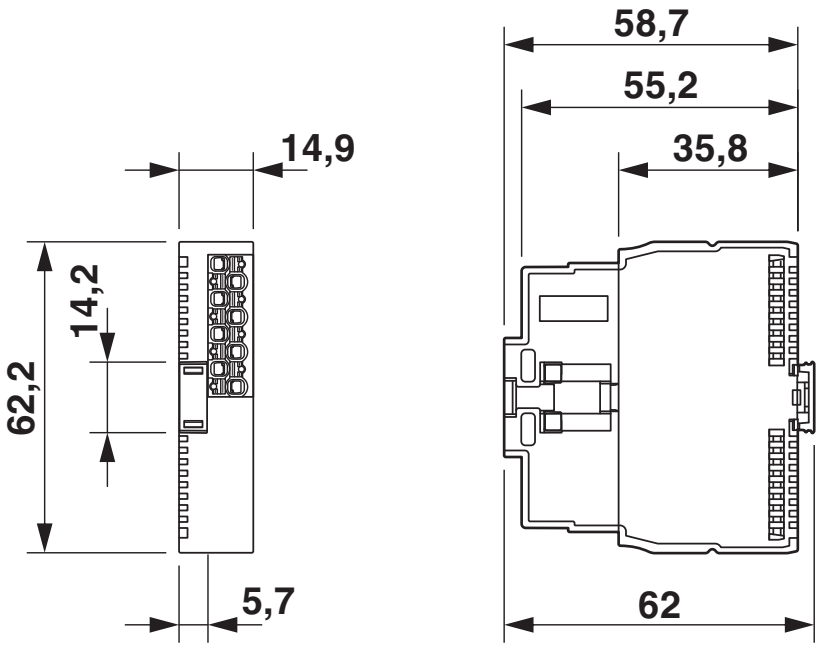
Drawings

Block diagram



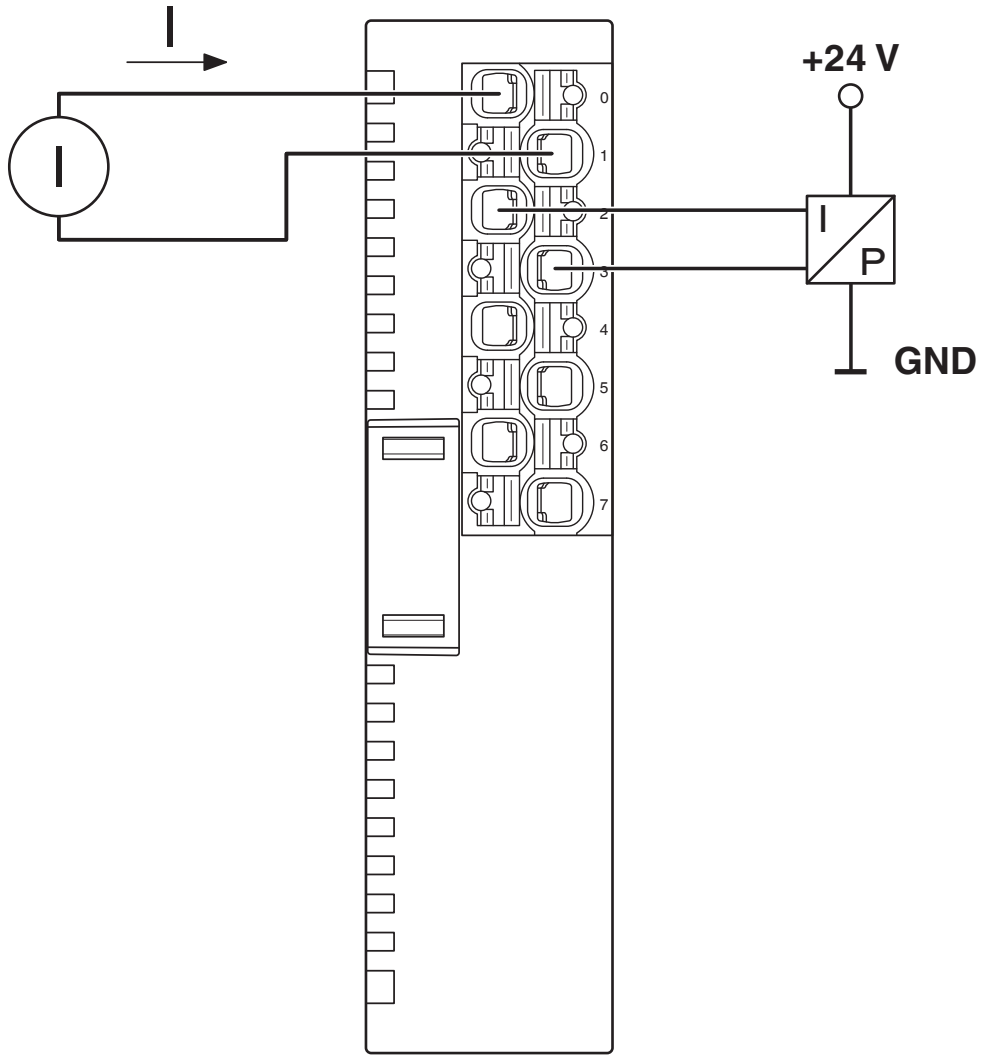
Internal wiring of the terminal points

Dimensional drawing



Dimensions

Connection diagram



Connection example

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1296378

UL Listed
Approval ID: E238705

cUL Listed
Approval ID: E238705

cULus Listed

Classifications

ECLASS

ECLASS-11.0	27242601
ECLASS-12.0	27242601
ECLASS-13.0	27242601

ETIM

ETIM 9.0	EC001596

UNSPSC

UNSPSC 21.0	32151600

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”

Mandatory accessories

AXL F BP SE4 - Module carrier

1088135

https://www.phoenixcontact.com/gb/products/1088135

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



AXL F BP SE6 - Module carrier

1088136

https://www.phoenixcontact.com/gb/products/1088136

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



Accessories

SZS 0,4X2,5 VDE - Screwdriver

1205037

https://www.phoenixcontact.com/gb/products/1205037



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

CRIMPFOX 6 - Crimping pliers

1212034

https://www.phoenixcontact.com/gb/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 mm^2 ... 6.0 mm^2, lateral entry, trapezoidal crimp

CRIMPFOX DUO 10 - Crimping pliers

1031721

https://www.phoenixcontact.com/gb/products/1031721



Crimping pliers, contact connection type: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, UL 486F, form A, E, F, min. cross section: 0.14 mm^2, max. cross section: 10 mm^2, for TWIN ferrules up to 2 x 4 mm^2, automatic cross section adjustment, rotating die, lateral and frontal insertion, compression: Trapezoidal crimp, black/green

CRIMPFOX 10T-F - Crimping pliers

1134913

https://www.phoenixcontact.com/gb/products/1134913



Crimping pliers, contact connection type: 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 x 4 mm^2, automatic cross section adjustment, frontal insertion, compression: Trapezoidal crimp, black

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

0803979

https://www.phoenixcontact.com/gb/products/0803979



Label, Roll, transparent/black, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, lettering field size: continuous x 3.2 mm, Number of individual labels: 1

SK 5,0 WH:REEL - Marker strip

0805221

https://www.phoenixcontact.com/gb/products/0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 5 mm, Number of individual labels: 10

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

0830928

https://www.phoenixcontact.com/gb/products/0830928



Marker for terminal blocks, Strip, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5 x 12 mm, Number of individual labels: 24

UCT6M-TM 5 - Marker for terminal blocks

0830756

https://www.phoenixcontact.com/gb/products/0830756



Marker for terminal blocks, for marking ABB terminal blocks from the SNK series, 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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