

AXL SE INC1 ASYM - Special function module



1182185

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Axioline Smart Elements, Position detection module, Incremental encoder input: 1, Asymmetrical encoder, Digital inputs: 2, 24 V DC, degree of protection: IP20

Product description

You can integrate Axioline Smart Elements into systems with the Smart Element interface. This Smart Element detects the positions of incremental encoders.

Your advantages

- Acquisition of digital signals from asymmetrical incremental encoders (A, B, Z)
- Acquisition of pulses of up to 300 kHz
- Evaluating linear or rotary axes
- Power supply for 5 V or 24 V encoder
- 1 input can be used for referencing
- Latch function for quick buffering of positions
- 32-bit register to output the measured increments
- Device rating plate stored

Commercial data

Item number	1182185
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR05
Product key	DRIB61
GTIN	4063151218379
Weight per piece (including packing)	38.44 g
Weight per piece (excluding packing)	35 g
Customs tariff number	85389091
Country of origin	DE

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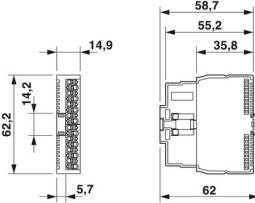


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Technical data

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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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	< 500 ms

System properties

Module

ID code (hex)	none
Process data channel	80 bit
Input address area	10 Byte
Output address area	10 Byte
Required parameter data	19 Byte
Required configuration data	7 Byte

Input data

Digital

Input name	Digital inputs
Description of the input	EN 61131-2, type 3
Number of inputs	2 (DI Ref, DI L)
Connection method	Push-in connection
Connection technology	1-conductor

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Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	3 mA
Protective circuit	Transient protection; Suppressor diode

Encoder

Number of inputs	1 (A, B, Z)
Input name	Incremental encoder input
Encoder signals	Asymmetrical encoder
Cable length	< 30 m (Shielded cable)

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

Encoder

Number	1 (+5 V)
Nominal output voltage	5 V DC
Voltage range	5 V DC ... 5.5 V DC
Current carrying capacity	max. 300 mA
Protective circuit	Short-circuit protection; Electrical and thermal
	Overload protection
	Transient protection; Suppressor diode
Number	1 (+24 V)
Nominal output voltage	24 V DC
Voltage range	19.2 V DC ... 30 V DC
Current carrying capacity	max. 500 mA
Protective circuit	Short-circuit protection; Electrical (from approx. 600 mA)
	Overload protection
	Transient protection; Suppressor diode
Number	1 (A, B, Z)
Designation	Asymmetrical incremental encoder
Input frequency	max. 300 kHz

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. 700 mA
	typ. 512 mA
Current consumption	min. 11 mA (without connected peripherals)
Power consumption	max. 21 W (of which 1.55 W internal losses)
	min. 264 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 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

Environmental and real-life conditions

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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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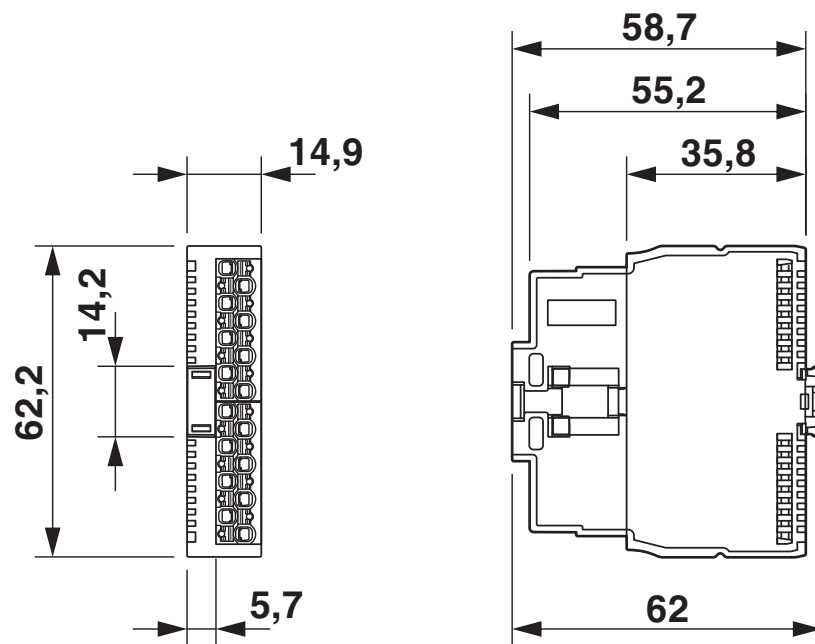


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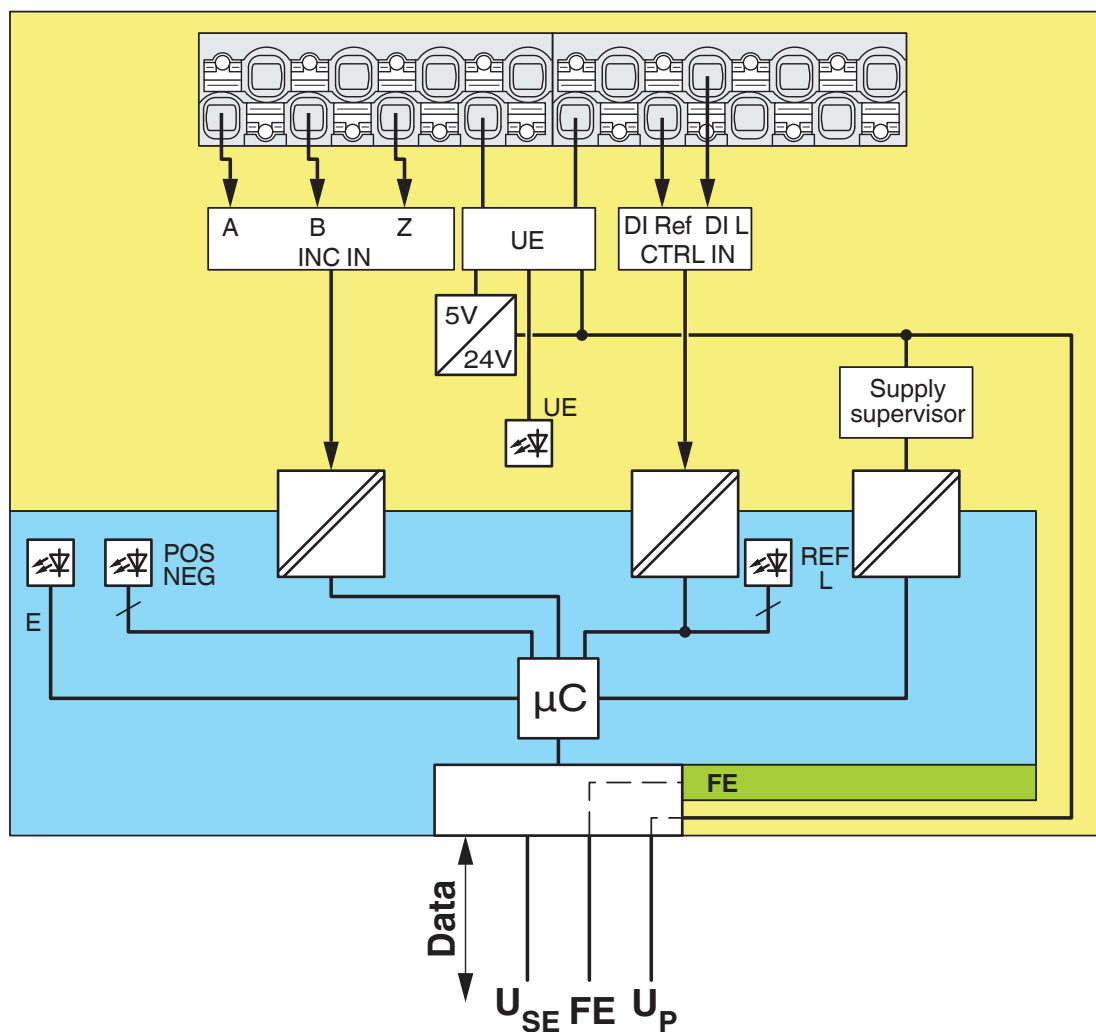
Drawings

Dimensional drawing



Dimensions

Block diagram



Internal wiring of the terminal points

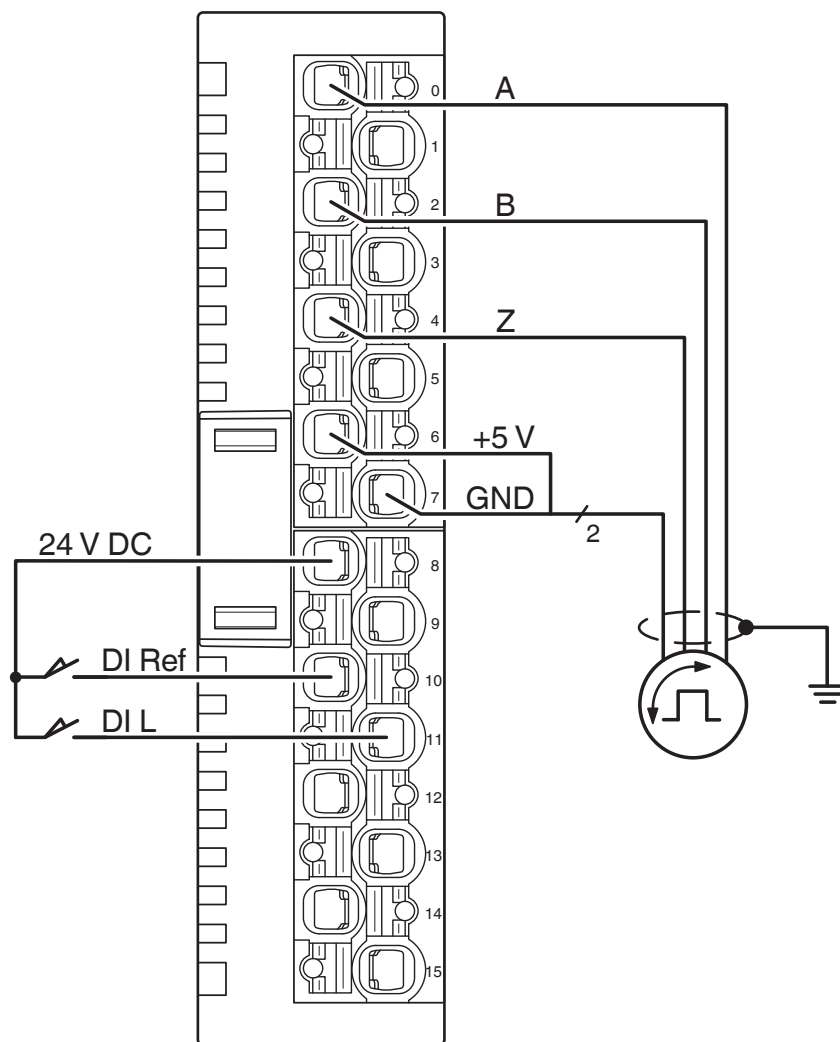
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Connection diagram



Connection example


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Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1182185>

**UL Listed**
Approval ID: FILE E 238705

**cUL Listed**
Approval ID: FILE E 238705

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 8.0	EC001599
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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

AXL F BP SE4 - Module carrier

1088135

<https://www.phoenixcontact.com/us/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/us/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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SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/us/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/us/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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CRIMPFOX DUO 10 - Crimping pliers

1031721

<https://www.phoenixcontact.com/us/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 mm², max. cross section: 10 mm², for TWIN ferrules up to 2 x 4 mm², 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/us/products/1134913>



Crimping pliers, contact connection type: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, min. cross section: 0.14 mm², max. cross section: 10 mm², For TWIN ferrules up to 2 x 4 mm², automatic cross section adjustment, frontal insertion, compression: Trapezoidal crimp, black

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

0803979

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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

SK 5,0 WH:REEL - Marker strip

0805221

<https://www.phoenixcontact.com/us/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

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

0830928

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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/us/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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