

# AXL SE PSDI8/3 - Safety module



1079241

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Axioline Smart Elements, Digital input module, Functional safety, PROFIsafe, only for connection to Phoenix Contact or Siemens controller, Safe digital inputs: 4 (2-channel assignment), 8 (1-channel assignment), 24 V DC, connection technology: 3-conductor, degree of protection: IP20

## Product description

You can integrate Axioline Smart Elements into systems with the Smart Element interface. This Smart Element is a safe input module for use in a PROFIsafe system.

## Your advantages

- Up to SIL 3 in accordance with EN 61508
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1, SIL 3 in accordance with EN IEC 62061
- 8 safe inputs for 1-channel assignment
- 4 safe inputs for 2-channel assignment

## Commercial data

Item number	1079241
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN03
Product key	DNA821
GTIN	4055626798127
Weight per piece (including packing)	58.43 g
Weight per piece (excluding packing)	36 g
Customs tariff number	85389091
Country of origin	DE

# AXL SE PSDI8/3 - Safety module

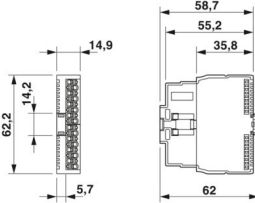
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## Technical data

### Dimensions

Dimensional drawing		
Width		14.9 mm
Height		62.2 mm
Depth		62 mm

### Notes

#### Note on application

Note on application	Only for industrial use
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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.

### System properties

#### Module

Input address area	6 Byte (PROFIsafe 2.6.1)
Output address area	5 Byte (PROFIsafe 2.6.1)

### Input data

#### Digital:

Input name	Safe digital inputs
Description of the input	EN 61131-2, type 3
Number of inputs	4 (2-channel assignment)
	8 (1-channel assignment)
Cable length	max. 200 m (200 m from the clock output to the safe input (total based on forward and return path))
Connection method	Push-in connection
Connection technology	3-conductor
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

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Nominal input current at $U_{IN}$	typ. 2.7 mA
Input filter time	1.5 ms
	3 ms (Default)
	5 ms
	15 ms
Protective circuit	Polarity reversal protection of the inputs; Diode

## Product properties

Product type	I/O component
Product family	Axioline Smart Elements
Application	Functional safety
	PROFIsafe
	only for connection to Phoenix Contact or Siemens controller
Type	modular
Mounting position	any
Operating mode	PROFIsafe 2.4, PROFIsafe 2.6.1

## Insulation characteristics

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

## Electrical properties

Maximum power dissipation for nominal condition	typ. 520 mW
Transmission medium	Copper

## Potentials

Protection	external fusing via the system in which the Smart Element is used
Protective circuit	Surge protection of the supply voltage; electronic (35 V, 0.5 s)
	Polarity reversal protection of the supply voltage; via the system in which the Smart Element is used

## Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 140 mA (at $U_{BUS}$ 5 V DC)
	typ. 101 mA (at $U_{BUS}$ 5 V DC)

## 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. 12 mA (Power supply from $U_P$ with 30 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)

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	typ. 9 mA (Power supply from U <sub>p</sub> with 24 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)
Current consumption	min. 8 mA (Power supply from U <sub>p</sub> with 19.2 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)
Power consumption	max. 360 mW
	min. 154 mW

## Connection data

### Connection technology

Connection name	I/O
Note on the connection method	Note the specification in the section Conductor cross-sections, and stripping and insertion lengths.

### Conductor connection

Connection method	Push-in connection
Conductor cross-section rigid	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section flexible	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

### I/O

Connection method	Push-in connection
Note on the connection method	Note the specification in the section Conductor cross-sections, and stripping and insertion lengths.
Conductor cross-section, rigid	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
Degree of protection at installation location	min. IP54
Air pressure (operation)	70 kPa ... 108 kPa
Air pressure (storage/transport)	66 kPa ... 108 kPa
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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### Air clearances and creepage distances

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Air clearances and creepage distances	IEC 60664-1
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## Mounting

Mounting type	Plug-in mounting (Smart Element slot)
Mounting position	any

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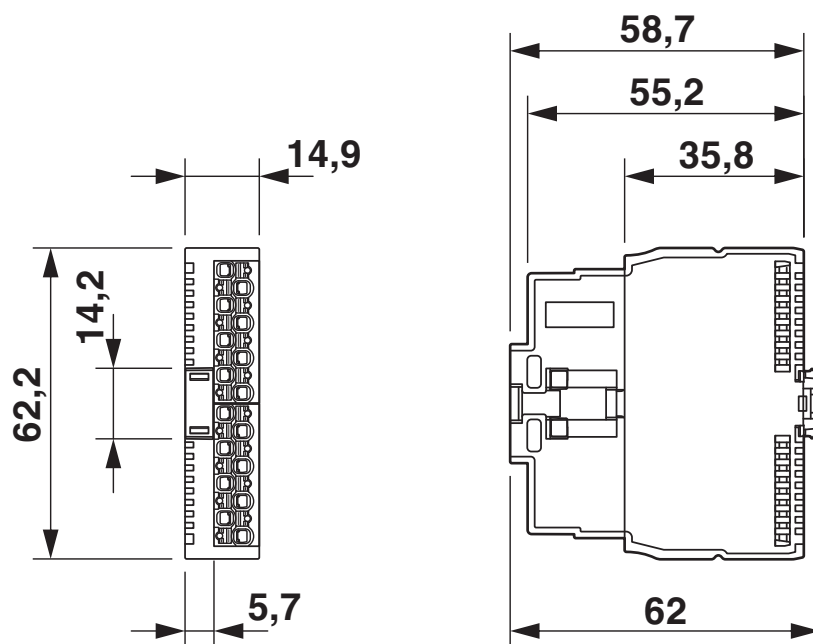
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## Drawings

Dimensional drawing



Dimensions

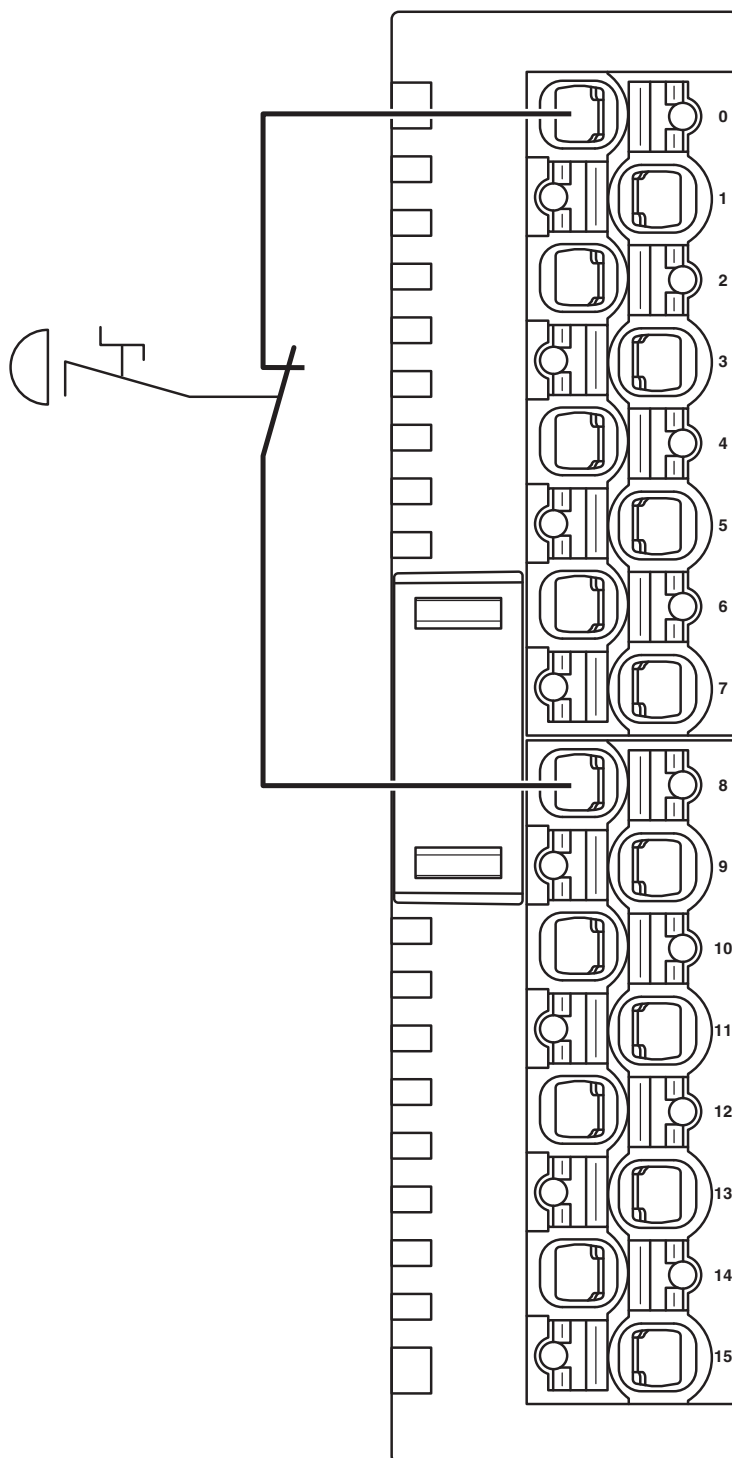
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Connection diagram



Connection example for an emergency stop circuit

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## Approvals

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**LR**

Approval ID: LR23402057TA

**DNV**

Approval ID: TAA00003B0



**RINA**

Approval ID: ELE263623XG

**ABS**

Approval ID: 24-2510075-PDA



**cULus Listed**

Approval ID: E238705

**PROFIsafe**

Approval ID: Z20276



**Functional Safety**

Approval ID: 968/EZ 650.04/20

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## Classifications

### ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

### ETIM

ETIM 9.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: n/a)
SCIP	68161f6b-01b3-4dd6-8b35-82a051a51224

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