AXL SE SC-A

**Axioline Smart Elements,
slot cover with diagnostic function**

Data sheet
108990_en_03

1 Description

You can integrate Axioline Smart Elements into systems with the Smart Element interface.
This Smart Element covers an unused Smart Element slot.

Features

– Protects an unused Smart Element slot
– Device rating plate stored

| i | If you are using an engineering system and an AXL SE SC-A slot cover, plan the Smart Element accordingly. |

| i | **Note when using bus couplers for PROFIBUS DP with the hardware and software (HW/SW) firmware version it runs:** |

AXL F BK PB: HW/FW ≤ 05/2.13
AXL F BK PB XC: HW/FW ≤ 00/2.13

The bus coupler does not support AXL SE SC-A slot covers.

Use another Smart element to cover the unused slots, such as AXL SE DI16/1.

| i | This data sheet is only valid in association with the UM EN AXL SE SYS INST user manual. |

| i | Make sure you always use the latest documentation.
It can be downloaded at: phoenixcontact.net/product/1088134 |

PHŒNIX CONTACT

INSPIRING INNOVATIONS

2   Table of contents

3   Ordering data

Description	Type	Order No.	Pcs./Pkt.
Axioline Smart Elements, Slot cover, Diagnostic function, degree of protection: IP20	AXL SE SC-A	1088134	1

Documentation	Type	Order No.	Pcs./Pkt.
User manual, English, Axioline Smart Elements	UM EN AXL SE SYS INST	-	-

Additional ordering data
For additional ordering data (accessories), please refer to user manual UM EN AXL SE SYS INST or go to phoenixcontact.net/products.

4   Technical data

Dimensions (nominal sizes in mm)
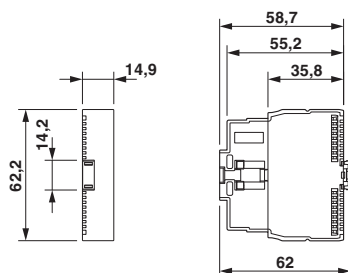
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

General data

Color	traffic grey A RAL 7042
Weight	28 g
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
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
Overvoltage category	II (IEC 60664-1)

General data

Degree of pollution	2 (EN 60664-1)
Mounting position	See the system in which the Smart Element is used.

ℹ️ Do not use the Smart Element in an atmosphere that contains corrosive gas.

Connection data

Connection method	without

Interface: Smart Element interface

Number	1
Connection method	Card edge connector
Start time until ready to operate	< 500 ms (after switching on the supply voltage (object 003D$_{hex}$: WakeUpTime))

Communications power supply of the Smart Elements (U$_{SE}$)

Supply voltage	using card edge connectors
Current draw	See documentation for the system in which the Smart Element is used.

Input and output address area

Input address area	0 Byte (All systems except PROFIBUS) 1 Byte (PROFIBUS)
Output address area	0 Byte

Configuration and parameter data in a PROFIBUS system

Required parameter data	1 Byte
Required configuration data	6 Byte

Electrical isolation/isolation of the voltage areas

Test section	Test voltage
Communications supply / functional ground	500 V AC, 50 Hz, 1 min.

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

Conformance with EMC Directive 2014/30/EU

| **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
Electromagnetic fields EN 61000-4-3/IEC 61000-4-3	Criterion A, Field intensity: 10 V/m
Fast transients (burst) EN 61000-4-4/IEC 61000-4-4	Criterion B, 2 kV
Conducted interference EN 61000-4-6/IEC 61000-4-6	Criterion A, Test voltage 10 V
Noise emission test as per EN 61000-6-4	Class A

For the latest approvals, please visit phoenixcontact.net/products.

5 Internal circuit diagram

Figure 1   Internal wiring
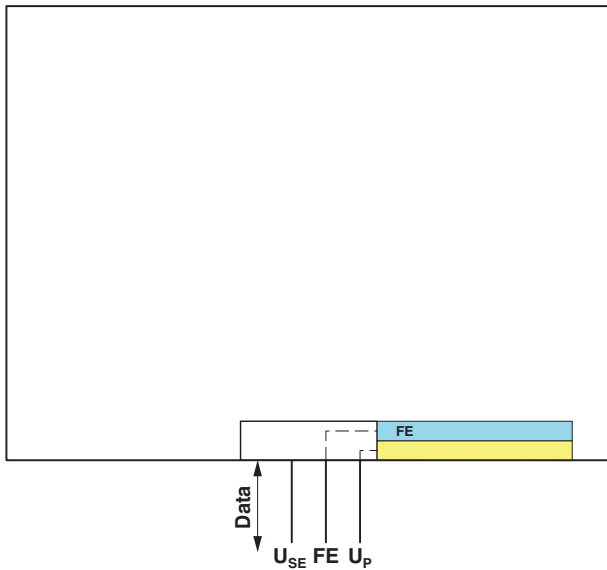
Key:

Data	Data transmission
U_{SE}	Communications power supply of the Smart Element
FE	Functional ground
U_P	I/O supply of the Smart Element
	Electrically isolated areas

6 For your safety

6.1 Intended use

Use Smart Elements exclusively in accordance with the specifications in the data sheet and the "Axioline Smart Elements" user manual.
Please also refer to the documentation for the system in which the Smart Elements are used.

6.2 Qualification of users

The use of products described in this data sheet is oriented exclusively to electrically skilled persons or persons instructed by them. The users must be familiar with the relevant safety concepts of automation technology as well as applicable standards and other regulations.

6.3 Disconnecting or plugging in a Smart Element

NOTE: Damage to contacts or malfunction
Before performing work on a Smart Element, disconnect the power to the Smart Element.
This means:
- Switch off the I/O supply voltage U_P!
- Switch off the communications power U_{SE}. For the system in which the Smart Element is used, this means the following: Switch off the voltage that generates the U_{SE}.

6.4 Locking a Smart Element

Make sure that each Smart Element is locked in its slot. This is only ensured if the unlocking mechanism has been pushed into the guide as far as it will go.

See also "Axioline Smart Elements" user manual.

6.5 Applications with UL approval

CAUTION!
- The device has to be built-in the final safety enclosure, which has adequate rigidity according to UL 61010-1, -2-201 and meets the requirements with respect to spread of fire.

Information:
To install the device according to the UL/CSA/IEC standard, the following rules must be observed.

- If the equipment is used in a manner not specified, the protection provided by the equipment may be impaired.

7 Terminal point assignment and diagnostic indicators

This Smart Element does not have any terminal points or diagnostic LEDs.

8 Parameter, diagnostics and information (PDI)

Parameter and diagnostic data as well as other information are transmitted as objects via the PDI channel.

For more detailed information on all possible standard objects for Axioline Smart Elements, please refer to the UM EN AXL SE SYS INST user manual.

The standard objects necessary for operation are described in the following section.

The information below applies to the following table:

Abbreviation	Meaning
A	Number of elements
L	Length of the elements in bytes
R	Read

9 Standard objects

Index (hex)	Object name	Data type	A	L	Rights	Meaning/contents		Startup param-eters	
Device type									
0037	DeviceType	Octet string	1	8	R	Device type	0000 0100 0053 1005$_{hex}$	No	
Diagnostics objects									
0018	DiagState	Record	11	33	R	Diagnostic state		No	*
Objects for process data management									
0025	PDIN	Octet string	1	0	R	Input process data: The object does not contain any data. When reading the object, you receive a positive response.		No	
0026	PDOUT	Octet string	1	0	R	Output process data: The object does not contain any data. When reading the object, you receive a positive response.		No	

The objects identified with * in the last column are described in more detail in the following sections.

The description of the other objects is to be found in the user manual UM EN AXL SE SYS INST.

Diagnostics state (0018$_{hex}$: DiagState)

This object is used for a structured message of an error.

A detailed description of the object is provided in user manual UM EN AXL SE SYS INST.

Possible error codes

Subindex	02	03	04	08	0B
Error	Priority	Channel	Error code	Function group	Text
	hex	hex	hex		
No error	00	00	0000	General	Status OK

Key

Priority	00$_{hex}$	No error
Channel	00$_{hex}$	No error

10 Device descriptions

The device is described in the device description files.
The device descriptions for controllers from Phoenix Contact are included in PC Worx and PLCnext Engineer, as well as in the corresponding service packs.
The device description files for other systems are available for download at phoenixcontact.net/products in the download area of the bus coupler installed.