

Safety module - AXL SE SSDI8/3 - 1190012

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Axioline Smart Elements, Digital input module, SafetyBridge technology, Safe digital inputs: 8 (1-channel assignment), 4 (2-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 SafetyBridge system.

Your advantages

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



Key Commercial Data

Packing unit	1 pc
GTIN	 4 063151 237479
GTIN	4063151237479
Weight per Piece (excluding packing)	40.000 g
Custom tariff number	85389091
Country of origin	Germany

Technical data

Dimensions

Caption	Dimensions
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

Safety module - AXL SE SSDI8/3 - 1190012

Technical data

Ambient conditions

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 ... 108 kPa
Air pressure (storage/transport)	66 kPa ... 108 kPa
Degree of protection	IP20
Degree of protection at installation location	min. IP54

Connection data

Designation	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 solid min.	0.25 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.25 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

Interfaces

Designation	Smart Element interface
Number	1
Connection method	Card edge connector
Transmission speed	See system in which you use the Smart Element.

Digital inputs

Input name	Safe digital inputs
Description of the input	EN 61131-2, type 3
Connection method	Push-in connection
Connection technology	3-conductor
Number of inputs	8 (1-channel assignment) 4 (2-channel assignment)
Protective circuit	Polarity reversal protection of the inputs Diode
Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	typ. 2.7 mA
Input filter time	1.5 ms

Safety module - AXL SE SSDI8/3 - 1190012

Technical data

Digital inputs

	3 ms (Default)
	5 ms
	15 ms
Cable length	max. 200 m (200 m from the clock output to the safe input (total based on forward and return path))
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Input current range "0" signal	max. 1.5 mA
Input current range "1" signal	min. 2 mA
Switching frequency	max. 10 Hz

Clock outputs

Number of outputs	2
Nominal voltage U_N	24 V DC (from U_P)
Limiting continuous current	max. 0.5 A DC (per clock output)
Short-circuit protection	Yes

General

Mounting type	Smart Element slot
Color	zinc yellow RAL 1018
Net weight	36 g
Operating mode	SafetyBridge
Degree of pollution	2 (EN 60664-1)
Mounting position	any
Maximum altitude	≤ 3000 m (Above sea level)

Axioline potentials

Designation	Axioline F local bus supply (U_{Bus})
Supply voltage	5 V DC (via bus base module)
Current consumption	typ. 101 mA (at U_{Bus} 5 V DC)
	max. 140 mA (at U_{Bus} 5 V DC)
Designation	Communications power supply of the Smart Elements (U_{SE})
Additional text	using card edge connectors
Current consumption	max. 144 mA (at U_{SE} 3.3 V DC)
Designation	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 consumption	min. 8 mA (Power supply from U_P with 19.2 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)

Safety module - AXL SE SSDI8/3 - 1190012

Technical data

Axioline potentials

	typ. 9 mA (Power supply from U_p with 24 V DC, all inputs set, without power supply to the sensors via clock supplies OUT_T1 and OUT_T2)
	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)
Power consumption	min. 154 mW
	typ. 216 mW
	max. 360 mW
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
Protection	external fusing via the system in which the Smart Element is used

Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	2 (1-channel assignment)
	3 (2-channel assignment)
Designation	IEC 61508 - Low demand
Safety Integrity Level (SIL)	2 (1-channel assignment)
	3 (2-channel assignment)
Designation	EN ISO 13849-1
Performance level (PL)	d (1-channel assignment)
	e (2-channel assignment)
Category	3 (1-channel assignment)
	4 (2-channel assignment)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	2 (1-channel assignment)
	3 (2-channel assignment)

Standards and Regulations

Immunity to ESD	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion A, 6 kV contact discharge, 8 kV air discharge
Immunity to EF	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
Immunity to burst	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion A, 2 kV
Immunity to surge	Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Test intensity 2, Criterion A Power supply: 0.5 kV/0.5 kV (symmetrical/unsymmetrical) Signal lines: 1.0 kV/2.0 kV (symmetrical/unsymmetrical)
Immunity to conducted interference	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V

Safety module - AXL SE SSDI8/3 - 1190012

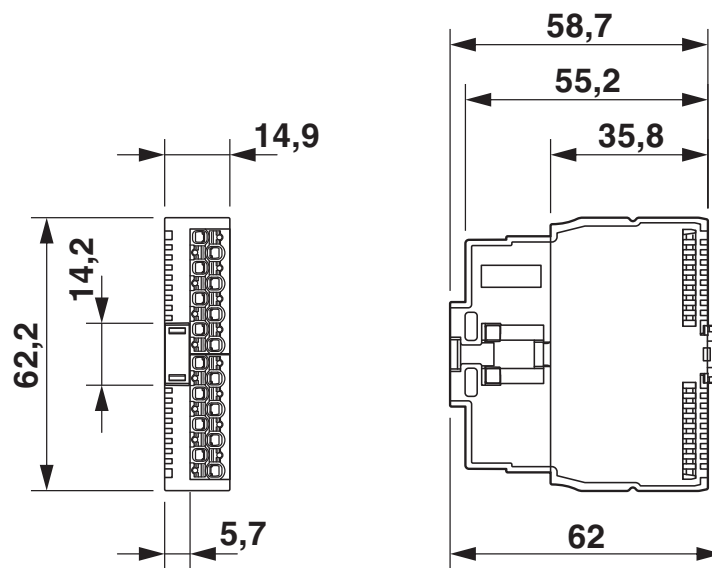
Technical data

Standards and Regulations

Interference emission	Noise emission test as per EN 61000-6-4 Class A (industrial applications)
Air clearances and creepage distances	IEC 60664-1
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
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
Overvoltage category	II (IEC 60664-1)

Drawings

Dimensional drawing



Dimensions

Classifications

eCl@ss

eCl@ss 10.0.1	27242604
eCl@ss 11.0	27242604
eCl@ss 9.0	27242604

Safety module - AXL SE SSDI8/3 - 1190012

Classifications

ETIM

ETIM 7.0	EC001599
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Approvals

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UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cULus Listed			
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Accessories

Accessories

Crimping tool

Crimping pliers - CRIMPFOX 6 - 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

Safety module - AXL SE SSDI8/3 - 1190012

Accessories

Crimping pliers - CRIMPFOX DUO 10 - 1031721



Crimping pliers, type of contact: Insulated and uninsulated ferrules, 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

Crimping pliers - CRIMPFOX 10T-F - 1134913



Crimping pliers, type of contact: 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

I/O component

Module carrier - AXL F BP SE4 - 1088135



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

Module carrier - AXL F BP SE6 - 1088136



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

Screwdriver tools

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



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

Safety module - AXL SE SSDI8/3 - 1190012

Accessories

Terminal marking

Label - MM-TML (EX4,2)R C1 TR/BK - 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 4.2 mm

Marker strip - SK 5,0 WH:REEL - 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

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



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

Marker for terminal blocks from the SNK series from ABB - UCT6M-TM 5 - 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: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.17 x 11.3 mm
