

AXL SE DO16/1 - Digital module



1088129

<https://www.phoenixcontact.com/us/products/1088129>

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Axioline Smart Elements, Digital output module, Digital outputs: 16, 24 V DC, 500 mA, connection technology: 1-conductor, degree of protection: IP20

Product description

You can integrate Axioline Smart Elements into systems with the Smart Element interface. This Smart Element emits digital signals.

Your advantages

- 16 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 1-conductor technology
- Substitute value behavior of the outputs can be parameterized for the Smart Element
- Device rating plate stored



Commercial data

Item number	1088129
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR05
Product key	DRIB32
GTIN	4055626888101
Weight per piece (including packing)	38.5 g
Weight per piece (excluding packing)	35 g
Customs tariff number	85389091

AXL SE DO16/1 - Digital module

1088129

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Country of origin	DE
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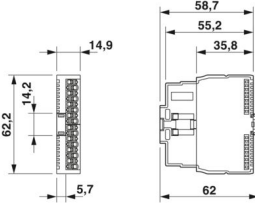
AXL SE DO16/1 - Digital module

1088129

<https://www.phoenixcontact.com/us/products/1088129>

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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Material specifications

Color (Housing)	gray (RAL 7042)
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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

Programming data (LocalbusSlave)

Process data channel	16 bit
Input address area	0 Byte
Output address area	2 Byte

Fieldbus data telegram (PROFIBUS)

Required parameter data	9 Byte
Required configuration data	6 Byte

Output data

Digital:

Output name	Digital outputs
Connection method	Push-in connection

AXL SE DO16/1 - Digital module



1088129

<https://www.phoenixcontact.com/us/products/1088129>

Connection technology	1-conductor
Number of outputs	16
Protective circuit	Short-circuit and overload protection; electronic
Output voltage	24 V
Limitation of the voltage induced on circuit interruption	-32.8 V DC ... -15 V DC
Max. current carrying capacity per output	max. 500 mA
Maximum output current per module	max. 6 A (Also make sure that the maximum permissible current of 6 A is not exceeded!)
Nominal output voltage	24 V DC
Load min.	10 k Ω
Output voltage when switched off	max. 1 V
Output current when switched off	max. 300 μ A
Nominal load, inductive	12 VA (1.2 H, 48 Ω , with nominal voltage)
Nominal load, lamp	12 W (at nominal voltage)
Nominal load, ohmic	12 W (48 Ω , with nominal voltage)
Switching frequency	max. 1200 per second (With resistive load, at least 50 mA load current) max. 1 per second (with inductive load) max. 16 per second (with nominal lamp load)
Reverse voltage resistance to short pulses	limited protection up to 0.5 A for 1 s
Behavior with overload	Shutdown with automatic restart
Behavior with inductive overload	Output can be destroyed
Signal delay	max. 100 μ s (when switched on) max. 100 μ s (when switched off, with at least 50 mA load current)
Overcurrent shut-down	min. 0.7 A
Output current with ground connection interrupt when switched off	< 1 mA

Product properties

Product type	I/O component
Product family	Axiline Smart Elements
Type	modular
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

Maximum power dissipation for nominal condition	1.2 W
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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)
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Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 6 A
Current consumption	min. 40 mA (without connected peripherals)
Protective circuit	Surge protection; See the system in which the Smart Element is used.
	Reverse polarity protection; parallel diode
Protection	See the system in which the Smart Element is used.

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.
	With a small conductor cross-section and high current, the terminal point temperature can reach up to 45 K above the ambient temperature.
	When selecting the cables, observe the permissible operating temperature in accordance with IEC or UL.

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.
	With a small conductor cross-section and high current, the terminal point temperature can reach up to 45 K above the ambient temperature.
	When selecting the cables, observe the permissible operating temperature in accordance with IEC or UL.
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
	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

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)

AXL SE DO16/1 - Digital module



1088129

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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)

Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	30g
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

Standards and regulations

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

Mounting type	Plug-in mounting (Smart Element slot)
Mounting position	See the system in which the Smart Element is used.

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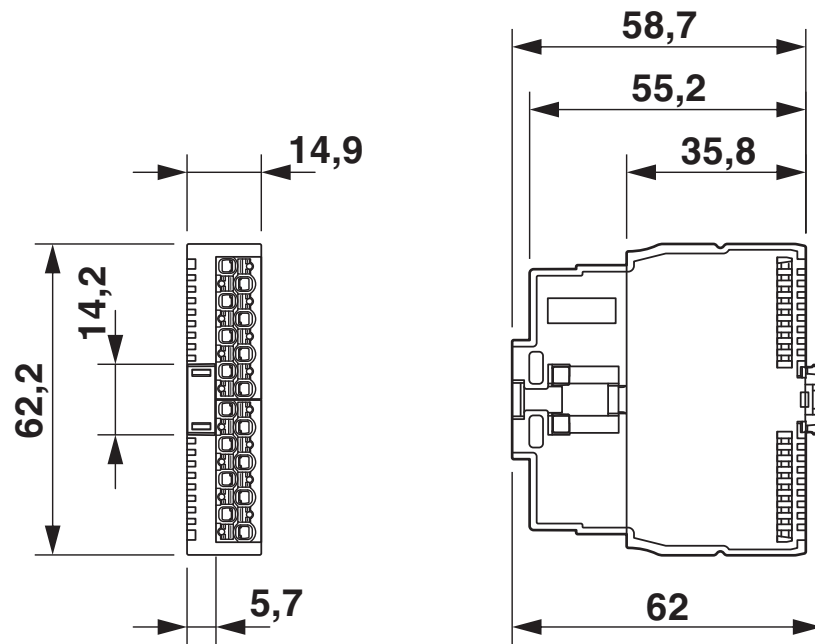
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Drawings

Dimensional drawing



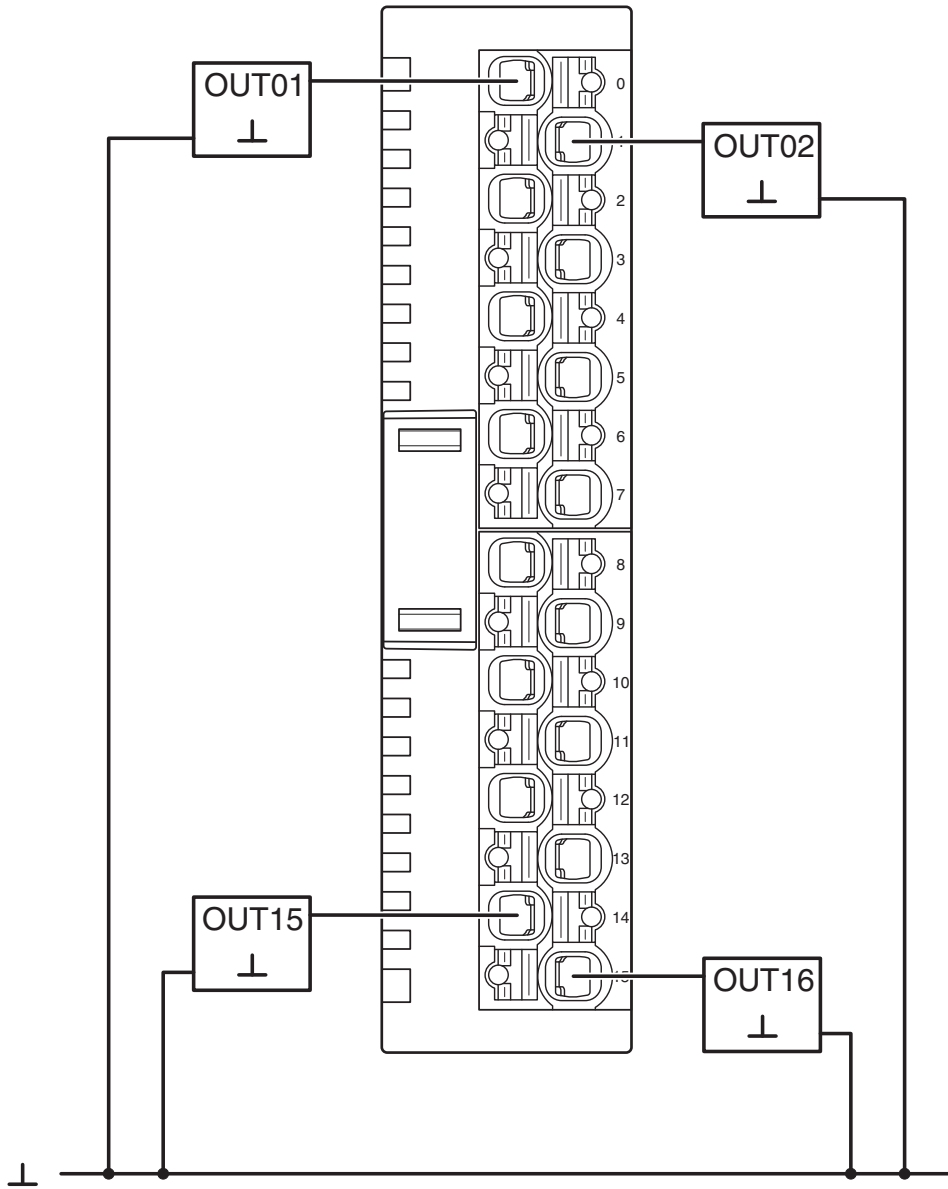
Dimensions (in mm)

AXL SE DO16/1 - Digital module

1088129

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Connection diagram



Connection in 1-conductor technology

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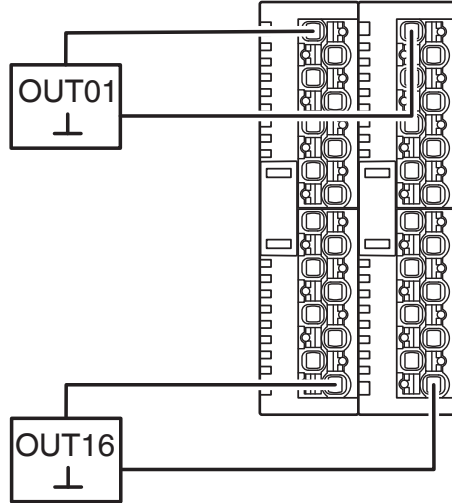
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Connection diagram

AXL SE DO16/1 AXL SE PD16 GND

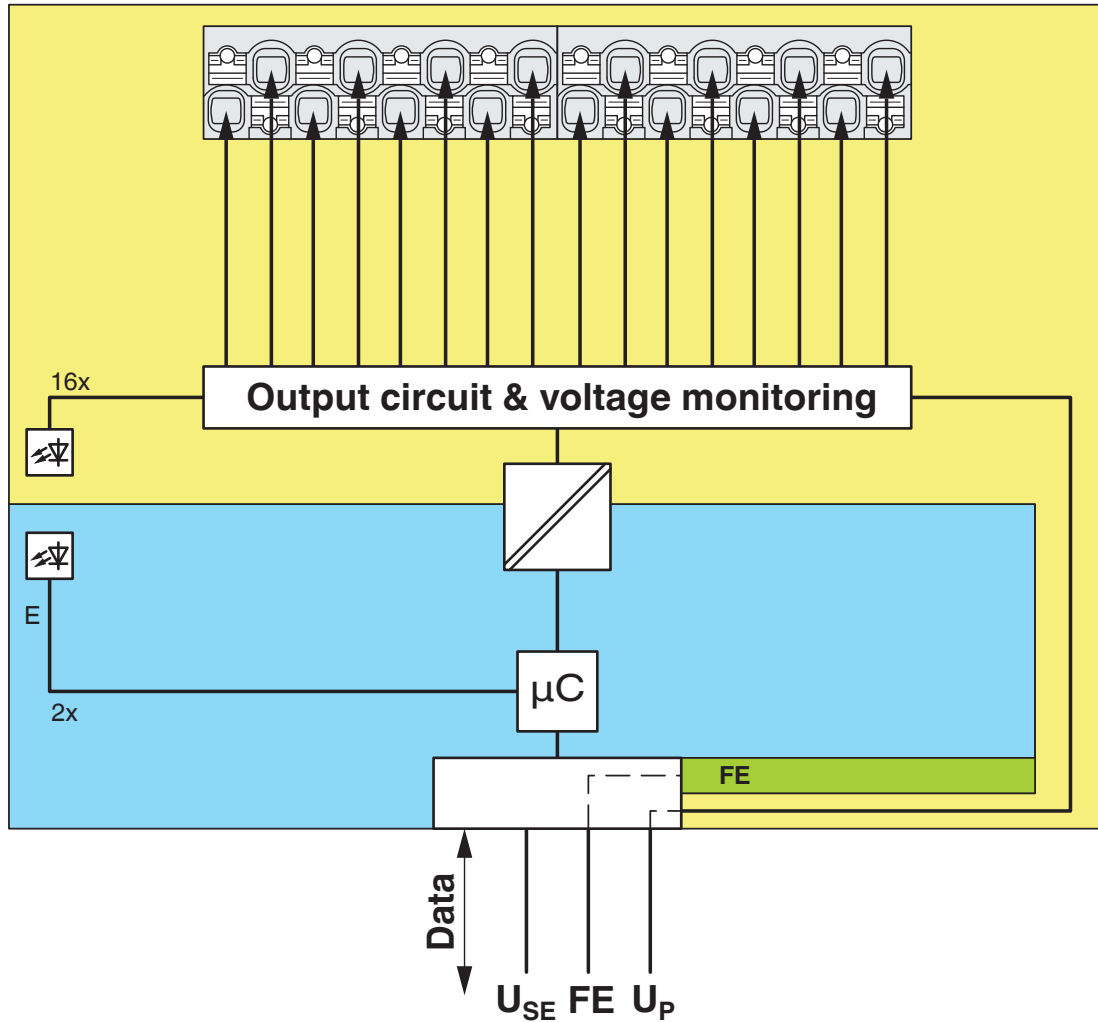


Connection in 2-conductor technology when using AXL SE PD ... (see data sheet)

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Block diagram



Internal wiring of the terminal points

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Approvals

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DNV

Approval ID: TAA00003B0



LR

Approval ID: LR23402057TA



RINA

Approval ID: ELE263623XG

ABS

Approval ID: 24-2510075-PDA



cULus Listed

Approval ID: E238705

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Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 10.0	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: 7439-92-1)
SCIP	1566ffa1-dd75-48e7-af6c-20ee81deec9e

EF3.1 Climate Change

CO2e kg	1.732 kg CO2e
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