

AXL SE DIO16/1 - Digital module

1745229

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Axioline Smart Elements, Digital I/O module, Digital inputs: 16, 24 V DC, connection technology: 1-conductor, 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. It is used to acquire and output digital signals.

Your advantages

- 16 digital inputs in accordance with EN 61131-2 type 1 and type 3
- Nominal voltage: 24 V DC
- Connection of sensors in 1-conductor technology
- 16 digital outputs
- 24 V DC, 500 mA
- Connection of actuators in 1-conductor technology
- Device rating plate stored

Commercial data

Item number	1745229
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	DRIB33
Product key	DRIB33
GTIN	4067923310216
Weight per piece (including packing)	37 g
Weight per piece (excluding packing)	34.3 g
Customs tariff number	85389091
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	14.9 mm
Height	62.2 mm
Depth	62 mm

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	2 Byte
Output address area	2 Byte

Fieldbus data telegram (PROFIBUS)

Required parameter data	29 Byte
Required configuration data	7 Byte

Input data

Digital:

Input name	Digital inputs
Description of the input	EN 61131-2 types 1 and 3
Number of inputs	16
Connection method	Push-in connection
Connection technology	1-conductor
Input voltage range "0" signal	-3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC

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Nominal input voltage U_{IN}	24 V DC
Nominal input current at U_{IN}	2.4 mA
Current flow	linear until nominal current is reached, then constantly approx. 2.4 mA
Input filter time	typ. 1 ms
Process data update	340 μ s
Protective circuit	Polarity reversal protection of the inputs; Diode

Output data

Digital:

Output name	Digital outputs
Connection method	Push-in connection
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, 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)
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	Axioline Smart Elements
Type	modular
Mounting position	See the system in which the Smart Element is used.

Insulation characteristics

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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	1.7 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)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 6 A
Current consumption	min. 50 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.

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
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
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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)

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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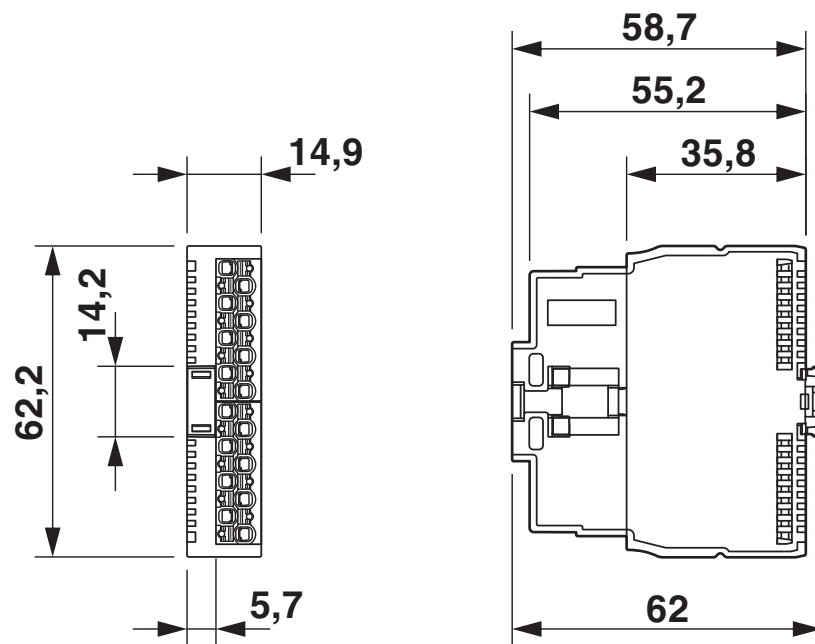
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Drawings

Dimensional drawing



Dimensions (in mm)

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Classifications

ECLASS

ECLASS-15.0

27242604

ETIM

ETIM 10.0

EC001599

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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)
	Bis(α,α -dimethylbenzyl) peroxide(CAS: 80-43-3)

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