AXL SE IOL4 - Communication module

1088132

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CRA-READY



Axioline Smart Elements, IO-Link master, IO-Link ports Class A: 4, connection method: Push-in connection, connection technology: 3-conductor, degree of protection: IP20; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

Product description

You can integrate Axioline Smart Elements into systems with the Smart Element interface. The IO-Link master enables the operation of up to four IO-Link devices. Alternatively, you can connect a standard digital sensor or actuator to each port.

Your advantages

- Connection of 4 IO-Link devices
- Alternatively: connection of one digital sensor or actuator per port
- Connection of IO-Link devices in 3-conductor technology
- Connection of sensors in 3-conductor technology
- Connection of actuators in 2- and 3-conductor technology
- Parameter data storage on the master
- IO-Link specification V1.1.2
- Substitute value behavior of inputs and outputs can be parameterized for each port
- IOL-CONF supported
- Device rating plate stored

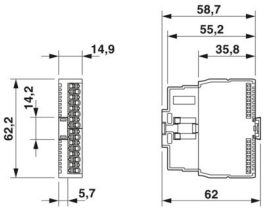
ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	1088132
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR05
Product key	DRIB53
GTIN	4055626887470
Weight per piece (including packing)	40 g
Weight per piece (excluding packing)	37 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

Notes

Note on application	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Mounting

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

Material specifications

Color (Housing)	gray (RAL 7042)

Interfaces

Smart Element interface

Number of interfaces	1
Connection method	Card edge connector
Start time until ready to operate	< 500 ms

System properties

Programming data

Process data channel	512 bit
Input address area	64 Byte
Output address area	64 Byte

Input data

Digital

Description of the input	IO-Link ports in digital input (DI) mode
Number of inputs	max. 4 (IEC 61131-2 type 1)

Connection method	Push-in connection
Connection technology	3-conductor
Nominal input voltage U_{IN}	24 V DC
Input voltage range "0" signal	-0.3 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 30 V DC
Nominal input current	typ. 2.5 mA
Sensor current per channel	max. 500 mA (from L+/L-)
Input filter time	1 µs

IO-Link

Number of ports	4
Connection method	Push-in connection
Connection technology	3-conductor
Port type	Class A

Output data

Digital

Output description	IO-Link ports in digital output (DO) mode
Connection method	Push-in connection
Connection technology	2-, 3-conductor
Number of outputs	max. 4
Nominal output voltage	24 V DC
Nominal current per channel	200 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.
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

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	1.85 W

Supply: IO-Link

Nominal voltage for I/O supply	24 V DC
Supply voltage range	18 V DC ... 30 V DC (including all tolerances, including ripple)
Nominal current for every IO-Link port	500 mA (at L+/L-)
	200 mA (at C/Q)
Protective circuit	Overload protection for L+; electronically limited to 0.6 A

	Short-circuit protection for L+; by switching off after 55 ms

Potentials: Communications power supply of the Smart Elements (U_{SE})

Supply voltage	using card edge connectors

Potentials: I/O supply (U_P) incl. IO-Link port supply

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. 2030 mA (Internal current consumption + full load of the 4 IO-Link ports (4 x 500 mA))
	typ. 2020 mA
Current consumption	min. 18 mA (without connected peripherals)
Protective circuit	Surge protection; See the system in which the Smart Element is used.
	Reverse polarity protection; Polarity protection 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 mm² ... 1.5 mm²
Conductor cross-section, flexible	0.25 mm² ... 1.5 mm²
Conductor cross-section AWG	24 ... 16
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm² ... 1.5 mm²
	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
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)

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

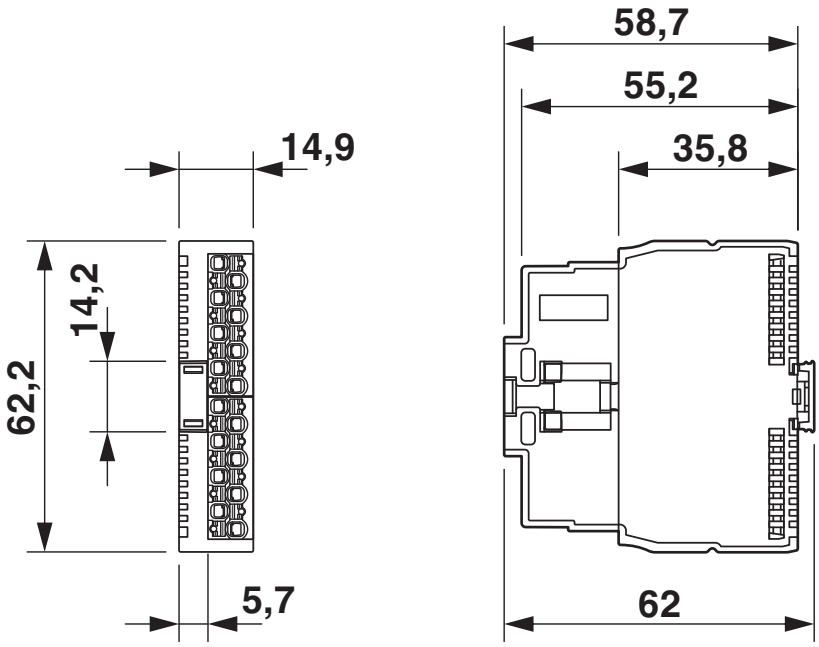
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	30g
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

Standards and regulations

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

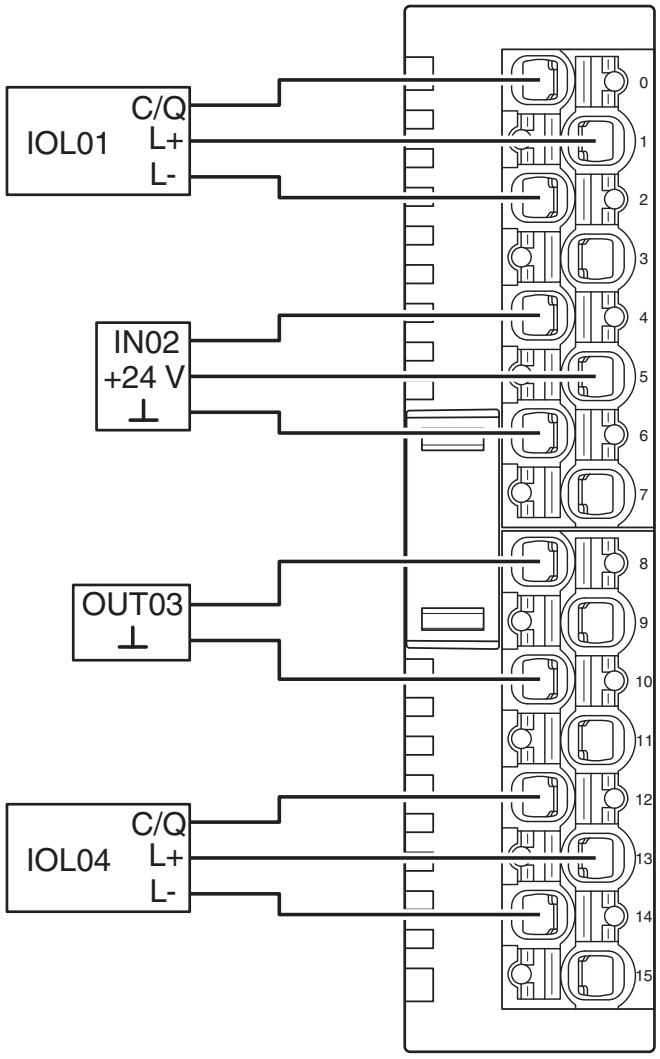
Drawings

Dimensional drawing



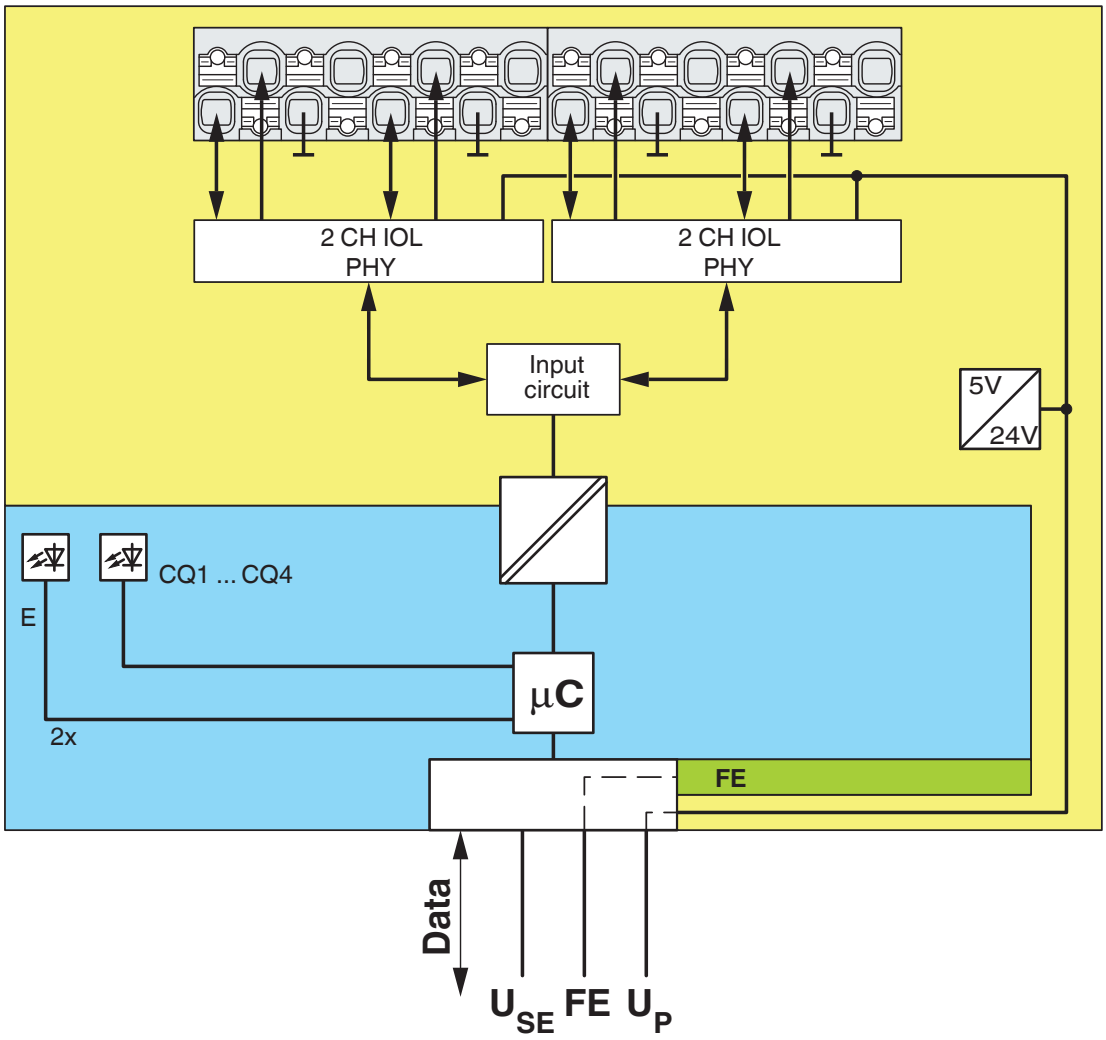
Dimensions

Connection diagram



Connection example

Block diagram



Internal wiring of the terminal points

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1088132

cULus Listed
Approval ID: E238705

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Classifications

ECLASS

ECLASS-13.0	27242608
ECLASS-15.0	27242608

ETIM

ETIM 10.0	EC001604

UNSPSC

UNSPSC 21.0	32151600

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	1c4625cc-d29e-4bde-923d-a438bb2d8b3d

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