

AXL P EX IS DI16 NAM 1F - Digital module



1052417

<https://www.phoenixcontact.com/us/products/1052417>

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Axioline P, Digital input module, Digital inputs: 16 (NAMUR), 8 V DC, connection technology: 2-conductor, Intrinsically safe, transmission speed in the local bus: 100 Mbps, degree of protection: IP20

Product description

The module is an Axioline P I/O module for use in the Axioline P modular I/O system. It is used to acquire digital signals. The module is a modular I/O device that can be affixed to the Axioline P local bus, to communicate I/O data up to the Axioline P bus coupler, which forms the head of the station. As an intrinsic safety I/O module, this device allows direct connection from intrinsically safe field I/O to the terminals of the module. The digital input module with NAMUR capabilities collects digital input signals and supports NAMUR proximity and close contact switches and makes this information available to the bus coupler through the Axioline P local bus. The module is fully hot-swappable on the Axioline P local bus, which also provides power to the module.

Your advantages

- 16 NAMUR digital input signals for NAMUR proximity sensors according to EN 60947-5-6
- Open circuit contacts
- Switch contacts with resistance circuit in accordance with IEC/EN 60947-5-6
- Connection of sensors in 2-conductor technology
- Intrinsically safe digital inputs with connection to Zone 1, Zone 0 or Division 1
- Can be used under extreme ambient conditions
- Temperature range: -40 °C ... +70 °C
- Hot-swappable

Commercial data

Item number	1052417
Packing unit	1 pc
Sales key	DR06
Product key	DRIP31
GTIN	4055626676241
Weight per piece (including packing)	400 g
Weight per piece (excluding packing)	288 g
Customs tariff number	85389099
Country of origin	US

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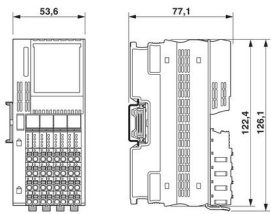


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Technical data

Dimensions

Dimensional drawing	
Width	53.6 mm
Height	126.1 mm
Depth	77.14 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

Notes

Utilization restriction	
EMC note	EMC: class A product, see manufacturer's declaration in the download area
Utilization restriction	
CCcex note	Use in potentially explosive areas is not permitted in China.

Material specifications

Color	traffic grey A RAL 7042
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Interfaces

Axioline P local bus	
Connection method	Connection for bus base module
Transmission speed	100 Mbps

Input data

Digital	
Input name	Digital inputs
Description of the input	NAMUR enabled digital input signals
Number of inputs	16 (NAMUR)
Connection method	Push-in connection
Connection technology	2-conductor
Nominal input voltage U_{IN}	8.2 V DC
Protective circuit	Polarity reversal protection of the inputs

Product properties

Type	block modular
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Product type	I/O component
Product family	Axioline P
Mounting position	any (no temperature derating)

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Potentials: Supply of the logic voltage U_L

Supply voltage range	19.2 V DC ... 30 V DC (via bus base module (U_L) at AXL P BK...)
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Potentials: Supply of the Axioline P local bus U_{BUS}

Supply voltage	5 V DC (via bus base module)
Current draw	max. 135 mA

Potentials: Axioline P extension module supply voltage

Supply voltage	U_L (via bus base module)
Current draw	max. 130 mA (via bus base module)

Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply of the local bus (U_{BUS}) / functional ground	500 V AC, 62 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 62 Hz, 1 min.
Test voltage: Field to functional earth	500 V AC, 62 Hz, 1 min.
Test voltage: Field to 5 V and 24 V supplies	1500 V AC, 62 Hz, 1 min.

Connection data

Connection technology

Connection name	Axioline P connector
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline P: system and installation" user manual.

Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

Axioline P connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline P: system and installation" user manual.
Conductor cross section, rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

Stripping length	8 mm
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (Standard)
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 2000 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)

Standards and regulations

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

ATEX

Identification	II 3(1) G Ex ec [ia Ga] IIC T4 Gc II (1) D [Ex ia Da] IIIC
Certificate	DEMKO 20 ATEX 2370X

IECEX

Identification	Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC
Certificate	IECEX UL 20.0044X

UKCA Ex (UKEX)

Identification	II 3(1) G Ex ec [ia Ga] IIC T4 Gc II (1) D [Ex ia Da] IIIC
Certificate	UL22UKEX2508X

Ex data

UL, USA / Canada	Ind. Cont. Eq. (E238705) also Listed Ind. Cont. Eq. for haz. loc. E196811 Install in: Class I, Div. 2, Groups A, B, C, D T4 Intrinsically safe outputs for: Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; [Ex ia] Haz loc Class I, Zone 2, AEx ec [ia Ga] IIC T4 Gc [AEx ia Da] IIIC Ex ec [ia Ga] IIC T4 Gc [Ex ia Da] IIIC
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Mounting

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating)

Ex data

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Safety data

Max. output voltage U_o	10.6 V
Max. output current I_o	11 mA
Max. output power P_o	30 mW
Safety-related maximum voltage U_m	250 V
A, B / IIC ((A, B, or IIC)): Max. external inductivity L_o / Max. external capacitance C_o	/ 2.3 μ F
C/IIB, IIIC ((C, IIB, or IIIC)): Max. external inductivity L_o / Max. external capacitance C_o	/ 16 μ F
D/IIA, E, F, G, Class III ((D, E, F, G, Class III, or IIA)): Max. external inductivity L_o / Max. external capacitance C_o	/ 71.8 μ F
A, B / IIC ((A, B, or IIC)): Max. external inductivity L_o / Max. external capacitance C_o	100 mH
C/IIB, IIIC ((C, IIB, or IIIC)): Max. external inductivity L_o / Max. external capacitance C_o	100 mH
D/IIA, E, F, G, Class III ((D, E, F, G, Class III, or IIA)): Max. external inductivity L_o / Max. external capacitance C_o	100 mH

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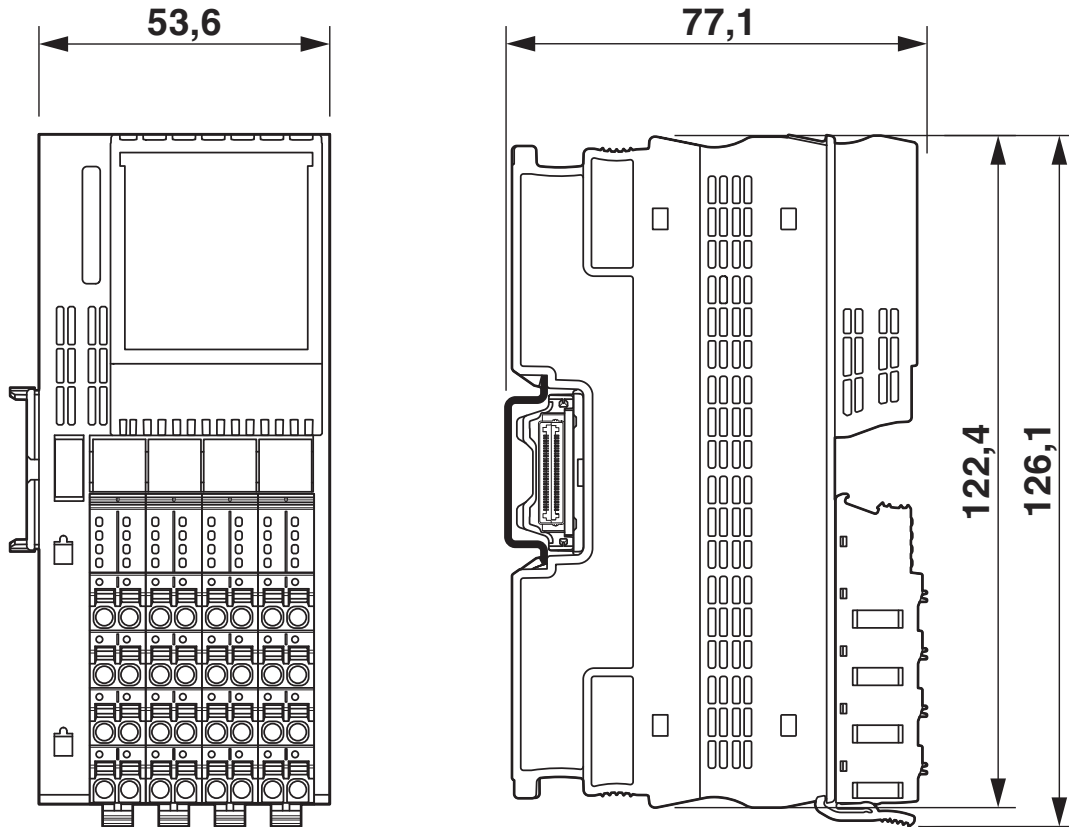


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Drawings

Dimensional drawing



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Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1052417>



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705



IECEX

Approval ID: IECEX UL 20.0044X



cUL Listed

Approval ID: FILE E 196811



UL Listed

Approval ID: FILE E 196811



ATEX

Approval ID: DEMKO 20 ATEX 2370X



CCC

Approval ID: 2021122316114727



UKCA-EX

Approval ID: UL22UKEX2508X

cULus Listed

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 9.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
	Dechlorane Plus
China RoHS	Environmentally Friendly Use Period = 25;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

AXL P BS F2 - Bus connector

1052428

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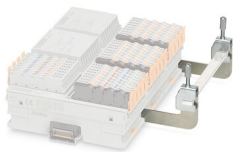


Axioline P bus base module for housing type F2

AXL SHIELD SET - Shield connection

2700518

<https://www.phoenixcontact.com/us/products/2700518>



Axioline shield connection set (contains 2 shield bus holders and 2 SK 5 shield connection clamps)

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AXL F/P IO EX PP - Separating plate

1100201

<https://www.phoenixcontact.com/us/products/1100201>

Axioline F/P partition plate for intrinsically safe modules



AXL P TERM PAIR - Termination block

2316402

<https://www.phoenixcontact.com/us/products/2316402>

Axioline P terminator pair



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ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

<https://www.phoenixcontact.com/us/products/0829579>



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

AXL P TERM PAIR - Termination block

2316402

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Axioline P terminator pair

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AXL P BS F2 - Bus connector

1052428

<https://www.phoenixcontact.com/us/products/1052428>

Axioline P bus base module for housing type F2



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