

AXL P DI16 NAM 1F - Digital module



1052416

<https://www.phoenixcontact.com/us/products/1052416>

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

Product description

The module is an Axioline P I/O module for use in the Axioline P modular I/O system. 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. 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 and may be removed while under power.

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
- Can be used under extreme ambient conditions
- Temperature range: -40 °C ... +70 °C
- Hot-swappable

Commercial data

Item number	1052416
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR06
Product key	DRIP31
GTIN	4055626676623
Weight per piece (including packing)	380 g
Weight per piece (excluding packing)	276 g
Customs tariff number	85389099
Country of origin	US

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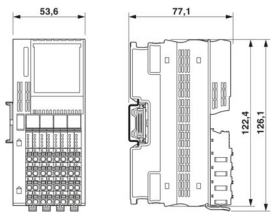


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Technical data

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

Note on application	
Note on application	Only for industrial use
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.

Interfaces

Axioline P local bus	
Number of interfaces	2
Connection method	Bus base module
Transmission speed	100 Mbps

System properties

Module	
ID code (hex)	none
Input address area	2 Byte (Firmware 1.00)
	4 Byte (Firmware 1.03 or later)
Output address area	0 Byte

Input data

Digital:	
Input name	Digital inputs

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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

Product type	I/O component
Product family	Axioline P
Type	block modular
Mounting position	any (no temperature derating)
Scope of supply	including bus base module and Axioline P connectors
Special properties	NAMUR functionality

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	3.17 W
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Potentials: Supply voltage (U_L)

Supply voltage	24 V DC (via bus base module)
Supply voltage range	19.2 V DC ... 30 V DC
Current draw	max. 130 mA (via bus base module) typ. 94 mA (via bus base module)
Protective circuit	Surge protection; electronic (35 V, 0.5 s) Reverse polarity protection; Polarity protection diode Transient protection; Suppressor diode

Potentials: Axioline P local bus supply (U_{BUS})

Supply voltage	5 V DC (via bus base module)
Current draw	max. 135 mA typ. 110 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply of the local bus (U_{BUS}) / functional ground	500 V AC, 60 Hz, 1 min
Test voltage: 5 V supply of the local bus (U_{BUS}) / digital inputs	1500 V AC, 60 Hz, 1 min
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 60 Hz, 1 min
Test voltage: 24 V supply (I/O) / digital inputs	1500 V AC, 60 Hz, 1 min
Test voltage: Digital inputs / functional ground	500 V AC, 60 Hz, 1 min

Connection data

Connection technology

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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

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
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 3G Ex ec IIC T4 Gc
Certificate	DEMKO 20 ATEX 2334X

IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX UL 20.0002X

UKCA Ex (UKEX)

Identification	II 3G Ex ec IIC T4 Gc
Certificate	PxCAI22UKEx1052416X

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UL, USA/Canada

Identification	cULus
Certificate	E238705

UL Ex, USA / Canada

Identification	Class I, Division 2, Groups A, B, C, D, T4
	Class I, Zone 2, IIC T4
Certificate	E196811

CCC / China-Ex

Identification	Ex ec IIC T4 Gc
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Ex data

UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T4 Class I, Zone 2, IIC T4
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Mounting

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

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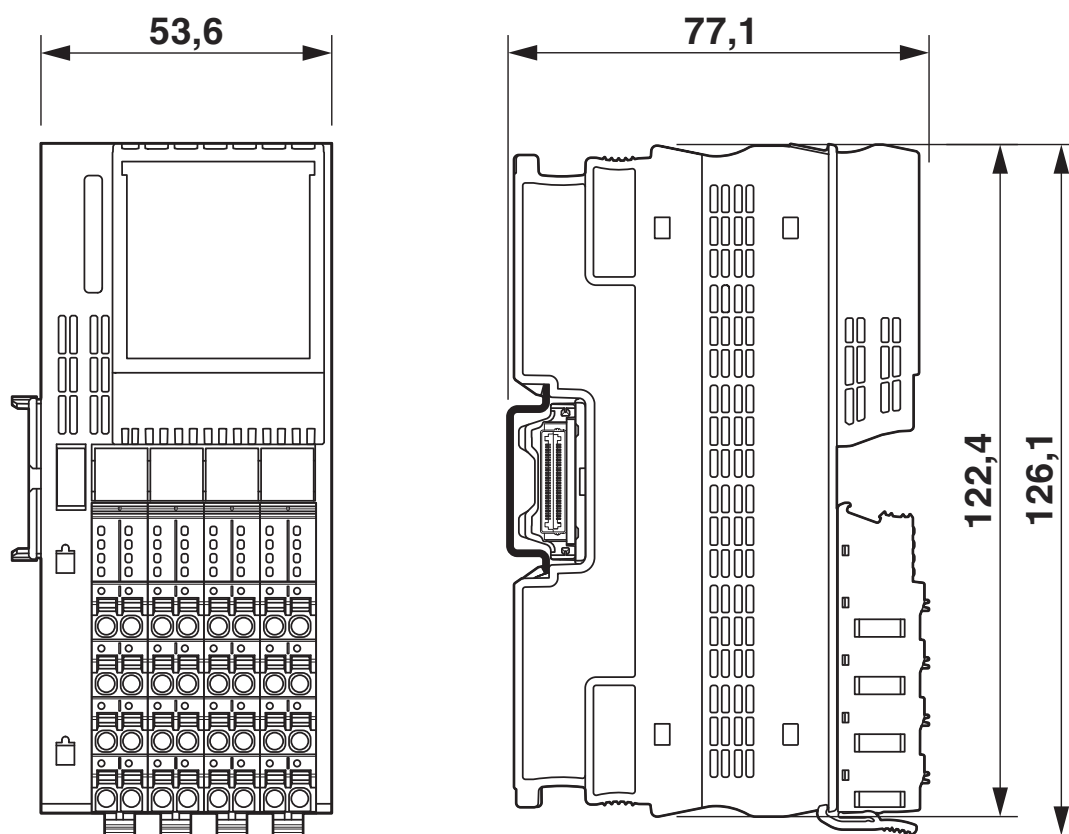


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Drawings

Dimensional drawing



Dimensional drawing

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1052416>



UL Listed

Approval ID: File E238705



cUL Listed

Approval ID: E238705



IECEx

Approval ID: IECEx UL 20.0002X



cUL Listed

Approval ID: E196811



UL Listed

Approval ID: E196811



ATEX

Approval ID: DEMKO 20 ATEX 2334X



CCC

Approval ID: 2025122309122350

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Classifications

ECLASS

ECLASS-13.0	27242604
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ETIM

ETIM 9.0	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-25
	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	57795b24-39a0-4e4c-8f8e-6cd546b050bf

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