# AXL P EX IS DI16 NAM 1F - Digital module

1052417

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

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Axioline P, Digital input module, Digital inputs: 16 (NAMUR), 8 V DC, connection technology: 2-conductor, NAMUR functionality, intrinsically safe, 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. As an intrinsic safety I/O module, this device allows direct connection from intrinsically safe field I/Os 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 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
- 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

ELEKTROGERÄTE RÜCKNAHME

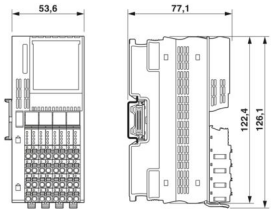
## Commercial data

| | |
|---|---|
| Item number | 1052417 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |

| | |
|---|---|
| Sales key | DR06 |
| Product key | DRIP31 |
| GTIN | 4055626676241 |
| Weight per piece (including packing) | 420 g |
| Weight per piece (excluding packing) | 288 g |
| Customs tariff number | 85389099 |
| Country of origin | US |

## 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

| | |
|---|---|
| CCCex note | Use in potentially explosive areas is not permitted in China. |

### Mounting

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

### Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |

### Interfaces

Axioline P local bus

| | |
|---|---|
| Number of interfaces | 2 |
| Connection method | Bus base module |
| Transmission speed | 100 Mbps |

### System properties

Programming data

| | |
|---|---|
| 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 |
| 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 |
| Process data update | 1.2 ms |
| 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 |
| | intrinsically safe |

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 |

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

| | |
|---|---|
| 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. |

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 mm² ... 1.5 mm² |
| Conductor cross-section, flexible | 0.2 mm² ... 1.5 mm² |
| 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) |

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) |

## Approvals

ATEX

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

IECEx

| | |
|---|---|
| Identification | Ex ec [ia Ga] IIC T4 Gc<br>[Ex ia Da] IIIC |

| | |
|---|---|
| Certificate | IECEx UL 20.0044X |

UKCA Ex (UKEX)

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

UL, USA/Canada

| | |
|---|---|
| Identification | cULus |
| Certificate | E238705 |

UL Ex, USA / Canada

| | |
|---|---|
| Identification | Class I, Division 2, Groups A, B, C, D, T4 |
| | Intrinsically safe connections to: 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 |
| Certificate | E196811 |

CCC / China-Ex

| | |
|---|---|
| Identification | Ex ec [ia Ga] IIC T4 Gc |
| | [Ex ia Da] IIIC |

Ex data

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

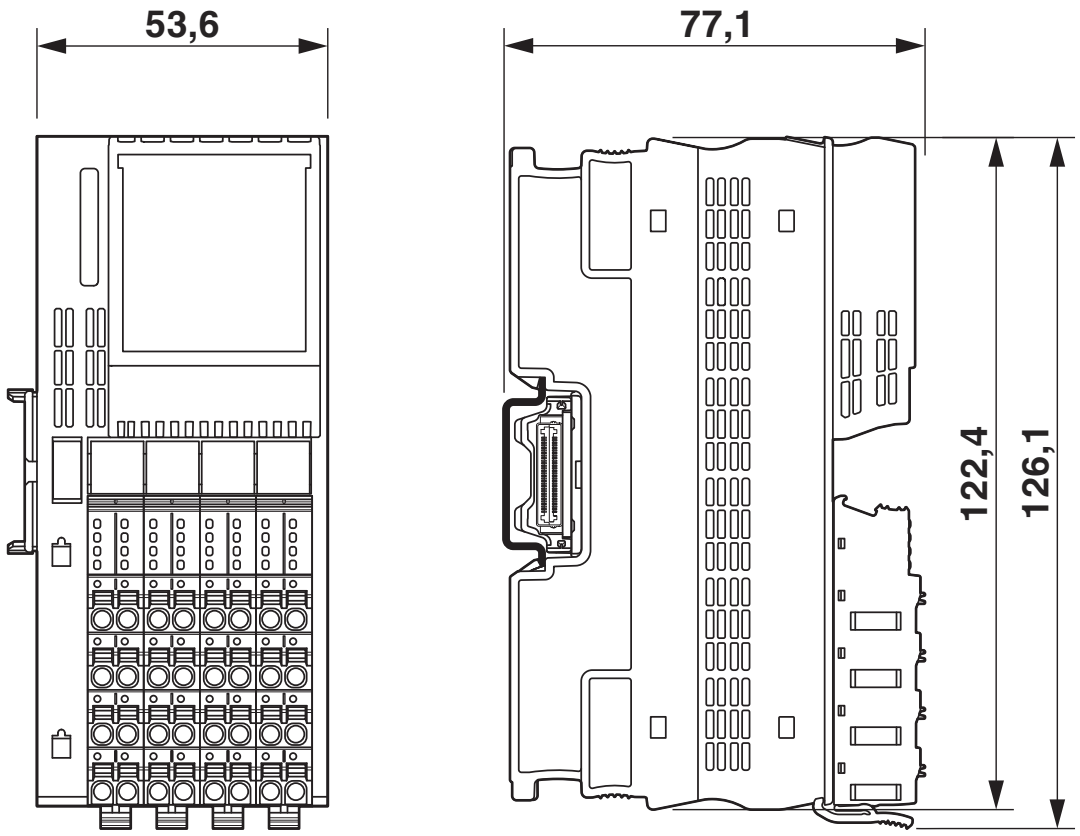
## Ex data

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: Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 100 mH / 2.3 µF |
| C/IIB, IIIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 100 mH / 16 µF |
| D/IIA, E, F, G, Class III: Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 100 mH / 71.8 µF |

## Drawings

Dimensional drawing




Dimensional drawing

## Approvals

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

**cULus Listed**
Approval ID: E238705

**IECEx**
Approval ID: IECEx UL 20.0044X

**cUL Listed**
Approval ID: FILE E196811

**UL Listed**
Approval ID: FIILE E196811

**ATEX**
Approval ID: DEMKO 20 ATEX 2370X

**CCC**
Approval ID: 2025122316122298

**UKCA-EX**
Approval ID: UL22UKEX2508X

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27242604 |
| ECLASS-15.0 | 27242604 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC001599 |

### 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-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 | 4aa24af6-07dc-4980-81e1-a0146a9c1629 |


Phoenix Contact 2026 © - all rights reserved
https://www.phoenixcontact.com



Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com