

I/O module - AXL F DI32/1 XC 1F - 2701226

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Axioline F XC, Digital input module, Digital inputs: 32, 24 V DC, connection method: 1-wire, Extreme conditions version, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors

The figure shows the standard item

Product Description

The module is designed for use within an Axioline F station. It is used to acquire digital signals. You can adjust the filter times of the inputs to increase noise immunity. Filter times of 100 µs enable you to implement a counter function with a maximum input frequency of 5 kHz in the application.

Your advantages

- ✓ 32 digital inputs according to EN 61131-2 type 1 and type 3
- ✓ 24 V DC, 2.4 mA
- ✓ Connection of sensors in single-wire technology
- ✓ Minimum update time of < 100 µs
- ✓ Filter times can be adjusted in three increments: < 100 µs, 1000 µs or 3000 µs
- ✓ Maximum input frequency: 5 kHz
- ✓ Device rating plate stored
- ✓ Can be used under extreme ambient conditions
- ✓ Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- ✓ Partially coated PCBs



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 1 pc |
| GTIN | |
| GTIN | 4046356730785 |

Technical data

Note

| | |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

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Technical data

Dimensions

| | |
|--------------------|---|
| Width | 53.6 mm |
| Height | 126.1 mm |
| Depth | 54 mm |
| Note on dimensions | The depth is valid when a TH 35-7,5 DIN rail is used (according to EN 60715). |

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 60 °C (Standard) |
| | -40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |
| 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) |
| Degree of protection | IP20 |

Connection data

| | |
|---------------------------------------|--|
| Designation | Axiline F connector |
| Connection method | Push-in connection |
| Note on the connection method | Please observe the information provided on conductor cross sections in the "Axiline F: system and installation" user manual. |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 1.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 1.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 16 |
| Stripping length | 8 mm |

General

| | |
|-------------------------------|-------------------------------------|
| Mounting type | DIN rail |
| Net weight | 167 g |
| Note on weight specifications | with connectors and bus base module |

Interfaces

| | |
|--------------------|---------------------|
| Designation | Axiline F local bus |
| No. of channels | 2 |
| Connection method | Bus base module |
| Transmission speed | 100 Mbps |

Axiline potentials

| | |
|----------------|--|
| Designation | Axiline F local bus supply (U_{Bus}) |
| Supply voltage | 5 V DC (via bus base module) |

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Technical data

Axioline potentials

| | |
|----------------------|--|
| Current consumption | max. 120 mA (HW 00) |
| | max. 60 mA (as of HW 01) |
| Power consumption | max. 600 mW (HW 00) |
| | max. 300 mW (as of HW 01) |
| Designation | Supply for digital input modules (U _i) |
| Supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current consumption | max. 50 mA |
| Power consumption | max. 1.2 W |
| Type of protection | Surge protection of the supply voltage |
| | Polarity reversal protection of the supply voltage |
| Protection | max. 8 A (polarity reversal protection up to 5 A) |

Digital inputs

| | |
|--|--|
| Input name | Digital inputs |
| Description of the input | EN 61131-2 types 1 and 3 |
| Connection method | Push-in connection |
| Connection technology | 1-wire |
| Number of inputs | 32 |
| Type of protection | Polarity reversal protection of the inputs |
| Input filter time | 3000 µs (Default) |
| Input voltage range "0" signal | -3 V DC ... 5 V DC |
| Input voltage range "1" signal | 11 V DC ... 30 V DC |
| Nominal input current at U _{IN} | 2.4 mA |

Electrical isolation

| | |
|--------------|---|
| Test section | 5 V communications power (logic), 24 V supply (I/O) 500 V AC 50 Hz 1 min. |
| | 5 V supply (logic)/functional earth ground 500 V AC 50 Hz 1 min. |
| | 24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min. |

Standards and Regulations

| | |
|------------------|---|
| Mechanical tests | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g |
| | Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g |
| | Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |

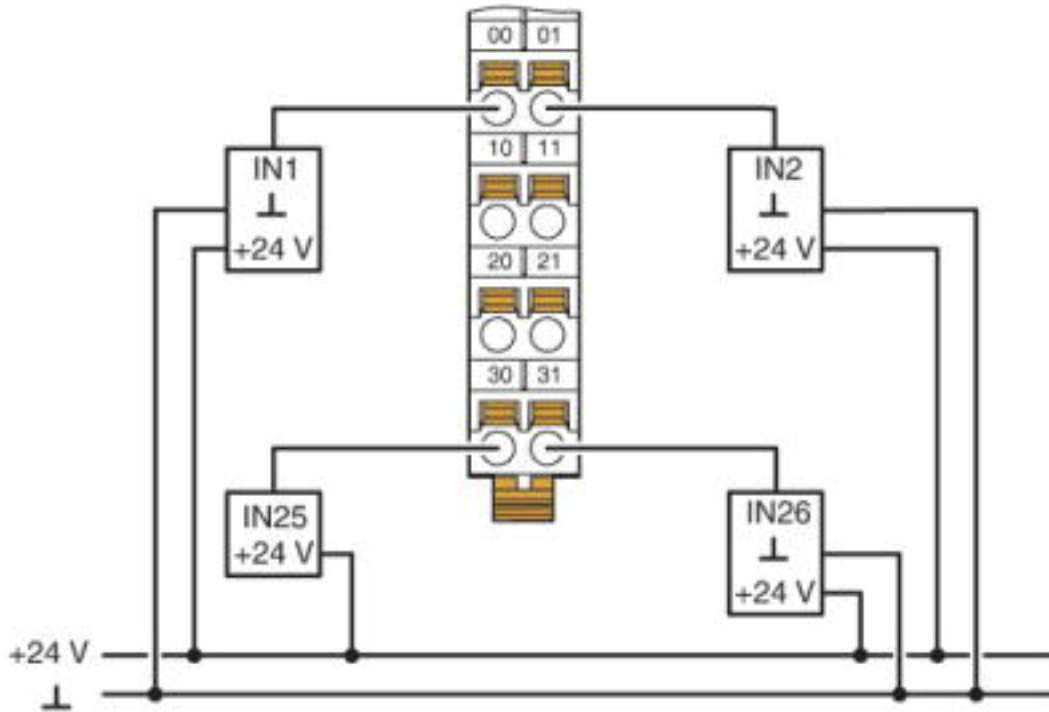
Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

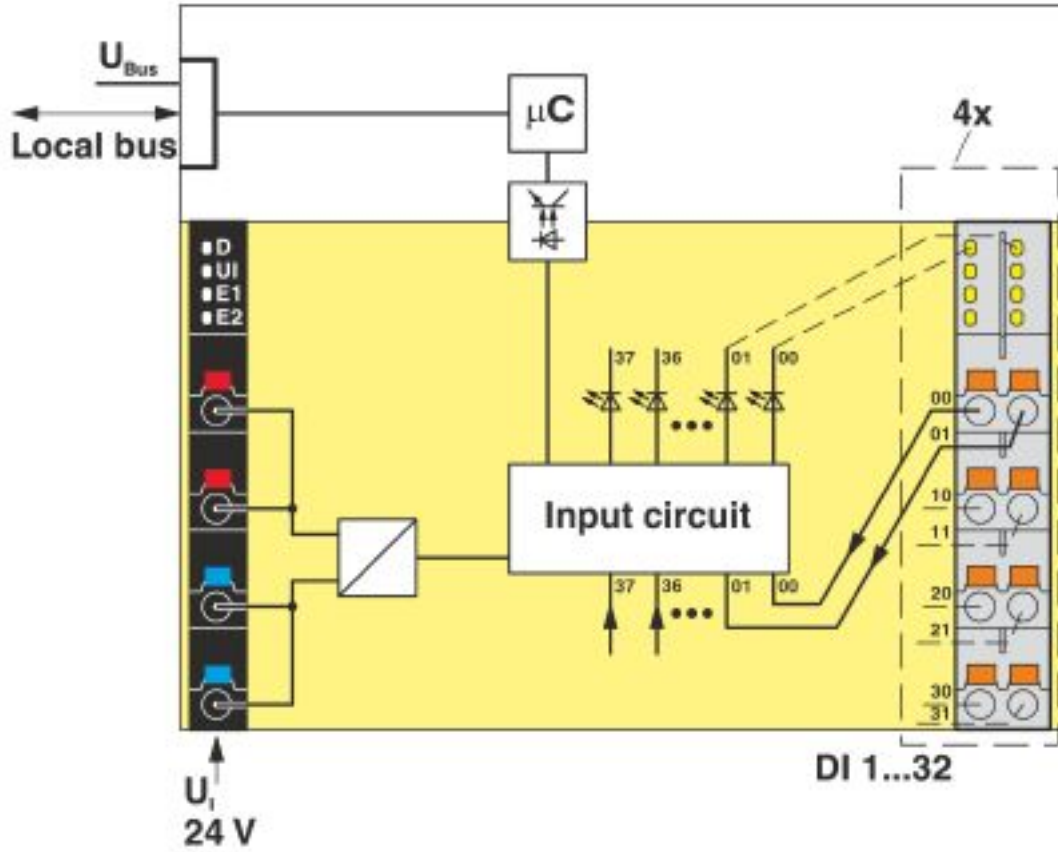
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Connection diagram



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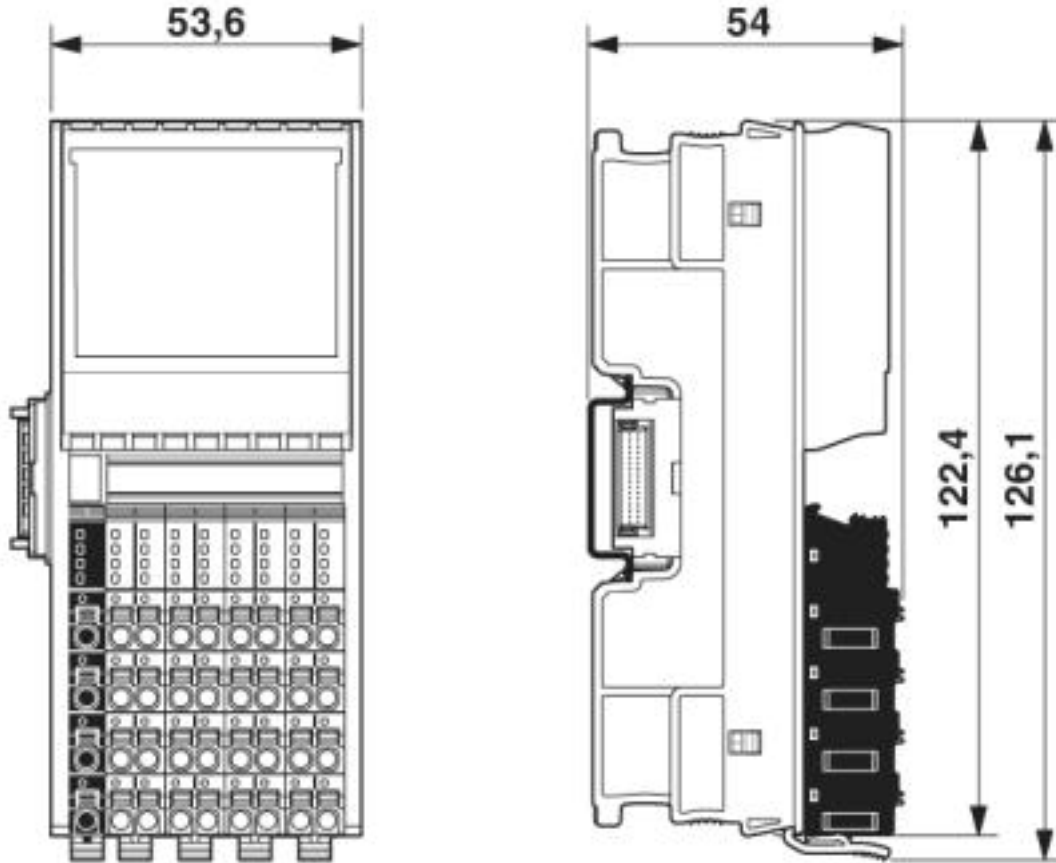
Block diagram



Internal wiring of the terminal points

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Dimensional drawing



Approvals

Approvals

Approvals

DNV GL / PRS / BV / LR / KR / NK / BSH / RINA / UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

DNV GL












<https://approvalfinder.dnvgi.com/>

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Approvals

| | | | |
|--------------|---|---|-------------------|
| PRS |  | http://www.prs.pl/ | TE/2239/880590/19 |
| BV |  | http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials | 36433/B0 BV |
| LR |  | http://www.lr.org/en | 14-20019 |
| KR |  | http://www.krs.co.kr/eng/main/main.aspx | HMB17372-AC002 |
| NK |  | http://www.classnk.or.jp/hp/en/ | 14A006 |
| BSH | | http://www.bsh.de/de/index.jsp | 840 |
| RINA |  | http://www.rina.org/en | ELE256518XG |
| UL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cUL Listed |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cULus Listed |  | | |

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