

I/O module - AXL F DI16/1 1H - 2688310

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Axioline F, Digital input module, Digital inputs: 16, 24 V DC, connection method: 1-wire, transmission speed in the local bus: 100 Mbps, including bus base module and Axioline F connectors

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.

Why buy this product

- ✓ 16 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
- ✓ Diagnostic and status indicators



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 STK |
| GTIN |  4 046356 606455 |
| GTIN | 4046356606455 |

Technical data

Dimensions

| | |
|--------------------|---|
| Width | 35 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). |

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Technical data

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 60 °C |
| 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 | Axioline F connector |
| Connection method | Push-in connection |
| Note on the connection method | Please observe the information provided on conductor cross sections in the "Axioline 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 | 185.5 g |
| Note on weight specifications | with connectors and bus base module |
| Diagnostics messages | I/O supply failure Yes |

Interfaces

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

Axioline potentials

| | |
|----------------------|--|
| Designation | Axioline F local bus supply (U _{Bus}) |
| Supply voltage | 5 V DC (via bus base module) |
| Current consumption | max. 120 mA |
| Power consumption | max. 600 mW |
| 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. 20 mA |
| Power consumption | max. 480 mW |

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Technical data

Axioline potentials

| | |
|--------------------|--|
| 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

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|--|--|
| 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 | 16 |
| 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 |

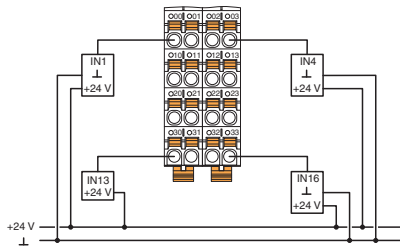
Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

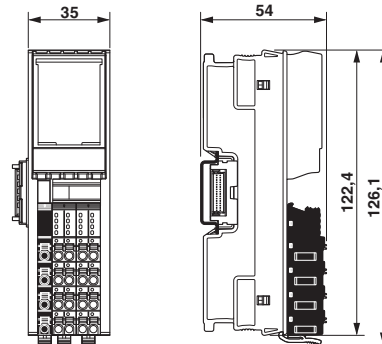
Drawings

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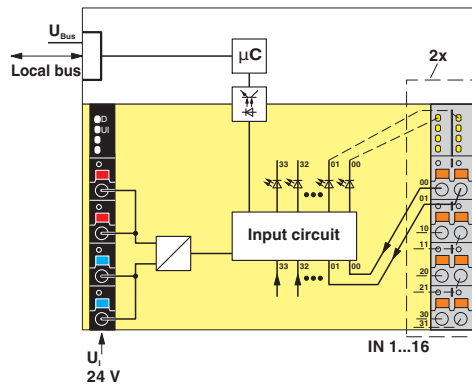
Connection diagram



Dimensional drawing



Block diagram



Internal wiring of the terminal points

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / RINA / NK / BSH / DNV GL / ABS / KR / cULus Listed

Ex Approvals

Approval details

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

I/O module - AXL F DI16/1 1H - 2688310

Approvals

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| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
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| EAC | | | EAC-Zulassung |
|-----|--|--|---------------|

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| RINA | | http://www.rina.org/en | ELE0078216XG |
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| NK | | http://www.classnk.or.jp/hp/en/ | 14A006 |
|----|--|---|--------|

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| BSH | | http://www.bsh.de/de/index.jsp | 840 |
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| DNV GL | | http://exchange.dnv.com/tari/ | TAA00000DF |
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| ABS | | http://www.eagle.org/eagleExternalPortalWEB/ | 17-HG1669996-PDA |
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| KR | | http://www.krs.co.kr/eng/main/main.aspx | HMB17372-AC002 |
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| cULus Listed | | | |
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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>