

## I/O module - AXL F DO4/3 AC 1F - 2702068

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Axioline F, Digital output module, Digital outputs: 4 (Triac outputs with zero voltage switch), 230 V AC, 2 A AC, connection method: 3-wire, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors

### Your advantages

- ✓ 4 digital outputs
- ✓ Connection of actuators in 2 and 3-wire technology
- ✓ Device rating plate stored
- ✓ Diagnostic and status indicators



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 933087 |
| GTIN         | 4046356933087                                                                                           |

### 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 (max. 2 A/channel for wall mounting on horizontal DIN rail; max. 1 A/channel for any mounting position) |
|                                          | -25 °C ... 50 °C (max. 2 A/channel for any mounting position)                                                            |
| 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)                                                                        |

# I/O module - AXL F DO4/3 AC 1F - 2702068

## Technical data

### Ambient conditions

|                                  |                                                   |
|----------------------------------|---------------------------------------------------|
| 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.<br>When selecting the cables, please note that in the case of a small conductor cross section and high current, the terminal point temperature may be up to 30 K above the ambient temperature. |
| Conductor cross section solid min.    | 0.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                           |
| Conductor cross section solid max.    | 1.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                           |
| Conductor cross section flexible min. | 0.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                           |
| Conductor cross section flexible max. | 1.5 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                           |
| Conductor cross section AWG min.      | 20                                                                                                                                                                                                                                                                                                                            |
| Conductor cross section AWG max.      | 16                                                                                                                                                                                                                                                                                                                            |
| Stripping length                      | 8 mm                                                                                                                                                                                                                                                                                                                          |

### General

|                               |                                                |
|-------------------------------|------------------------------------------------|
| Mounting type                 | DIN rail                                       |
| Color                         | traffic grey A RAL 7042                        |
| Net weight                    | 239 g                                          |
| Note on weight specifications | with connectors and bus base module            |
| Mounting position             | any (observe temperature and current derating) |

### 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 <sub>Bus</sub> )                                 |
| Supply voltage       | 5 V DC (via bus base module)                                                    |
| Current consumption  | max. 120 mA                                                                     |
| Power consumption    | max. 600 mW                                                                     |
| Designation          | Supply for digital output modules (U <sub>O</sub> )                             |
| Supply voltage       | 230 V AC                                                                        |
| Supply voltage range | 12 V AC ... 253 V AC (including all tolerances, including ripple, 50 ... 60 Hz) |
| Current consumption  | max. 8 A (provide external protection)                                          |
| Power consumption    | max. 2024 VA (of which 8 VA internal losses)                                    |
| Protective circuit   | Surge protection of the supply voltage Varistor 275 V                           |

# I/O module - AXL F DO4/3 AC 1F - 2702068

## Technical data

### Axioline potentials

|            |          |
|------------|----------|
| Protection | max. 8 A |
|------------|----------|

### Digital outputs

|                                            |                                                                                |
|--------------------------------------------|--------------------------------------------------------------------------------|
| Output name                                | Digital outputs                                                                |
| Connection method                          | Push-in connection                                                             |
| Connection technology                      | 3-wire                                                                         |
| Number of outputs                          | 4 (Triac outputs with zero voltage switch)                                     |
| Protective circuit                         | External protection required $I^2t$ -value (a half-wave): 340 A <sup>2</sup> s |
| Output voltage                             | 230 V AC                                                                       |
| Nominal output voltage                     | 230 V AC                                                                       |
| Maximum output current per channel         | 2 A AC                                                                         |
| Maximum output current per module          | 8 A AC (provide external protection)                                           |
| Nominal load, ohmic                        | max. 460 W (at nominal voltage)                                                |
| Switching frequency                        | max. 100 per second (with ohmic load)                                          |
| Load min.                                  | 5.1 kΩ (at 230 V)                                                              |
| Output voltage when switched off           | see diagram                                                                    |
| Behavior with overload                     | Output may be damaged                                                          |
| Reverse voltage resistance to short pulses | Reverse voltage proof                                                          |

### Electrical isolation

|              |                                                                                                                     |
|--------------|---------------------------------------------------------------------------------------------------------------------|
| Test section | I/Os / logic 4 kV Rated surge voltage (safe isolation according to EN 61010-2-201/IEC 61010-2-201)                  |
|              | I/Os / logic 5 kV Pulse test voltage according to EN 61850/IEC 61850                                                |
|              | I/O / functional earth ground 4 kV Rated surge voltage (safe isolation according to EN 61010-2-201/IEC 61010-2-201) |
|              | I/O / functional earth ground 5 kV Pulse test voltage according to EN 61850/IEC 61850                               |
|              | I/O area AC / PE 4 kV Rated surge voltage (basic insulation according to EN 61010-2-201/IEC 61010-2-201)            |

### 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                                                          |
| Developed according to standard | IEC 61850-3 Immunity to magnetic fields, EN 61000-4-8/IEC 61000-4-8 300 A/m continuous, 1000 A/m for 1 s                |
|                                 | IEC 61850-3 Immunity to attenuated oscillating magnetic fields, EN 61000-4-10/IEC 61000-4-10 100 A/m                    |
|                                 | IEC 61850-3 Immunity to conducted common-mode interference, EN 61000-4-16/IEC 61000-4-16 30 V continuous, 300 V for 1 s |
|                                 | IEC 61850-3 Attenuated oscillating waves, EN 61000-4-18/IEC 61000-4-18 1 kV symmetrical, 2.5 kV asymmetrical            |

### Environmental Product Compliance

|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

## I/O module - AXL F DO4/3 AC 1F - 2702068

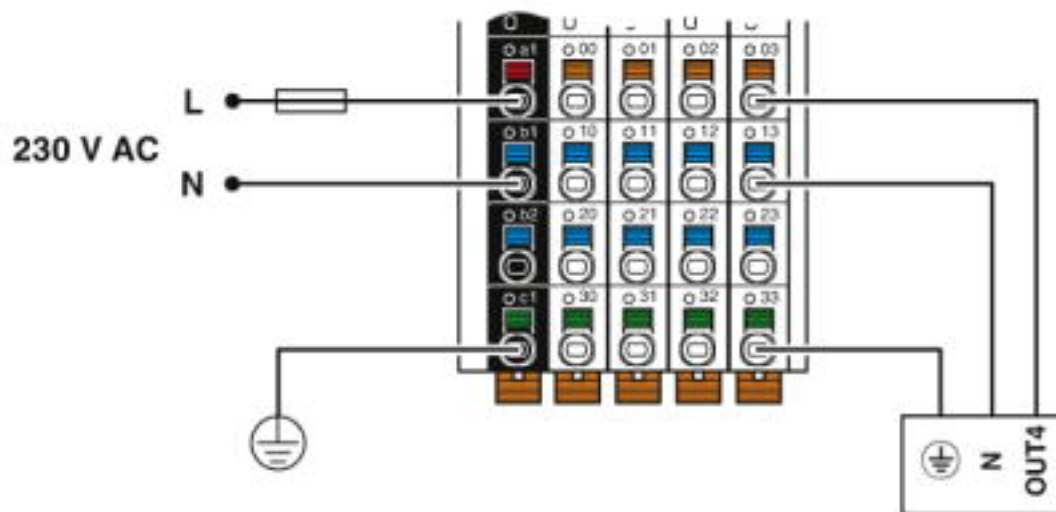
### Technical data

#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

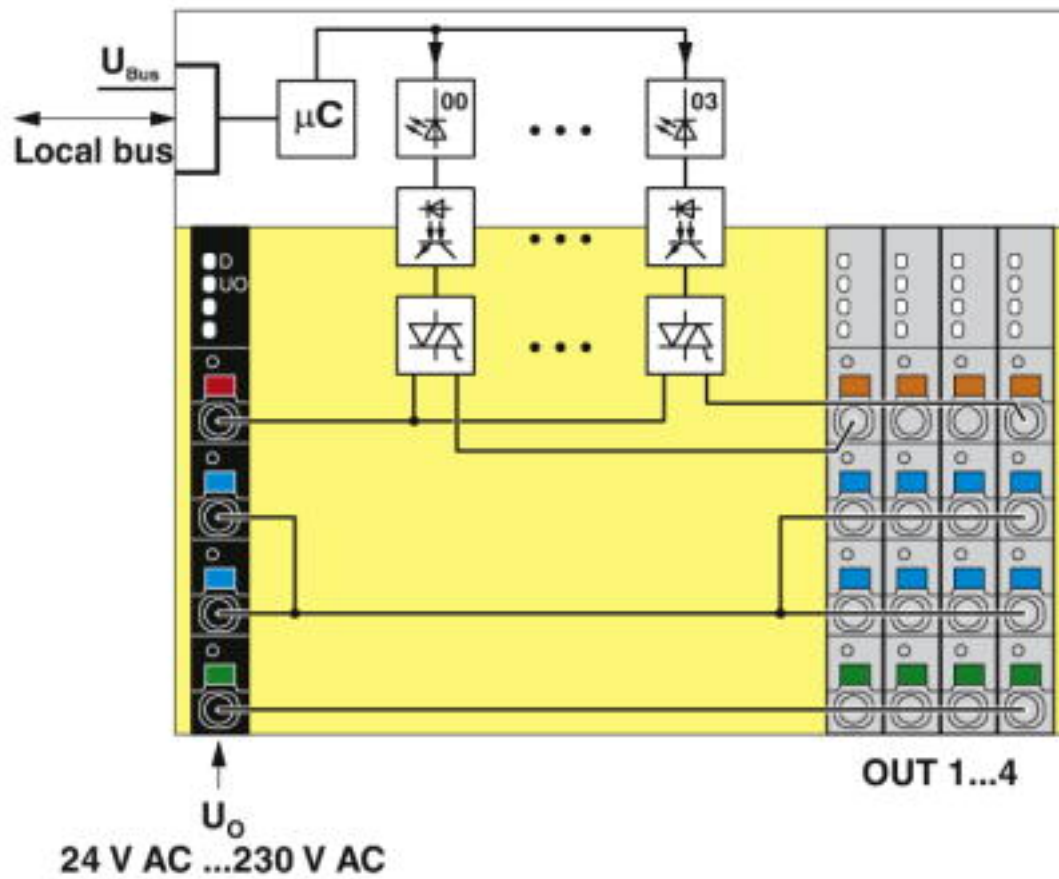
Connection diagram



Connection with 3-wire technology

## I/O module - AXL F DO4/3 AC 1F - 2702068

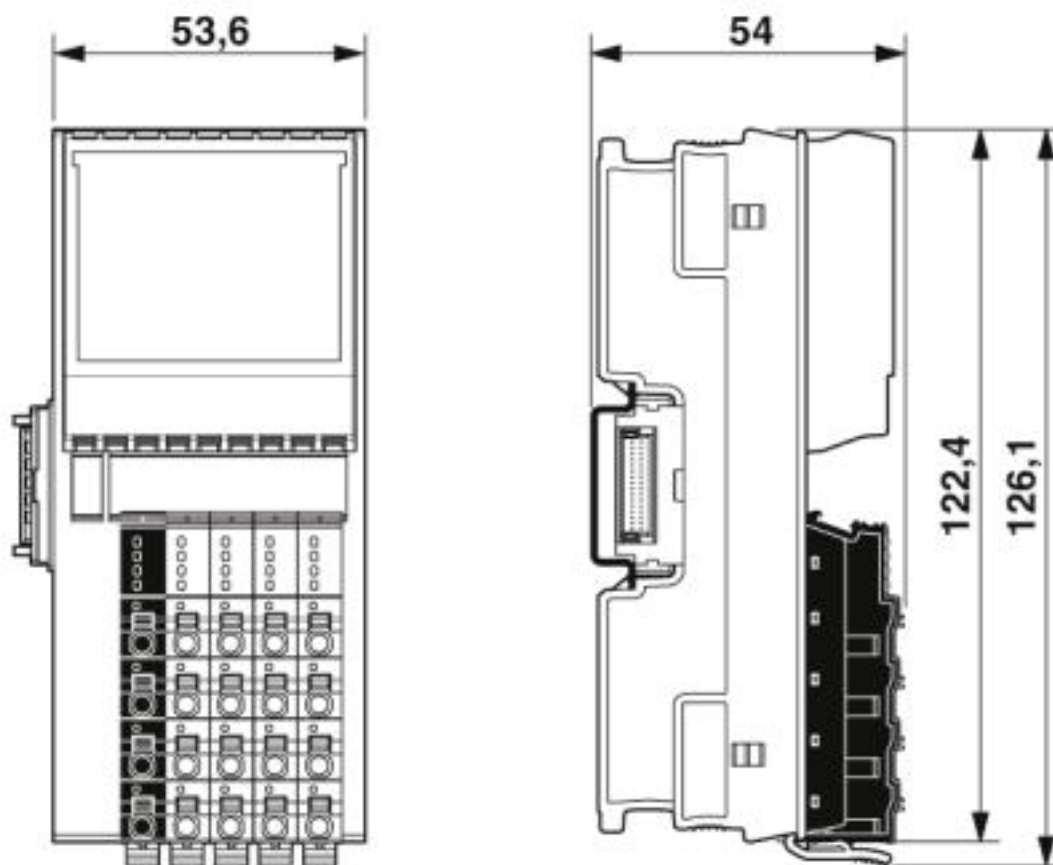
Block diagram



Internal wiring of the terminal points

## I/O module - AXL F DO4/3 AC 1F - 2702068

Dimensional drawing



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242604 |
| eCl@ss 5.1    | 27242600 |
| eCl@ss 6.0    | 27242600 |
| eCl@ss 7.0    | 27242604 |
| eCl@ss 8.0    | 27242604 |
| eCl@ss 9.0    | 27242604 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC001599 |
| ETIM 6.0 | EC001599 |
| ETIM 7.0 | EC001599 |

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 32151602 |
| UNSPSC 18.0 | 32151602 |
| UNSPSC 19.0 | 32151602 |

## I/O module - AXL F DO4/3 AC 1F - 2702068

### Classifications

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 20.0 | 32151602 |
| UNSPSC 21.0 | 32151602 |

### Approvals

#### Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

#### Approval details

|           |                                                                                     |                                                                                                                                                       |               |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|            |                                                                                     |                                                                                                                                                       |               |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|              |                                                                                     |  |  |
|--------------|-------------------------------------------------------------------------------------|--|--|
| cULus Listed |  |  |  |
|--------------|-------------------------------------------------------------------------------------|--|--|

### Accessories

#### Accessories

#### Device marking

Insert label - EMT (35X46)R - 0801604



Insert label, for the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMARKER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: snapped into marker carrier, lettering field size: 35 x 46 mm, Number of individual labels: 500

#### DIN rail connector

## I/O module - AXL F DO4/3 AC 1F - 2702068

### Accessories

Bus connector - AXL F BS F - 2688129



Axioline F bus base module for housing type F

---

### Terminal marking

Zack marker strip - ZB 20,3 AXL UNPRINTED - 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

---

Zack Marker strip, flat - ZBF 7,5:UNBEDRUCKT - 0809942



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into flat marker groove, for terminal block width: 7.5 mm, lettering field size: 5.15 x 7.4 mm, Number of individual labels: 10

---

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>