# AXL F DO8/2 2A XC 1H - Digital module

1035427

https://www.phoenixcontact.com/us/products/1035427

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CRA-READY



The figure shows the standard item

Axioline F, Digital output module, Digital outputs: 8, 24 V DC, 2 A, connection technology: 2-conductor, Extreme conditions version, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

## Product description

The module is designed for use within an Axioline F station. It is used to output digital signals. The outputs are protected against short circuit and overload.

## Your advantages

- 8 digital outputs
- 24 V DC, 2 A
- Connection of actuators in 2-conductor technology
- Minimum update time of < 100 µs
- 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

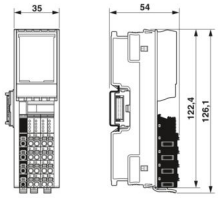
ELEKTROGERÄTE RÜCKNAHME

## Commercial data

| | |
|---|---|
| Item number | 1035427 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DR02 |
| Product key | DRI232 |
| GTIN | 4055626541570 |
| Weight per piece (including packing) | 184.8 g |
| Weight per piece (excluding packing) | 184.8 g |
| Customs tariff number | 85389091 |
| Country of origin | DE |

## Technical data

### Dimensions

| | |
|---|---|
| Dimensional drawing |   |
| Width | 35 mm |
| Height | 126.1 mm |
| Depth | 54 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 | Only for industrial use |
| Note on application | As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA. |

### Mounting

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

### Material specifications

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

### Interfaces

Axioline F local bus

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

### System properties

Programming data

| | |
|---|---|
| Input address area | 0 Byte |
| Output address area | 1 Byte |

Fieldbus data telegram (PROFIBUS)

| | |
|---|---|
| Required parameter data | 3 Byte |
| Required configuration data | 6 Byte |

## Output data

Digital:

| | |
|---|---|
| Output name | Digital outputs |
| Design of digital output | Semiconductor |
| Connection method | Push-in connection |
| Connection technology | 2-conductor |
| Number of outputs | 8 |
| Protective circuit | Short-circuit protection, overload protection of the outputs; electronic |
| Output voltage | 24 V |
| Max. current carrying capacity per output | max. 2 A |
| Maximum output current per module | max. 16 A (Provide external protection; if the total current of 8 A is exceeded, connect the supply at the power connector parallel via both terminal points.) |
| Nominal output voltage | 24 V DC |
| Load min. | 10 kΩ |
| Output voltage when switched off | max. 1 V |
| Output current when switched off | max. 300 µA |
| Nominal load, inductive | max. 48 VA (1.2 H, 12 Ω, at nominal load) |
| Nominal load, lamp | max. 48 W (at nominal voltage) |
| Nominal load, ohmic | max. 48 W (12 Ω, at nominal load) |
| Behavior with overload | Shutdown with automatic restart |
| Behavior with inductive overload | Output can be destroyed |
| Switching frequency | max. 6000 per second (with nominal ohmic load, up to HW 01) |
| | max. 10000 per second (For min. 50 mA load current, from HW 02) |
| | max. 1 per second (with inductive load) |
| | max. 4 per second (with nominal lamp load) |
| Reverse voltage resistance to short pulses | limited protection up to 0.5 A for 1 s |
| Signal delay | max. 150 µs (When switching on, up to HW 01) |
| | max. 150 µs (When switching off, for min. 100 mA load current, up to HW 01) |
| | max. 100 µs (When switching on, from HW 02) |
| | max. 100 µs (When switching off, for min. 100 mA load current, from HW 02) |
| Overcurrent shut-down | as of 2.8 A |
| Output current with ground connection interrupt when switched off | < 1 mA |

## Product properties

| | |
|---|---|
| Product type | I/O component |
| Product family | Axioline F |
| Type | block modular |
| Mounting position | any (no temperature derating) |
| Scope of supply | including bus base module and Axioline F connectors |

| | |
|---|---|
| Special properties | The product is being prepared for compliance with the Cyber Resilience Act (CRA) |
| | Extreme conditions version |

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 | 4.25 W |

Potentials: Axioline F local bus supply ($U_{Bus}$)

| | |
|---|---|
| Supply voltage | 5 V DC (via bus base module) |
| Current draw | max. 150 mA (up to HW 01) |
| | max. 60 mA (from HW 02) |

Potentials: Supply for digital output modules ($U_O$)

| | |
|---|---|
| Supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current draw | max. 16 A (Provide external protection; if the total current of 8 A is exceeded, connect the supply at the power connector parallel via both terminal points.) |
| Current consumption | min. 12 mA (without actuators) |
| Protective circuit | Surge protection; electronic (35 V, 0.5 s) |
| | Reverse polarity protection; parallel diode; with external 5 A fuse (only for commissioning) |
| Protection | max. 16 A (polarity reversal protection up to 5 A) |

Electrical isolation/isolation of the voltage ranges

| | |
|---|---|
| Test voltage: 5 V supply of the local bus ($U_{Bus}$) / 24 V supply (I/Os) | 500 V AC, 50 Hz, 1 min |
| Test voltage: 5 V supply of the local bus ($U_{Bus}$) / functional ground | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply (I/O) / functional ground | 500 V AC, 50 Hz, 1 min |

## Connection data

Connection technology

| | |
|---|---|
| Connection name | Axioline F connector |
| Note on the connection method | Please observe the information provided on conductor cross-sections in the “Axioline F: system and installation” user manual. |

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, rigid | 0.5 mm² ... 1.5 mm² |
| Conductor cross-section, flexible | 0.5 mm² ... 1.5 mm² |
| Conductor cross-section AWG | 20 ... 16 |

| | |
|---|---|
| Stripping length | 8 mm |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -25 °C ... 60 °C (Standard applications and applications with UL approval) |
| | -40 °C ... 70 °C (Extended, see section “Tested successfully: use under extreme ambient conditions” in the data sheet.) |
| Degree of protection | IP20 |
| 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) |
| 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 |

### Test (noxious gas)

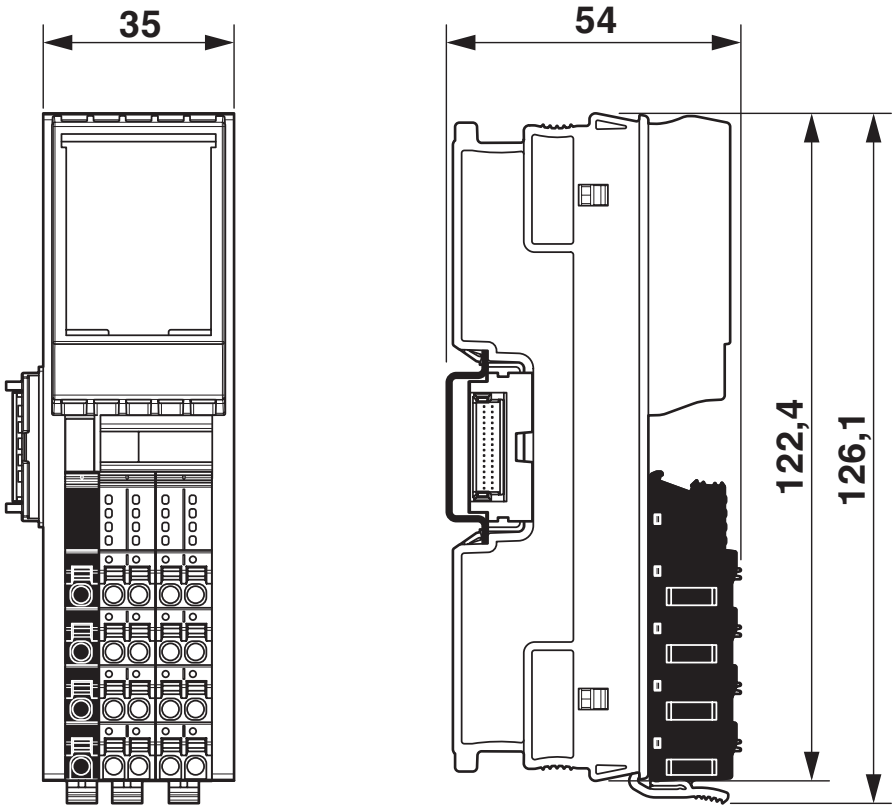
| | |
|---|---|
| Test standard | ISA-71.04-2013 G3 Harsh Group A |
| | IEC 60068-2-60:2015 Method 4 |
| Temperature | 25 °C ±1 K |
| Humidity (relative) | 75 % ±3 % |
| Test duration | 21 Days |
| Volume concentration $H_2S$ (Hydrogen sulfide) | 50 ppb |
| Volume concentration $NO_2$ (Nitrogen dioxide) | 1250 ppb |
| Volume concentration $Cl_2$ (Chlorine) | 10 ppb |
| Volume concentration $SO_2$ (Sulfur dioxide) | 300 ppb |

## Standards and regulations

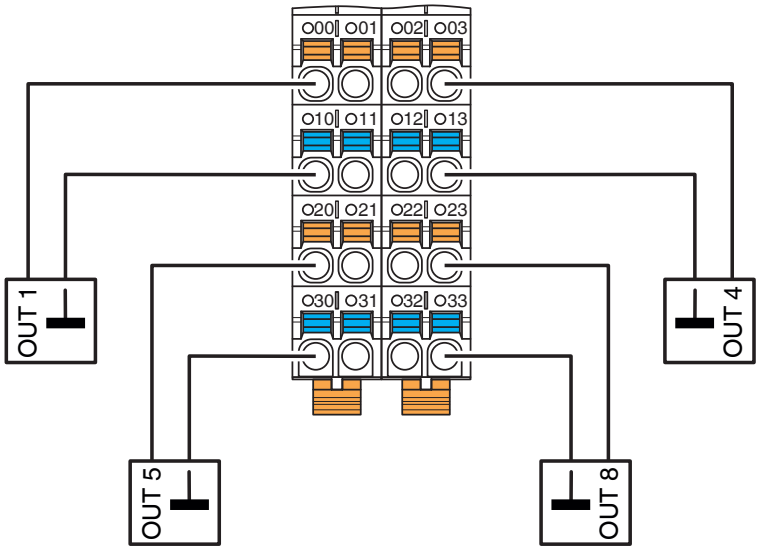
| | |
|---|---|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |

## Drawings

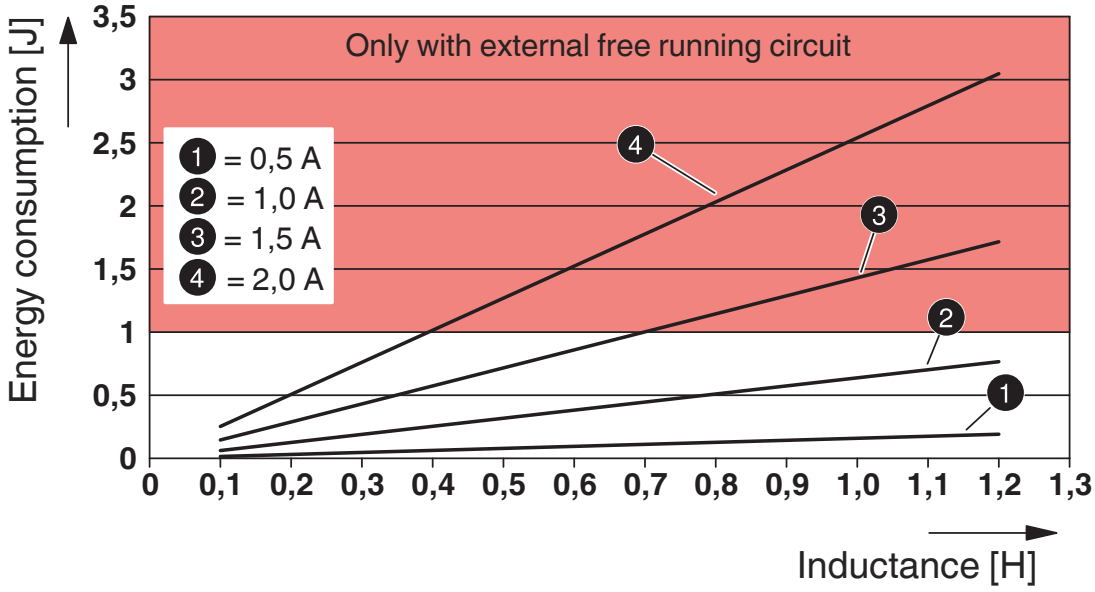
Dimensional drawing




Connection diagram

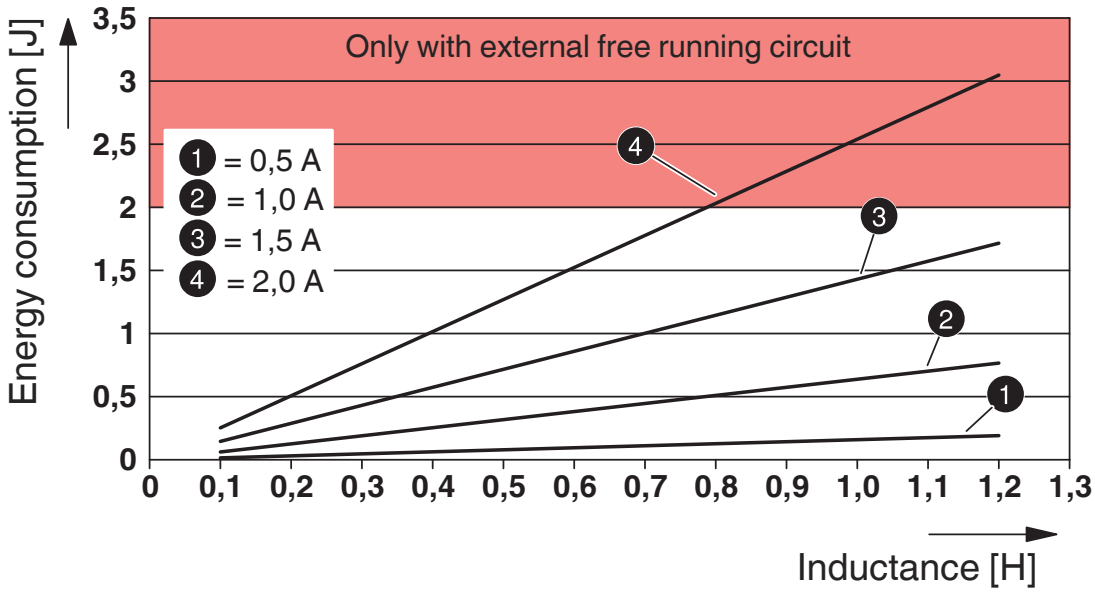


Diagram



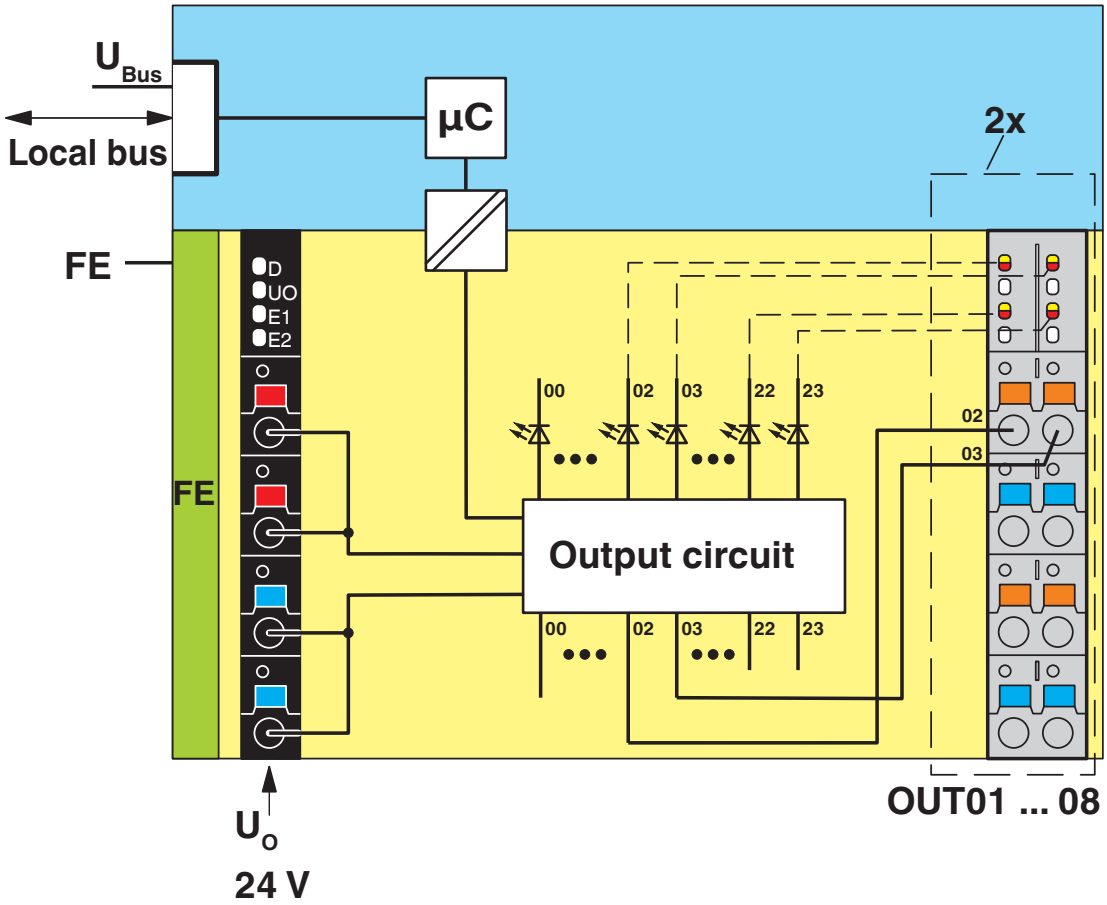

Maximum energy consumption of the outputs when switching off inductive loads with 100 % simultaneity

Diagram




Maximum energy consumption of the outputs when switching off inductive loads with 50 % simultaneity

Block diagram




Internal wiring of the terminal points

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1035427

**DNV GL**
Approval ID: TAA00000DF

**BSH**
Approval ID: 840c

**RINA**
Approval ID: ELE008423XG001

**cULus Listed**
Approval ID: E238705

## 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-50 |
| | 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 | 8752c402-ba32-4254-b5c0-be5988f7600f |


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