# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

2910154

https://www.phoenixcontact.com/us/products/2910154

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Relay module for VIP I/O-Marshalling base elements. For switching 120 V AC loads up to max. 3 A. Integrated fuse and fuse failure indication. N/O contact or N/C contact can be used.

## Product description

Relay module for digital output signals for switching loads with max. 3 A nominal current and a maximum voltage of 120 V AC. The switch contact is protected by an integrated replaceable 3 A fuse. If the fuse fails, this is indicated by an LED. A plug-in bridge determines whether an N/O contact or an N/C contact is used. The module is installed on a corresponding VIP I/O-Marshalling base element by means of plug-in contact. Installation in zone 2, "ec" type of protection is permitted.

## Your advantages

- Output blown fuse indication
- Active relay coil indication
- Two-stage progressive release allowing for voltage checks with field-powered devices
- Channel for marking accessories
- Replaceable TE5-style fusing
- 120 V internal marshalling option for connected field device
- Integrated keying reduces possible user error during replacement
- 1 PDT relay with user selectable NO or NC contact

## Commercial data

| | |
|---|---|
| Item number | 2910154 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | C480 |
| Product key | CK8222 |
| Catalog page | Page 556 (C-5-2017) |
| GTIN | 4055626447285 |
| Weight per piece (including packing) | 68.2 g |
| Weight per piece (excluding packing) | 71.2 g |
| Customs tariff number | 85364900 |
| Country of origin | US |

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## Technical data

### Product properties

| | |
|---|---|
| Product type | Relay Module |
| Product family | VIP I/O-Marshalling |
| Application | Output function |
| Operating mode | 100% operating factor |
| Mechanical service life | $2x\ 10^7$ cycles |

### Insulation characteristics

| | |
|---|---|
| Overvoltage category | II |
| Pollution degree | 2 |

### Input data

#### Coil side

| | |
|---|---|
| Nominal input voltage $U_N$ | 24 V DC |
| Input voltage range in reference to $U_N$ | 0.9 ... 1.1 |
| Typical input current at $U_N$ | 13.5 mA |
| Typical response time | 5 ms |
| Typical release time | 8 ms |
| Protective circuit | Reverse polarity protection; Polarity protection diode |
| | Freewheeling diode; Freewheeling diode |
| Operating voltage display | Yellow LED |

### Output data

#### Switching

| | |
|---|---|
| Contact switching type | 1 changeover contact |
| Type of switch contact | Single contact |
| Contact connection type | Power contact |
| Contact material | AgSnO |
| Maximum switching voltage | 120 V AC |
| Limiting continuous current | 3 A (fuse limited) |
| Maximum inrush current | on request |
| Min. switching current | 10 mA (at 12 V) |
| Interrupting rating (ohmic load) max. | 23 W (at 110 V DC) |
| | 360 VA (at 120 V AC) |

### Connection data

#### Control circuits

| | |
|---|---|
| Connection method | Pin strip |

### Ex data
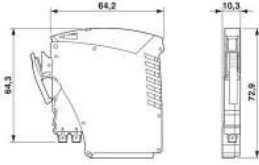
### Safety data

| | |
|---|---|
| Input voltage $U_i$ | 24 V DC |
| Input current $I_i$ | 13.5 mA |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 10.3 mm |
| Height | 64.2 mm |
| Depth | 72.9 mm |

## Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | V0 |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |
| Altitude | ≤ 2000 m |
| Permissible humidity (operation) | 0 % ... 95 % (non-condensing) |

## Approvals

### ATEX

| | |
|---|---|
| Identification | Ⓔ II 3G Ex ec nC IIC T4 Gc |
| Certificate | Sira 17ATEX4293X |

### IECEx

| | |
|---|---|
| Identification | Ex ec nC IIC T4 Gc |
| Certificate | IECEx SIR 17.0078X |

### UKEX

| | |
|---|---|
| Identification | Ⓔ II 3G Ex ec nC IIC T4 Gc |
| Certificate | PxCIF23UKEX2910153X |

### UL, USA/Canada

| | |
|---|---|
| Identification | Class I, Div. 2, Groups A, B, C, D T4 |
| | Class I, Zone 2, Group IIC T4 |

### CSA, USA/Canada

| | |
|---|---|
| | Class I, Div. 2, Groups A, B, C, D T4 |

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| Identification | Class I, Zone 2, AEx ec nC IIC T4 Gc |
|---|---|
| | Ex ec nC IIC T4 Gc |

## Standards and regulations

| Standards/regulations | IEC 60664 |
|---|---|
| | DIN EN 50178 |

## Mounting

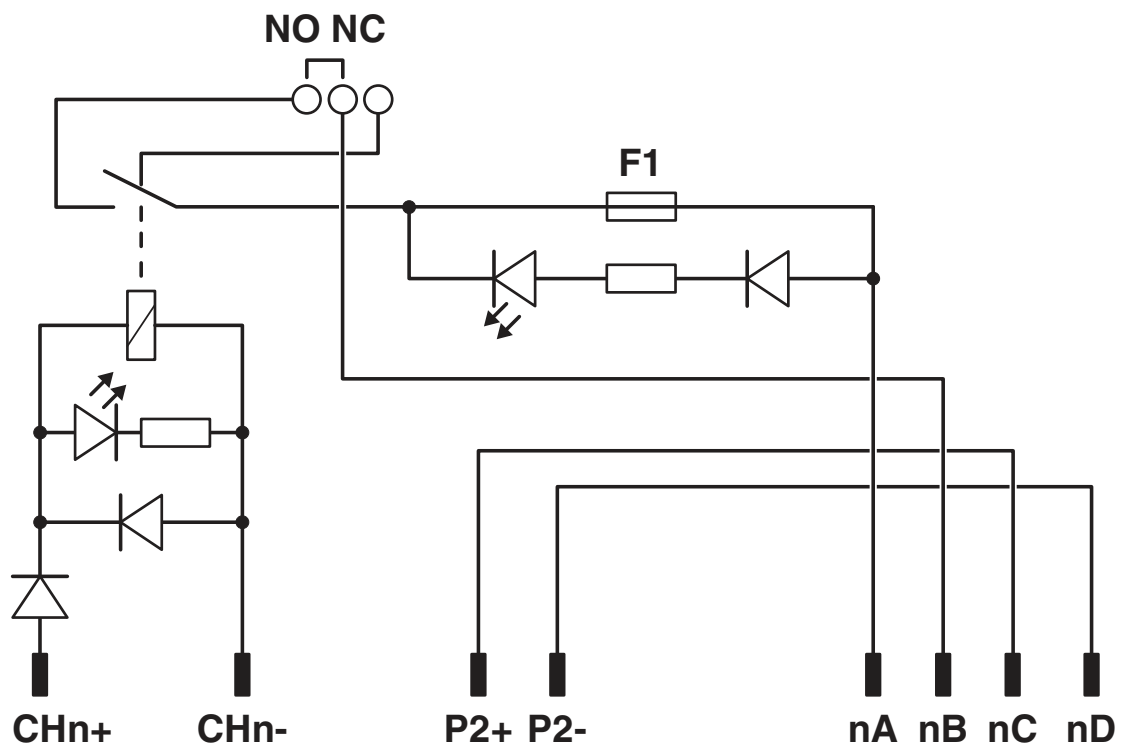| Mounting type | Plug-in mounting |
|---|---|
| Assembly instructions | Plugs into VIP/...BASE... |
| Mounting position | any |

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## Drawings

### Dimensional drawing

64,2

10,3

64,3

72,9

### Circuit diagram

NO NC

F1

CHn+    CHn-       P2+ P2-        nA nB nC nD
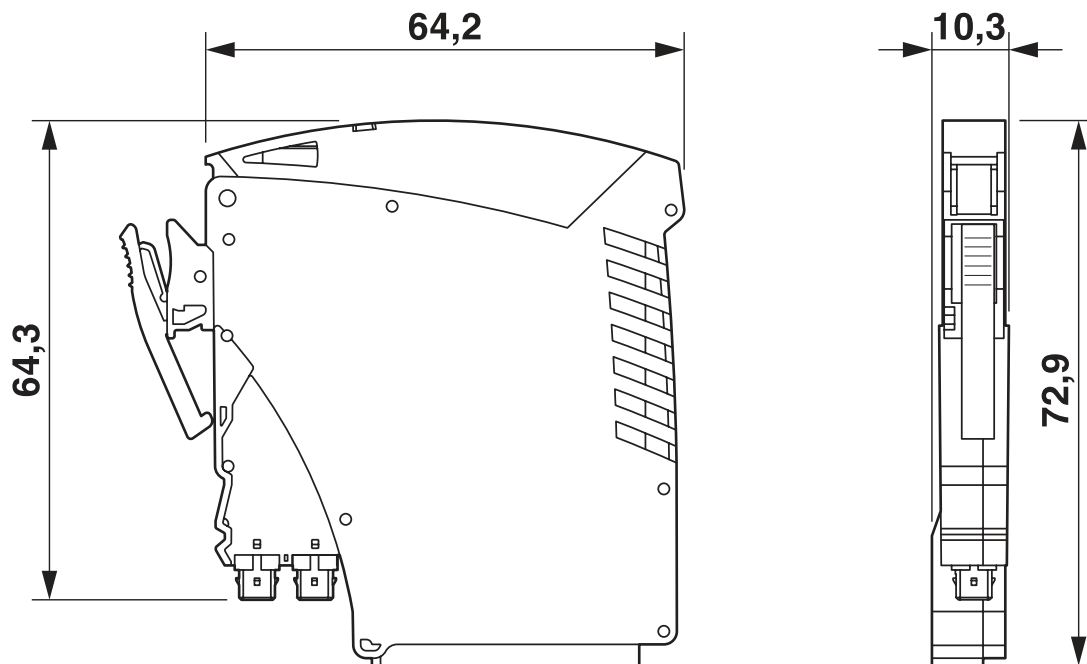
## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2910154

**IECEx**
Approval ID: IECEx SIR 17.0078X

**ATEX**
Approval ID: SIRA 17 ATEX 4293X

**CSA**
Approval ID: 70134758

**FM approved**
Approval ID: FM19US0089X

**CSAus**
Approval ID: 70134758

**cCSAus**

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-11.0 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

### ETIM

| | |
|---|---|
| ETIM 8.0 | EC001437 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39122300 |

## Environmental product compliance

| REACh SVHC | Lead 7439-92-1 |
|---|---|

| China RoHS | Environmentally Friendly Use Period = 50 years |
|---|---|
| | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

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## Mandatory accessories

### VIP/S/MC/BASE 1-8/L/EX - Base module

2906596

https://www.phoenixcontact.com/us/products/2906596

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 1–8.

### VIP/S/MC/BASE 9-16/L/EX - Base module

2906630

https://www.phoenixcontact.com/us/products/2906630

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 9–16.

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## VIP/S/MC/BASE 17-24/L/EX - Base module

2907024

https://www.phoenixcontact.com/us/products/2907024

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 17–24.

## VIP/S/MC/BASE 25-32/L/EX - Base module

2907025

https://www.phoenixcontact.com/us/products/2907025

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 25–32.

# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

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## VIP/S/MC/BASE 1-8/L/C/EX - Base module

2907186

https://www.phoenixcontact.com/us/products/2907186

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 1–8 and painting.

## VIP/S/MC/BASE 9-16/L/C/EX - Base module

2907187

https://www.phoenixcontact.com/us/products/2907187

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 9–16 and painting.

# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

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## VIP/S/MC/BASE 17-24/L/C/EX - Base module

2907209

https://www.phoenixcontact.com/us/products/2907209

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 17–24 and painting.

## VIP/S/MC/BASE 25-32/L/C/EX - Base module

2907210

https://www.phoenixcontact.com/us/products/2907210

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. With the COMBICON connector, compatible with the Honeywell C300 and RUSIO series. Marking for channels 25–32 and painting.

# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

2910154

https://www.phoenixcontact.com/us/products/2910154

## VIP/S/D25M/BASE 1-8/L/C/EX - Base module

2906595

https://www.phoenixcontact.com/us/products/2906595

8-channel VIP I/O marshalling base element for universal use. All connections as screw connection technology. This module with the D-SUB 25 connector is pin compatible with the Foxboro I/A series DCS.

## VIP/MSTB/D50M/BASE/16CH/CX/EX - Base module

2908788

https://www.phoenixcontact.com/us/products/2908788

16-channel VIP I/O marshalling base element for universal use. Plug-in field and supply terminals available as accessories. Either with screw or Push-in connection technology. Compatible with the Tricon CX DCS series (D-SUB 50).

# Accessories

# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

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## UC-TM  6 - Marker for terminal blocks

0818085

https://www.phoenixcontact.com/us/products/0818085

Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

## ZB 5,08:UNBEDRUCKT - Zack marker strip

0809793

https://www.phoenixcontact.com/us/products/0809793

Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 5.08 mm, lettering field size: 4.98 x 10.5 mm, Number of individual labels: 10

# IOA REL 120V DO/BFI/3.0A/EX - Relay Module

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https://www.phoenixcontact.com/us/products/2910154

## B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/us/products/1051993

Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

## FUSE/TE5/3.15A/F-10PCS - Fuse set

2906442

https://www.phoenixcontact.com/us/products/2906442

Plug-in fuse (TE5$^®$); nominal current: 3.15 A; tripping behavior: fast-blow (F)