

# IOA REL 230V DO/BFI/NO/3.0A/EX - Relay module



2910421

<https://www.phoenixcontact.com/us/products/2910421>

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Relay module for VIP I/O-Marshalling base elements. For switching 230 V AC loads up to max. 3 A. Integrated fuse and fuse failure indication. N/O 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 230 V AC. The switch contact is protected by an integrated replaceable 3 A fuse. If the fuse fails, this is indicated by an LED. One N/O contact is available on the field side. 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
- 230 V internal marshalling option for connected field device
- Integrated keying reduces possible user error during replacement
- Relay with NO contact

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2910421                        |
| Packing unit                         | 1 pc                           |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C480                           |
| Product key                          | DK1154                         |
| GTIN                                 | 4055626495989                  |
| Weight per piece (including packing) | 67.3 g                         |
| Weight per piece (excluding packing) | 67.3 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 <sup>7</sup> cycles |

### Insulation characteristics

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

### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 14.09.2026 |
|------------------------------|------------|

### 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<br>Freewheeling diode; Freewheeling diode |
| Operating voltage display                 | Yellow LED                                                                                       |
| Status display                            | LED red, indicates blown F1 fuse                                                                 |

### Output data

#### Switching

|                                       |                                         |
|---------------------------------------|-----------------------------------------|
| Contact switching type                | 1 N/O contact                           |
| Type of switch contact                | Single contact                          |
| Contact connection type               | Power contact                           |
| Contact material                      | AgSnO                                   |
| Maximum switching voltage             | 230 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)<br>690 VA (230 V AC) |

### Connection data

#### Control circuits

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|                   |                    |
|-------------------|--------------------|
| Connection method | Plug-in connection |
|-------------------|--------------------|

## Ex data

### Safety data

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

## Dimensions

### Item dimensions

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

## Material specifications

|                                        |                 |
|----------------------------------------|-----------------|
| Color                                  | gray (RAL 7042) |
| 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 note     | Plugs into VIP/...BASE... |
| Mounting position | any                       |

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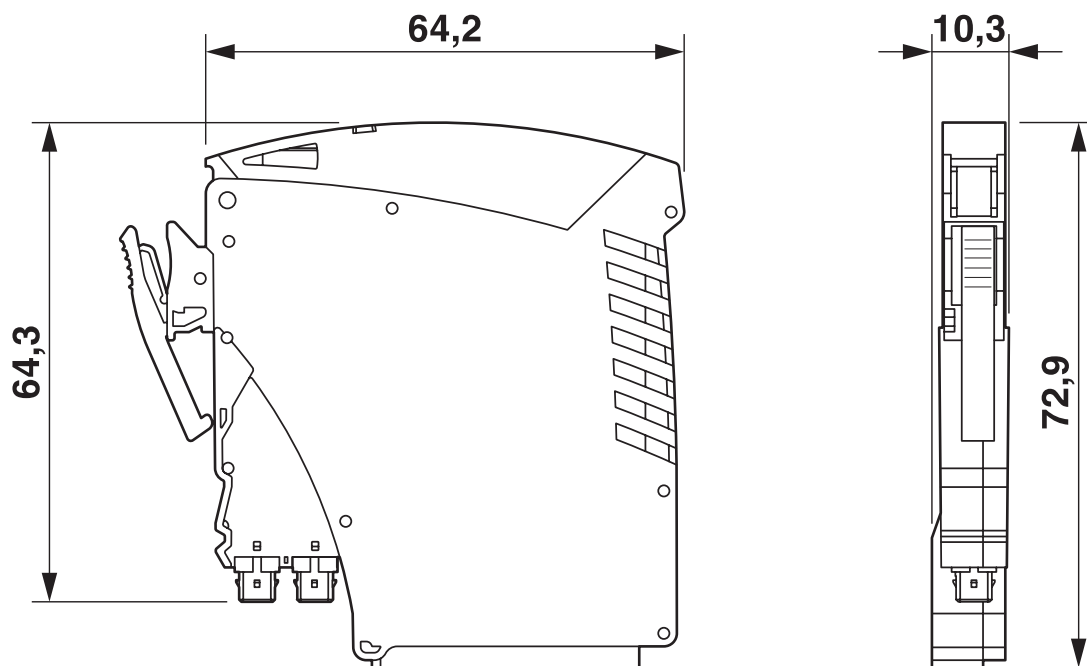
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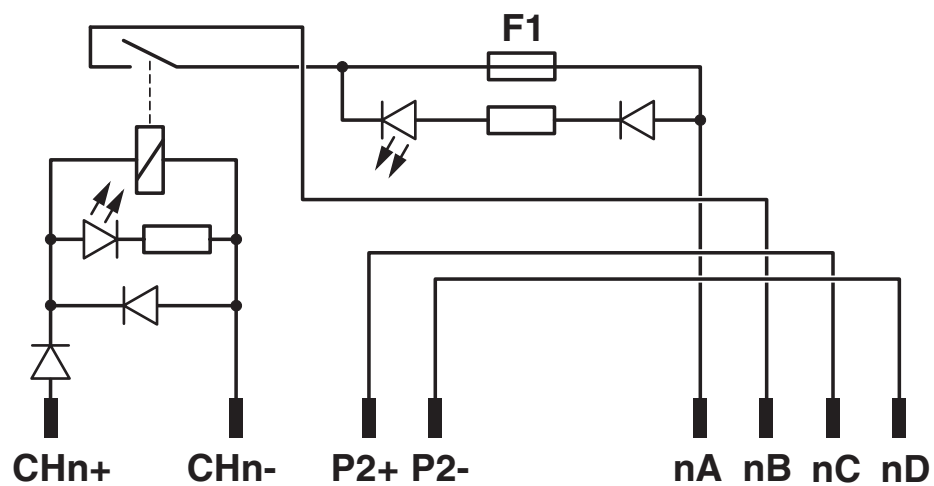


## Drawings

Dimensional drawing



Circuit diagram



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## Approvals

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**IECEx**

Approval ID: IECEx SIR 17.0078X



**ATEX**

Approval ID: SIRA 17ATEX4293X



**CSA**

Approval ID: 70134758



**cUL Listed**

Approval ID: FILE E 196811



**UL Listed**

Approval ID: FILE E 196811



**CSAus**

Approval ID: 70134758

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001437 |
|-----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes                |
| Exemption                               | 6(c), 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                                | 8e10970a-ccb7-421c-b37d-e7fa6f6e8dc8 |

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