

# ST-OV3- 24DC/240AC/3 - Solid-state relay



2903231

<https://www.phoenixcontact.com/us/products/2903231>

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Plug-in power solid-state relay, with LED and protective circuit in input and output circuits, input: 24 V DC, output: 24 - 280 V AC/max. 3 A, can be plugged into basic terminal blocks

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2903231                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C460                           |
| Product key                          | DK61B1                         |
| GTIN                                 | 4017918079017                  |
| Weight per piece (including packing) | 55.5 g                         |
| Weight per piece (excluding packing) | 55.5 g                         |
| Customs tariff number                | 85364190                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                              |                          |
|------------------------------|--------------------------|
| Product type                 | Single solid-state relay |
| Data management status       |                          |
| Date of last data management | 05.09.2025               |

### Electrical properties

|                             |                          |
|-----------------------------|--------------------------|
| Test voltage (Input/output) | 2.5 kV AC (Input/output) |
|-----------------------------|--------------------------|

### Input data

|                                                      |                                                             |
|------------------------------------------------------|-------------------------------------------------------------|
| Nominal input voltage $U_N$                          | 24 V DC                                                     |
| Input voltage range in reference to $U_N$            | 0.8 ... 1.2                                                 |
| Input voltage range                                  | 19.2 V DC ... 28.8 V DC                                     |
| Switching threshold "0" signal in reference to $U_N$ | $\leq 0.4$                                                  |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.8$                                                  |
| Typical input current at $U_N$                       | 7 mA                                                        |
| Typical response time                                | switch-on time: Max. one half cycle - zero-voltage crossing |
| Typical turn-off time                                | switch-off time Max. one half cycle - zero-current crossing |
| Operating voltage display                            | Yellow LED                                                  |
| Protective circuit                                   | Reverse polarity protection; Polarity protection diode      |
| Transmission frequency                               | 25 Hz                                                       |

### Output data

|                                                  |                                                                                         |
|--------------------------------------------------|-----------------------------------------------------------------------------------------|
| Design of digital output                         | electronic                                                                              |
| Output voltage range                             | 24 V AC ... 280 V AC                                                                    |
| Limiting continuous current                      | 3 A (see derating curve)                                                                |
| Min. load current                                | 50 mA                                                                                   |
| Leakage current                                  | 5 mA (in off state - components with low minimum load and leakage currents on request.) |
| Surge current                                    | 35 A ( $t = 10$ ms)                                                                     |
| Phase angle $\cos \phi$ min                      | 0.5                                                                                     |
| Max. load value                                  | $6 \text{ A}^2\text{s}$ ( $I^2 \times t$ at $t = 8.3$ ms)                               |
| Peak offstate voltage                            | 600 V                                                                                   |
| Voltage drop at max. limiting continuous current | 1.5 V                                                                                   |
| Output circuit                                   | 2-conductor, floating                                                                   |
| Protective circuit                               | RC element                                                                              |

### Dimensions

|        |         |
|--------|---------|
| Width  | 20.8 mm |
| Height | 33 mm   |
| Depth  | 66.5 mm |

### Material specifications

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|       |                  |
|-------|------------------|
| Color | green (RAL 6021) |
|-------|------------------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |

## Standards and regulations

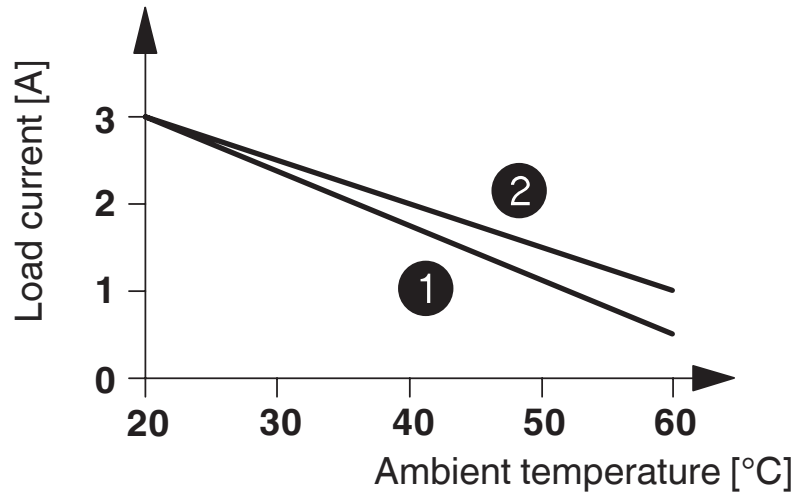
|                       |              |
|-----------------------|--------------|
| Standards/regulations | DIN VDE 0110 |
|-----------------------|--------------|

## Mounting

|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

## Drawings

Diagram



- ① In rows with zero spacing
- ② stand-alone device

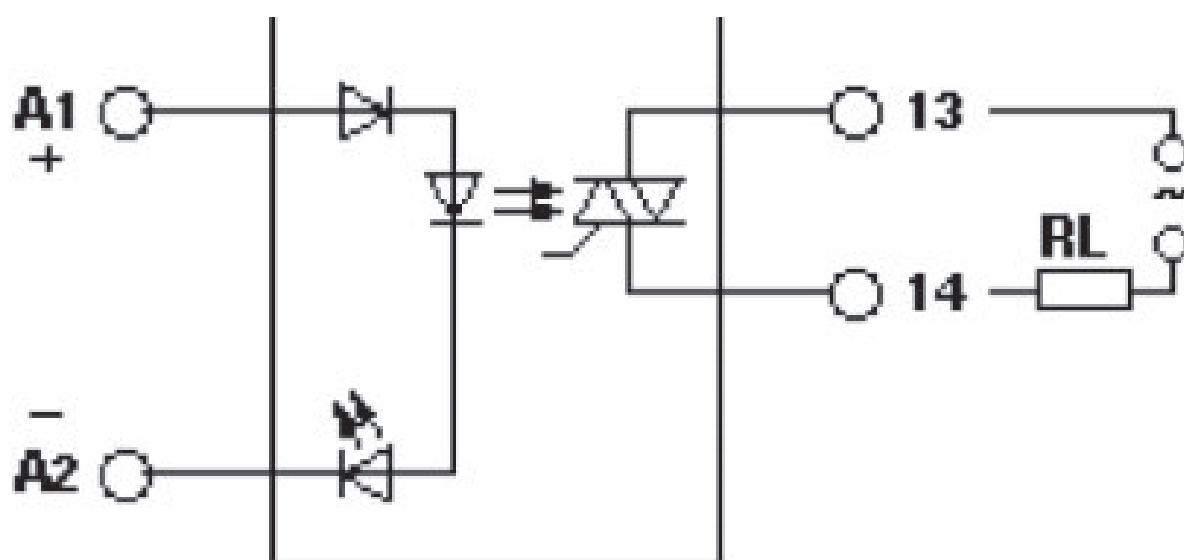
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Circuit diagram

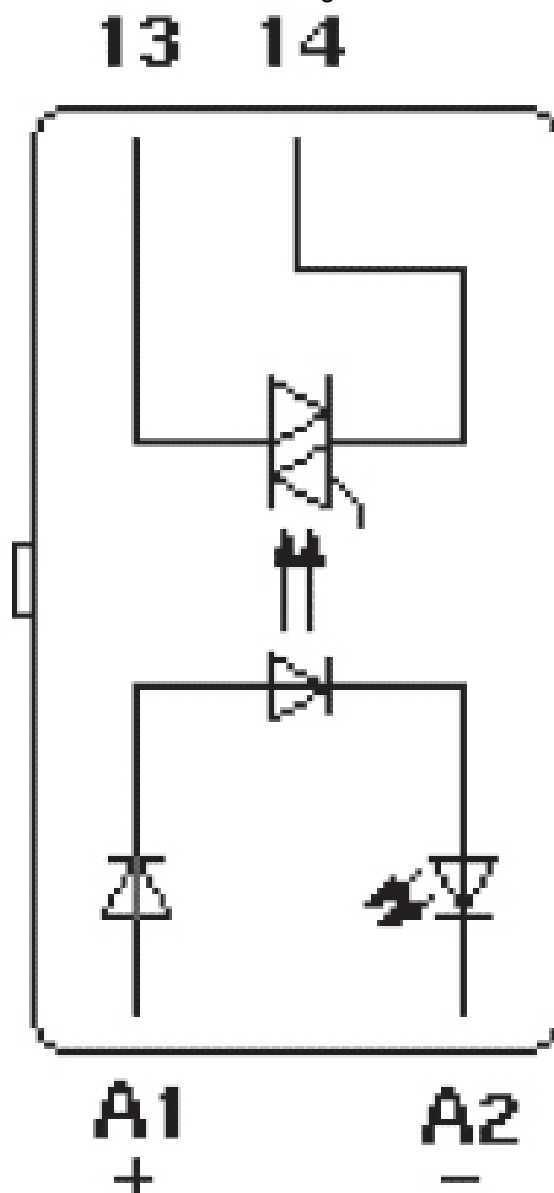


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Circuit diagram



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## Approvals

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**EAC**

Approval ID: RU\*C-DE.\*08.B.00010

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001504 |
|----------|----------|

### UNSPSC

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

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## 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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
|                                     | Lead(CAS: 7439-92-1)                        |
| SCIP                                | 0a051117-802b-47c8-bfc3-8f375e982785        |

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