

# EMG 10-OV-110DC/24DC/1 - Solid-state relay module



2944245

<https://www.phoenixcontact.com/gb/products/2944245>

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Power solid-state relay, with LED and protective circuit in input and output circuits, input: 110 V DC, output: 5 - 36 V DC/max. 1 A

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2944245                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 10 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | CK61C2                         |
| Product key                          | CK61C2                         |
| Catalog page                         | Page 138 (IF-2011)             |
| GTIN                                 | 4017918081546                  |
| Weight per piece (including packing) | 40.53 g                        |
| Weight per piece (excluding packing) | 40.53 g                        |
| Customs tariff number                | 85364900                       |
| Country of origin                    | DE                             |

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## Technical data

### Notes

#### Utilization restriction

|          |                                                                           |
|----------|---------------------------------------------------------------------------|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---------------------------------------------------------------------------|

### Product properties

|                |                          |
|----------------|--------------------------|
| Product type   | Solid-state relay module |
| Application    | Output function          |
| Operating mode | 100% operating factor    |

#### Insulation characteristics

|            |                  |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

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|            |                  |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

### Electrical properties

|                             |                          |
|-----------------------------|--------------------------|
| Test voltage (Input/output) | 3.5 kV AC (Input/output) |
|-----------------------------|--------------------------|

### Input data

|                                                      |                                                        |
|------------------------------------------------------|--------------------------------------------------------|
| Nominal input voltage $U_N$                          | 110 V DC                                               |
| Input voltage range in reference to $U_N$            | 0.9 ... 1.1                                            |
| Input voltage range                                  | 99 V DC ... 121 V DC                                   |
| Switching threshold "0" signal in reference to $U_N$ | $\leq 0.23$                                            |
| Switching threshold "1" signal in reference to $U_N$ | $\geq 0.9$                                             |
| Typical input current at $U_N$                       | 4 mA                                                   |
| Typical response time                                | 0.1 ms                                                 |
| Typical turn-off time                                | 0.2 ms                                                 |
| Status display                                       | Yellow LED                                             |
| Protective circuit                                   | Reverse polarity protection; Polarity protection diode |
| Transmission frequency                               | 500 Hz                                                 |

### Output data

|                                                  |                                             |
|--------------------------------------------------|---------------------------------------------|
| Contact switching type                           | 1 N/O contact                               |
| Design of digital output                         | electronic                                  |
| Output nominal voltage                           | 24 V DC                                     |
| Output voltage range                             | 5 V DC ... 36 V DC                          |
| Limiting continuous current                      | 1 A (see derating curve)                    |
| Surge current                                    | 2 A ( $t = 1$ s)                            |
| Peak offstate voltage                            | 45 V DC (Collector-emitter reverse voltage) |
| Voltage drop at max. limiting continuous current | $\leq 1$ V                                  |
| Output circuit                                   | 2-conductor, floating                       |

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|                    |                                                        |
|--------------------|--------------------------------------------------------|
| Protective circuit | Reverse polarity protection; Polarity protection diode |
|--------------------|--------------------------------------------------------|

## Connection data

### Input side

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm                                        |
| Screw thread                     | M3                                          |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 12                                   |

### Output side

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm                                        |
| Screw thread                     | M3                                          |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>   |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 12                                   |

## Dimensions

|        |        |
|--------|--------|
| Width  | 10 mm  |
| Height | 75 mm  |
| Depth  | 102 mm |

## Material specifications

|                                        |                  |
|----------------------------------------|------------------|
| Color                                  | green (RAL 6021) |
| Flammability rating according to UL 94 | V0               |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Degree of protection                    | IP20             |
| Ambient temperature (operation)         | -20 °C ... 50 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |

## Standards and regulations

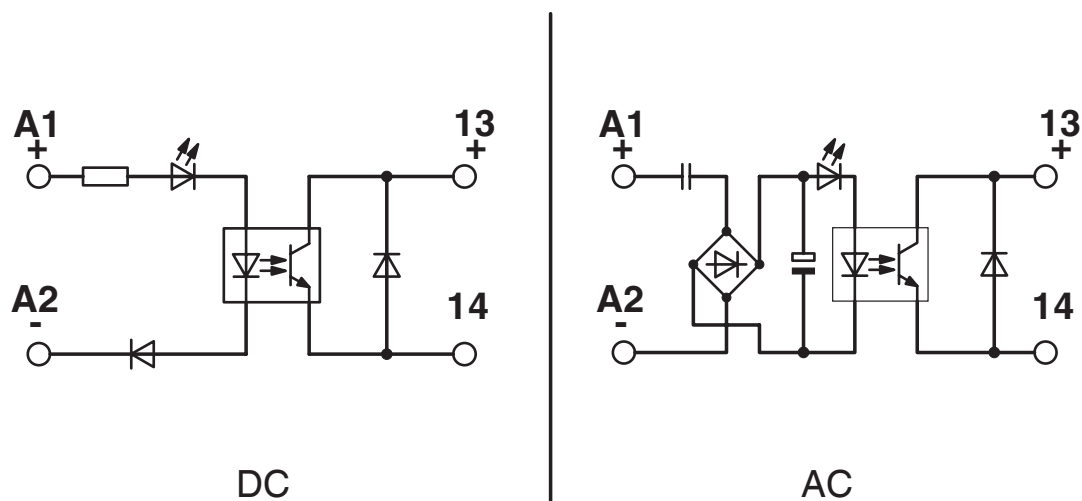
|                       |           |
|-----------------------|-----------|
| Standards/regulations | IEC 60664 |
|                       | EN 50178  |

## Mounting

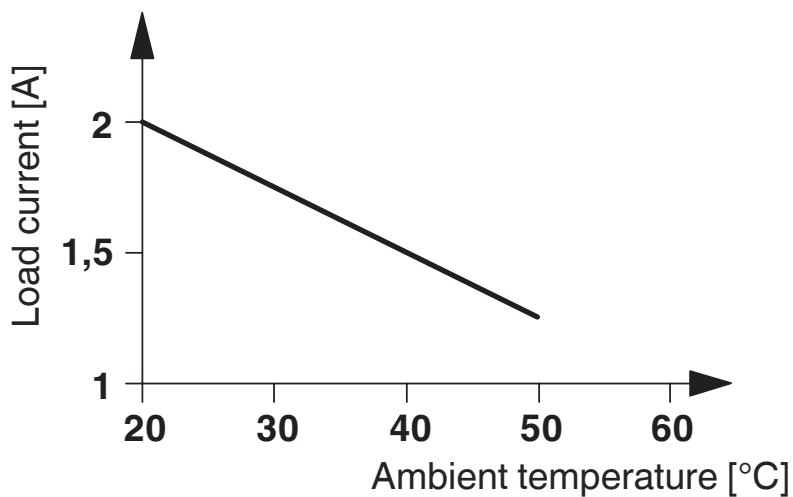
|                       |                           |
|-----------------------|---------------------------|
| Mounting type         | DIN rail mounting         |
| Assembly instructions | in rows with zero spacing |
| Mounting position     | any                       |

## Drawings

Circuit diagram



Diagram



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2944245>



**EAC**

Approval ID: TR\_TS\_D\_00573\_c



**EAC**

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

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371604 |
| ECLASS-12.0 | 27371604 |
| ECLASS-13.0 | 27371604 |

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                               |
|            | Hexahydromethylphthalic anhydride                                                                            |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                               |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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## Accessories

### EMG-SGKS 10 - Marking material

2947585

<https://www.phoenixcontact.com/gb/products/2947585>



Equipment marker, narrow

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