

EMG 10-OV- 5DC/24DC/1 - Solid-state relay module



2944203

<https://www.phoenixcontact.com/us/products/2944203>

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

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2944203 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Sales key | C460 |
| Product key | DK61C1 |
| GTIN | 4017918081508 |
| Weight per piece (including packing) | 37.78 g |
| Weight per piece (excluding packing) | 39.46 g |
| Customs tariff number | 85364190 |
| Country of origin | DE |

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 |
|------------|------------------|

Data management status

| | |
|------------------------------|------------|
| Date of last data management | 01.04.2026 |
|------------------------------|------------|

Electrical properties

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

Input data

| | |
|--|--|
| Nominal input voltage U_N | 5 V DC |
| Input voltage range in reference to U_N | 0.9 ... 1.1 |
| Input voltage range | 4.5 V DC ... 5.5 V DC |
| Switching threshold "0" signal in reference to U_N | ≤ 0.6 |
| Switching threshold "1" signal in reference to U_N | ≥ 0.9 |
| Typical input current at U_N | 4.2 mA |
| Typical response time | 0.1 ms |
| Typical turn-off time | 0.2 ms |
| Status display | LED (yellow) |
| 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 | ≤ 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 ² ... 4 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 12 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Output side

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

Dimensions

Item 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

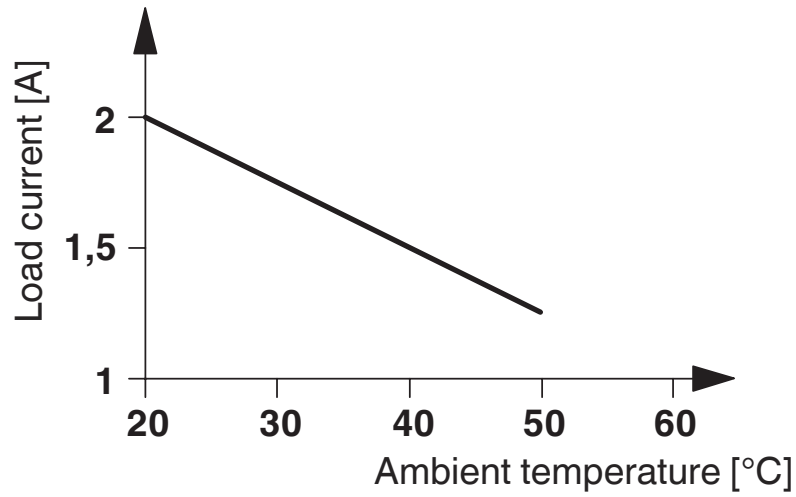
| | |
|-----------------------|-----------|
| Standards/regulations | IEC 60664 |
| | EN 50178 |

Mounting

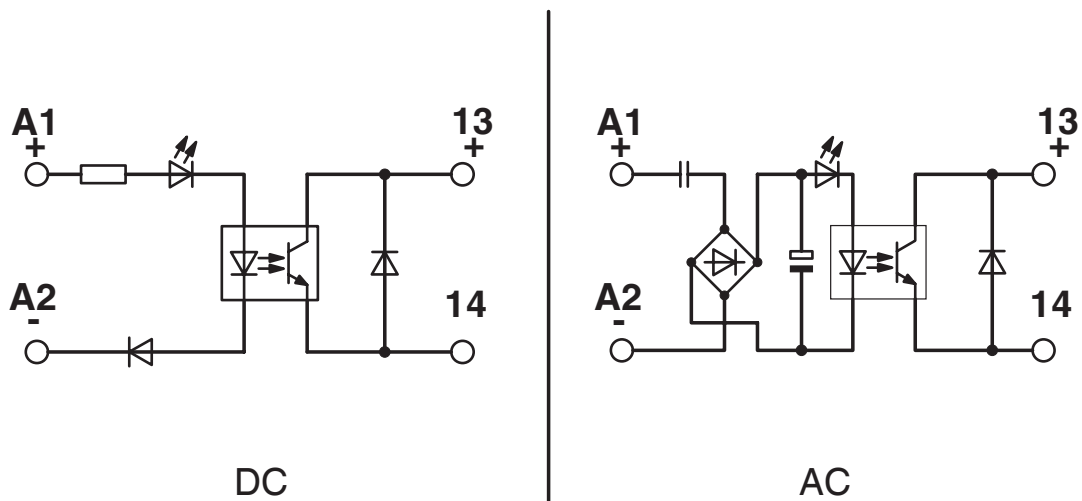
| | |
|-------------------|---------------------------|
| Mounting type | DIN rail mounting |
| Assembly note | in rows with zero spacing |
| Mounting position | any |

Drawings

Diagram



Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2944203>



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 10.0 | EC001504 |
|-----------|----------|

UNSPSC

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

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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
| | Lead(CAS: 7439-92-1) |
| SCIP | 99923bb1-7eb7-4979-88fc-7e32245ed2b6 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 1.248 kg CO2e |
|---------|---------------|