

# EMG 10-OE- 24DC/ 48DC/100 - Solid-state relay module



2948908

<https://www.phoenixcontact.com/us/products/2948908>

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Input solid-state relay, with LED and protective circuit in input and output circuits, input: 24 V DC, output: 4 - 48 V DC/max. 100 mA

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2948908       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C460          |
| Product key                          | DK61C1        |
| GTIN                                 | 4017918083571 |
| Weight per piece (including packing) | 36.98 g       |
| Weight per piece (excluding packing) | 36 g          |
| Customs tariff number                | 85364190      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

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

### Insulation characteristics

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 2                |

### 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 $U_N$                          | 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 $U_N$                       | 8.5 mA   |
| Typical response time                                | 20 $\mu$ s   |
| Typical turn-off time                                | 100 $\mu$ s  |
| Status display                                       | LED (yellow)   |
| Protective circuit                                   | Reverse polarity protection; Polarity protection diode<br>Surge protection |
| Transmission frequency                               | 500 Hz   |

### Output data

|  |  |
|--|--|
| Contact switching type                           | 1 N/O contact  |
| Design of digital output                         | electronic   |
| Output nominal voltage                           | 48 V DC  |
| Output voltage range                             | 4 V DC ... 48 V DC   |
| Limiting continuous current                      | 100 mA   |
| Voltage drop at max. limiting continuous current | 0.9 V  |
| Output circuit                                   | 2-conductor, floating  |
| Protective circuit                               | Reverse polarity protection; Polarity protection diode<br>Surge protection |

### Connection data

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## 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

### 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 ... 60 °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                       |

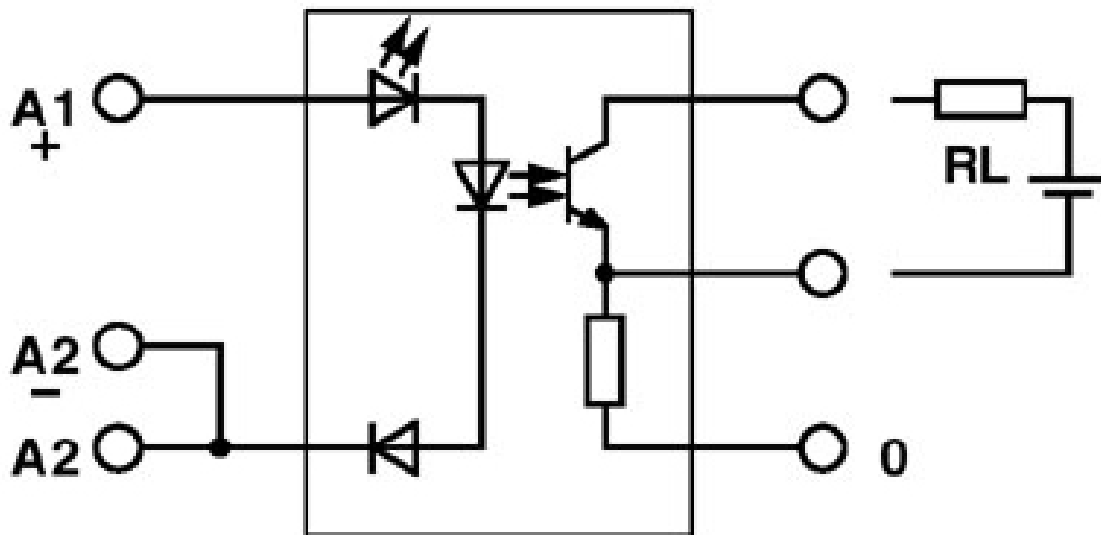
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## Drawings

Circuit diagram



Output: 2-conductor, floating, negative switching

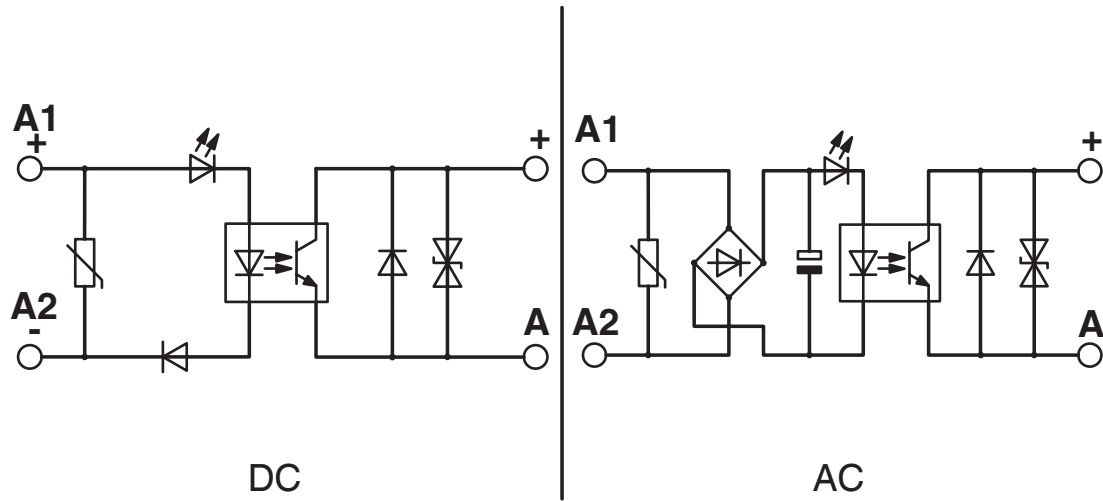
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Circuit diagram



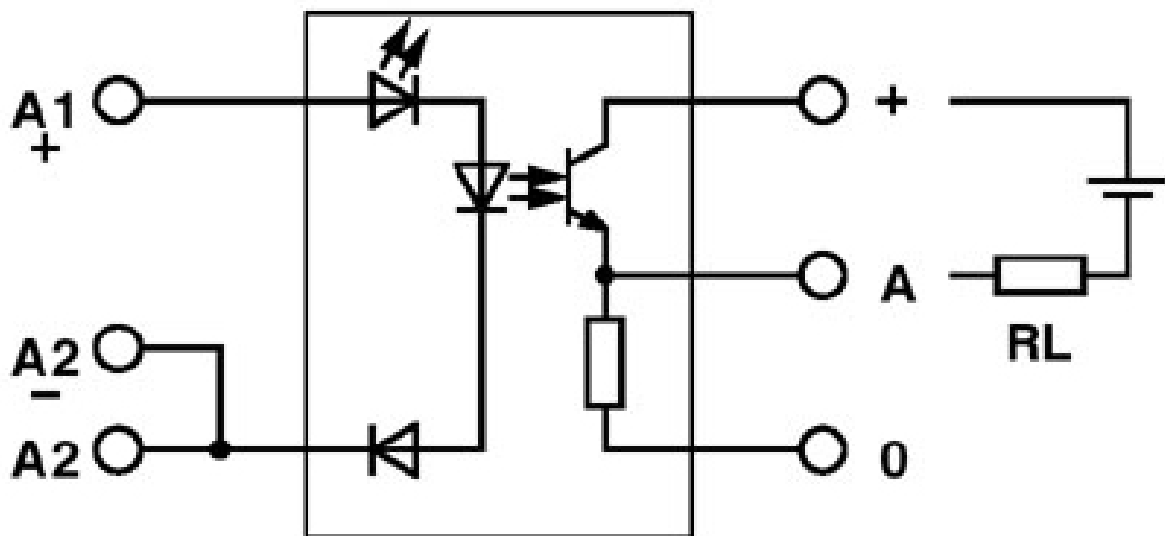
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Circuit diagram



Output: 2-conductor, floating, positive switching

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2948908>



**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 |
|-------------|----------|

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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.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
|                                     | Lead(CAS: 7439-92-1)                        |
| SCIP                                | 34dd6d28-69d0-45ff-bd31-72dd843ecb28        |

### EF3.1 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 1.38 kg CO2e |
|---------|--------------|

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