

# EMG 17-REL/SG-B 24/21/P - Relay Module



2956411

<https://www.phoenixcontact.com/gb/products/2956411>

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Relay module, with soldered-in remanence miniature switching relay, with positive switching diode wiring, contacts (AgSnO): small to large loads, 1 changeover contact, input voltage 24 V DC

## Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 2956411            |
| Packing unit                         | 10 pc              |
| Minimum order quantity               | 10 pc              |
| Sales key                            | CK6142             |
| Product key                          | CK6142             |
| Catalog page                         | Page 145 (IF-2009) |
| GTIN                                 | 4017918085773      |
| Weight per piece (including packing) | 47.5 g             |
| Weight per piece (excluding packing) | 46.84 g            |
| Customs tariff number                | 85364190           |
| 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            | Relay Module          |
| Product family          | EMG                   |
| Application             | Universal             |
| Operating mode          | 100% operating factor |
| Mechanical service life | approx. $10^7$ cycles |

#### Insulation characteristics

|            |                                       |
|------------|---------------------------------------|
| Insulation | Safe isolation, reinforced insulation |
|------------|---------------------------------------|

#### Insulation characteristics: Air clearances and creepage distances between the power circuits

|                      |                                       |
|----------------------|---------------------------------------|
| Insulation           | Safe isolation, reinforced insulation |
| Overvoltage category | III                                   |
| Pollution degree     | 2                                     |

### Electrical properties

|                                                 |                                                      |
|-------------------------------------------------|------------------------------------------------------|
| Maximum power dissipation for nominal condition | 0.19 W                                               |
| Test voltage (Winding/contact)                  | 4 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact) |

#### Air clearances and creepage distances between the power circuits

|                          |          |
|--------------------------|----------|
| Rated insulation voltage | 250 V AC |
| Rated surge voltage      | 4 kV     |

### Input data

#### Coil side

|                                |                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------|
| Nominal input voltage $U_N$    | 24 V DC                                                                                          |
| Input voltage range            | 19.2 V DC ... 26.4 V DC (20 °C)                                                                  |
| Drive and function             | bistable                                                                                         |
| Drive (polarity)               | polarized                                                                                        |
| Typical input current at $U_N$ | typ. 8 mA                                                                                        |
| Typical response time          | 5 ms                                                                                             |
| Typical release time           | 5 ms                                                                                             |
| Pulse time range               | 30 ms ... 5 s                                                                                    |
| Coil voltage                   | 24 V DC                                                                                          |
| Protective circuit             | Freewheeling diode; Freewheeling diode<br>Reverse polarity protection; Polarity protection diode |

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## Output data

### Switching

|                                       |                                                                                                                                     |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Contact switching type                | 1 changeover contact                                                                                                                |
| Type of switch contact                | Single contact                                                                                                                      |
| Contact material                      | AgSnO                                                                                                                               |
| Maximum switching voltage             | 250 V AC/DC                                                                                                                         |
| Minimum switching voltage             | 5 V (at 100 mA)<br>24 V (At 1 mA)                                                                                                   |
| Limiting continuous current           | 6 A                                                                                                                                 |
| Maximum inrush current                | 8 A                                                                                                                                 |
| Min. switching current                | 1 mA (at 24 V)<br>100 mA (At 5 V)                                                                                                   |
| Interrupting rating (ohmic load) max. | 144 W (at 24 V DC)<br>43 W (at 48 V DC)<br>42 W (at 60 V DC)<br>55 W (at 110 V DC)<br>100 W (at 220 V DC)<br>1500 VA (for 250 V AC) |

### Switching: when the gold layer is destroyed

|                                       |                                                                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Maximum switching voltage             | 250 V AC/DC                                                                                                                        |
| Limiting continuous current           | 5 A                                                                                                                                |
| Maximum inrush current                | 6 A                                                                                                                                |
| Interrupting rating (ohmic load) max. | 120 W (at 24 V DC)<br>40 W (at 48 V DC)<br>35 W (at 60 V DC)<br>30 W (at 110 V DC)<br>55 W (at 220 V DC)<br>1250 VA (for 250 V AC) |

## Connection data

### Coil 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                                   |

### Contact side

|                   |                  |
|-------------------|------------------|
| Connection method | Screw connection |
| Stripping length  | 8 mm             |
| Screw thread      | M3               |

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|                                  |                                             |
|----------------------------------|---------------------------------------------|
| 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  | 17.5 mm |
| Height | 75 mm   |
| Depth  | 62.5 mm |

## Material specifications

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

## Environmental and real-life conditions

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -40 °C ... 50 °C |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C |

## Standards and regulations

### Air clearances and creepage distances between the power circuits

|                       |              |
|-----------------------|--------------|
| Standards/regulations | DIN EN 50178 |
|-----------------------|--------------|

## Mounting

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

# EMG 17-REL/SG-B 24/21/P - Relay Module

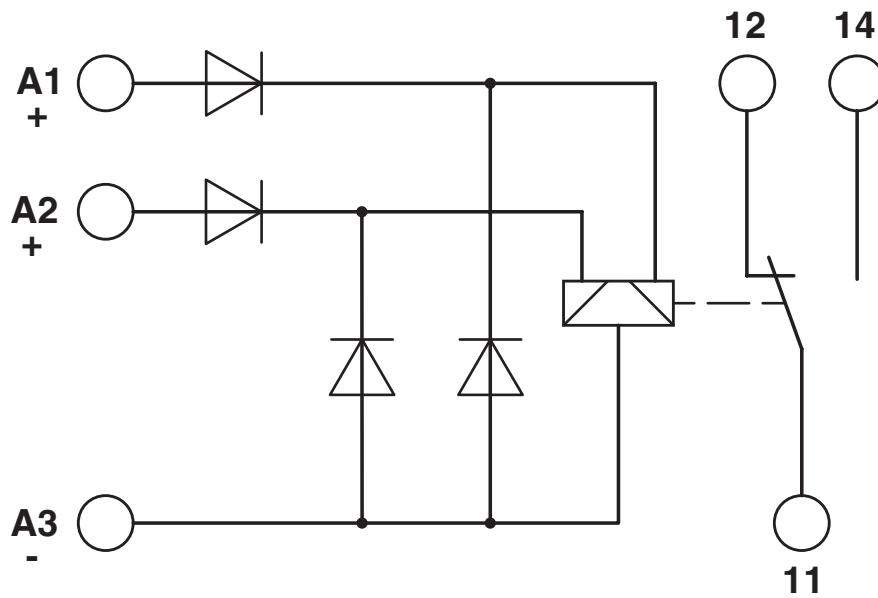
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## Drawings

Circuit diagram



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2956411>



**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 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001437 |
|----------|----------|

### UNSPSC

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

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## Environmental product compliance

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                               |
| 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-GKS 12 - Marking material

2947035

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Device marking label, width: 12 mm, area: 12 x 8 mm, e.g. for EML(10x7) R adhesive marking material

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