

# EMG 17-REL/KSR-120/21-21-LC - Relay module



2940427

<https://www.phoenixcontact.com/us/products/2940427>

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Relay module, with soldered-in miniature switching relay, contact (AgNi): medium to large loads, 2 changeover contacts, input voltage 120 V AC/DC

## Your advantages

- Safe isolation between coil and contact side
- Integrated input circuit and interference suppression circuit

## Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 2940427            |
| Packing unit                         | 10 pc              |
| Minimum order quantity               | 1 pc               |
| Sales key                            | C460               |
| Product key                          | CK61C2             |
| Catalog page                         | Page 135 (IF-2011) |
| GTIN                                 | 4017918080099      |
| Weight per piece (including packing) | 56.1 g             |
| Weight per piece (excluding packing) | 56.46 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            | Relay Module                   |
| Product family          | EMG                            |
| Application             | Universal                      |
| Operating mode          | 100% operating factor          |
| Mechanical service life | approx. $5 \times 10^7$ cycles |

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

|                      |                                                                                                                            |
|----------------------|----------------------------------------------------------------------------------------------------------------------------|
| Insulation           | Basic insulation<br>Safe isolation, reinforced insulation, and 6 kV between input circuit and output contact current paths |
| Overvoltage category | II                                                                                                                         |
| Pollution degree     | 2                                                                                                                          |

#### Insulation characteristics: Air clearances and creepage distances between input and contact circuit (or output contact current path)

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

#### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 02.05.2024 |
|------------------------------|------------|

### Electrical properties

|                                                 |                                                                |
|-------------------------------------------------|----------------------------------------------------------------|
| Maximum power dissipation for nominal condition | 0.72 W                                                         |
| Test voltage (Winding/contact)                  | 4 kV AC (50 Hz, 1 min., winding/contact)                       |
| Test voltage (Contact/contact)                  | 1 kV AC (50 Hz, 1 min., changeover contact/changeover contact) |

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

|                          |          |
|--------------------------|----------|
| Rated insulation voltage | 260 V AC |
| Rated surge voltage      | 2.3 kV   |

#### Air clearances and creepage distances between input and contact circuit (or output contact current path)

|                          |          |
|--------------------------|----------|
| Rated insulation voltage | 260 V AC |
| Rated surge voltage      | 6 kV     |

### Input data

#### Coil side

|                             |             |
|-----------------------------|-------------|
| Nominal input voltage $U_N$ | 120 V AC/DC |
|-----------------------------|-------------|

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|                                |                                    |
|--------------------------------|------------------------------------|
| Input voltage range            | 96 V AC/DC ... 132 V AC/DC (20 °C) |
| Drive and function             | monostable                         |
| Drive (polarity)               | polarized                          |
| Typical input current at $U_N$ | 6 mA                               |
| Typical response time          | 8 ms                               |
| Typical release time           | 10 ms                              |
| Protective circuit             | Bridge rectifier; Bridge rectifier |
| Operating voltage display      | Yellow LED                         |

## Output data

### Switching

|                                       |                        |
|---------------------------------------|------------------------|
| Contact switching type                | 2 changeover contacts  |
| Type of switch contact                | Single contact         |
| Contact material                      | AgNi                   |
| 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)     |
|                                       | 95 W (at 48 V DC)      |
|                                       | 60 W (at 60 V DC)      |
|                                       | 40 W (at 110 V DC)     |
|                                       | 55 W (at 220 V DC)     |
|                                       | 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                                          |
| 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   |

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|       |         |
|-------|---------|
| Depth | 62.5 mm |
|-------|---------|

## Material specifications

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

## Environmental and real-life conditions

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -20 °C ... 40 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |

## Standards and regulations

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

|                       |             |
|-----------------------|-------------|
| Standards/regulations | IEC 60664-1 |
|-----------------------|-------------|

### Air clearances and creepage distances between input and contact circuit (or output contact current path)

|                       |             |
|-----------------------|-------------|
| Standards/regulations | IEC 60664-1 |
|-----------------------|-------------|

### Standards/regulations

|                       |            |
|-----------------------|------------|
| Standards/regulations | EN 61810-1 |
|-----------------------|------------|

## Mounting

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

## Drawings

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2940427>



**cUL Recognized**

Approval ID: E238705



**UL Recognized**

Approval ID: E238705



**EAC**

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

**cULus Recognized**

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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

### EU RoHS

|                                         |            |
|-----------------------------------------|------------|
| Fulfills EU RoHS substance requirements | Yes        |
| Exemption                               | 6(c), 7(a) |

### 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.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | b5505a02-ee59-45cf-a9f1-0645d613c25c |

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