

# Relay Module - EMG 10-REL/KSR-120/21-LC



2964445

<https://www.phoenixcontact.com/il/products/2964445>

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Relay module, with soldered-in miniature switching relay, contact (AgNi): medium to large loads, 1 changeover contact, input voltage 120 V AC/DC

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## Your advantages

- Integrated input circuit and interference suppression circuit

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## Commercial Data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 2964445            |
| Packing unit                         | 10 pc              |
| Minimum order quantity               | 1 pc               |
| Product Key                          | CK6142             |
| Catalog Page                         | Page 134 (IF-2011) |
| GTIN                                 | 4017918125110      |
| Weight per Piece (including packing) | 40.57 g            |
| Weight per Piece (excluding packing) | 40.57 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                   |
| Application             | Universal                      |
| Operating mode          | 100% operating factor          |
| Mechanical service life | approx. $2 \times 10^7$ cycles |

#### Insulation characteristics

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

### Electrical properties

|                                                 |                                          |
|-------------------------------------------------|------------------------------------------|
| Maximum power dissipation for nominal condition | 0.6 W                                    |
| Test voltage                                    | 4 kV AC (50 Hz, 1 min., winding/contact) |

### Input data

#### Coil side

|                                |                                                                  |
|--------------------------------|------------------------------------------------------------------|
| Nominal input voltage $U_N$    | 120 V AC/DC                                                      |
| Input voltage range            | 96 V AC/DC ... 132 V AC/DC (20 °C)                               |
| Typical input current at $U_N$ | 5 mA                                                             |
| Typical response time          | 7 ms                                                             |
| Typical release time           | 11 ms                                                            |
| Protective circuit             | Bridge rectifier; Bridge rectifier<br>Surge protection; Varistor |
| Operating voltage display      | Yellow LED                                                       |

### Output data

#### Switching

|                             |                                      |
|-----------------------------|--------------------------------------|
| Contact type                | Single contact, 1 changeover contact |
| Type of switch contact      | Single contact                       |
| Drive and function          | monostable                           |
| Contact material            | AgNi                                 |
| Maximum switching voltage   | 250 V AC/DC                          |
| Limiting continuous current | 6 A                                  |
| Maximum inrush current      | 8 A                                  |
|                             | 140 W (at 24 V DC)                   |

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|                                       |                        |
|---------------------------------------|------------------------|
| Interrupting rating (ohmic load) max. | 53 W (at 48 V DC)      |
|                                       | 45 W (at 60 V DC)      |
|                                       | 35 W (at 110 V DC)     |
|                                       | 55 W (at 220 V DC)     |
|                                       | 1500 VA (for 250 V AC) |

## Connection data

### Coil side

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm                                        |
| Screw thread                     | M3                                          |
| Conductor cross section solid    | 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

|                                  |                                             |
|----------------------------------|---------------------------------------------|
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| Conductor cross section AWG      | 24 ... 12                                   |

## Dimensions

|        |         |
|--------|---------|
| Width  | 10.6 mm |
| Height | 75 mm   |
| Depth  | 62.5 mm |

## 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

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

## Mounting

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

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## Drawings

Connection diagram



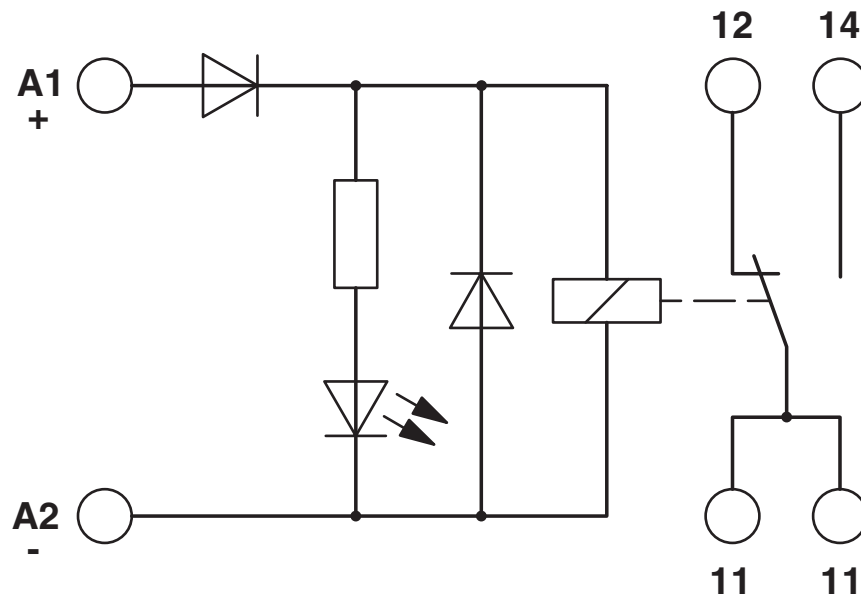
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Circuit diagram



# Relay Module - EMG 10-REL/KSR-120/21-LC



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## Approvals

|                                                                                   |                                                     |                       |                   |                             |
|-----------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>cUL Recognized</b><br>Approval ID: FILE E 238705 |                       |                   |                             |
|                                                                                   | Nominal Voltage $U_N$                               | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|                                                                                   |                                                     |                       | -                 | -                           |

|                                                                                   |                                                    |                       |                   |                             |
|-----------------------------------------------------------------------------------|----------------------------------------------------|-----------------------|-------------------|-----------------------------|
|  | <b>UL Recognized</b><br>Approval ID: FILE E 238705 |                       |                   |                             |
|                                                                                   | Nominal Voltage $U_N$                              | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|                                                                                   |                                                    |                       | -                 | -                           |

|                                                                                   |                                            |  |  |  |
|-----------------------------------------------------------------------------------|--------------------------------------------|--|--|--|
|  | <b>EAC</b><br>Approval ID: TR_TS_D_00573_c |  |  |  |
|                                                                                   |                                            |  |  |  |

|                                                                                     |                                                |  |  |  |
|-------------------------------------------------------------------------------------|------------------------------------------------|--|--|--|
|  | <b>EAC</b><br>Approval ID: RU*C-DE.*08.B.00010 |  |  |  |
|                                                                                     |                                                |  |  |  |

|                         |  |  |  |  |
|-------------------------|--|--|--|--|
| <b>cULus Recognized</b> |  |  |  |  |
|-------------------------|--|--|--|--|

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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27371601 |
| ECLASS-10.0.1 | 27371601 |
| ECLASS-11.0   | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001437 |
|----------|----------|

### 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

### Marking material

Marking material - EMG-SGKS 10 - 2947585

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



Equipment marker, narrow

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