

# DEK-REL- 24/I/1 - Relay module



2940171

<https://www.phoenixcontact.com/us/products/2940171>

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Relay terminal block, with soldered-in miniature relays, contact (AgNi+Au): small to medium loads, 1 N/O contact, input voltage 24 V AC/DC, for assembly on NS 35/7.5, terminal width 6.2 mm

## Your advantages

- Reduced costs as N terminal block is no longer required
- Up to 73 % more space
- Wiring reduced to a minimum
- 2-layer contact with hard gold plating for universal applications from 1 mA to 5 A continuous current
- 2 kV<sub>rms</sub> electrical isolation between input and output
- Integrated input circuit

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2940171       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C460          |
| Product key                          | DK61A2        |
| GTIN                                 | 4017918079895 |
| Weight per piece (including packing) | 23.31 g       |
| Weight per piece (excluding packing) | 19 g          |
| Customs tariff number                | 85364190      |
| Country of origin                    | CN            |

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## Technical data

### Notes

|                     |   |
|---------------------|---|
| Note on application | Use of EB 80-DIK... bridges in the DEK terminal blocks:<br>Absorption of humidity from the ambient air as well as an unfavorable tolerance between a larger number of DEK terminal blocks and the EB 80-DIK... bridge may cause (minor) expansion of the DEK housing. When the EB 80-DIK... bridges are used, therefore, it is recommended that these be disconnected after about 10 to 12 DEK terminal blocks and a wire bridge to the next DEK terminal block be inserted in their place. |
|---------------------|---|

### Product properties

|                         |                                |
|-------------------------|--------------------------------|
| Product type            | Relay Module                   |
| Product family          | DEK                            |
| Application             | Output function                |
| Operating mode          | 100% operating factor          |
| Mechanical service life | approx. $2 \times 10^7$ cycles |

### Insulation characteristics

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

### Data management status

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

### Electrical properties

|   |  |
|---|--|
| Maximum power dissipation for nominal condition | 0.16 W                                   |
| Test voltage (Winding/contact)                  | 2 kV AC (50 Hz, 1 min., winding/contact) |

### Input data

#### Coil side

|                                |                                       |
|--------------------------------|---------------------------------------|
| Nominal input voltage $U_N$    | 24 V AC/DC                            |
| Input voltage range            | 19.2 V AC/DC ... 26.4 V AC/DC (20 °C) |
| Drive and function             | monostable                            |
| Drive (polarity)               | polarized                             |
| Typical input current at $U_N$ | 6.5 mA                                |
| Typical response time          | 5 ms                                  |
| Typical release time           | 15 ms                                 |
| Protective circuit             | Bridge rectifier; Bridge rectifier    |
| Operating voltage display      | Yellow LED                            |

### Output data

#### Switching

|                        |               |
|------------------------|---------------|
| Contact switching type | 1 N/O contact |
|------------------------|---------------|

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|                                       |  |
|---------------------------------------|--|
| Type of switch contact                | Double contact   |
| Contact material                      | AgNi, hard gold-plated   |
| Maximum switching voltage             | 250 V AC<br>125 V DC   |
| Minimum switching voltage             | 0.1 V  |
| Limiting continuous current           | 3 A (5 A up to 35°C at 24 V DC)  |
| Maximum inrush current                | 5 A  |
| Min. switching current                | 1 mA   |
| Interrupting rating (ohmic load) max. | 72 W (at 24 V DC)<br>60 W (at 48 V DC)<br>50 W (at 60 V DC)<br>50 W (at 110 V DC)<br>750 VA (for 250 V AC)<br>120 W (at 24 V DC - up to 35°) |

## Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm  |
| Screw thread                     | M3  |
| Conductor cross-section rigid    | 0.2 mm <sup>2</sup> ... 2.5 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 ... 14                                   |
| Tightening torque                | 0.4 Nm ... 0.5 Nm                           |

## Dimensions

### Item dimensions

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |
| Depth  | 56 mm  |

## Material specifications

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

## Environmental and real-life conditions

### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -20 °C ... 50 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |

## Standards and regulations

|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

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

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|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

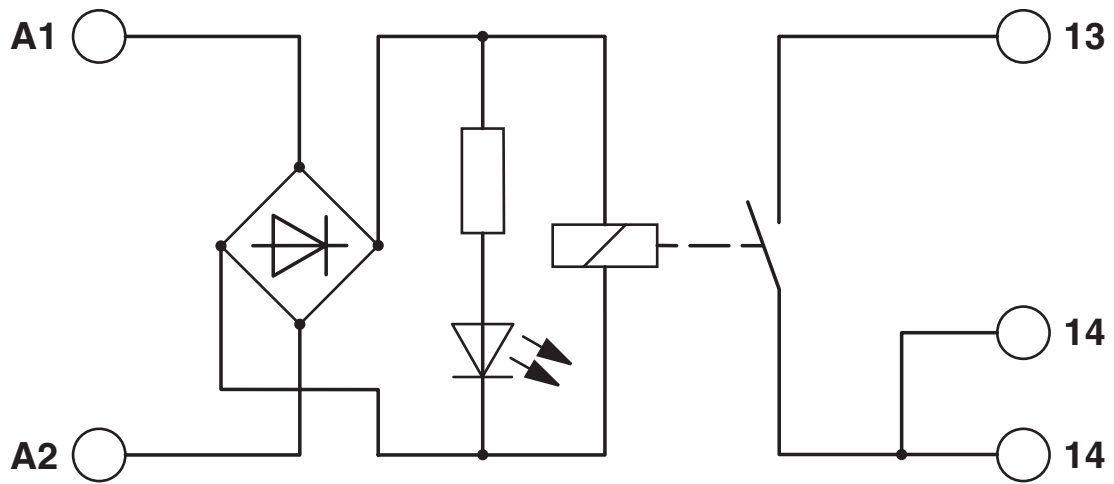
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## Drawings

Circuit diagram



# DEK-REL- 24/I/1 - Relay module



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## Approvals

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**cUL Recognized**

Approval ID: E238705



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001437 |
|-----------|----------|

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |              |
|---|--------------|
| Fulfills EU RoHS substance requirements | Yes          |
| Exemption                               | 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.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | 9b235608-6f54-4508-85fb-8f2708416cbb |

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