

# DEK-OV- 24DC/ 24DC/ 10 - Solid-state relay terminal block



2964322

<https://www.phoenixcontact.com/us/products/2964322>

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Power solid-state relay terminal block with short-circuit-proof DC voltage output, input: 24 V DC, output: 3 - 33 V DC/10 A

## Your advantages

- Actuator version available
- EB-DIK insertion bridges
- Labeling and mounting with user-friendly modular terminal blocks
- Wear-free switching of up to 24 V DC/10 A
- Integrated output protective circuit
- Zero voltage switch at AC output
- Status indicator
- Electrical isolation between input and output at up to 2.5 kVrms
- Integrated input circuit

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2964322       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C460          |
| Product key                          | DK61A1        |
| GTIN                                 | 4017918893194 |
| Weight per piece (including packing) | 25.5 g        |
| Weight per piece (excluding packing) | 25.5 g        |
| Customs tariff number                | 85364190      |
| Country of origin                    | CN            |

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## Technical data

### Notes

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Order information:  | The housing is open on one side. The appropriate cover is D-DEK 1,5 GN (2716949).                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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   | Solid-state relay module |
| Product family | DEK                      |
| Application    | Output function          |
| Operating mode | 100% operating factor    |

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

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

Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 15.09.2025 |
|------------------------------|------------|

### Electrical properties

|                                                 |                          |
|-------------------------------------------------|--------------------------|
| Maximum power dissipation for nominal condition | 0.5 W                    |
| Test voltage (Input/output)                     | 2.5 kV AC (Input/output) |

Air clearances and creepage distances between the power circuits

|                          |         |
|--------------------------|---------|
| Rated insulation voltage | 50 V DC |
| Rated surge voltage      | 0.5 kV  |

### 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 $U_N$                       | 3.5 mA                      |
| Typical response time                                | 100 $\mu$ s                 |
| Typical turn-off time                                | 500 $\mu$ s                 |
| Operating voltage display                            | Yellow LED                  |
| Protective circuit                                   | Reverse polarity protection |

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|                        |                  |
|------------------------|------------------|
|                        | Surge protection |
| Transmission frequency | 100 Hz           |

## Output data

|                                                  |                                |
|--------------------------------------------------|--------------------------------|
| Contact switching type                           | 1 N/O contact                  |
| Design of digital output                         | electronic                     |
| Output voltage range                             | 8 V DC ... 33 V DC             |
| Limiting continuous current                      | 10 A (see derating curve)      |
| Surge current                                    | 100 A (t = 20 ms)              |
| Voltage drop at max. limiting continuous current | ≤ 50 mV                        |
| Output circuit                                   | 3-conductor, ground-referenced |
| Protective circuit                               | Reverse polarity protection    |
|                                                  | Surge protection               |

## Connection data

|                                  |                     |
|----------------------------------|---------------------|
| Connection method                | Screw connection    |
| Stripping length                 | 8 mm                |
| Screw thread                     | M3                  |
| Conductor cross-section rigid    | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section AWG      | 24 ... 14           |
| Tightening torque                | 0.4 Nm ... 0.5 Nm   |

## 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 ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |
| Altitude                                | ≤ 2000 m         |

## Standards and regulations

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

|                       |                  |
|-----------------------|------------------|
| Standards/regulations | DIN EN 60947-5-1 |
|-----------------------|------------------|

## Mounting

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

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

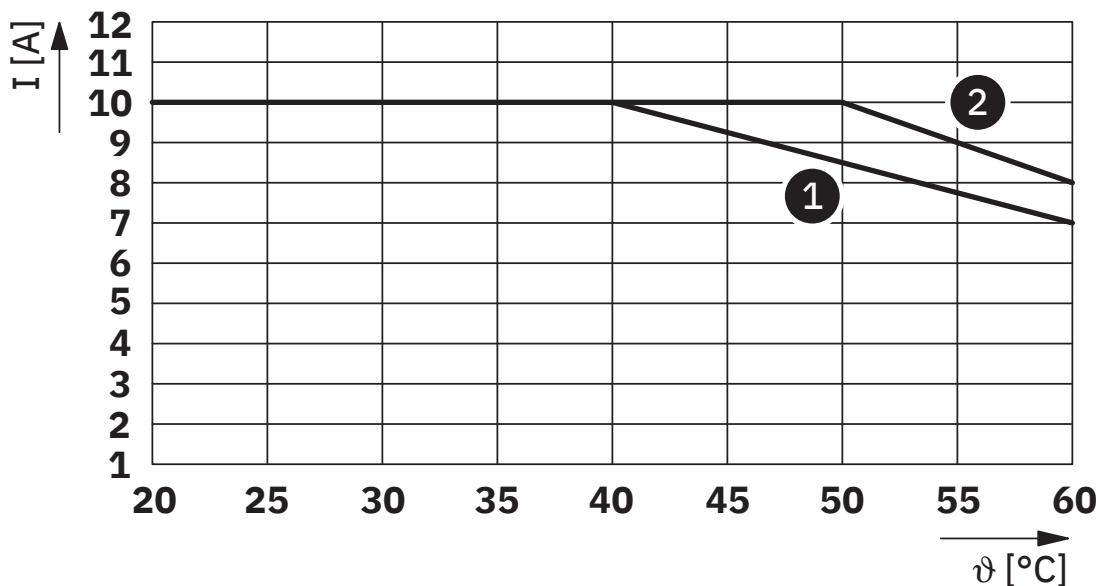
# DEK-OV- 24DC/ 24DC/ 10 - Solid-state relay terminal block

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## Drawings

Diagram

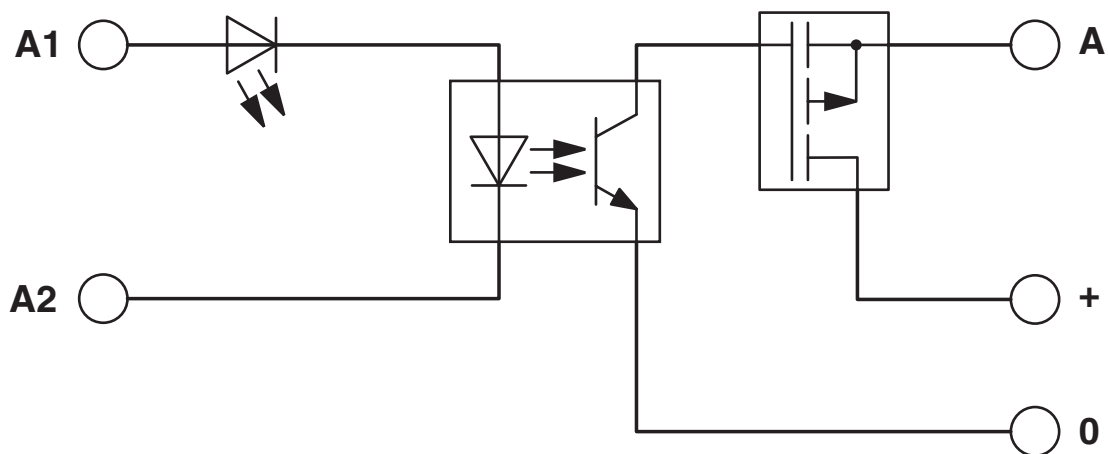


Derating curve for the continuous load current

Curve 1: Arranged in a row without spacing

Curve 2: Arranged in a row with spacing > 6 mm

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2964322>



**cUL Recognized**  
Approval ID: E238705



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001504 |
|----------|----------|

### 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                                | 7a6c560f-fd73-479f-9d04-b53970e8a4c3 |

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