

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



## Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 10 pc         |
| GTIN         |               |
| GTIN         | 4017918893194 |

## Technical data

### Note

|                         |   |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area   |
| Type of note            | Order information:  |
| Note                    | The housing is open on one side. The appropriate cover is D-DEK 1,5 GN (2716949).   |
| Type of note            | Note on application   |
| Note                    | Use of EB 80-DIK... bridges in the DEK terminal blocks: 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... |

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## Technical data

### Note

|  |  |
|--|--|
|  | 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. |
|--|--|

### Dimensions

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

### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -20 °C ... 70 °C |

### 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                                | 250 $\mu$ s                 |
| Typical turn-off time                                | 800 $\mu$ s                 |
| Operating voltage display                            | Yellow LED                  |
| Type of protection                                   | Reverse polarity protection |
|  | Surge protection            |
| Transmission frequency                               | 100 Hz                      |
| Power dissipation for nominal condition              | 0.5 W                       |

### Output data

|  |                                |
|--|--------------------------------|
| Output voltage range                             | 5 V DC ... 30 V DC             |
| Limiting continuous current                      | 10 A (see derating curve)      |
| Surge current                                    | 100 A (t = 20 ms)              |
| Voltage drop at max. limiting continuous current | $\leq 50$ mV                   |
| Output circuit                                   | 3-conductor, ground-referenced |
| Type of protection                               | Reverse polarity protection    |
|  | Surge protection               |

### General

|                           |                           |
|---------------------------|---------------------------|
| Test voltage input/output | 2.5 kV AC                 |
| Mounting position         | any                       |
| Assembly instructions     | In rows with zero spacing |
| Operating mode            | 100% operating factor     |

### Connection data

# Solid-state relay terminal block - DEK-OV- 24DC/ 24DC/ 10 - 2964322

## Technical data

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection name                  | Input side                                  |
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm  |
| Screw thread                     | M3  |
| Conductor cross section solid    | 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                                   |
| Torque                           | 0.5 Nm                                      |

### Connection data 2

|                                  |   |
|----------------------------------|---|
| Connection name                  | Output side                                 |
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm  |
| Screw thread                     | M3  |
| Conductor cross section solid    | 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                                   |
| Torque                           | 0.5 Nm                                      |

### Standards and Regulations

|                                  |                       |
|----------------------------------|-----------------------|
| Connection in acc. with standard | CUL                   |
| Designation                      | Standards/regulations |
| Standards/regulations            | IEC 60664             |
|                                  | EN 50178              |
| Insulation                       | Basic insulation      |
| Pollution degree                 | 2                     |
| Overvoltage category             | II                    |

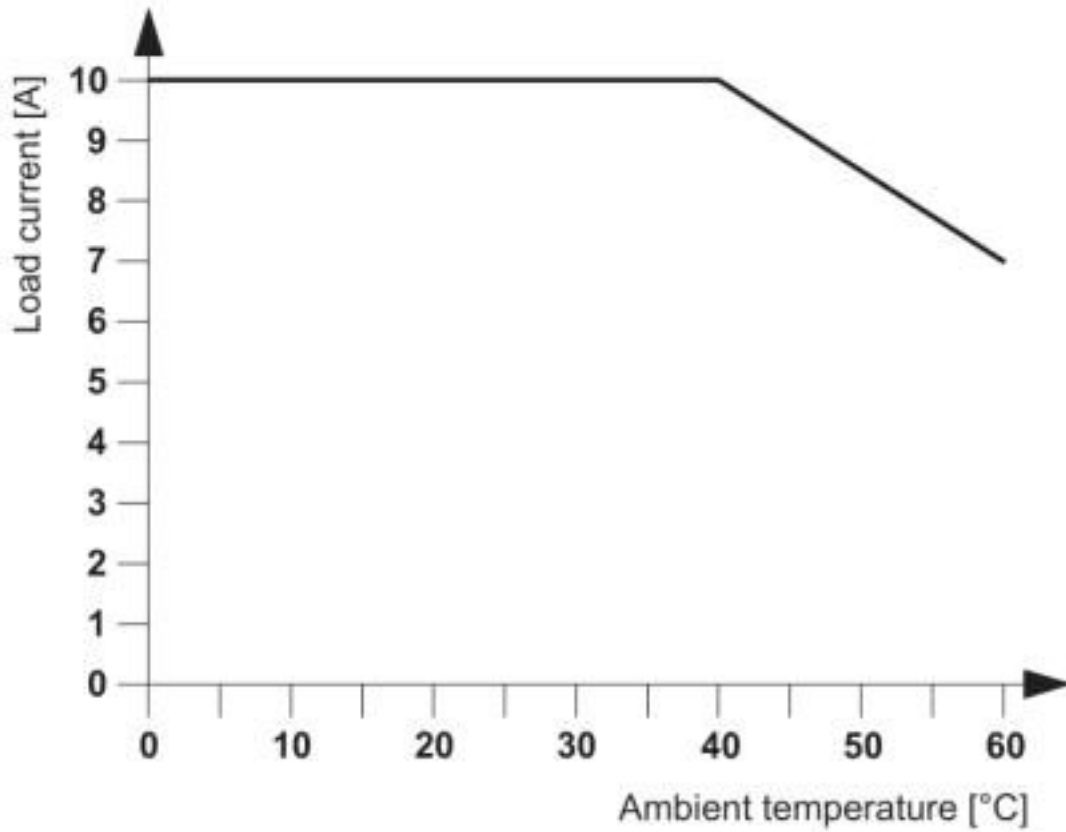
### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

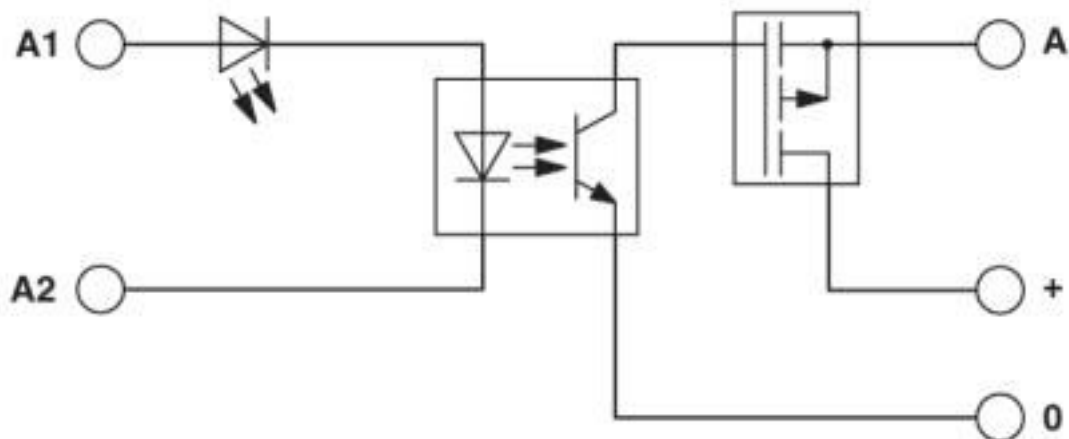
## Drawings

# Solid-state relay terminal block - DEK-OV- 24DC/ 24DC/ 10 - 2964322

Diagram



Circuit diagram



## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371604 |
| eCl@ss 4.0    | 27371100 |

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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.1 | 27371100 |
| eCl@ss 5.0 | 27371000 |
| eCl@ss 5.1 | 27371000 |
| eCl@ss 6.0 | 27371600 |
| eCl@ss 7.0 | 27371604 |
| eCl@ss 8.0 | 27371604 |
| eCl@ss 9.0 | 27371604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001504 |
| ETIM 3.0 | EC001504 |
| ETIM 4.0 | EC001504 |
| ETIM 5.0 | EC001504 |
| ETIM 6.0 | EC001504 |
| ETIM 7.0 | EC001504 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121542 |
| UNSPSC 11     | 39121542 |
| UNSPSC 12.01  | 39121542 |
| UNSPSC 13.2   | 39122326 |
| UNSPSC 18.0   | 39122326 |
| UNSPSC 19.0   | 39122326 |
| UNSPSC 20.0   | 39122326 |
| UNSPSC 21.0   | 39122326 |

## Approvals

### Approvals

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Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

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Ex Approvals

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### Approval details

# Solid-state relay terminal block - DEK-OV- 24DC/ 24DC/ 10 - 2964322

## Approvals

|               |  |   |               |
|---------------|--|---|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|---------------|--|---|---------------|

|                |  |   |               |
|----------------|--|---|---------------|
| cUL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 238705 |
|----------------|--|---|---------------|

|     |  |  |                 |
|-----|--|--|-----------------|
| EAC |  |  | TR_TS_D_00573_c |
|-----|--|--|-----------------|

|                  |  |  |  |
|------------------|--|--|--|
| cULus Recognized |  |  |  |
|------------------|--|--|--|

## Accessories

### Accessories

#### Insertion bridge

Insertion bridge - EB 2- DIK RD - 2716693



Insertion bridge, pitch: 6.15 mm, number of positions: 2, color: red

Insertion bridge - EB 3- DIK RD - 2716745



Insertion bridge, pitch: 6.15 mm, number of positions: 3, color: red

Insertion bridge - EB 4- DIK RD - 2716758



Insertion bridge, pitch: 6.15 mm, number of positions: 4, color: red

## Solid-state relay terminal block - DEK-OV- 24DC/ 24DC/ 10 - 2964322

### Accessories

Insertion bridge - EB 5- DIK RD - 2716761



Insertion bridge, pitch: 6.15 mm, number of positions: 5, color: red

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Insertion bridge - EB 10- DIK RD - 2716774



Insertion bridge, pitch: 6.15 mm, number of positions: 10, color: red

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Insertion bridge - EB 2- DIK BU - 2716648



Insertion bridge, pitch: 6.15 mm, number of positions: 2, color: blue

---

Insertion bridge - EB 3- DIK BU - 2716651



Insertion bridge, pitch: 6.15 mm, number of positions: 3, color: blue

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Insertion bridge - EB 4- DIK BU - 2716664



Insertion bridge, pitch: 6.15 mm, number of positions: 4, color: blue

---

## Solid-state relay terminal block - DEK-OV- 24DC/ 24DC/ 10 - 2964322

### Accessories

Insertion bridge - EB 5- DIK BU - 2716677



Insertion bridge, pitch: 6.15 mm, number of positions: 5, color: blue

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Insertion bridge - EB 10- DIK BU - 2716680



Insertion bridge, pitch: 6.15 mm, number of positions: 10, color: blue

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Insertion bridge - EB 80- DIK BU - 2715940



Insertion bridge, pitch: 6.2 mm, number of positions: 80, color: blue

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Insertion bridge - EB 80- DIK RD - 2715953



Insertion bridge, pitch: 6.2 mm, number of positions: 80, color: red

---

Insertion bridge - EB 80- DIK WH - 2715788



Insertion bridge, pitch: 6.15 mm, number of positions: 80, color: white

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### Labeled terminal marker



## Solid-state relay terminal block - DEK-OV- 24DC/ 24DC/ 10 - 2964322

### Accessories

Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

---

### Partition plate

Separating plate - D-DEK 1,5 GN - 2716949



Cover for setting the end of a terminal row, color: green

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### Sensor/actuator terminal block

Sensor/actuator terminal block - DIKD 1,5 - 2715979



Sensor/actuator terminal block, connection method: Screw connection, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 6.2 mm, color: gray, mounting type: NS 35/7,5, NS 35/15

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### Terminal marking

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

Zack marker strip - ZB 6/WH-100:UNBEDRUCKT - 5060935



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

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