

# SIM-EI-220DC/TTL/100 - Miniature solid-state relay



2271183

<https://www.phoenixcontact.com/us/products/2271183>

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The figure shows version SIM-EI-5DC/TTL/100

Input solid-state relay, with protective circuit in input and output circuits, input: 220 V DC, output: TTL logic level, max. 100 mA

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2271183                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Product key                          | DK61F1                         |
| GTIN                                 | 4017918054229                  |
| Weight per piece (including packing) | 18.7 g                         |
| Weight per piece (excluding packing) | 18.7 g                         |
| Country of origin                    | DE                             |

## Technical data

### Product properties

|                              |                          |
|------------------------------|--------------------------|
| Product type                 | Single solid-state relay |
| Data management status       |                          |
| Date of last data management | 05.09.2025               |

### Electrical properties

|                             |                                      |
|-----------------------------|--------------------------------------|
| Test voltage (Input/output) | 2.5 kV (50 Hz, 1 min., input/output) |
|-----------------------------|--------------------------------------|

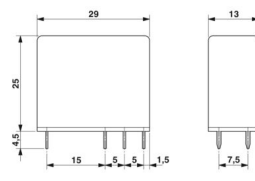
### Input data

|  |  |
|--|--|
| Nominal input voltage $U_N$                          | 220 V DC   |
| Input voltage range in reference to $U_N$            | 0.9 ... 1.1  |
| Input voltage range                                  | 198 V DC ... 242 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 $U_N$                       | 2.6 mA   |
| Protective circuit                                   | Reverse polarity protection; Polarity protection diode |
| Transmission frequency                               | 1000 Hz  |

### Output data

|  |  |
|--|--|
| Design of digital output                         | electronic   |
| Output voltage range                             | 3 V DC ... 5.25 V DC   |
| Limiting continuous current                      | 100 mA   |
| Fan out  | 1  |
| Voltage drop at max. limiting continuous current | 0.3 V  |
| Output circuit                                   | 3-conductor, ground-referenced   |
| Protective circuit                               | Reverse polarity protection; Polarity protection diode<br>Free running; Freewheeling diode |
| Output resistor                                  | approx. 390 $\Omega$   |

### Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 13 mm  |
| Height              | 29 mm  |
| Depth               | 25 mm  |

### Environmental and real-life conditions

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## Ambient conditions

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

## Standards and regulations

|                       |              |
|-----------------------|--------------|
| Standards/regulations | DIN VDE 0110 |
|-----------------------|--------------|

## Mounting

|                   |   |
|-------------------|---|
| Assembly note     | can be aligned with spacing $\geq 2$ mm |
| Mounting position | any                                     |

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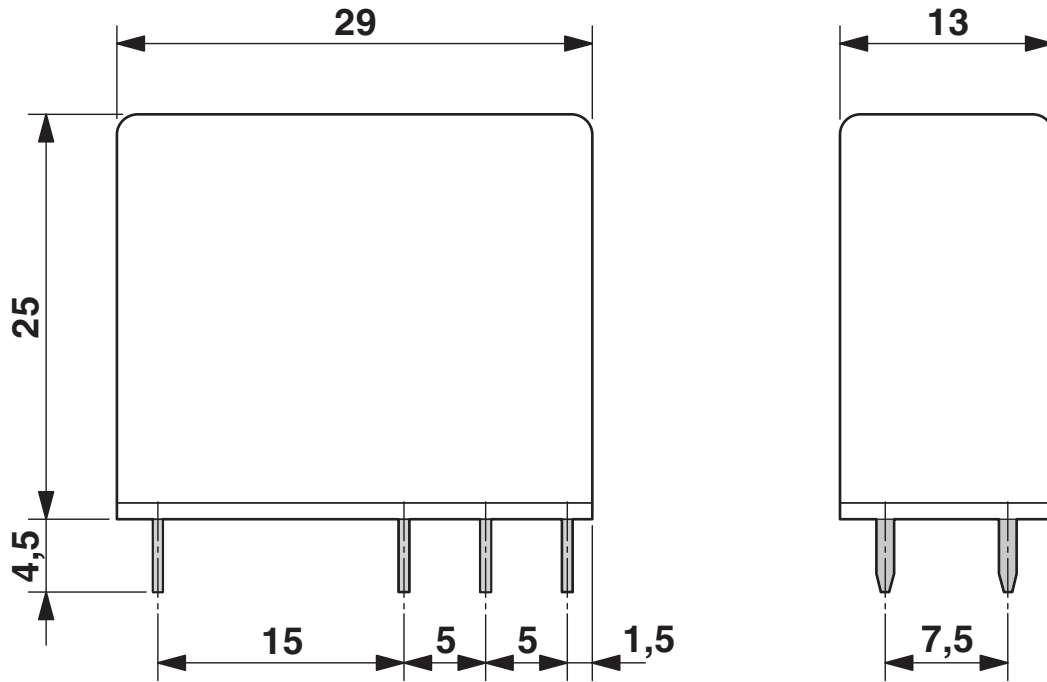


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## Drawings

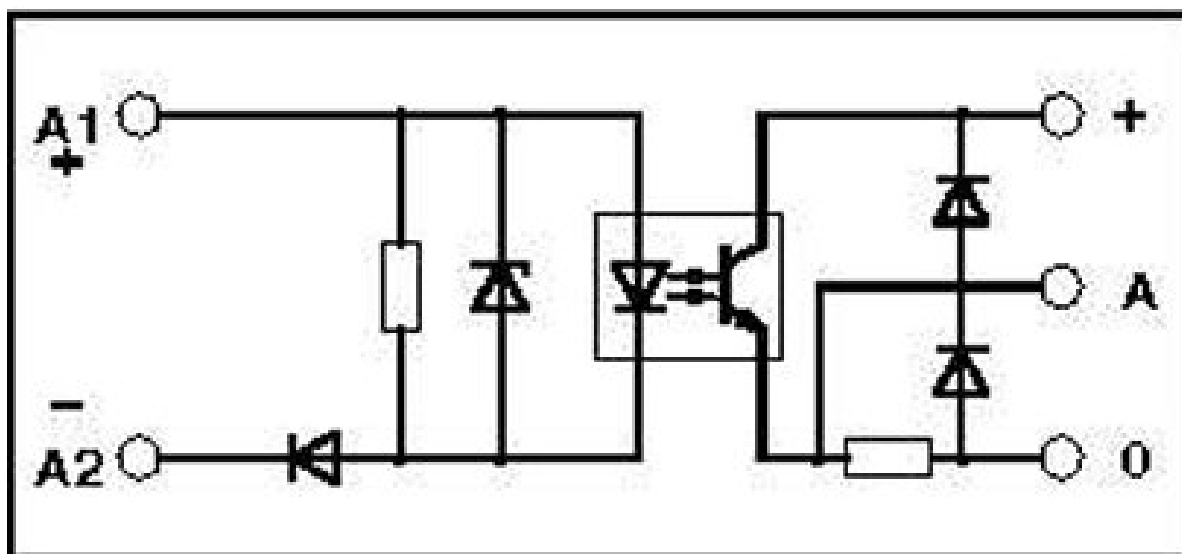
Dimensional drawing



Schematic diagram



Circuit diagram



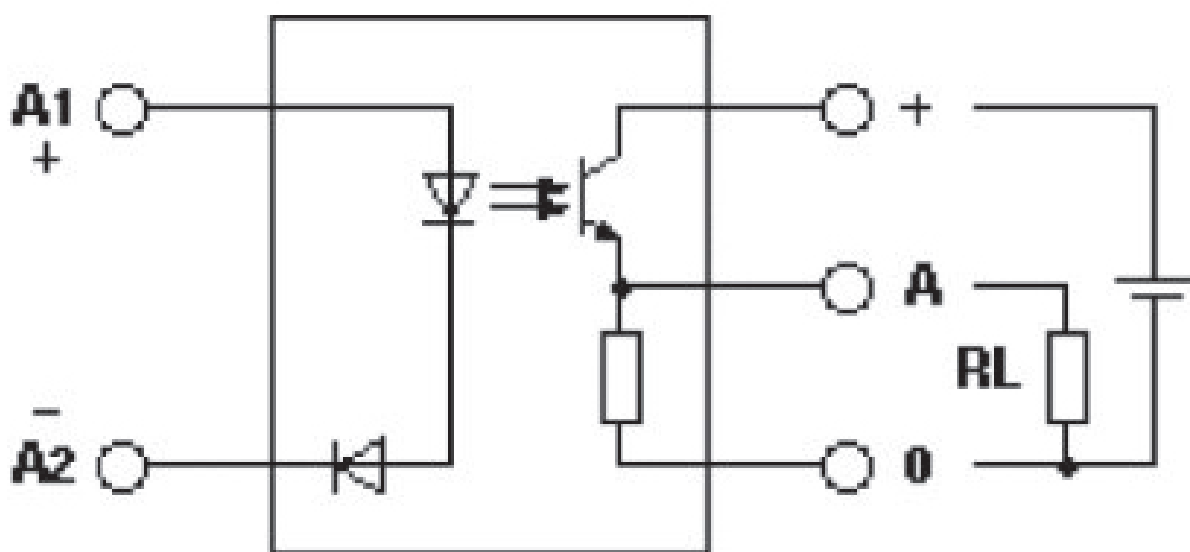
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Circuit diagram



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## Environmental product compliance

### 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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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