

# SIM-EI-110DC/TTL/100 - Miniature solid-state relay



2271170

<https://www.phoenixcontact.com/us/products/2271170>

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Input solid-state relay, with protective circuit in input and output circuits, input: 110 V DC, output: TTL logic level, max. 100 mA

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

## Commercial data

Item number	2271170
Packing unit	10 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	DK61F1
GTIN	4017918054212
Weight per piece (including packing)	20.6 g
Weight per piece (excluding packing)	20.6 g
Country of origin	DE

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## Technical data

### Product properties

Product type	Single solid-state relay
Data management status	
Date of last data management	01.04.2026

### Electrical properties

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

Nominal input voltage $U_N$	110 V DC
Input voltage range in reference to $U_N$	0.9 ... 1.1
Input voltage range	99 V DC ... 121 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 $U_N$	2.4 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 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
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## Mounting

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

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## Drawings

Dimensional drawing



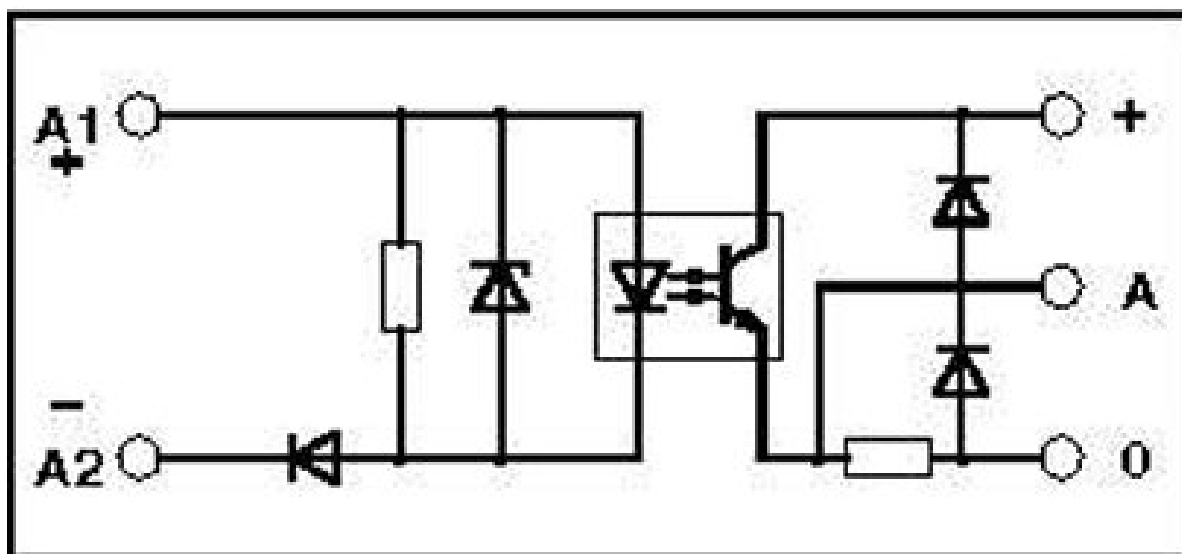
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Schematic diagram



Circuit diagram

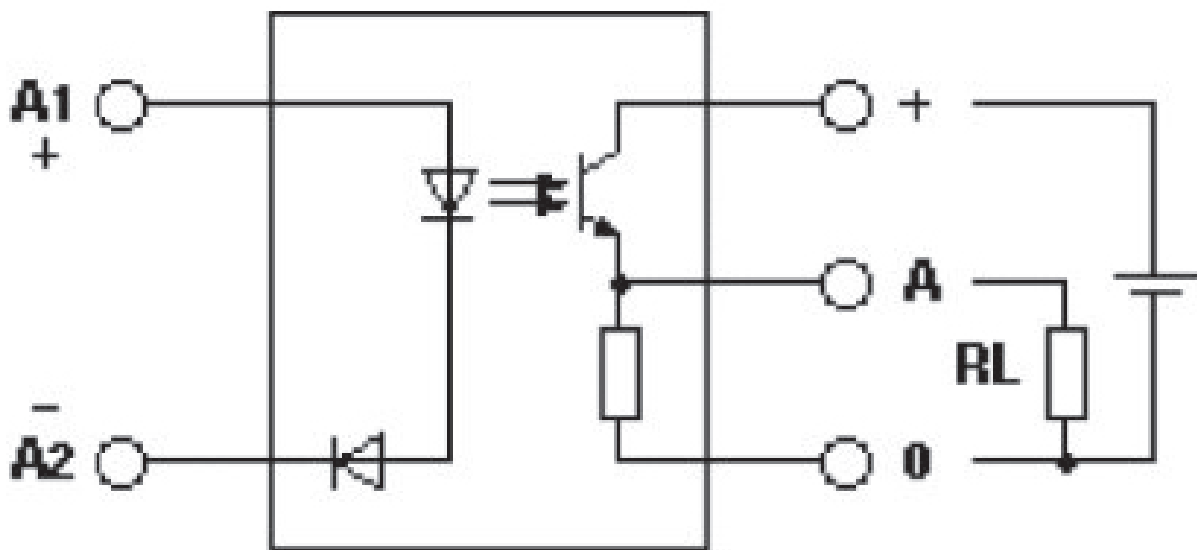


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Circuit diagram



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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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