

# EMG 17-OV- 5DC/ 24DC/2 - Solid-state relay module



2946780

<https://www.phoenixcontact.com/us/products/2946780>

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Power solid-state relay, with LED and protective circuit in input and output circuits, input: 5 V DC, output: short-circuit-proof, 10 - 30 V DC/max. 2 A

The figure shows version EMG 17-OV, with short-circuit proof DC voltage output, max. 2 A

## Commercial data

Item number	2946780
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C460
Product key	DK61C2
GTIN	4017918082420
Weight per piece (including packing)	58.4 g
Weight per piece (excluding packing)	58.4 g
Customs tariff number	85364190
Country of origin	DE

## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Solid-state relay module
Application	Output function
Operating mode	100% operating factor

#### Insulation characteristics

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

#### Data management status

Date of last data management	15.09.2025
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### Electrical properties

Test voltage (Input/output)	2.5 kV AC (Input/output)
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### Input data

Nominal input voltage $U_N$	5 V DC
Input voltage range in reference to $U_N$	0.8 ... 1.2
Input voltage range	4 V DC ... 6 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 $U_N$	4.5 mA
Typical response time	120 $\mu$ s
Typical turn-off time	230 $\mu$ s
Status display	LED (yellow)
Protective circuit	Reverse polarity protection; Polarity protection diode Surge protection; Varistor
Transmission frequency	1000 Hz

### Output data

Design of digital output	electronic
Output nominal voltage	24 V DC
Output voltage range	10 V DC ... 30 V DC
Limiting continuous current	2 A (see derating curve)
Leakage current	150 $\mu$ A
Peak offstate voltage	33 V DC (Collector-emitter reverse voltage)

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Current limitation at short-circuits	> 2 A (short-circuit-proof)
Voltage drop at max. limiting continuous current	≤ 0.3 V
Output circuit	3-conductor, ground-referenced
Error indication	Red LED
Protective circuit	Reverse polarity protection; Polarity protection diode Free running; Freewheeling diode Surge protection; Suppressor diode

## Connection data

### Input side

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 4 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 ... 12

### Output side

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 4 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 ... 12

## Dimensions

Width	17.5 mm
Height	75 mm
Depth	102 mm

## Material specifications

Color	green (RAL 6021)
Flammability rating according to UL 94	V0

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-20 °C ... 70 °C

## Standards and regulations

Standards/regulations	IEC 60664 EN 50178
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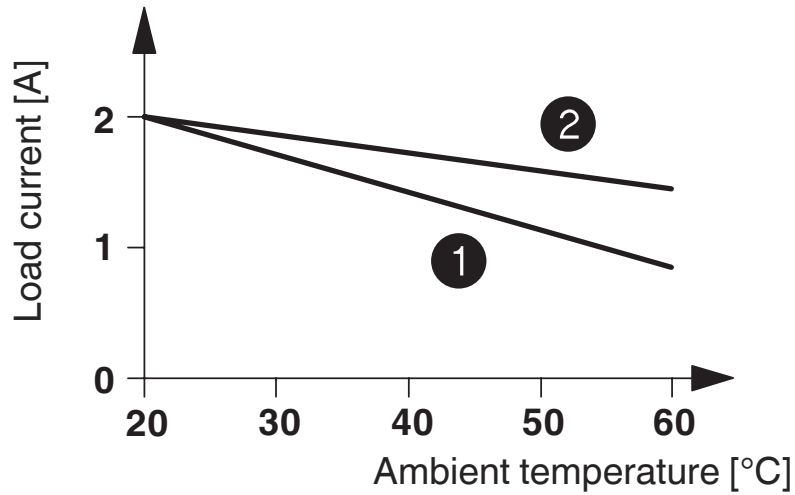
<https://www.phoenixcontact.com/us/products/2946780>

## Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

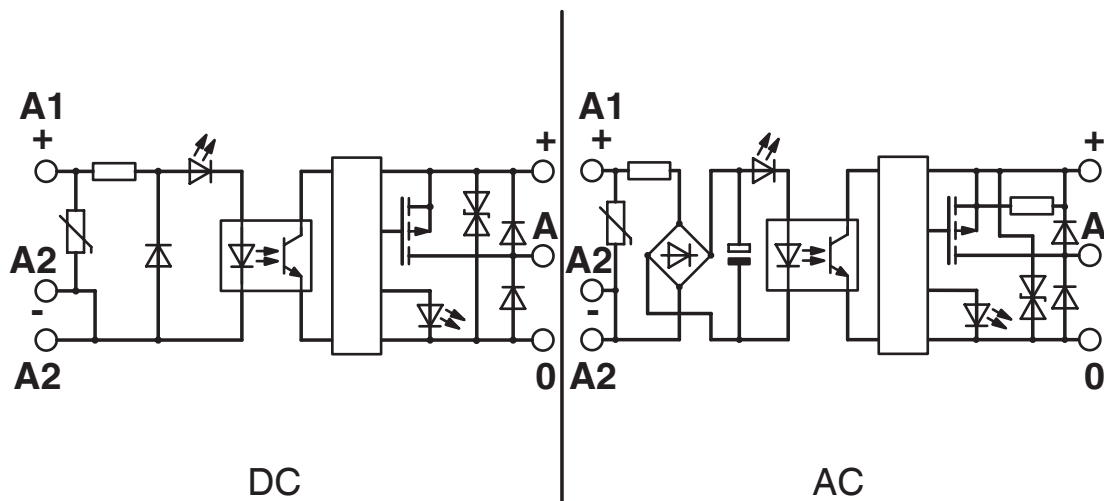
## Drawings

Diagram



- ① In rows with zero spacing
- ② stand-alone device

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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