

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
Overtoltage category	III
Pollution degree	2

Data management status

Date of last data management	01.04.2026
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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	≤ 0.4
Switching threshold "1" signal in reference to U_N	≥ 0.8
Typical input current at U_N	4.5 mA
Typical response time	120 μ s
Typical turn-off time	230 μ 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 μ 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 ² ... 4 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
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 ² ... 4 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
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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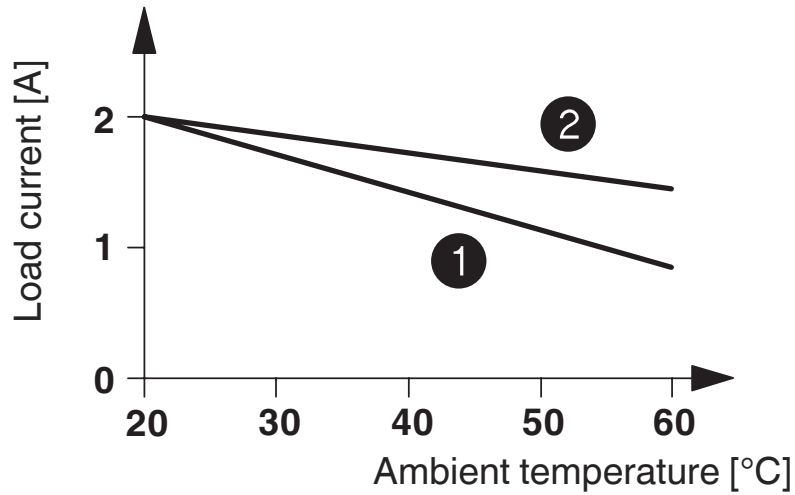
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Mounting

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

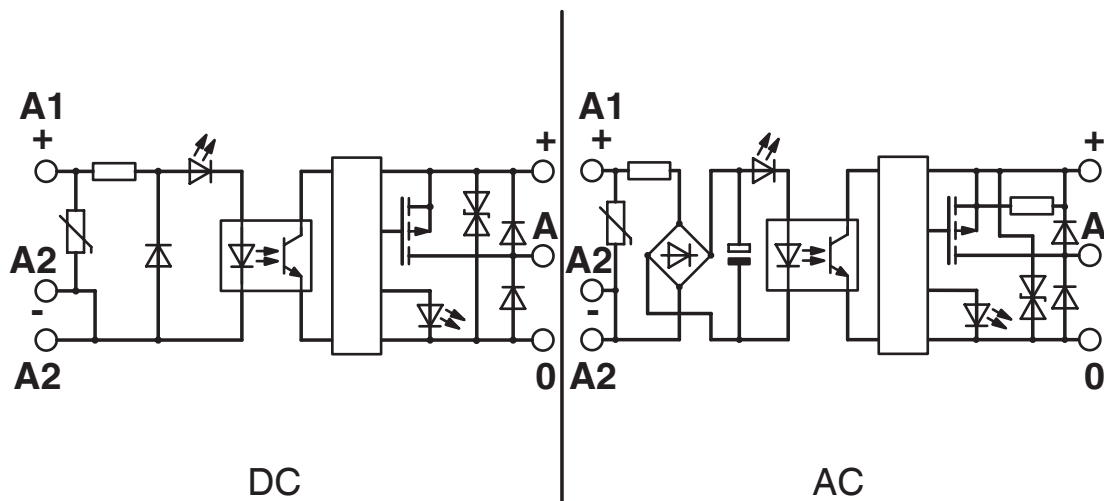
Drawings

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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