

# EMG 45-REL/IR-W 24/HWR - Relay module



2949376

<https://www.phoenixcontact.com/us/products/2949376>

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Relay module, with soldered-in industrial relay, contact: 2 changeover contacts, for multi-input fault warnings, with input diode gate in P polarity (6 diodes 1N4007) and capacitor parallel to the coil as well as a multi-input LED display, input voltage 24 V AC

The figure shows version EMG 45-REL/IR-G 24/HWR

## Commercial data

Item number	2949376
Packing unit	5 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	DK6147
GTIN	4017918083762
Weight per piece (including packing)	126.56 g
Weight per piece (excluding packing)	126.56 g
Country of origin	DE

## Technical data

### Notes

Notes on operation	During installation, the system must be connected in phase.
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### Product properties

Product type	Relay Module
Application	Fault reporting system
Mechanical service life	approx. $5 \times 10^7$ cycles

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Data management status

Date of last data management	12.09.2025
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### Electrical properties

Maximum power dissipation for nominal condition	1.25 W
Test voltage (Winding/contact)	2 kV AC (50 Hz, 1 min., winding/contact)

### Input data

#### Diode

Description of the input	6 diodes, with P polarity
Diode type	1 N 4007
Max. operating voltage $U_{max}$	250 V AC
Peak reverse voltage per diode	1300 V
Reverse current per diode	30 $\mu$ A
Conducting state voltage per diode	approx. 0.8 V
Conducting state current per diode	0.7 A (with single load) 0.2 A (with simultaneous loads)

#### Coil side

Nominal input voltage $U_N$	24 V AC
Input voltage range	21.6 V AC ... 26.4 V AC
Input voltage range in reference to $U_N$	0.9 ... 1.1
Drive and function	monostable
Typical input current at $U_N$	approx. 52 mA
Typical response time	5 ms ... 15 ms
Typical release time range	15 ms ... 30 ms
Protective circuit	Decoupling diodes; Decoupling diodes Capacitor; Capacitor
Operating voltage display	LED red
Coil resistance	770 $\Omega$

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Nominal power consumption	approx. 740 mW
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## Output data

### Switching

Contact switching type	Single contact, 2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Limiting continuous current	3 A
Maximum inrush current	5 A
Interrupting rating (ohmic load) max.	1250 VA (for 250 V AC)

## Connection data

### Coil 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

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## Dimensions

Width	45 mm
Height	75 mm
Depth	82.5 mm

## Material specifications

Color	green (RAL 6021)
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## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

Standards/regulations	DIN VDE 0110b, Gr. C for 250 V DC
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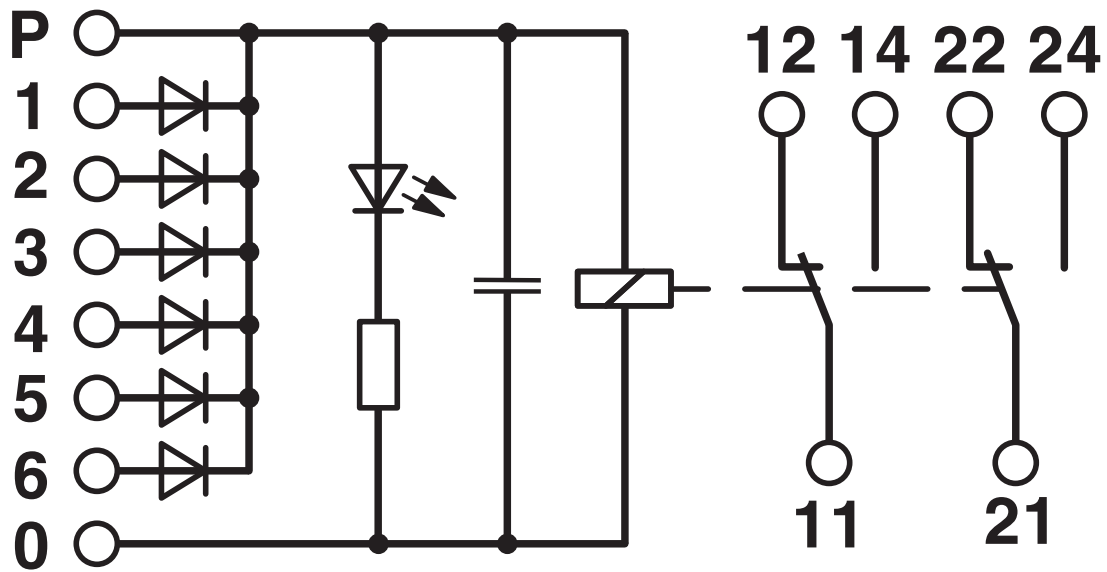
	DIN EN 50178/VDE 0160 (in relevant parts)
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## Mounting

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

## Drawings

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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