

# EMG 17-REL/SG-B 48/21/P - Relay Module



2946654

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Relay module, with soldered-in remanence miniature switching relay, with positive switching diode wiring, contacts (AgSnO): small to large loads, 1 changeover contact, input voltage 48 V DC

## Commercial data

Item number	2946654
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	C460
Product key	CK6142
Catalog page	Page 145 (IF-2009)
GTIN	4017918118037
Weight per piece (including packing)	46.47 g
Weight per piece (excluding packing)	46.47 g
Customs tariff number	85364190
Country of origin	DE

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## 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	Relay Module
Product family	EMG
Application	Universal
Operating mode	100% operating factor
Mechanical service life	approx. $10^7$ cycles

#### Insulation characteristics

Insulation	Safe isolation, reinforced insulation
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#### Insulation characteristics: Air clearances and creepage distances between the power circuits

Insulation	Safe isolation, reinforced insulation
Overvoltage category	III
Pollution degree	2

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Overvoltage category	III
Pollution degree	2

### Electrical properties

Maximum power dissipation for nominal condition	0.41 W
Test voltage (Winding/contact)	4 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)

#### Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
Rated surge voltage	4 kV

### Input data

#### Coil side

Nominal input voltage $U_N$	48 V DC
Input voltage range	38.4 V DC ... 52.8 V DC (20 °C)
Drive and function	bistable
Drive (polarity)	polarized
Typical input current at $U_N$	typ. 8.5 mA
Typical response time	5 ms
Typical release time	5 ms
Pulse time range	30 ms ... 5 s
Coil voltage	24 V DC

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Protective circuit	Freewheeling diode; Freewheeling diode
	Reverse polarity protection; Polarity protection diode

## Output data

### Switching

Contact switching type	1 changeover contact
Type of switch contact	Single contact
Contact material	AgSnO
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 100 mA)
	24 V (At 1 mA)
Limiting continuous current	6 A
Maximum inrush current	8 A
Min. switching current	1 mA (at 24 V)
	100 mA (At 5 V)
Interrupting rating (ohmic load) max.	144 W (at 24 V DC)
	43 W (at 48 V DC)
	42 W (at 60 V DC)
	55 W (at 110 V DC)
	100 W (at 220 V DC)
	1500 VA (for 250 V AC)

### Switching: when the gold layer is destroyed

Maximum switching voltage	250 V AC/DC
Limiting continuous current	6 A
Maximum inrush current	8 A
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	40 W (at 48 V DC)
	35 W (at 60 V DC)
	30 W (at 110 V DC)
	55 W (at 220 V DC)
	1500 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

### Contact side

Connection method	Screw connection
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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	62.5 mm

## Material specifications

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

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 50 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C

## Standards and regulations

### Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 50178
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## Mounting

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

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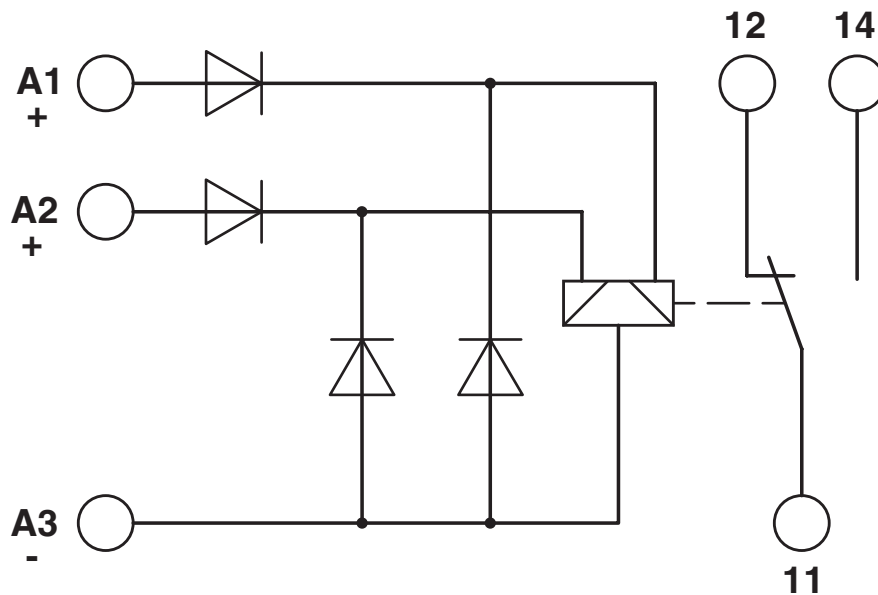
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## Drawings

Circuit diagram



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## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2946654>



**EAC**

Approval ID: TR\_TS\_D\_00573\_c



**EAC**

Approval ID: RU\*C-DE.\*08.B.00010

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## Classifications

### ECLASS

ECLASS-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	27371601

### ETIM

ETIM 9.0	EC001437
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a)

### 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.)	Lead(CAS: 7439-92-1)
SCIP	61a7def1-2f5c-4146-87b1-56032ebd7fbf



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## Accessories

### EMG-GKS 12 - Marking material

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Device marking label, width: 12 mm, area: 12 x 8 mm, e.g. for EML(10x7) R adhesive marking material

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