

# Single relay - REL-MR-230AC/21-21/MS



2987972

<https://www.phoenixcontact.com/de/produkte/2987972>

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Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switching position indicator, status LED, coil voltage 230 V AC

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## Your advantages

- With detectable manual operation
- DC types with integrated freewheeling diode
- Integrated status LED
- Switching current of up to 16 A
- Mechanical switch position indicator

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## Commercial Data

Item number	2987972
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	G1 - Relais
Product Key	CK6195
Catalog Page	Page 292 (C-5-2019)
GTIN	4046356480987
Weight per Piece (including packing)	19,19 g
Weight per Piece (excluding packing)	17,99 g
Customs tariff number	85364900
Country of origin	CN

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## Technical Data

### Product properties

Product type	Single relay
Set comprises	2905292 RIF-1-RPT-LV-230AC/2X21MS
	2905662 RIF-1-RSC-LV-230AC/2X21MS
Mechanical service life	5x 10 <sup>6</sup> cycles

### Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.81 W
Test voltage	5 kV AC (50 Hz, 1 min., winding/contact)
Test voltage Contact/contact	2.5 kV AC (50 Hz, 1 min., contact/contact)

### Input data

#### Coil side

Nominal input voltage $U_N$	230 V AC
Input voltage range	179.4 V AC ... 333.5 V AC
Mains frequency	50/60 Hz
Typical input current at $U_N$	3.5 mA
Typical response time	3 ms ... 12 ms (depending on phase relation)
Typical release time range	2 ms ... 8 ms (depending on phase relation)

### Output data

#### Switching

Contact type	2 changeover contacts
Type of switch contact	Single contact
Drive and function	monostable
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	16 A (20 ms)
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	2000 VA (for 250 V AC)
Switching capacity	1 A (at 24 V, DC13)
	1.5 A (at 24 V, AC15)
	1.5 A (at 120 V, AC15)
	1.5 A (at 240 V, AC15)
Motor load according to UL 508	1/4 HP, 120 V AC (N/O contact)
	1/2 HP, 240 V AC (N/O contact)
	1/4 HP, 120 V AC (N/C contact)

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1/3 HP, 240 V AC (N/C contact)

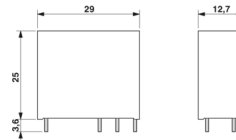
## Connection data

Connection method

Solder connection

## Dimensions

Dimensional drawing



Width

12.7 mm

Height

29 mm

Depth

25 mm

## Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)

-40 °C ... 70 °C

Ambient temperature (storage/transport)

-40 °C ... 85 °C

## Approval data

Corrosive gas test

Identification

ISA-S71.04. G3 Harsh Group

EN 60068-2-60

## Standards and regulations

Standards/regulations

EN 61810-1

VDE 0435-201

EN 50178

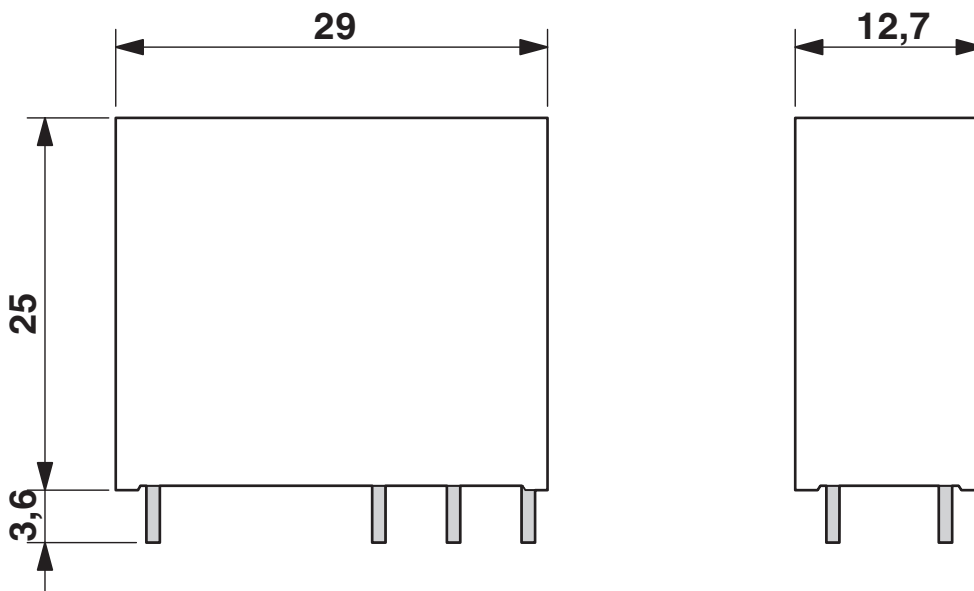
# Single relay - REL-MR-230AC/21-21/MS

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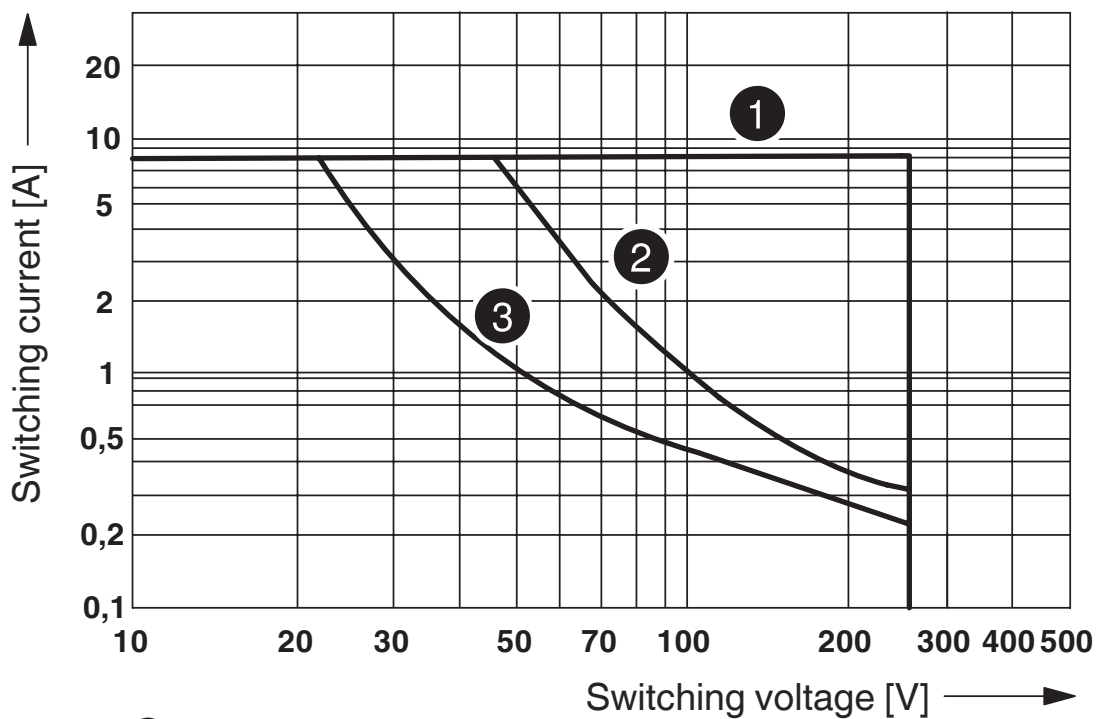
<https://www.phoenixcontact.com/de/produkte/2987972>

## Drawings

Dimensional drawing



Diagram



- ① AC, ohmic load
- ② DC, ohmic load, contacts in series
- ③ DC, ohmic load

Interrupting rating

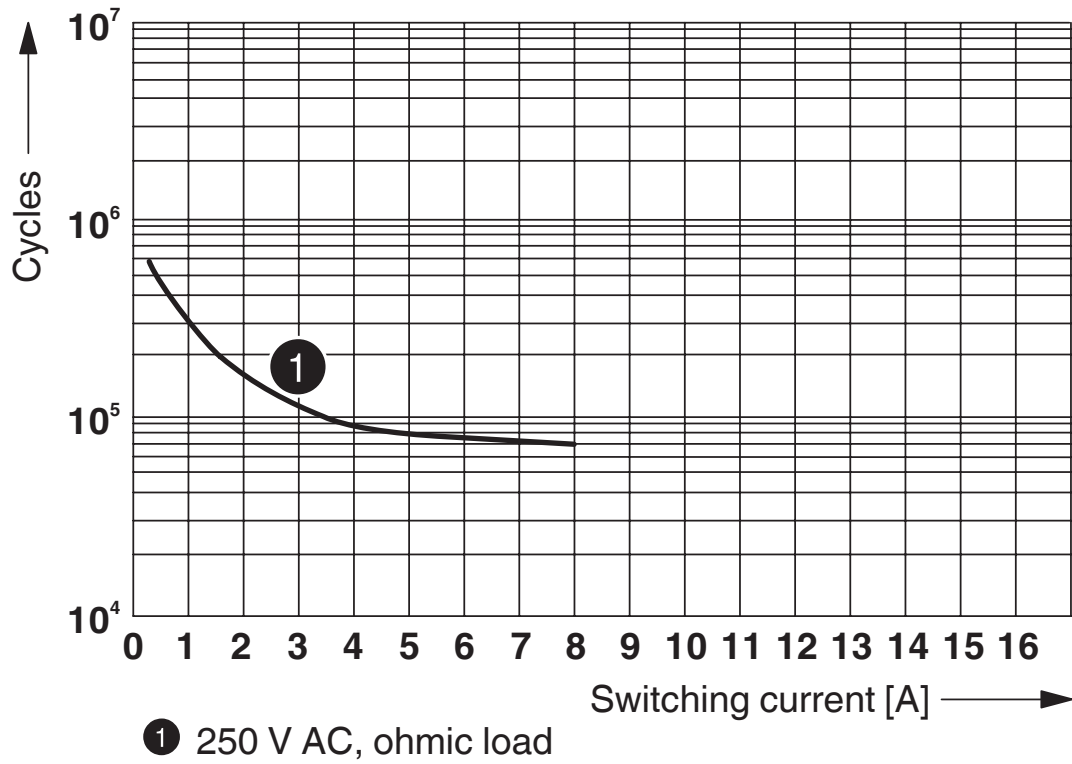
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Diagram

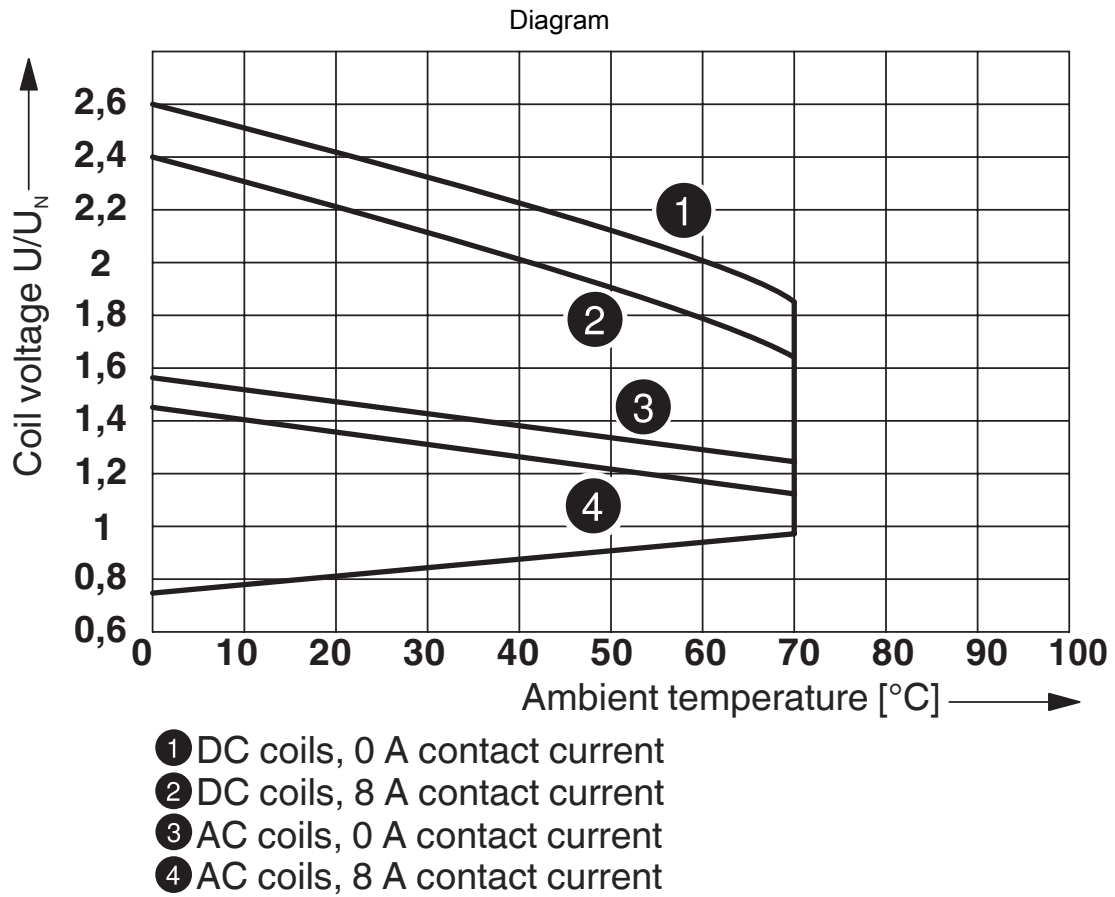


Electrical service life

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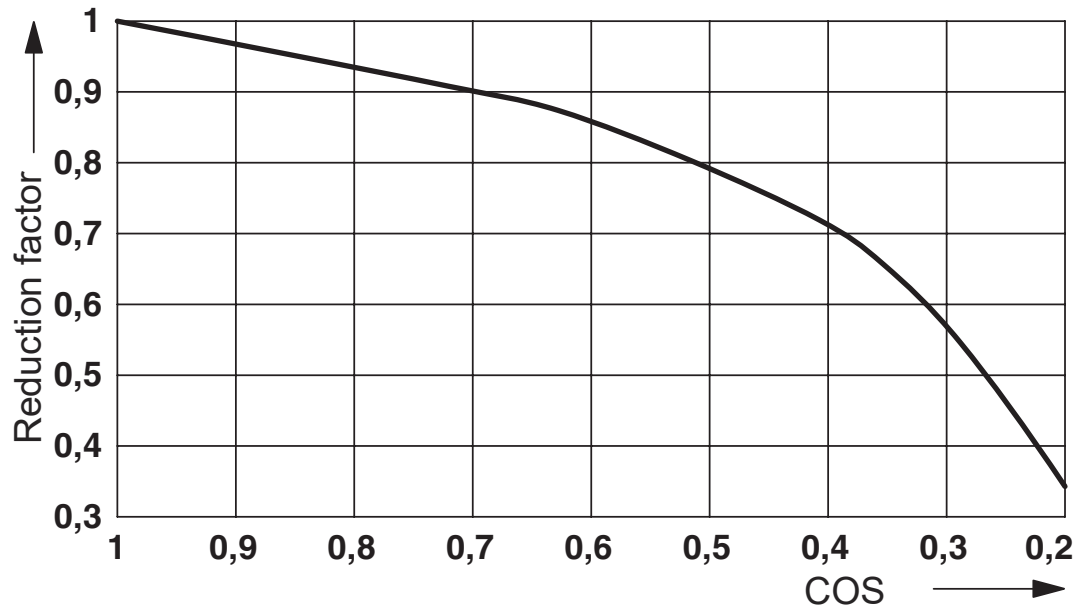
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Operating voltage range

Diagram



Service life reduction factor with various cos phi



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## Approvals



**cUL Recognized**  
Approval ID: FILE E 195083



**UL Recognized**  
Approval ID: FILE E 195083



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



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



**VDE Zeichengenehmigung**  
Approval ID: 40027210

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
Mark approval certificate			-	-

**cULus Recognized**

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## Classifications

### ECLASS

ECLASS-9.0	27371601
ECLASS-10.0.1	27371601
ECLASS-11.0	27371601

### ETIM

ETIM 8.0	EC001437
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

### Relay base

Relay base - RIF-1-BPT/2X21 - 2900931

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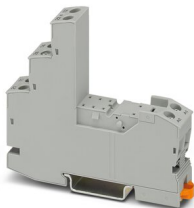


Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

### Relay base

Relay base - RIF-1-BSC/2X21 - 2900930

<https://www.phoenixcontact.com/de/produkte/2900930>



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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