

# Single relay - REL-MR- 24AC/21HC



2961406

<https://www.phoenixcontact.com/de/produkte/2961406>

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Plug-in miniature power relay, with power contact for high continuous currents, 1 changeover contact, input voltage 24 V AC

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## Your advantages

- Switching current of up to 16 A

# Single relay - REL-MR- 24AC/21HC



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## Commercial Data

Item number	2961406
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	G1 - Relais
Product Key	CK6195
Catalog Page	Page 290 (C-5-2019)
GTIN	4017918937812
Weight per Piece (including packing)	16,18 g
Weight per Piece (excluding packing)	15,06 g
Customs tariff number	85364190
Country of origin	AT

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## Technical Data

### Product properties

Product type	Single relay
Set comprises	2834339 PR1-RSC3-LV- 24AC/21
	2834410 PR1-RSP3-LV- 24AC/21
	2903341 RIF-1-RPT-LV-24AC/1X21
	2903357 RIF-1-RSC-LV-24AC/1X21
Operating mode	100% operating factor
Mechanical service life	1x 10 <sup>7</sup> cycles

### Insulation characteristics

Overvoltage category	III
Pollution degree	3

### Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.77 W
Test voltage	5 kV AC (50 Hz, 1 min., winding/contact)

### Input data

#### Coil side

Nominal input voltage $U_N$	24 V AC
Input voltage range	18.72 V AC ... 37.2 V AC
Input voltage range in reference to $U_N$	see diagram
Mains frequency	50/60 Hz
Typical input current at $U_N$	32 mA (50 Hz)
	24 mA (60 Hz)
Typical response time	3 ms ... 12 ms (depending on phase relation)
Typical release time range	2 ms ... 9 ms (depending on phase relation)
Coil resistance	350 $\Omega$ $\pm$ 10 % (at 20 °C)

### Output data

#### Switching

Contact type	1 changeover contact
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	16 A
Maximum inrush current	25 A (20 ms)
Min. switching current	10 mA (at 12 V)

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Interrupting rating (ohmic load) max.	384 W (at 24 V DC)
	58 W (at 48 V DC)
	48 W (at 60 V DC)
	50 W (at 110 V DC)
	80 W (at 220 V DC)
	4000 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.2 A (at 250 V, DC13)
	6 A (at 24 V, AC15)
	6 A (at 120 V, AC15)
	6 A (at 250 V, AC15)
Motor load according to UL 508	1/2 HP, 120 V AC (N/O contact)
	1 HP, 240 V AC (N/O contact)
	1/3 HP, 120 V AC (N/C contact)
	3/4 HP, 240 V AC (N/C contact)
	1/4 HP, 200 ... 250 V AC

## Connection data

Connection method	Solder connection
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## Dimensions

Dimensional drawing	
Width	12.7 mm
Height	29 mm
Depth	15.7 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	RT II
Ambient temperature (operation)	-40 °C ... 85 °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

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## Standards and regulations

Standards/regulations	IEC 60664
	EN 50178
	EN 61810-1

## Mounting

Assembly instructions	Can be aligned without spacing ( $> 70\text{ °C} \geq 2.5\text{ mm}$ )
Mounting position	any

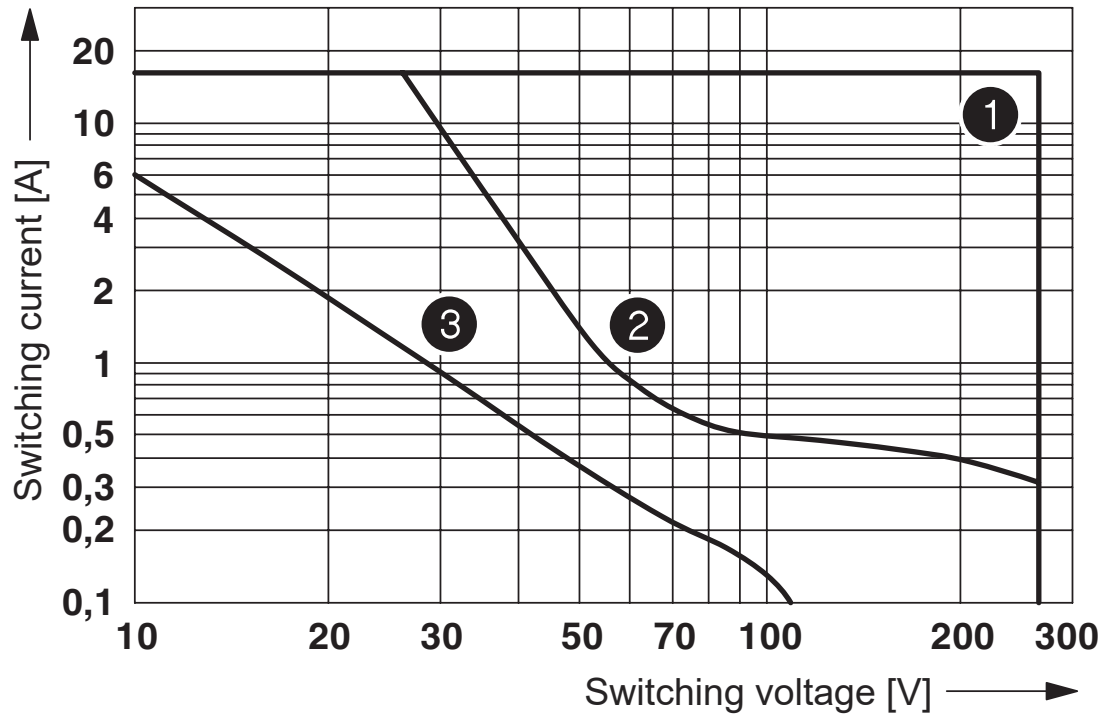
# Single relay - REL-MR- 24AC/21HC

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## Drawings

Diagram



- ① AC, ohmic load
- ② DC, ohmic load
- ③ DC, L/R = 40 ms

Interrupting rating

Dimensional drawing

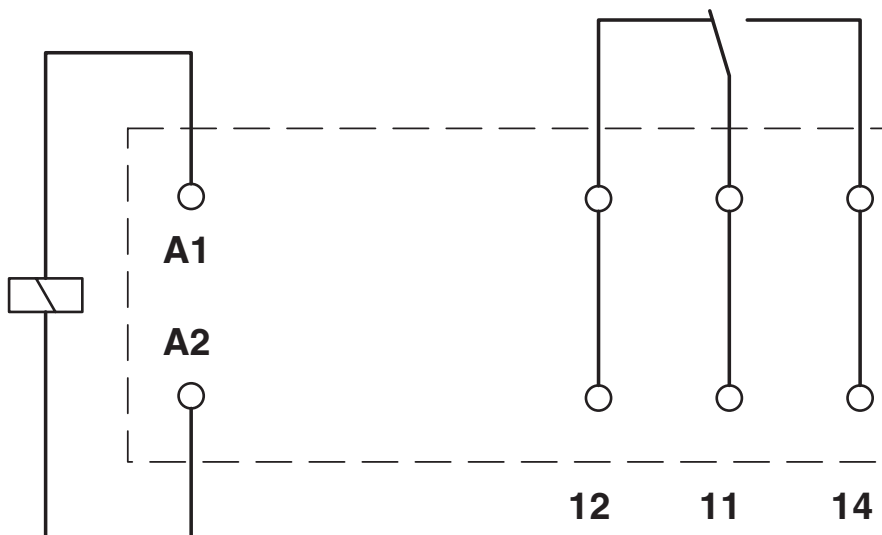


# Single relay - REL-MR- 24AC/21HC

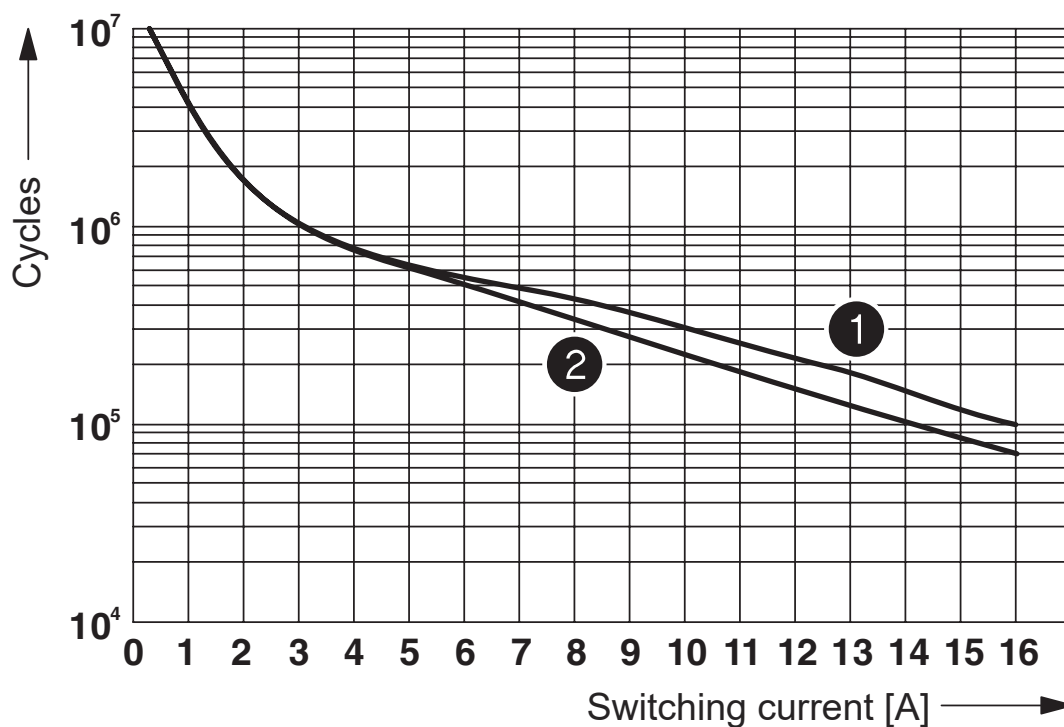
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Circuit diagram



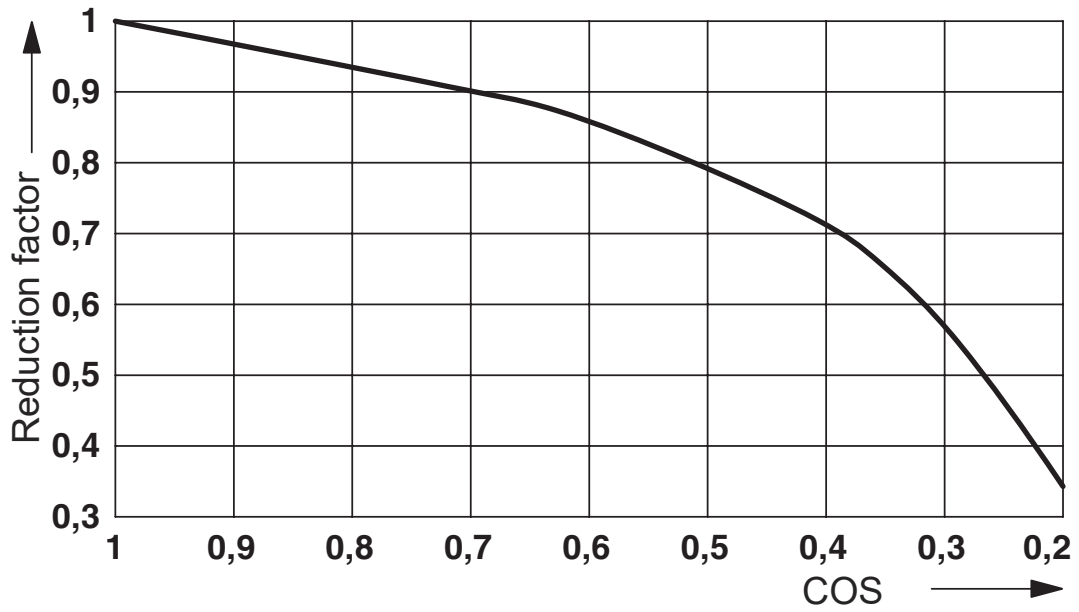
Diagram



- ① 250 V AC, ohmic load (DC coils)
- ② 250 V AC, ohmic load (AC coils)

Electrical service life

Diagram



Service life reduction factor with various cos phi

Drilling plan/solder pad geometry



a = pitch division 2.5 mm

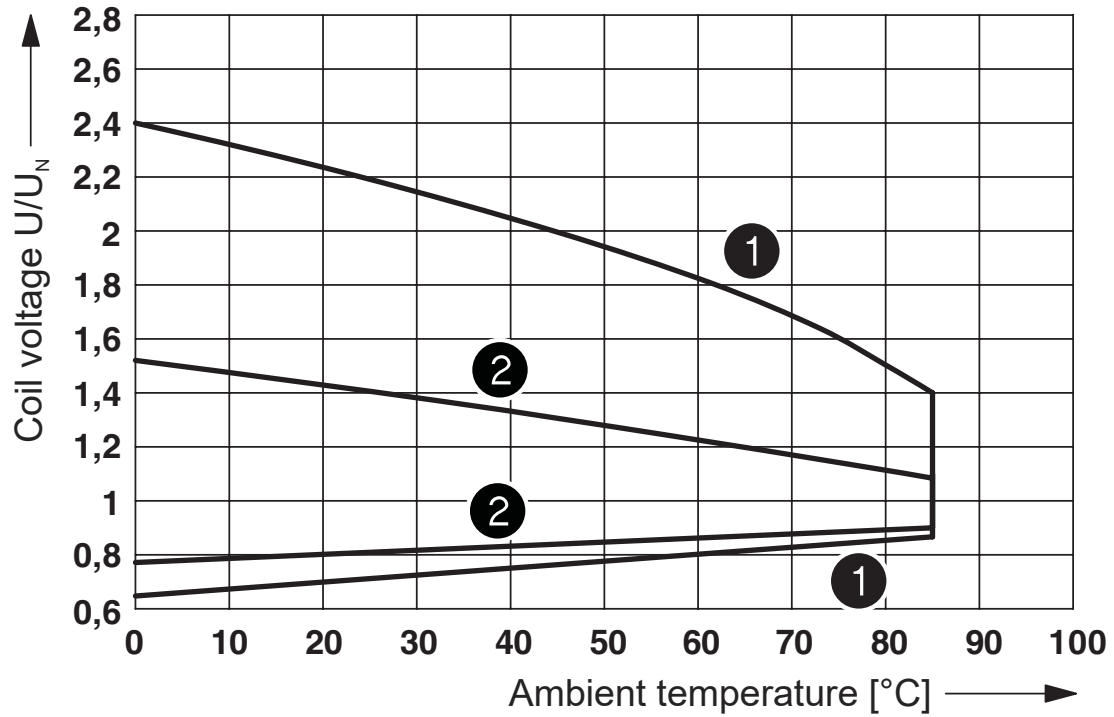


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Diagram



- ① DC coils
- ② AC coils

Operating voltage range

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## Approvals



**cUL Recognized**  
Approval ID: FILE E 228652



**UL Recognized**  
Approval ID: FILE E 228652



**EAC**  
Approval ID: RU C-DE.A\*30.B.01082



**UL Recognized**  
Approval ID: FILE E 172140



**VDE Zeichengenehmigung**  
Approval ID: 40007758

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
Reports with production monitoring			-	-



**VDE Zeichengenehmigung**  
Approval ID: 40048281

	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
Reports with production monitoring			-	-



**cUL Recognized**  
Approval ID: FILE E 172140

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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

<https://www.phoenixcontact.com/de/produkte/2900931>



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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