

# REL-MR- 12DC/21-21AU - Single relay



2961299

<https://www.phoenixcontact.com/in/products/2961299>

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Plug-in miniature power relay, with multi-layer gold contact, 2 changeover contacts, input voltage 12 V DC

## Your advantages

- RT III-proof (wash-proof)

## Commercial Data

Item number	2961299
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	CK6
Product Key	CK6195
Catalog Page	Page 290 (C-5-2019)
GTIN	4017918164041
Weight per Piece (including packing)	16.34 g
Weight per Piece (excluding packing)	14.98 g
Customs tariff number	85364900
Country of origin	AT

## Technical Data

### Product properties

Product type	Single relay
Set comprises	2967277 PLC-RSC- 12DC/21-21AU
	2912565 PLC-RSP- 12DC/21-21AU
	2900337 PLC-RPT- 12DC/21-21AU
	2987118 PLC-RSP- 24UC/21-21AU/RW
	2900349 PLC-RPT- 24UC/21-21AU/RW
Operating mode	100% operating factor
Mechanical service life	3x 10 <sup>7</sup> cycles

### Insulation characteristics

Insulation	Basic insulation
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### Insulation characteristics

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	3

### Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.4 W
Test voltage (Winding/contact)	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 $U_N$	12 V DC
Input voltage range	7.8 V DC ... 29.76 V DC
Typical input current at $U_N$	33 mA
Typical response time	7 ms
Typical release time	3 ms
Coil resistance	360 $\Omega$ $\pm$ 10 % (at 20 °C)

### Output data

#### Switching

Contact type	2 changeover contacts
Type of switch contact	Single contact
Drive and function	monostable
Drive (polarity)	bipolar
Contact material	AgNi, hard gold-plated
Maximum switching voltage	30 V AC

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	36 V DC
Minimum switching voltage	100 mV (at 10 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (at 24 V)
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)
Switching capacity min.	0.12 W

Switching: when the gold layer is destroyed

Note	the following values are applicable if a gold layer is destroyed
Contact material	AgNi
Maximum switching voltage	250 V
Minimum switching voltage	5 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	15 A (300 ms)
Min. switching current	10 mA (At 5 V)
Interrupting rating (ohmic load) max.	190 W (at 24 V DC) 85 W (at 48 V DC) 60 W (at 60 V DC) 44 W (at 110 V DC) 60 W (at 220 V DC) 2000 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) 2 A (at 24 V, AC15) 2 A (at 120 V, AC15) 2 A (at 250 V, AC15)

## Connection data

Connection method	Plug / 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

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## Ambient conditions

Degree of protection	RT III
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Approvals

### Corrosive gas test

Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

## 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

# REL-MR- 12DC/21-21AU - Single relay

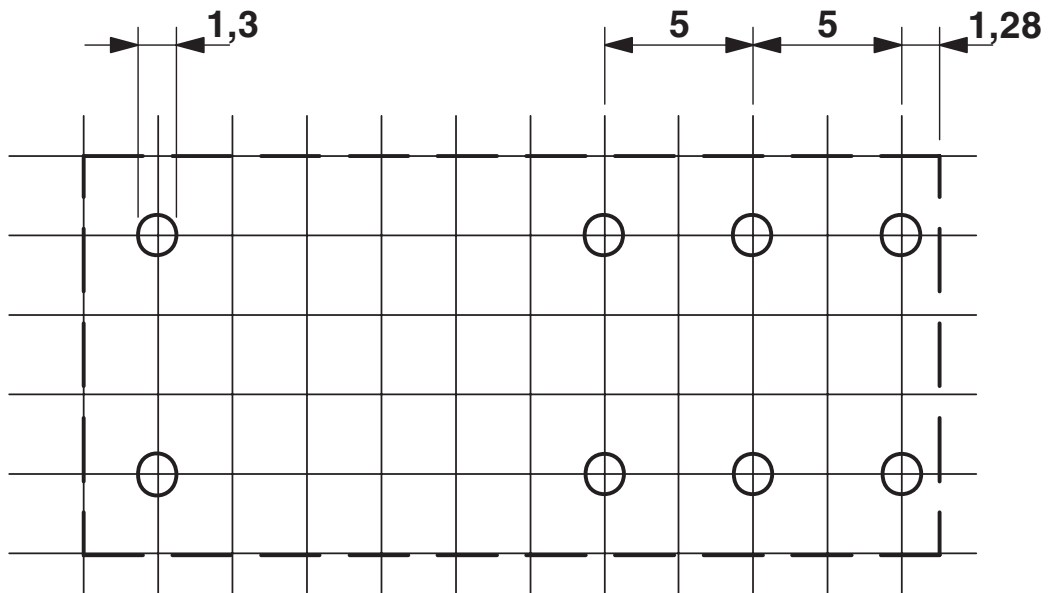


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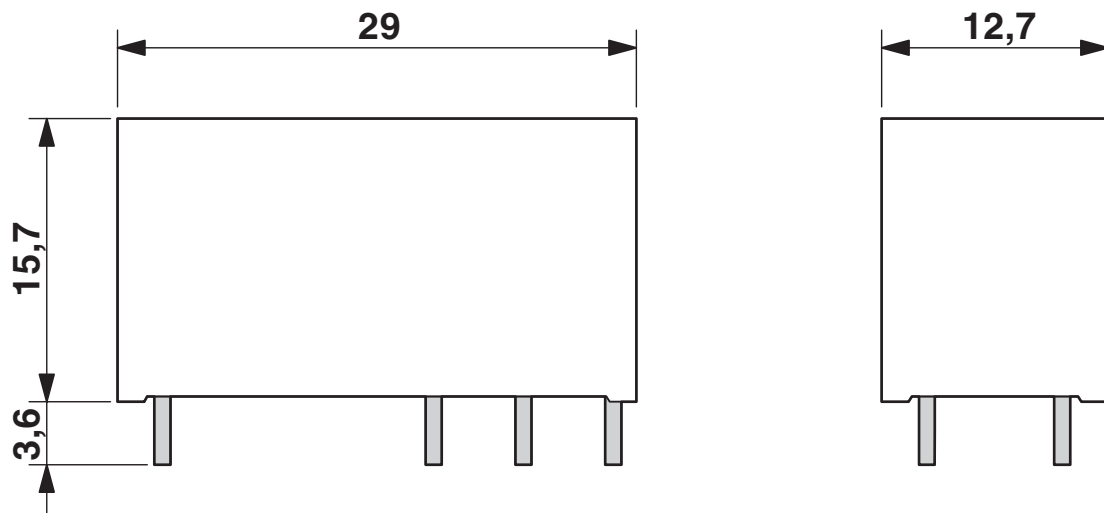
## Drawings

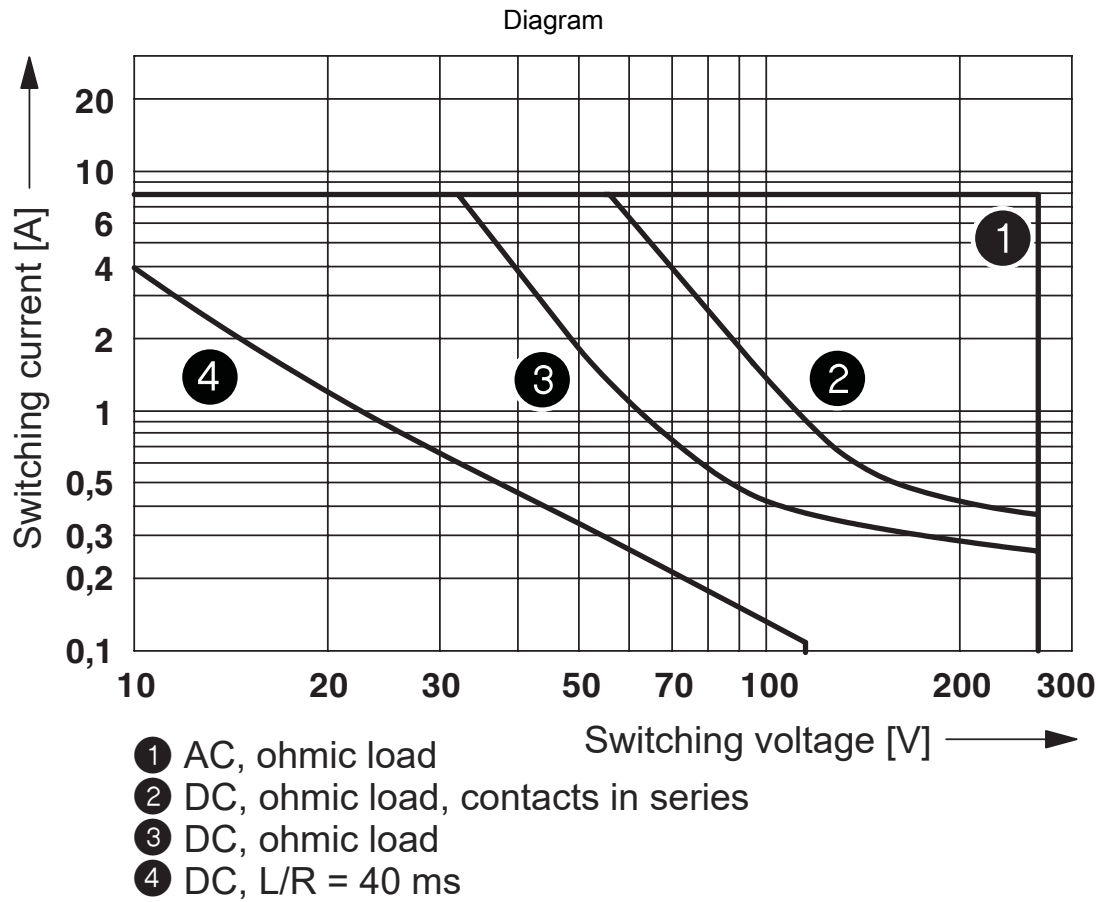
Drilling plan/solder pad geometry



a = pitch division 2.5 mm

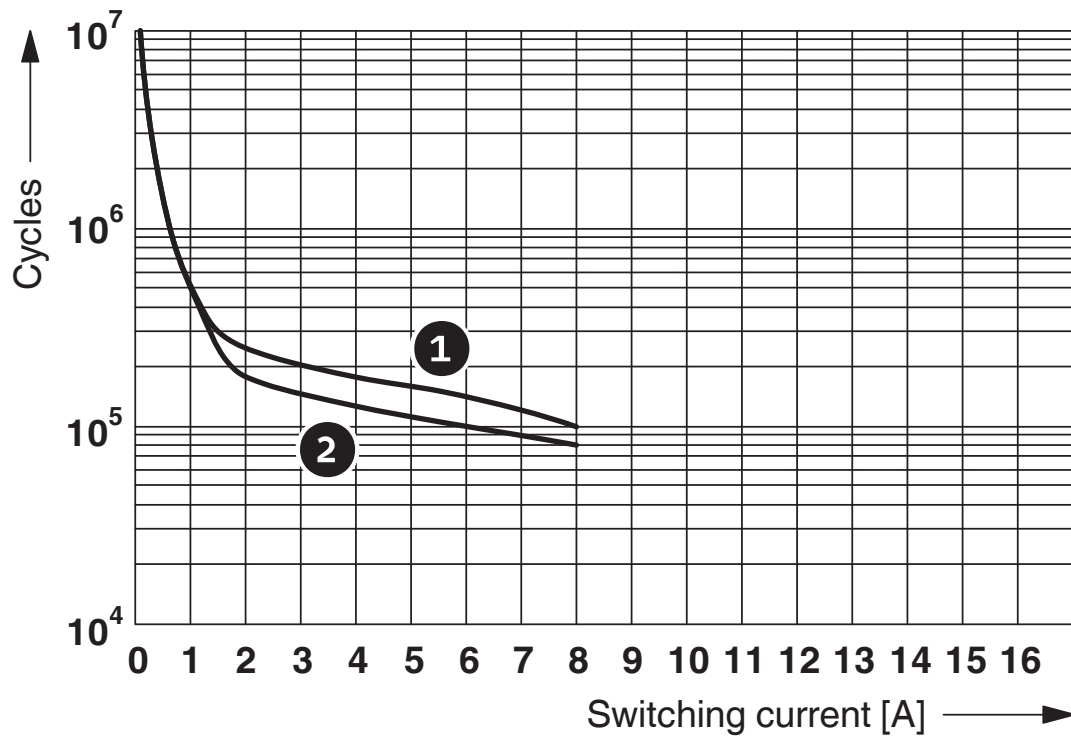
Dimensional drawing





Interrupting rating

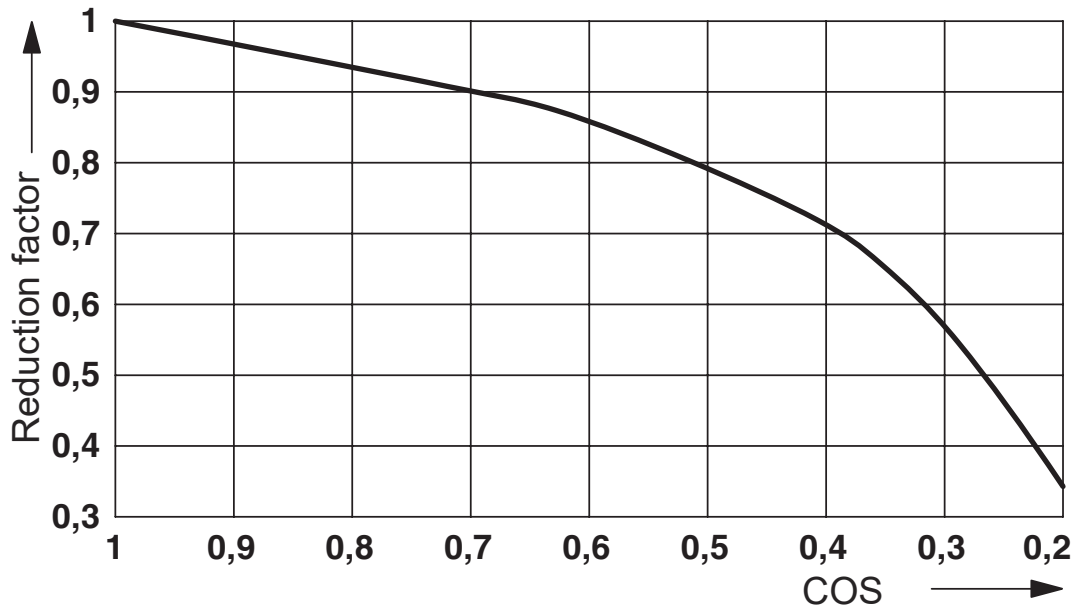
Diagram



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

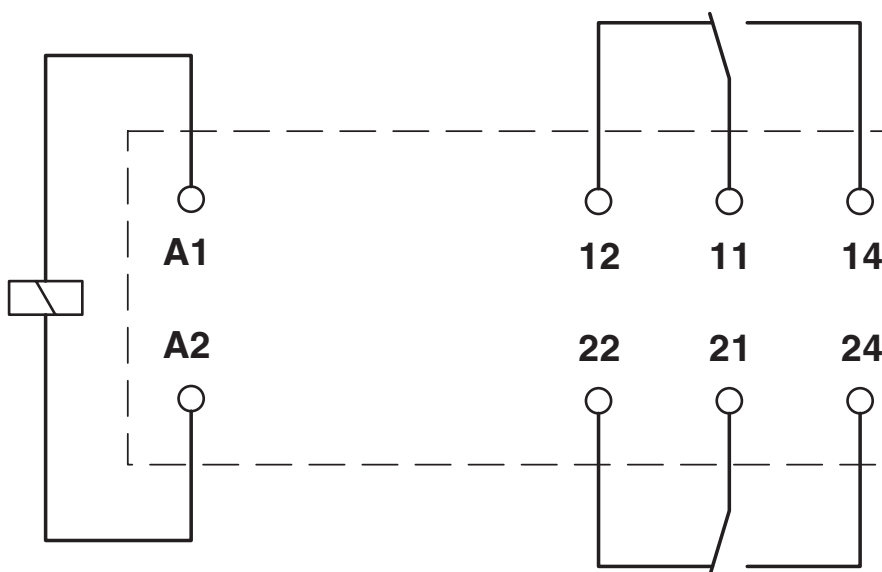
Electrical service life

Diagram



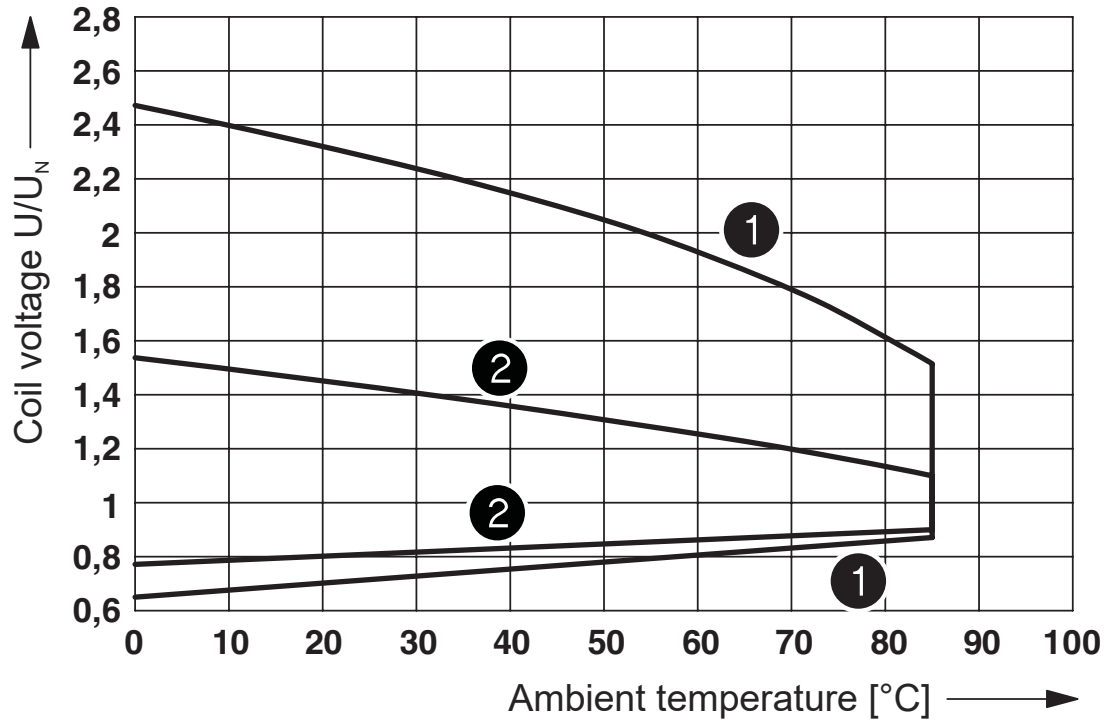
Service life reduction factor with various cos phi

Circuit diagram





Diagram



- ① DC coils
- ② AC coils

Operating voltage range

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## Approvals



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



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Approval ID: FILE E 228652



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



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



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



**VDE Zeichengenehmigung**  
Approval ID: 40007758



**VDE Zeichengenehmigung**  
Approval ID: 40048281



**PRS**  
Approval ID: TE/2109/880590/16



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

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## Classifications

### ECLASS

ECLASS-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	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

### PLC-BPT- 12DC/21-21 - Relay base

2900282

<https://www.phoenixcontact.com/in/products/2900282>



14 mm PLC basic terminal block with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 2 changeover contacts, input voltage 12 V DC

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### PLC-BSC- 12DC/21-21 - Relay base

2967251

<https://www.phoenixcontact.com/in/products/2967251>



14 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 2 changeover contacts, input voltage 12 V DC

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

2900931

<https://www.phoenixcontact.com/in/products/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

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

2900930

<https://www.phoenixcontact.com/in/products/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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