

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

2961435

<https://www.phoenixcontact.com/de/produkte/2961435>



Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.

---

Plug-in miniature power relay, with power contact, 2 changeover contacts, input voltage 24 V AC



---

## Your advantages

- RT III-proof (wash-proof)
- Switching current of up to 8 A

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



2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

## Commercial Data

Item number	2961435
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	G1 - Relais
Product Key	CK6195
Catalog Page	Page 290 (C-5-2019)
GTIN	4017918937843
Weight per Piece (including packing)	15,97 g
Weight per Piece (excluding packing)	14,85 g
Customs tariff number	85364900
Country of origin	AT

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



2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

## Technical Data

### Product properties

Product type	Single relay
Set comprises	2834494 PR1-RSC3-LV- 24AC/2X21
	2834575 PR1-RSP3-LV- 24AC/2X21
	2903333 RIF-1-RPT-LV-24AC/2X21
	2903349 RIF-1-RSC-LV-24AC/2X21
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)
Test voltage Contact/contact	2.5 kV AC (50 Hz, 1 min., contact/contact)

### Input data

#### Coil side

Nominal input voltage $U_N$	24 V AC
Input voltage range	18.7 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 (at 50 Hz)
	24 mA (At 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	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	5 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	12 A (20 ms)

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

2961435


<https://www.phoenixcontact.com/de/produkte/2961435>

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 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 250 V, AC15)
Motor load according to UL 508	1/4 HP, 120 V AC
	1/2 HP, 240 V AC

## Connection data

Connection method	Solder connection
-------------------	-------------------

## 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 III
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

## Standards and regulations

Standards/regulations	IEC 60664
	EN 50178

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



2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

	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/21-21

2961435

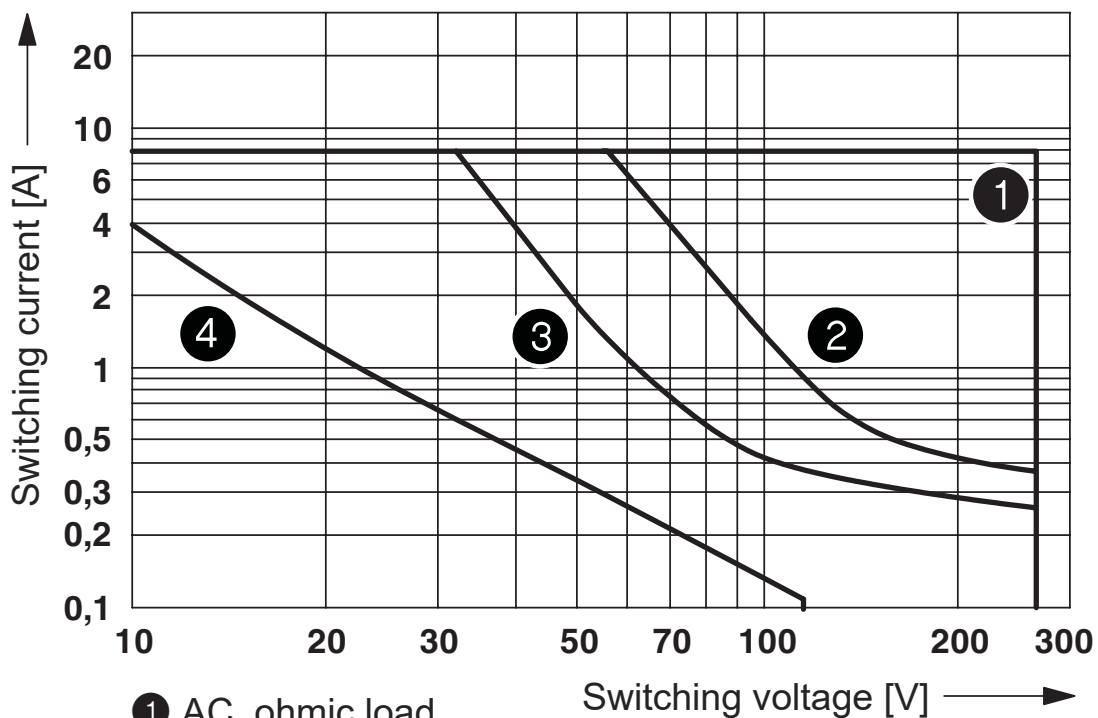
<https://www.phoenixcontact.com/de/produkte/2961435>

## Drawings

Dimensional drawing



Diagram



- ① AC, ohmic load
- ② DC, ohmic load, contacts in series
- ③ DC, ohmic load
- ④ DC, L/R = 40 ms

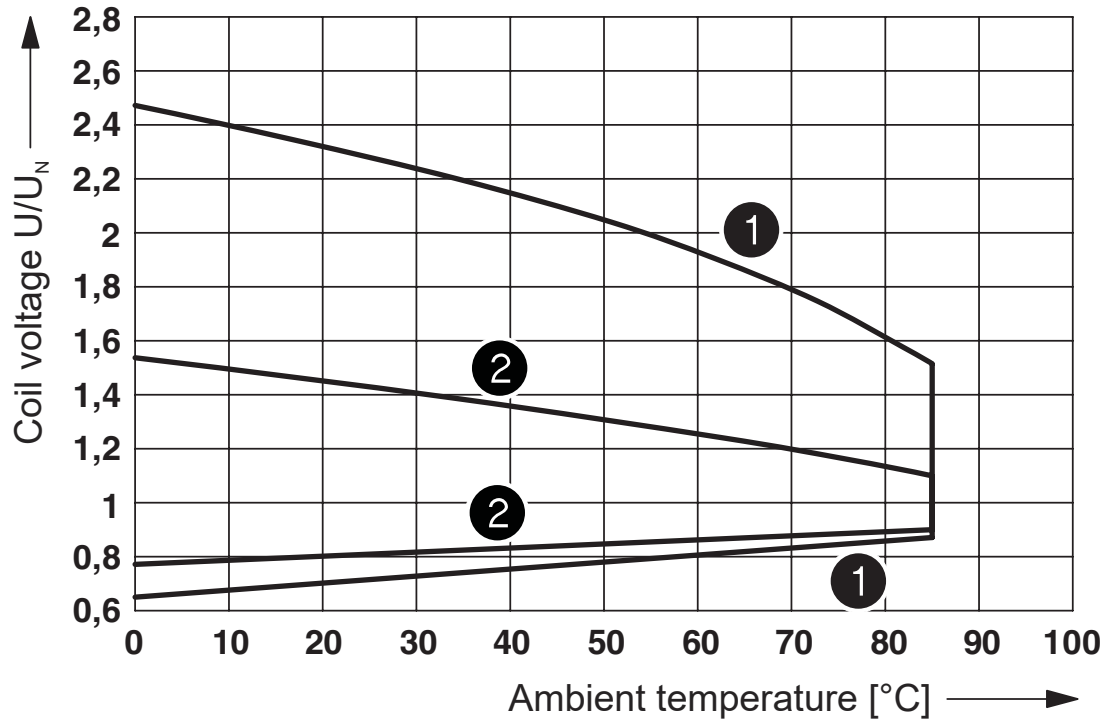
Interrupting rating

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

2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

Diagram



- ① DC coils
- ② AC coils

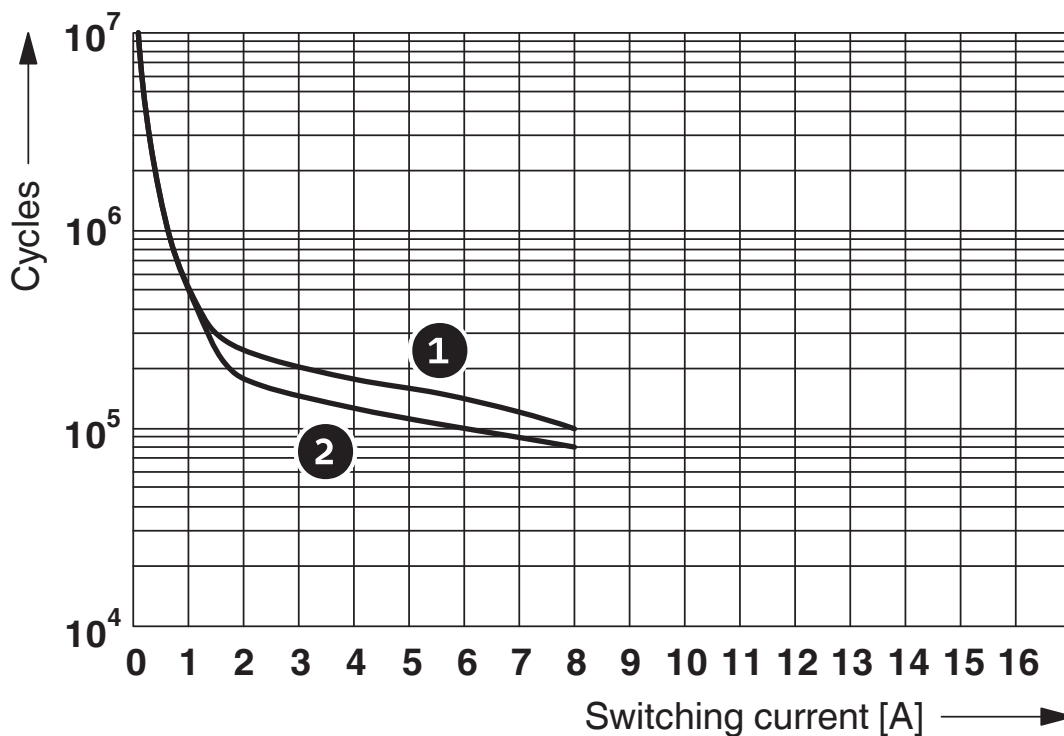
Operating voltage range

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

2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

Diagram



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

Electrical service life

Drilling plan/solder pad geometry



a = pitch division 2.5 mm

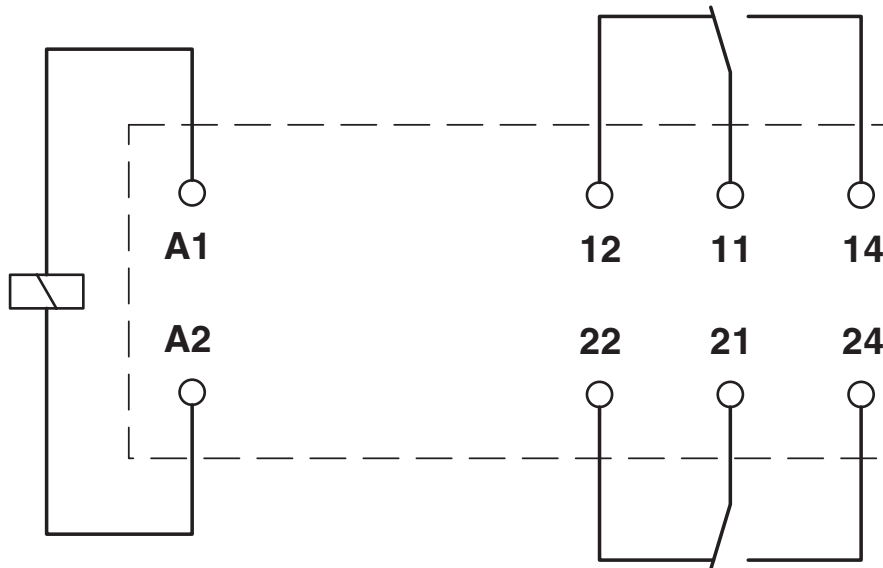


# Single relay - REL-MR- 24AC/21-21

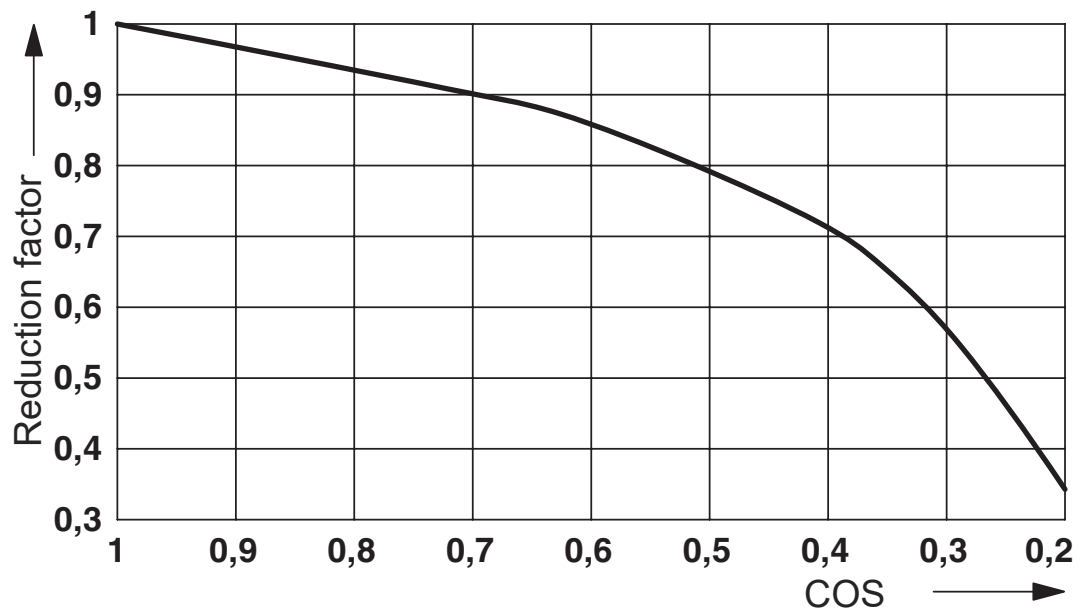
2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

Circuit diagram



Diagram



Service life reduction factor with various cos phi

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



2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

## Approvals



### cUL Recognized

Approval ID: FILE E 228652



### UL Recognized

Approval ID: FILE E 228652



### EAC

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



### UL Recognized

Approval ID: FILE E 172140



### EAC

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



### VDE Zeichengenehmigung

Approval ID: 40007758

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



### VDE Zeichengenehmigung

Approval ID: 40048281

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



### cUL Recognized

Approval ID: FILE E 172140

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



2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001437
----------	----------

### UNSPSC

UNSPSC 21.0	39122300
-------------	----------

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



2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

## Environmental Product Compliance

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

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

2961435

<https://www.phoenixcontact.com/de/produkte/2961435>

## 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

---

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT Deutschland GmbH

Flachsmarktstraße 8

D-32825 Blomberg

+49 52 35/3-1 20 00

[info@phoenixcontact.de](mailto:info@phoenixcontact.de)