

# Single relay - REL-MR- 24DC/21-21/MS - 2987943

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Plug-in miniature relay, with power contact, 2 PDTs, test button, mechanical switch position indicator, status LED, freewheeling diode, polarity A1+, A2, input voltage 24 V DC

## Your advantages

- With detectable manual operation
- DC types with integrated freewheeling diode
- Integrated status LED
- Mechanical switch position indicator



## Key Commercial Data

Packing unit	10 pc
Minimum order quantity	10 pc
GTIN	 4 046356 480659
GTIN	4046356480659

## Technical data

### Dimensions

Width	12.7 mm
Height	29 mm
Depth	25 mm

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

### Coil side

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	see diagram
Typical input current at $U_N$	18 mA

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## Technical data

### Coil side

Typical response time	9 ms
Typical release time	6 ms
Power dissipation for nominal condition	0.43 W

### Contact side

Contact type	2 PDT
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Min. switching current	10 mA (at 12 V)
Maximum inrush current	16 A (20 ms)
Limiting continuous current	8 A
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)
	1/3 HP, 240 V AC (N/C contact)

### General

Test voltage relay winding/relay contact	5 kV AC (50 Hz, 1 min.)
Test voltage relay contact/relay contact	5 kV AC (50 Hz, 1 min.)
Test voltage PDT/PDT	5 kV AC
Mechanical service life	5x 10 <sup>6</sup> cycles
Service life, electrical	see diagram

### Connection data

Connection method	Solder connection
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### Standards and Regulations

Connection in acc. with standard	CUL
Standards/regulations	EN 61810-1
	VDE 0435-201
	EN 50178

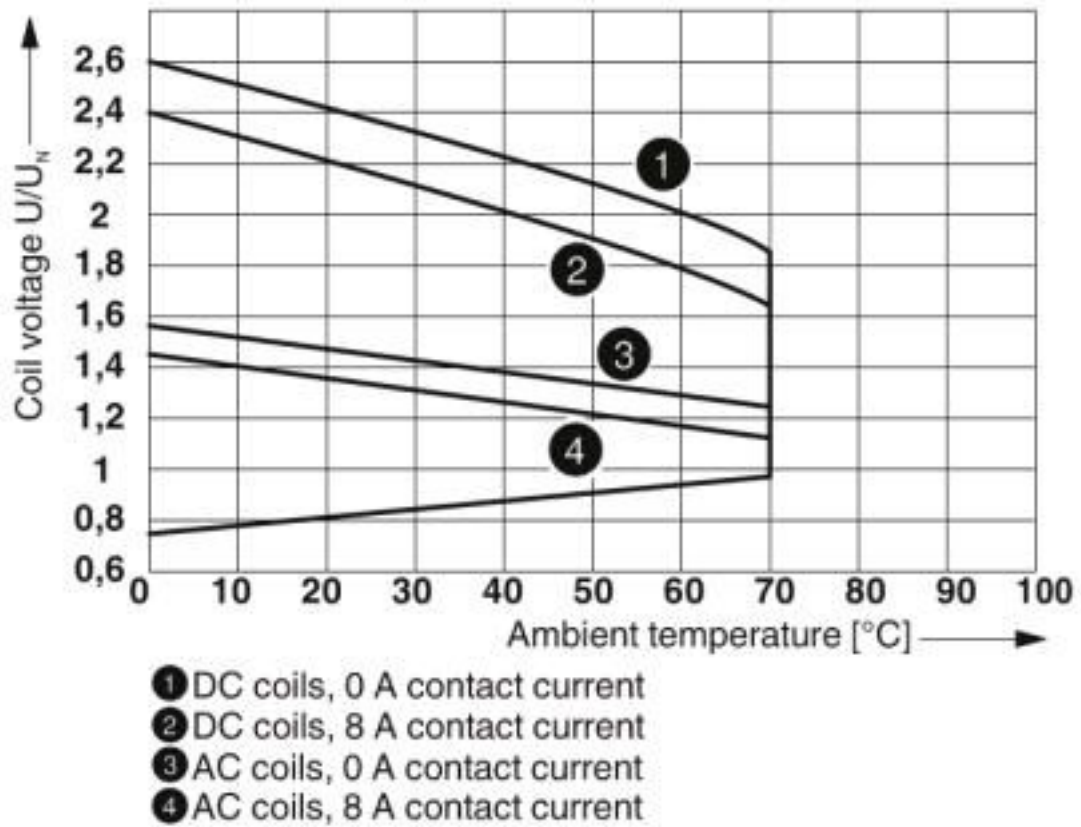
### Environmental Product Compliance

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

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## Drawings

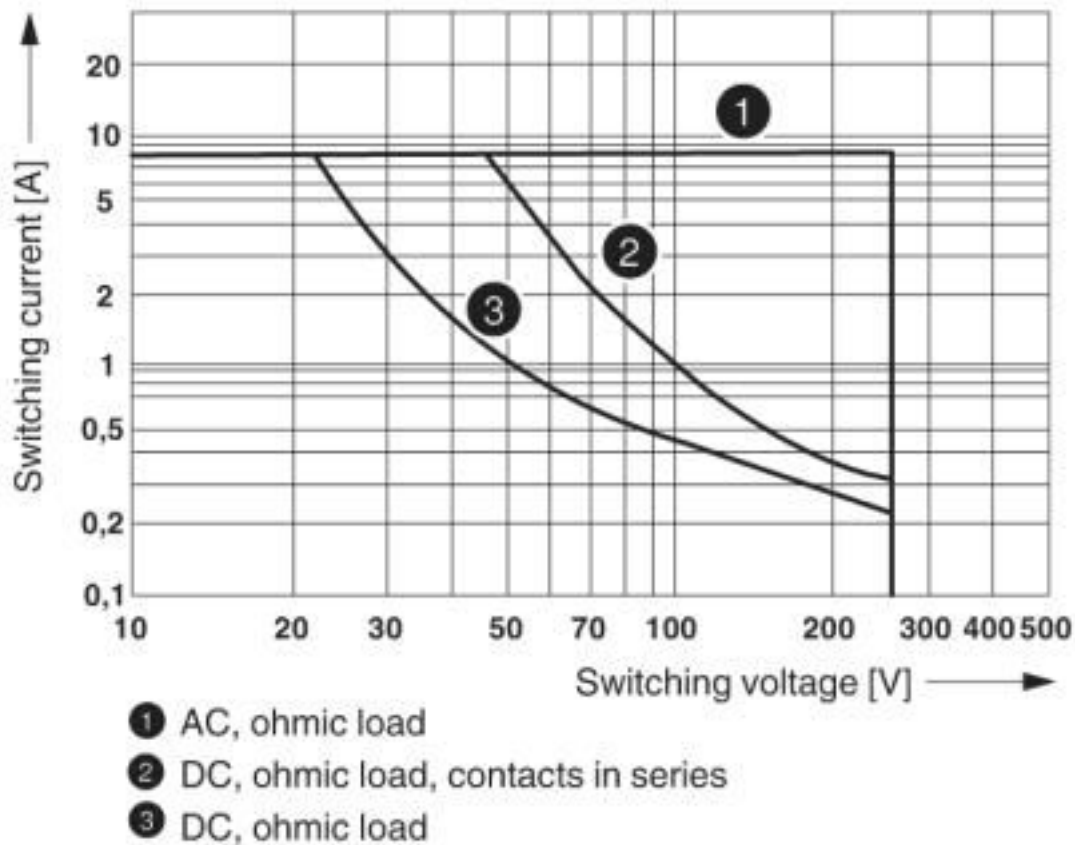
Diagram



Operating voltage range

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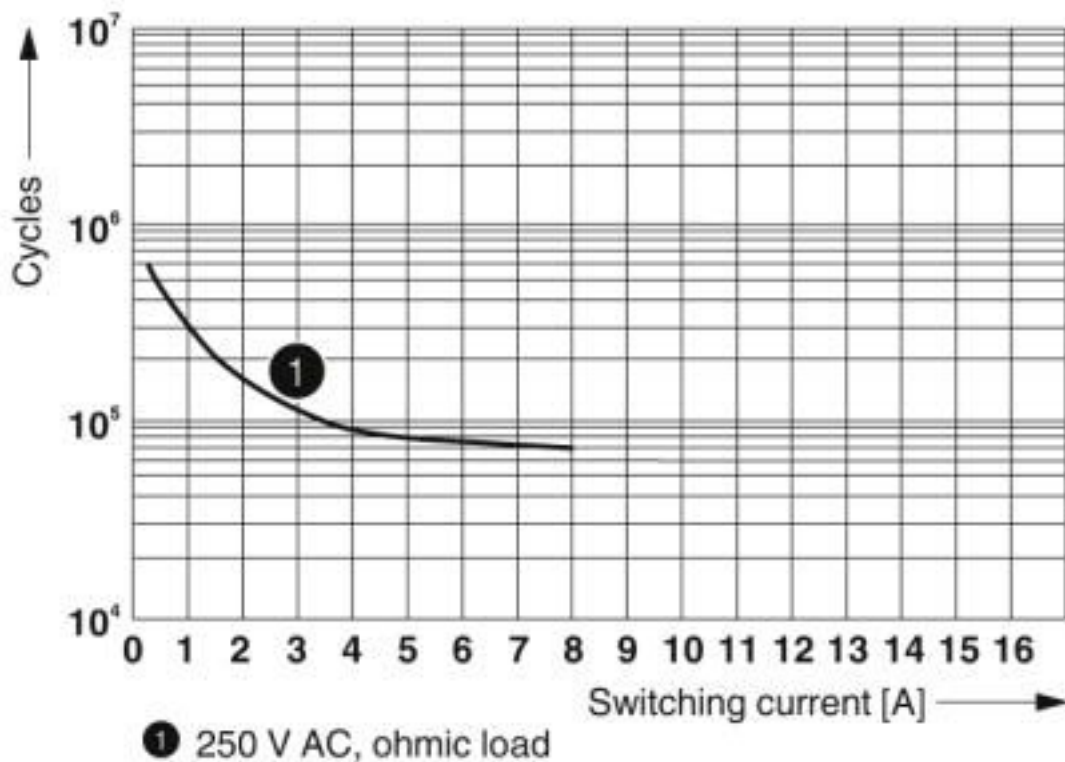
Diagram



Interrupting rating

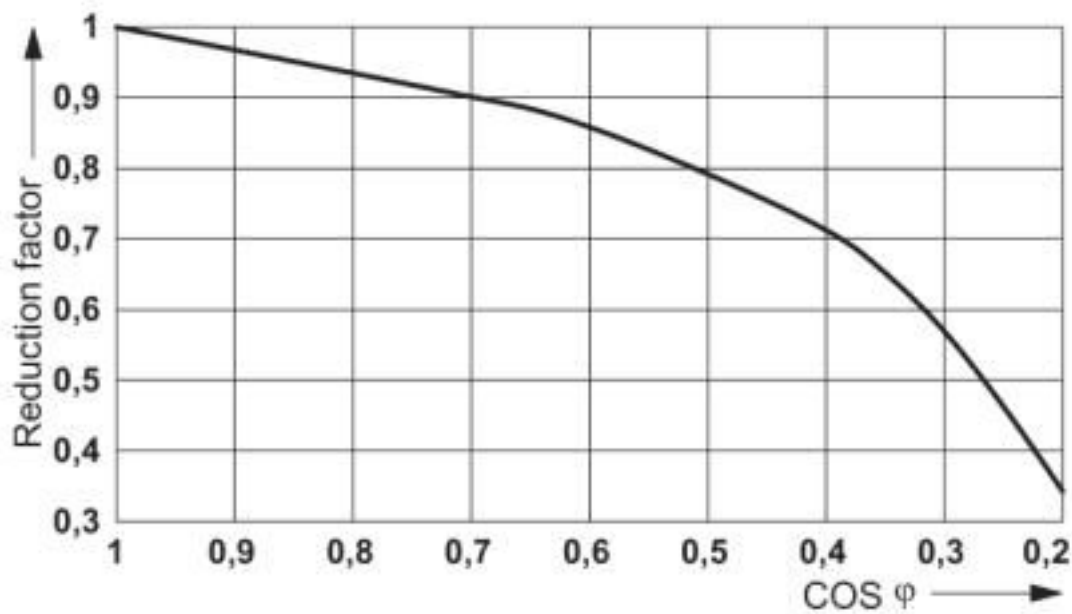
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Diagram



Electrical service life

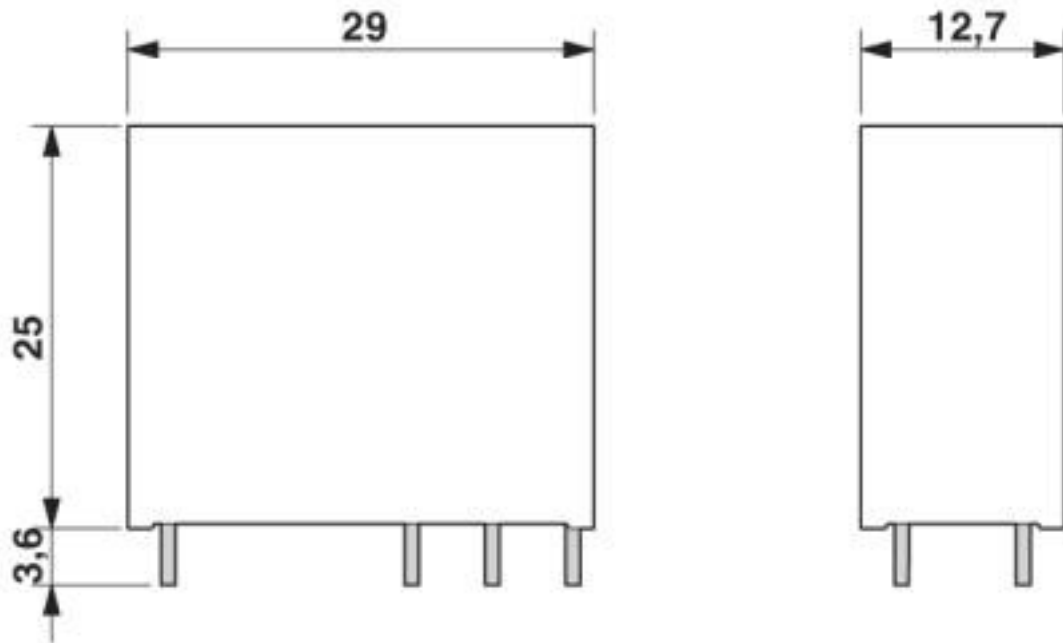
Diagram



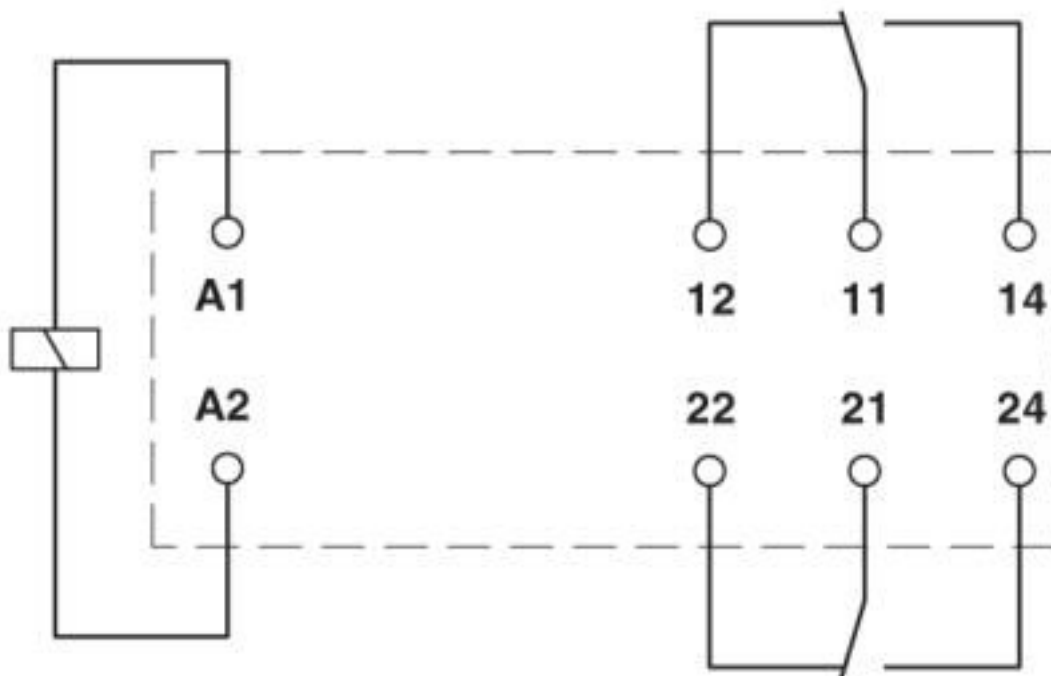
Service life reduction factor with various cos phi

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Dimensional drawing



Circuit diagram



## Classifications

eCl@ss

eCl@ss 10.0.1	27371601
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## Classifications

### eCl@ss

eCl@ss 4.0	27371100
eCl@ss 4.1	27371100
eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

### ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437
ETIM 5.0	EC001437
ETIM 6.0	EC001437
ETIM 7.0	EC001437

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39122334
UNSPSC 18.0	39122334
UNSPSC 19.0	39122334
UNSPSC 20.0	39122334
UNSPSC 21.0	39122334

## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / VDE Zeichengenehmigung / EAC / EAC / cULus Recognized

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#### Ex Approvals

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### Approval details

# Single relay - REL-MR- 24DC/21-21/MS - 2987943

## Approvals

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40027210
EAC			TR_TS_D_00573_c
EAC			RU*C-DE.*08.B.00010
cULus Recognized			

## Accessories

### Additional products

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



RIF-1... relay base, for miniature power relay with 1 or 2 PDTs or solid-state relays of the same design, push-in connection, plug-in option for input/suppressor modules, for mounting on NS 35/7,5

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

Relay base - PR1-BSC3/2X21 - 2833521



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 1/3 level design, screw connections, connection facility for input/interference suppression modules

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Relay base - PR1-BSP3/2X21 - 2833534



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 1/3 level design, spring-cage connections, connection facility for input/interference suppression modules

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