

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

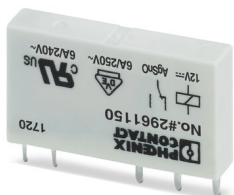
2961150

<https://www.phoenixcontact.com/de/produkte/2961150>



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Plug-in miniature power relay, with power contact, 1 changeover contact, input voltage 12 V DC



## Your advantages

- Safe isolation according to DIN EN 50178 between coil and contact
- High degree of protection up to RT III depending on type (wash-proof)
- Power contacts up to 6 A

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## Commercial Data

Item number	2961150
Packing unit	10 pc
Minimum order quantity	10 pc
Sales Key	G1 - Relais
Product Key	CK6195
Catalog Page	Page 284 (C-5-2019)
GTIN	4017918159566
Weight per Piece (including packing)	6,62 g
Weight per Piece (excluding packing)	5 g
Customs tariff number	85364900
Country of origin	CZ

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## Technical Data

### Product properties

Product type	Single relay
Set comprises	2903371 RIF-0-RPT-12DC/21
	2903375 RIF-0-RSC-12DC/21
Operating mode	100% operating factor
Mechanical service life	2x 10 <sup>7</sup> cycles

### Insulation characteristics

Overvoltage category	III
Pollution degree	3

### Electrical properties

Maximum power dissipation for nominal condition	0.17 W
Test voltage	4 kV AC (50 Hz, 1 min., winding/contact)

### Input data

#### Coil side

Nominal input voltage U <sub>N</sub>	12 V DC
Input voltage range	7.2 V DC ... 33 V DC
Input voltage range in reference to U <sub>N</sub>	see diagram
Typical input current at U <sub>N</sub>	14 mA
Typical response time	5 ms
Typical release time	2.5 ms
Coil resistance	848 Ω ±10 % (at 20 °C)

### Output data

#### Switching

Contact type	1 changeover contact
Type of switch contact	Single contact
Drive and function	monostable
Contact material	AgSnO
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (at 100 mA)
Limiting continuous current	6 A
Maximum inrush current	10 A (4 s)
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	20 W (at 48 V DC)
	18 W (at 60 V DC)
	23 W (at 110 V DC)
	40 W (at 220 V DC)

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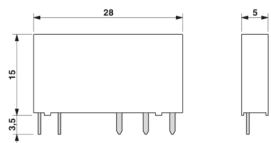
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Switching capacity	1500 VA (for 250 V AC)
	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.1 A (at 220 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
Motor load according to UL 508	3 A (at 230 V, AC15)
	1/4 HP, 240 - 277 V AC (N/O contact)
	1/6 HP, 240 - 277 V AC (N/C contact)

## Connection data

Connection method	Solder connection
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## Dimensions

Dimensional drawing	
Width	5 mm
Height	28 mm
Depth	15 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
	EN 61810-1

## Mounting

Assembly instructions	in rows with zero spacing
Mounting position	any

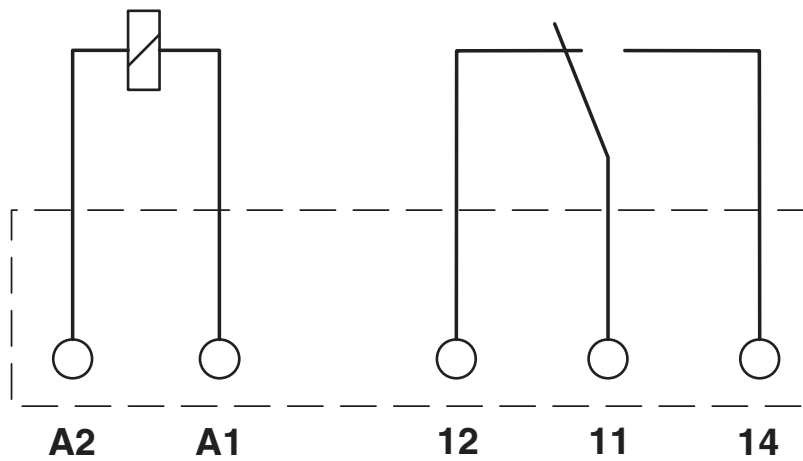
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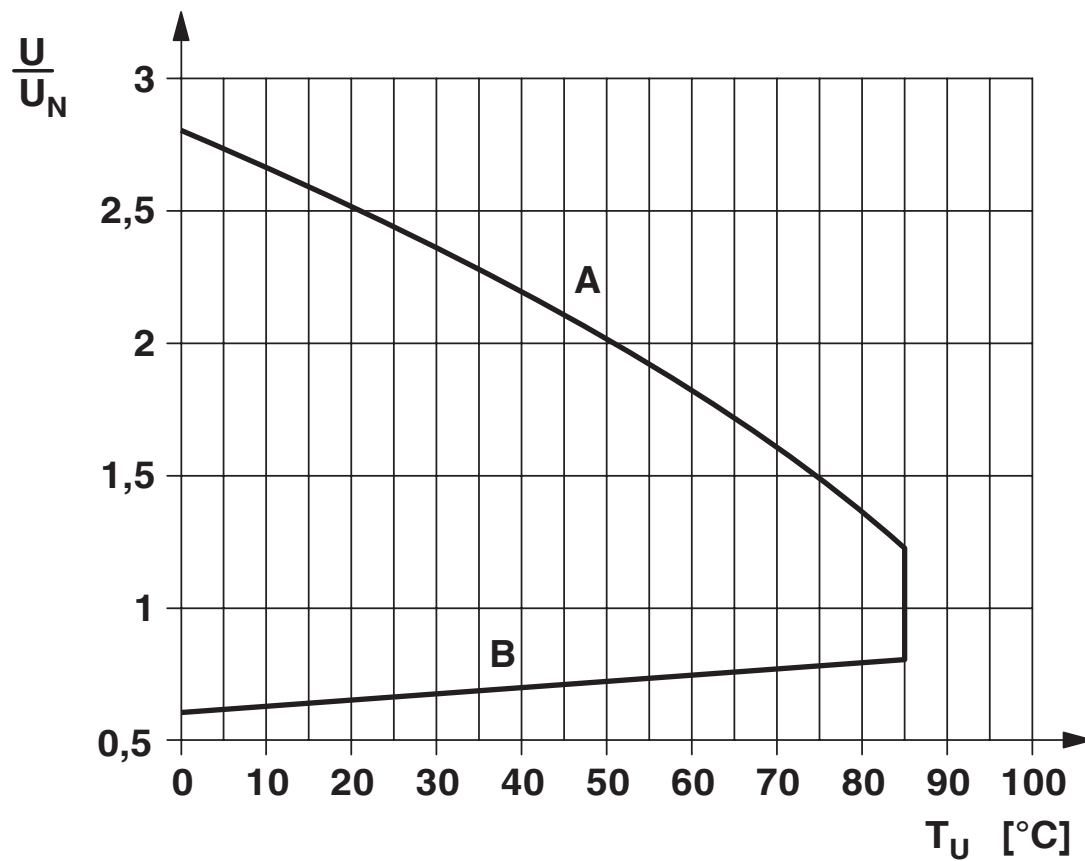
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## Drawings

Circuit diagram



Diagram



Input voltage range

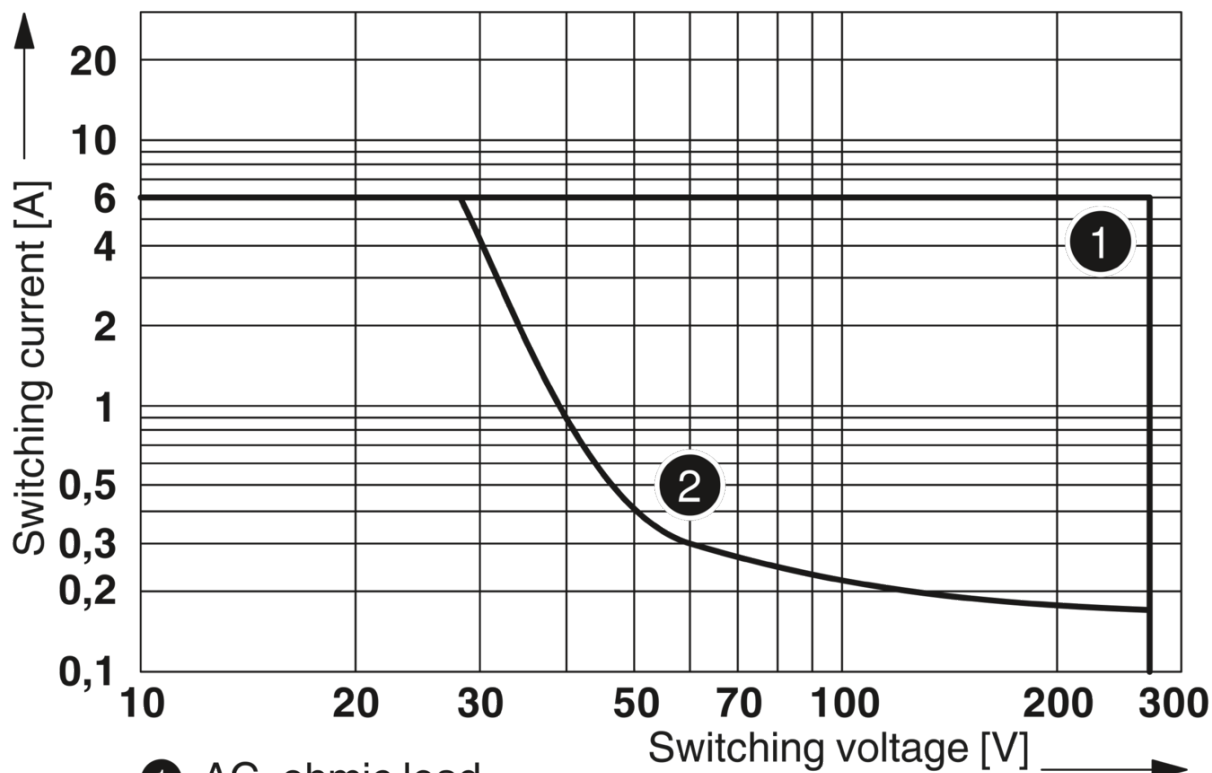
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Diagram

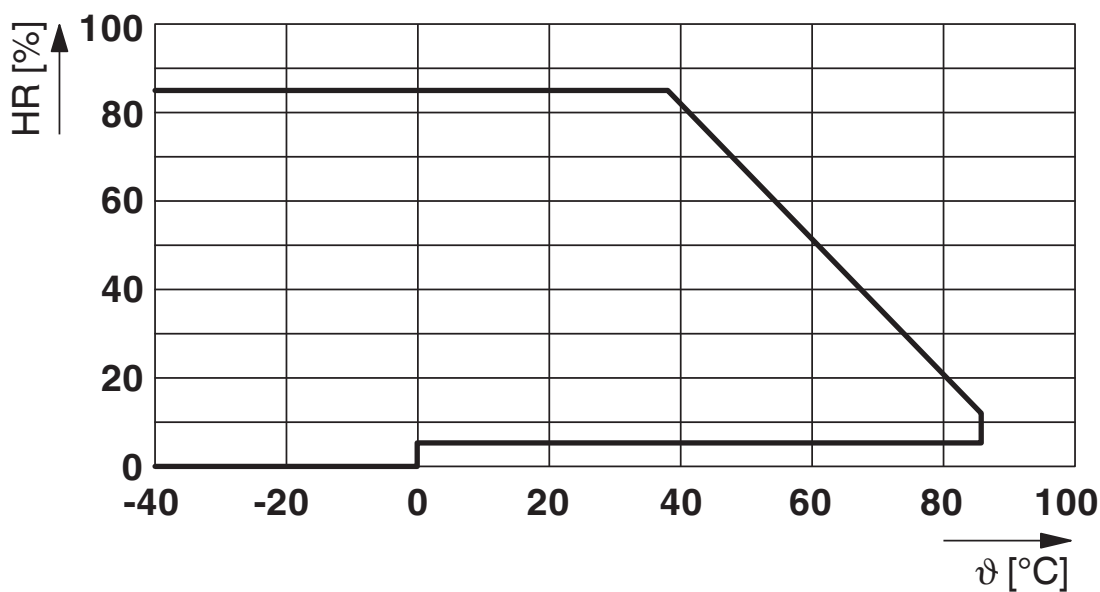


① AC, ohmic load

② DC, ohmic load

Interrupting rating

Diagram



Permissible humidity for operation and storage

$T_{amb} < 0^\circ$ : Avoid icing

$T_{amb} > 0^\circ$ : Avoid condensation

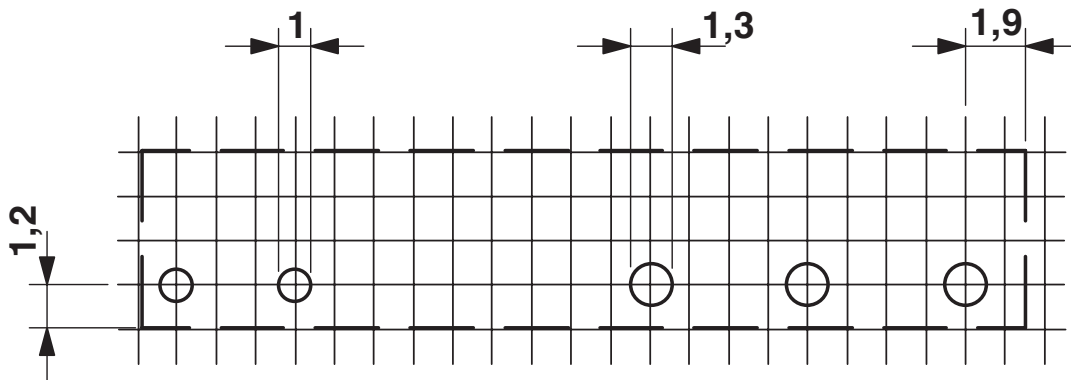
The temperature limits specified in the data sheets apply for the operating conditions.

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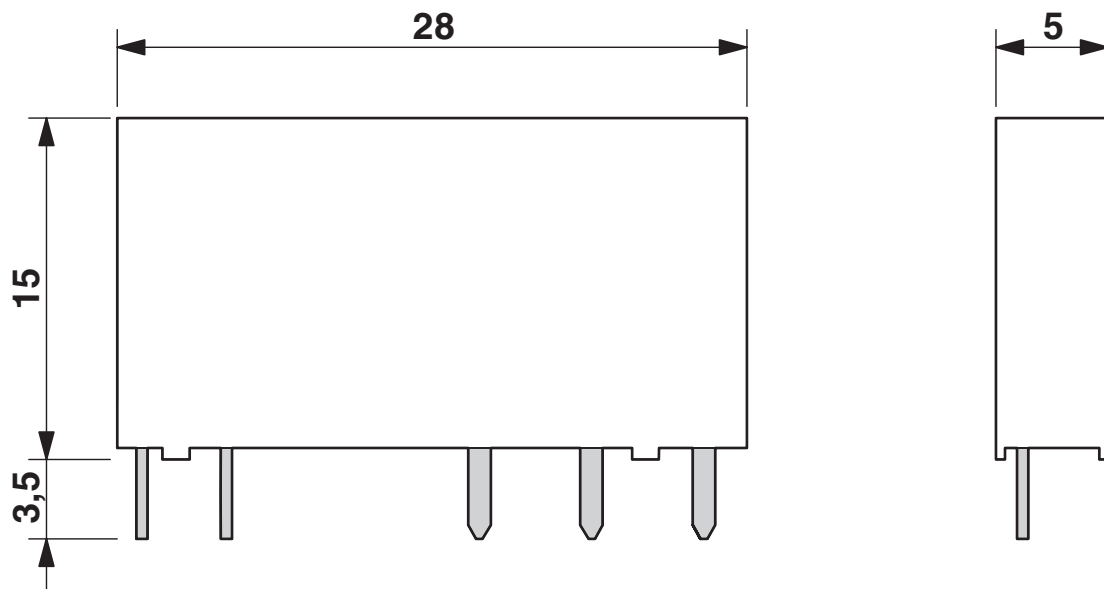
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Drilling plan/solder pad geometry



a = pitch division 1.25 mm and 1.27 mm

Dimensional drawing



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## Approvals



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



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



**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: 40010212

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



**VDE Zeichengenehmigung**  
Approval ID: 40032864

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



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



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



**VDE Zeichengenehmigung**  
Approval ID: 40054426



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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 - PLC-BPT- 12DC/21 - 2900444

<https://www.phoenixcontact.com/de/produkte/2900444>



6.2 mm PLC basic terminal block with Push-in connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 12 V DC

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### Relay base

Relay base - PLC-BSC- 12DC/21 - 2966896

<https://www.phoenixcontact.com/de/produkte/2966896>



6.2 mm PLC basic terminal block with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 12 V DC

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## Relay base

Relay base - RIF-0-BPT/21 - 2900958

<https://www.phoenixcontact.com/de/produkte/2900958>



Relay base RIF-0..., for miniature power relay with 1 changeover contact or solid-state relays of the same design, Push-in connection, for mounting on NS 35/7,5

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## Relay base

Relay base - RIF-0-BSC/21 - 2900957

<https://www.phoenixcontact.com/de/produkte/2900957>



RIF-0... relay base, for miniature power relay with 1 changeover contact or identical solid-state relays, screw connection, for mounting on NS 35/7,5

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