

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



2909644

<https://www.phoenixcontact.com/us/products/2909644>

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Plug-in miniature power relay, with multi-layer gold contact, 1 changeover contact, manual operation, 12 V DC input voltage

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2909644 |
| Packing unit | 1 pc |
| Minimum order quantity | 10 pc |
| Note | Made to order (non-returnable) |
| Sales key | C460 |
| Product key | CK6195 |
| Catalog page | Page 284 (C-5-2019) |
| GTIN | 4055626377698 |
| Weight per piece (including packing) | 6.65 g |
| Weight per piece (excluding packing) | 4.7 g |
| Customs tariff number | 85364190 |
| Country of origin | CZ |

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Technical data

Product properties

| | |
|-------------------------|---------------------------|
| Product type | Single relay |
| Operating mode | 100% operating factor |
| Mechanical service life | 1x 10 ⁷ cycles |

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree | 3 |

Electrical properties

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

Input data

Coil side

| | |
|--|------------------------|
| Nominal input voltage U _N | 12 V DC |
| Input voltage range | 7.2 V DC ... 33 V DC |
| Input voltage range in reference to U _N | see diagram |
| Drive and function | monostable |
| Drive (polarity) | non-polarized |
| Typical input current at U _N | 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 switching type | 1 changeover contact |
| Type of switch contact | Single contact |
| Contact material | AgSnO, hard gold-plated |
| Maximum switching voltage | 30 V AC 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) |
| Motor load according to UL 508 | 1/4 HP, 240 - 277 V AC (N/O contact) 1/6 HP, 240 - 277 V AC (N/C contact) |

Switching: when the gold layer is destroyed

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| | |
|---------------------------------------|--|
| Note | the following values are applicable if a gold layer is destroyed |
| Contact material | AgSnO |
| Maximum switching voltage | 250 V AC/DC |
| Minimum switching voltage | 5 V (at 100 mA) |
| Limiting continuous current | 6 A |
| 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) 1500 VA (for 250 V AC) |
| Switching capacity | 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) 3 A (at 230 V, AC15) |

Connection data

| | |
|-------------------|--------------------------|
| Connection method | Plug / solder connection |
|-------------------|--------------------------|

Dimensions

| | |
|--------|-------|
| Width | 5 mm |
| Height | 28 mm |
| Depth | 16 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 |

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 |
|-----------------------|-------------------------------------|

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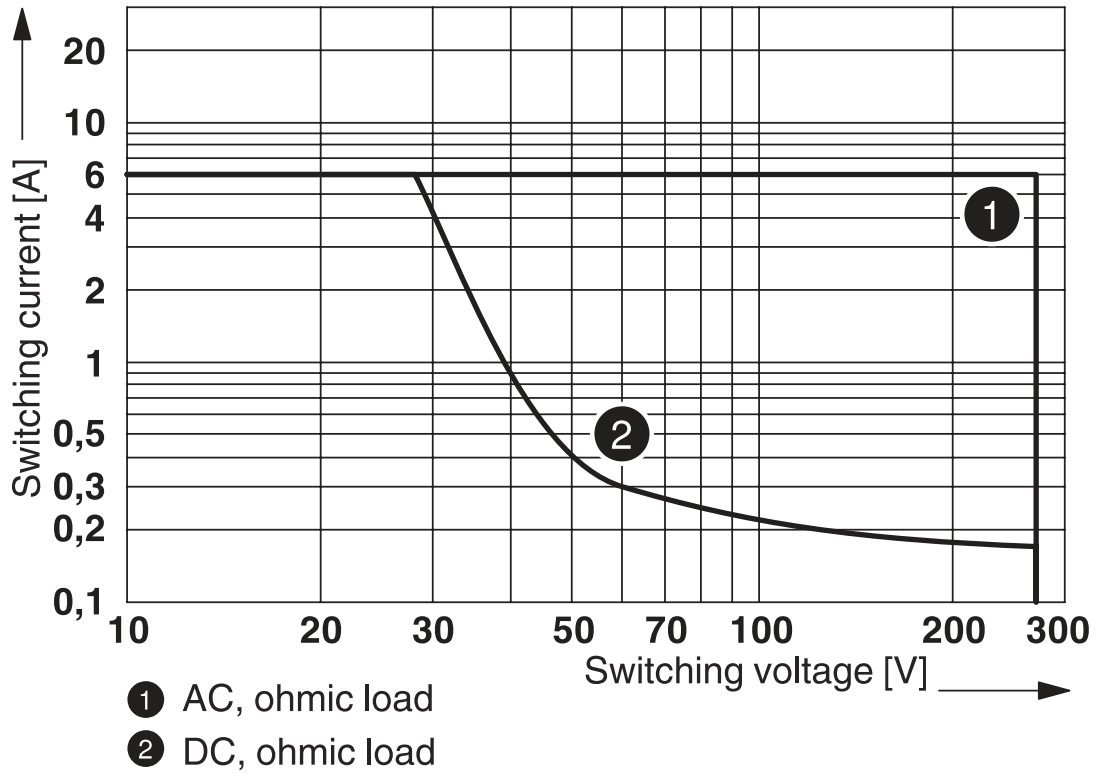
<https://www.phoenixcontact.com/us/products/2909644>

Mounting

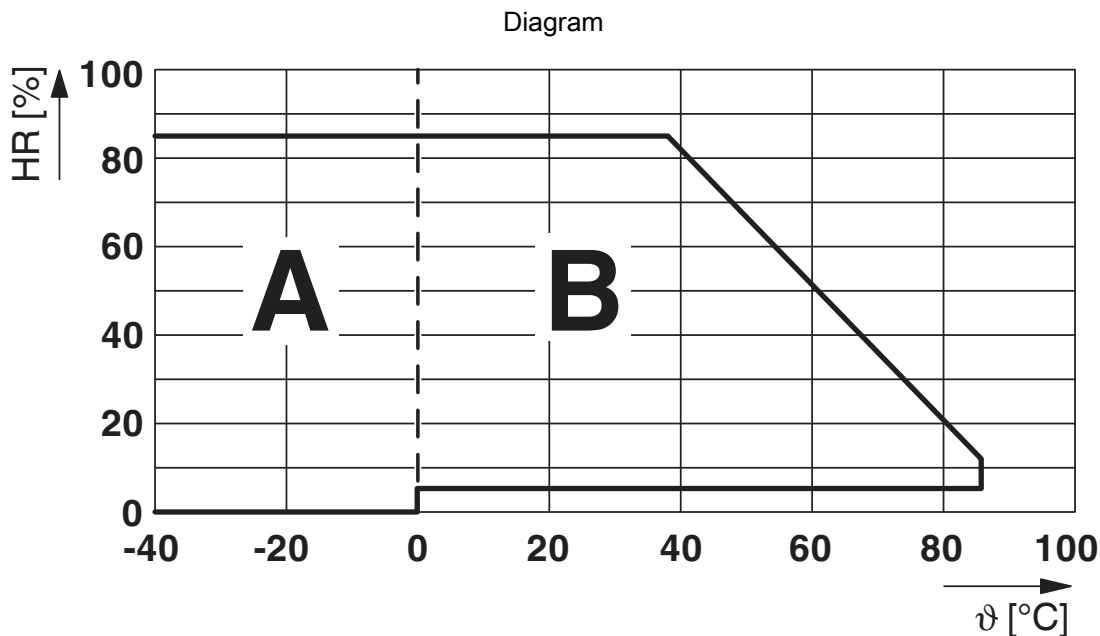
| | |
|-----------------------|---------------------------|
| Assembly instructions | in rows with zero spacing |
| Mounting position | any |

Drawings

Diagram



Interrupting rating



Permissible humidity for operation and storage.

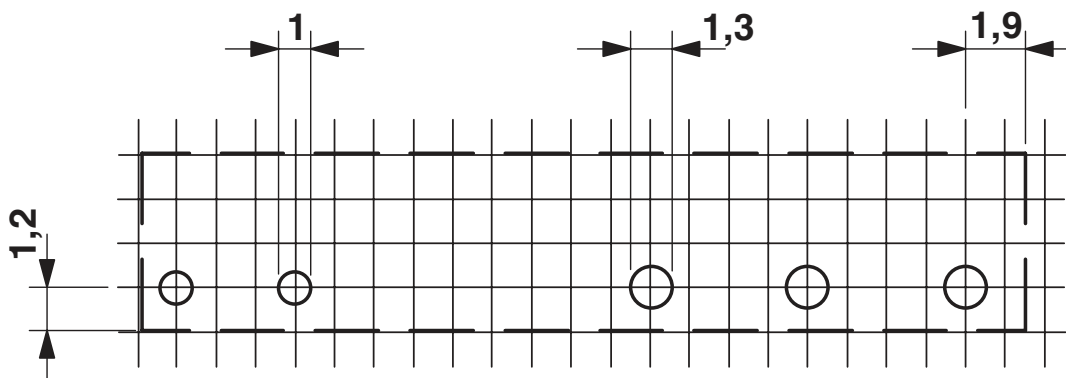
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures $\leq 0^{\circ}\text{C}$ must be prevented

Area B: Condensation at ambient temperatures $> 0^{\circ}\text{C}$ must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature $\leq 25^{\circ}\text{C}$.

Drilling plan/solder pad geometry

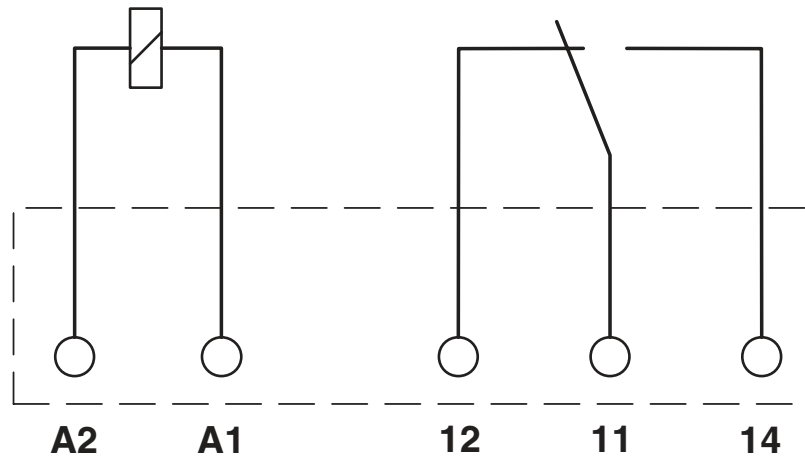


a = pitch division 1.25 mm and 1.27 mm

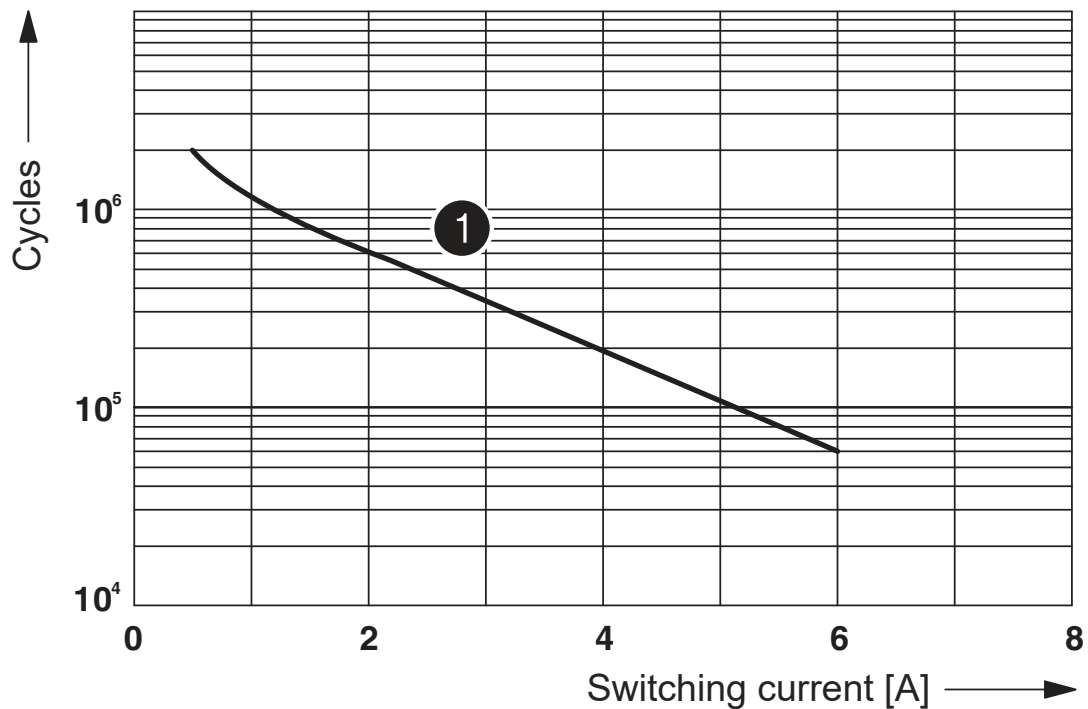
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Circuit diagram



Diagram



① 250 V AC, ohmic load

Electrical service life

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2909644>



cUL Recognized
Approval ID: FILE E 228652



UL Recognized
Approval ID: FILE E 228652



EAC
Approval ID: TR_TS_D_00573_c



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



VDE Zeichengenehmigung
Approval ID: 40010212

cULus Recognized

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

ETIM

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

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

RIF-0-BPT/21 - Relay base

2900958

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

RIF-0-BSC/21 - Relay base

2900957

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