

# REL-IR4/LDP- 48DC/4X21 - Single relay



2903678

<https://www.phoenixcontact.com/pc/products/2903678>

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Plug-in industrial relay with power contacts, 4 changeover contacts, test button, status LED, freewheeling diode, mechanical switching position indicator, polarity: A1+, A2-, coil voltage: 48 V DC

## Commercial data

Item number	2903678
Packing unit	10 pc
Minimum order quantity	10 pc
Product key	CK6193
Catalog page	Page 292 (C-7-2013)
GTIN	4046356758918
Weight per piece (including packing)	35.305 g
Weight per piece (excluding packing)	34.2 g
Customs tariff number	85364190
Country of origin	PL

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## Technical data

### Product properties

Product type	Single relay
Operating mode	100% operating factor
Mechanical service life	approx. $2 \times 10^7$ cycles

### Insulation characteristics

Insulation	Basic insulation
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### Insulation characteristics

Insulation	Basic insulation
Overvoltage category	II
Pollution degree	2

### Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	1.06 W
Test voltage (Winding/contact)	2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2 kV <sub>rms</sub> (50 Hz, 1 min., changeover contact/changeover contact)
Rated insulation voltage	250 V AC
Rated surge voltage	2.5 kV

### Input data

#### Coil side

Nominal input voltage $U_N$	48 V DC
Input voltage range	38.4 V DC ... 86.4 V DC (20 °C)
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at $U_N$	22 mA
Typical response time	13 ms
Typical release time	14 ms
Protective circuit	Freewheeling diode
Status display	Yellow LED

### Output data

#### Switching

Contact switching type	4 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (At 24 mA)
Limiting continuous current	6 A

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Maximum inrush current	16 A (20 ms, N/O contacts)
Min. switching current	5 mA (at 24 V)
Interrupting rating (ohmic load) max.	144 W (at 24 V DC)
	124 W (at 48 V DC)
	108 W (at 60 V DC)
	52 W (at 110 V DC)
	48 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity min.	0.12 W
Switching capacity	2 A (at 24 V, DC13)
	0.22 A (at 120 V, DC13)
	0.11 A (at 250 V, DC13)
	1.5 A (at 24 V, AC15)
	1.5 A (at 120 V, AC15)
	1 A (at 240 V, AC15)
Motor load according to UL 508	1/3 HP, 240 V AC

## Connection data

Connection method	Plug-in connection
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## Dimensions

Width	21.2 mm
Height	27.5 mm
Depth	35.6 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	RT I
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Approvals

### Corrosive gas test

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

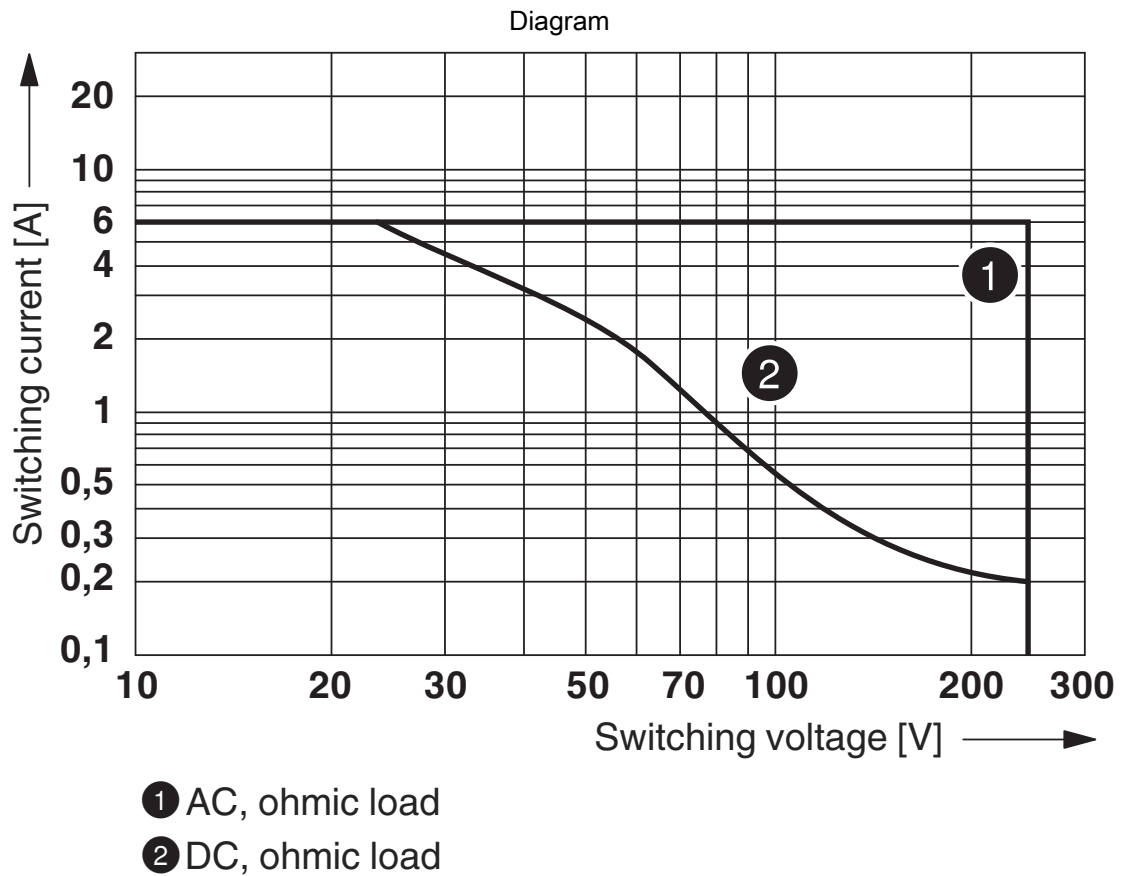
## Standards and regulations

Standards/regulations	IEC 60664
	IEC 61810

## Mounting

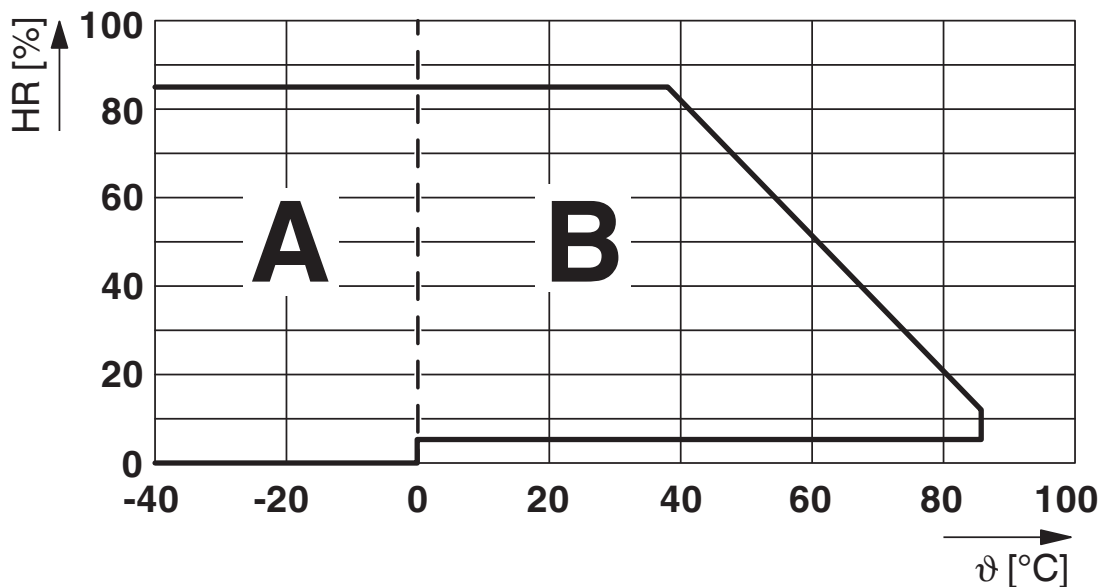
Mounting position	any
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## Drawings



Interrupting rating

Diagram



Permissible humidity for operation and storage.

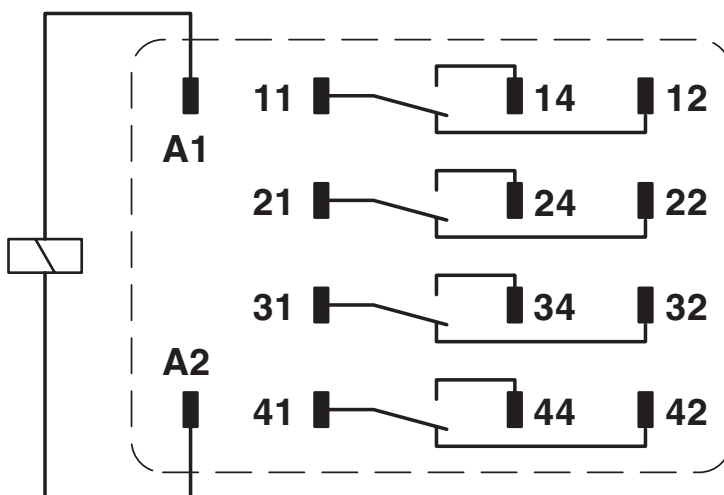
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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

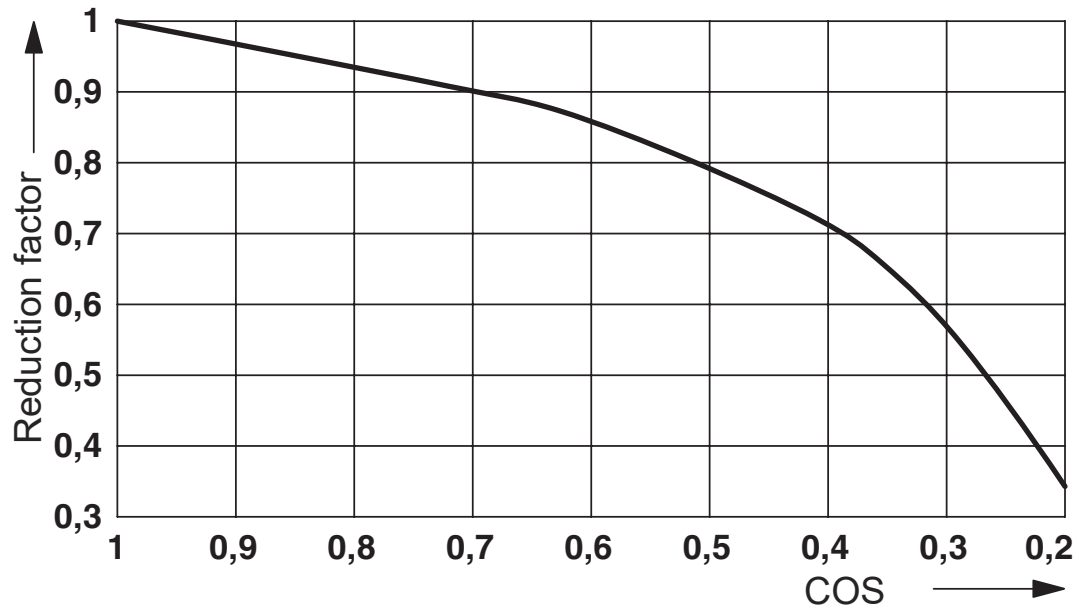
Area B: Condensation at ambient temperatures  $> 0^\circ\text{C}$  must be prevented

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

Circuit diagram



Diagram

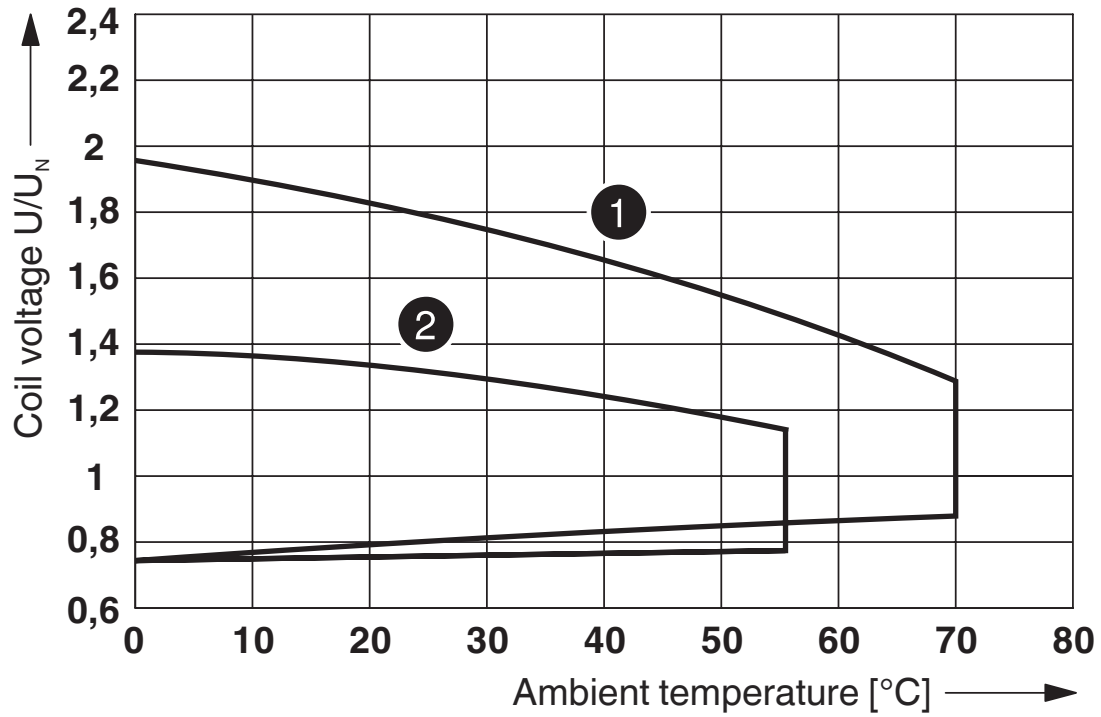


Service life reduction factor

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Diagram



① DC coils

② AC coils

Operating voltage range

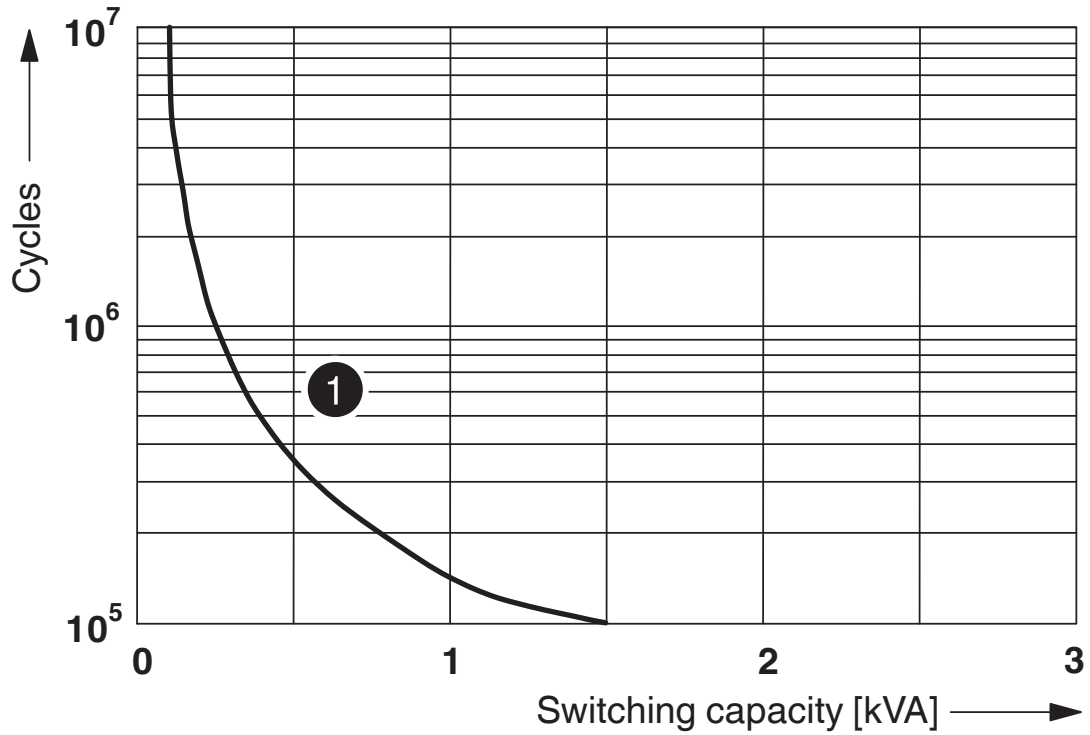
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Diagram



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/pc/products/2903678>



**CSA**

Approval ID: 256725



**cUL Recognized**

Approval ID: FILE E 172140



**UL Recognized**

Approval ID: FILE E 172140



**EAC**

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



**VDE Zeichengenehmigung**

Approval ID: 40040427

**cULus Recognized**

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## Classifications

### ECLASS

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

### ETIM

ETIM 9.0	EC001437
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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## Mandatory accessories

### RIF-2-BPT/4X21 - Relay base

2900934

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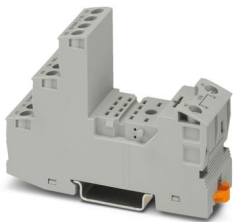


Relay base RIF-2..., for industrial relay with 2 or 4 changeover contacts, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

### RIF-2-BSC/4X21 - Relay base

2900932

<https://www.phoenixcontact.com/pc/products/2900932>



RIF-2... relay base, for industrial relay with 2 or 4 changeover contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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