RIF-2-RSC-LDP-24DC/4X21/EX - Relay module

2909845

https://www.phoenixcontact.com/us/products/2909845

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Pre-assembled relay module consisting of: relay base, function plug-in module, power contact relay, and retaining bracket, approval in accordance with ATEX/IECEx (Zone 2) and Ex Zone Class I, Div. 2, Screw connection, 4 changeover contacts, Freewheeling diode, Input voltage: 24 V DC

Product description

The pluggable electromechanical and solid-state relays in the RIFLINE complete product range and the base are recognized and approved in accordance with UL 508. The relevant approvals can be called up at the individual components in question.

Commercial data

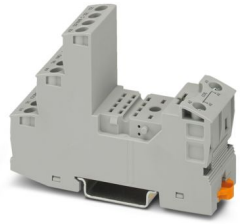
Item number	2909845
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C465
Product key	DK651A
GTIN	4055626395487
Weight per piece (including packing)	117.68 g
Weight per piece (excluding packing)	117.68 g
Customs tariff number	85364190
Country of origin	CN

Set consists of

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

1047031

https://www.phoenixcontact.com/us/products/1047031



RIF-2.../EX relay base for assembling with RTIII-sealed industrial relays with 4 changeover contacts for use in zone 2, screw connection, plug-in option for input / interference suppression modules, for mounting on NS 35/7,5

REL-IR4/24DC/4X21/EX - Single relay

2909738

https://www.phoenixcontact.com/us/products/2909738



Pluggable industrial relay, RT III sealed with power contacts, 4x changeover contacts, mechanical switch position indicator, polarity: non-polarized, input voltage: 24 V DC, in connection with RIF-2.../EX bases approved in accordance with ATEX/IECEx (zone 2) and Ex zone class I, div. 2.

RIF-LDP-12-24 DC - Plug-in module

2900939

https://www.phoenixcontact.com/us/products/2900939



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with freewheeling diode and yellow LED, polarity: A1+, A2-, input voltage: 12 V DC ... 24 V DC ±30 %

RIF-RH-2 - Retaining bracket

2900954

https://www.phoenixcontact.com/us/products/2900954



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-2 relay base, for industrial relay

Technical data

Product properties

Product type	Relay Module
Product family	RIFLINE complete
Application	Class I, Division 2
	potentially explosive areas
Operating mode	100% operating factor
Mechanical service life	approx. 2x 10^7 cycles

Insulation characteristics

Insulation	Basic insulation
Overvoltage category	III
	II (Zone 2)
Pollution degree	2

Data management status

Date of last data management	12.09.2025

Electrical properties

Maximum power dissipation for nominal condition	1.01 W
Test voltage (Winding/contact)	2.5 kV_{rms} (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2 kV_{rms} (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	24 V DC
Input voltage range	19.2 V DC ... 30 V DC (20 °C)
Input voltage range in reference to U_N	see diagram
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at U_N	42 mA
Typical response time	13 ms
Typical release time	14 ms
Coil voltage	24 V DC
Protective circuit	Freewheeling diode
Operating voltage 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 (24 mA)
Limiting continuous current	6 A (see diagram)
Maximum inrush current	16 A (20 ms, N/O contacts)
Min. switching current	5 mA (24 V)
Interrupting rating (ohmic load) max.	144 W (24 V DC)
	124 W (48 V DC)
	108 W (60 V DC)
	52 W (110 V DC)
	48 W (220 V DC)
	1500 VA (250 V AC)
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)
Utilization category CB Scheme (IEC 60947-5-1)	AC15, 1 A/240 V (N/O contact)
	DC13, 2 A/24 V (N/O contact)

Connection data

Connection method	Screw connection
Stripping length	8 mm
Conductor cross-section rigid	0.5 mm² ... 4 mm²
Conductor cross-section rigid (2 conductors with same cross section)	0.5 mm² ... 2.5 mm²
Conductor cross-section flexible	0.5 mm² ... 4 mm²
	0.5 mm² ... 4 mm² (Ferrule with plastic sleeve)
Conductor cross-section flexible (2 conductors with same cross section)	0.5 mm² ... 2.5 mm²
	0.5 mm² ... 1.5 mm² (TWIN ferrule with plastic sleeve)
Conductor cross-section AWG	20 ... 10 (solid)
	20 ... 12 (flexible)
Tightening torque	0.5 Nm ... 0.6 Nm

Dimensions

Item dimensions

Width	27 mm
Height	89 mm
Depth	75 mm

Material specifications

Color	gray (RAL 7042)

Flammability rating according to UL 94 (Housing)	V2 (Housing)

Environmental and real-life conditions

Ambient conditions

Degree of protection (Relay base)	IP20 (Relay base)
Degree of protection (Relay)	RT III (Relay)
Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approvals

ATEX

Identification	II 3G Ex ec nC IIC T4 Gc
Certificate	IBExU17ATEXB014X

UKCA Ex (UKEX)

Identification	II 3G Ex ec nC IIC T4 Gc
Certificate	PxcIF21UKEX2909741X

IECEx

Identification	Ex ec nC IIC T4 Gc
Certificate	IECEx IBE 17.0032X

UL, USA/Canada

Identification	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC

Corrosive gas test

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

Standards and regulations

Standards/regulations	IEC 60947-5-1

Ex zone

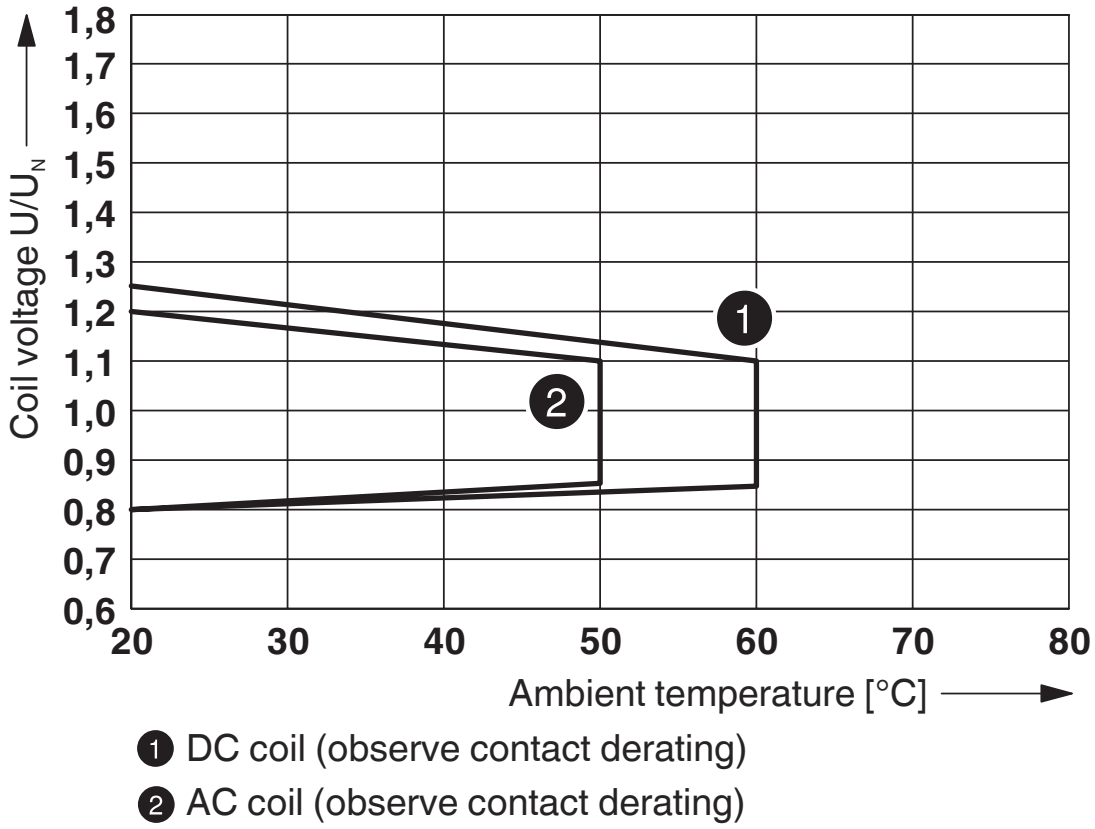
Standards/regulations	EN/IEC 60079-0
	EN/IEC 60079-7
	EN/IEC 60079-15

Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

Drawings

Diagram

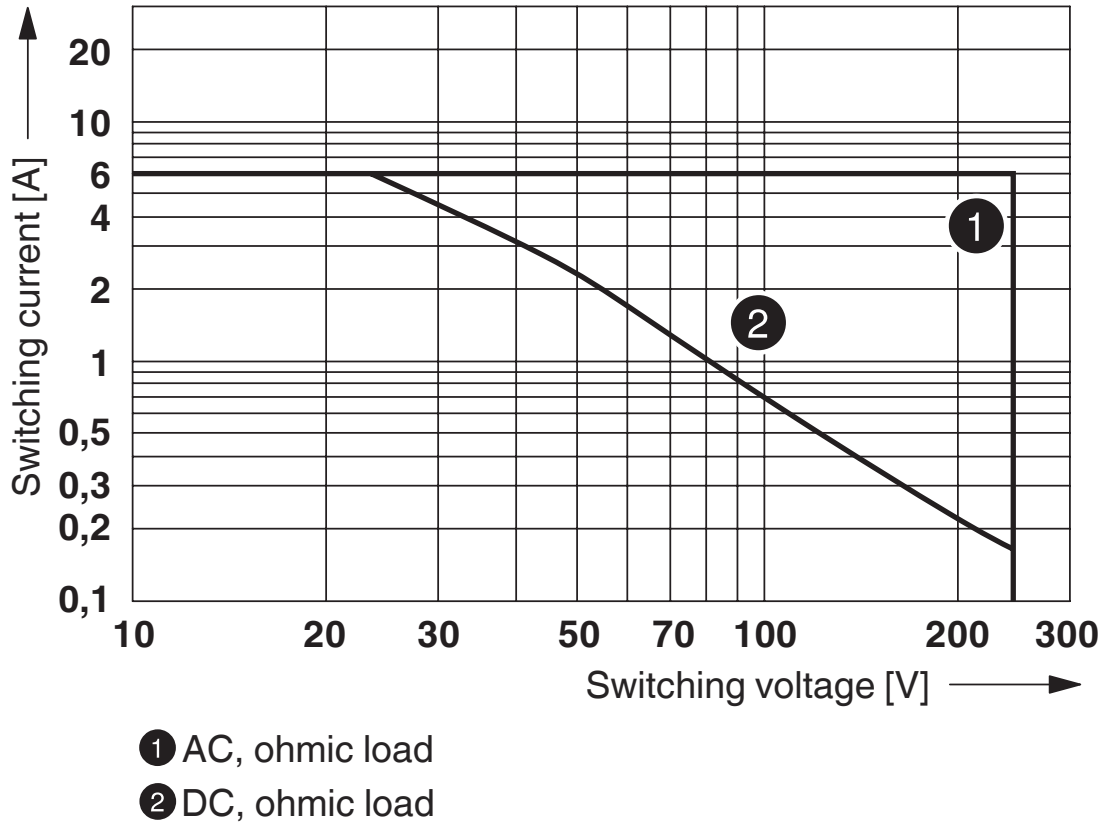


1 DC coil (observe contact derating)

2 AC coil (observe contact derating)

Operating voltage range

Diagram

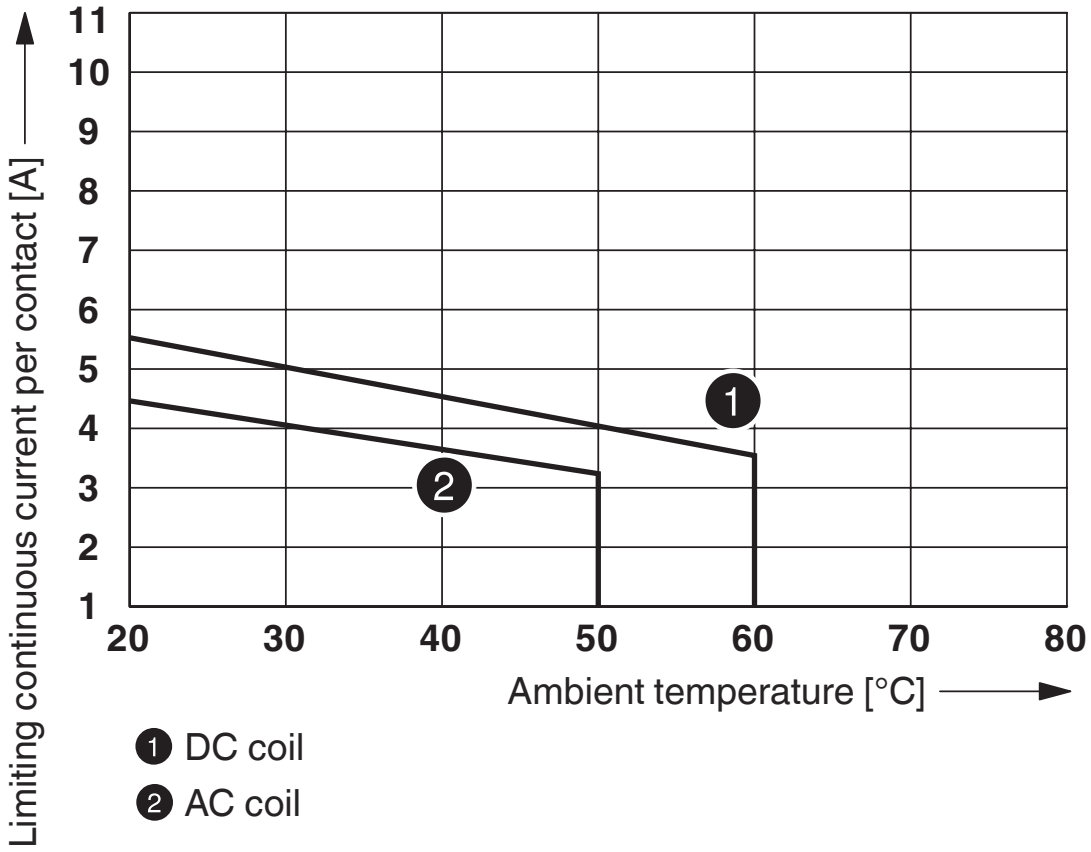


1 AC, ohmic load

2 DC, ohmic load

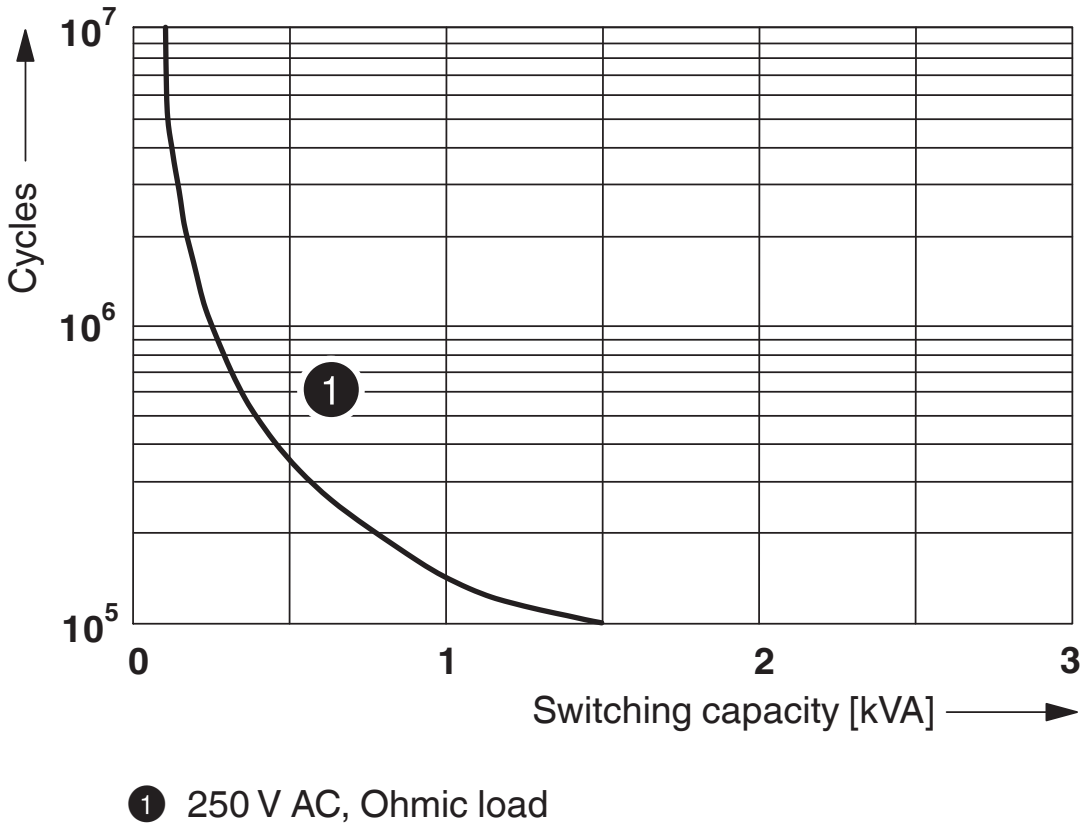
Interrupting rating

Diagram



Contact derating

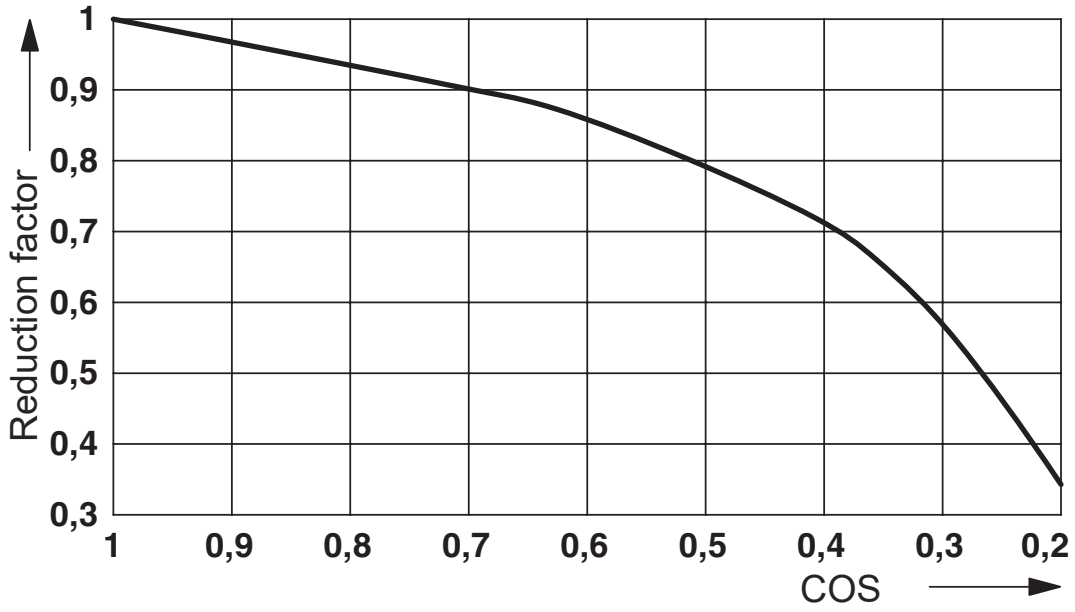
Diagram



1 250 V AC, Ohmic load

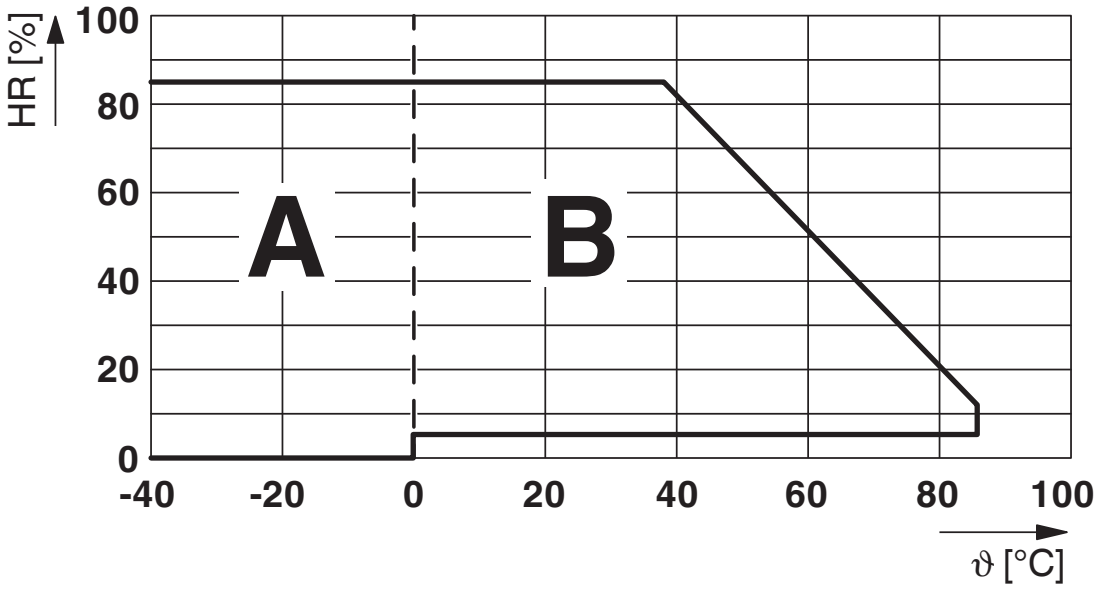
Electrical service life

Diagram



Service life reduction factor

Diagram

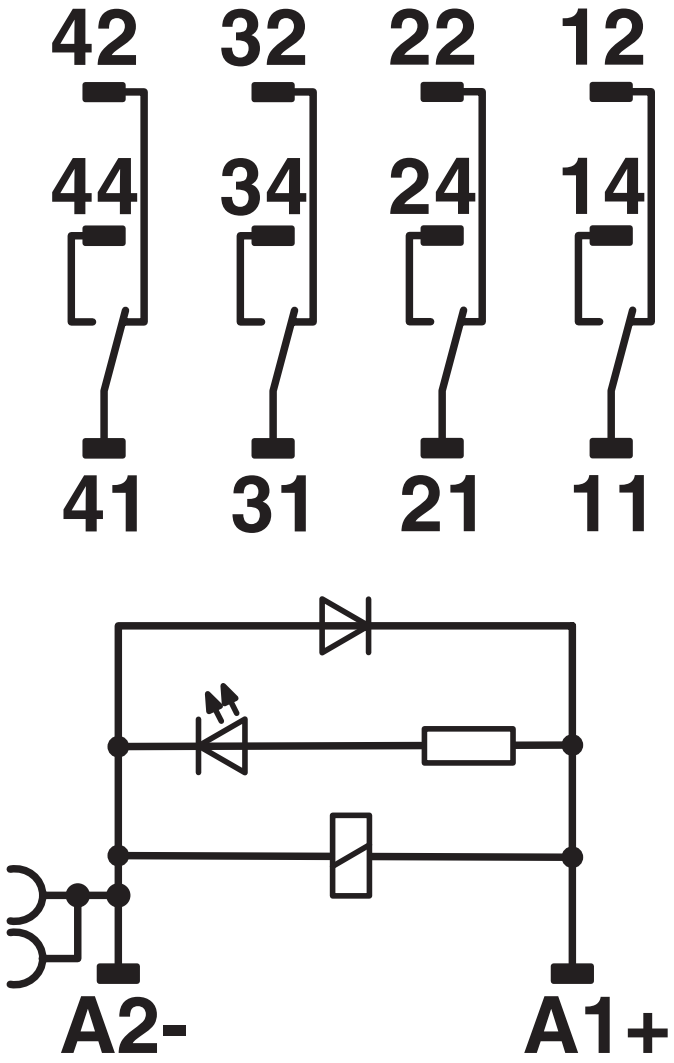


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°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 ≤ 25°C.

Circuit diagram



DC coils

Classifications

ECLASS

ECLASS-13.0	27371601

ETIM

ETIM 9.0	EC001437

UNSPSC

UNSPSC 21.0	39122300

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)

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