RIF-1-RPT-LDP-24DC/1ICT - Relay module

1078686

https://www.phoenixcontact.com/us/products/1078686

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Preassembled relay module with Push-in connection, consisting of: relay base, power contact relay, plug-in display/interference suppression module, retaining bracket. Contact switching type: 1 N/O contact, max. inrush current up to 800 A, 24 V DC input voltage

Product description

The relay module is particularly suitable for switching strong capacitive loads, such as LED lights. The ballasts installed in the LED lights often have extremely high switch-on peaks which cause standard relay contacts to fuse. The leading tungsten pre-contact ensures that switch-on currents of up to 800 A can be switched safely. 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	1078686
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C465
Product key	DK6529
GTIN	4055626792170
Weight per piece (including packing)	69.6 g
Weight per piece (excluding packing)	69.6 g
Customs tariff number	85364110
Country of origin	CN

Set consists of

RIF-1-BPT/2X21 - Relay base

2900931

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Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

REL-MR- 24DC/ 1ICT - Single relay

2987338

https://www.phoenixcontact.com/us/products/2987338



Pluggable miniature power relay, with tungsten pre-contact for high switch-on currents up to 800 A peaks, 1 N/O contact, input voltage: 24 V DC

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-1 - Retaining bracket

2900953

https://www.phoenixcontact.com/us/products/2900953



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 mm tall miniature power relay and solid-state relay

Technical data

Notes

Notes on operation	FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21)
Notes on operation	At least a basic level of insulation is maintained against adjacent modules in the DIN rail direction. If the application has higher requirements on the insulation (reinforced insulation), then these must be realized through suitable measures (e.g. partition plates).
Notes on operation	The system installer must ensure the touch protection of the product (at voltages > 25 V AC/60 V DC). The product is a built-in device without protection against direct contact.

Product properties

Product type	Relay Module
Product family	RIFLINE complete
Application	high inrush currents
Operating mode	100% operating factor
Mechanical service life	3x 10^7 cycles

Insulation characteristics: Standards/regulations

Insulation	Safe isolation, reinforced insulation
Overvoltage category	III
Pollution degree	2

Data management status

Date of last data management	21.03.2025

Electrical properties

Maximum power dissipation for nominal condition	0.43 W
Test voltage (Winding/contact)	4 kV AC (50 Hz, 1 min., winding/contact)

Standards/regulations

Rated surge voltage	6 kV

Input data

Coil side

Nominal input voltage U_N	24 V DC
Input voltage range	19.2 V DC ... 33.6 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	18 mA
Typical response time	8 ms
Typical release time	10 ms

Coil voltage	24 V DC
Protective circuit	Reverse polarity protection; Polarity protection diode
	Surge protection; Freewheeling diode
Operating voltage display	Yellow LED

Output data

Switching

Contact switching type	1 N/O contact
Type of switch contact	Single contact
Note regarding the switch contact	With tungsten leading contact
Contact material	AgSnO
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (100 mA)
Limiting continuous current	6 A
	10 A (Value is permissible if connections 11 and 21, as well as connections 14 and 24 are bridged.)
Maximum inrush current	165 A (20 ms)
	800 A (200 µs)
Min. switching current	100 mA (12 V DC)
Interrupting rating (ohmic load) max.	264 W (at 24 V DC, observe contact derating)
	58 W (at 48 V DC)
	48 W (at 60 V DC)
	50 W (at 110 V DC)
	80 W (at 220 V DC)
	2750 VA (at 250 V AC, observe contact derating)
Switching capacity min.	1200 mW
Utilization category CB Scheme (IEC 60947-5-1)	AC15, 6 A/250 V (N/O contact)
	DC13, 2 A/24 V (N/O contact)

Connection data

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross-section rigid	0.14 mm² ... 1.5 mm²
Conductor cross-section flexible	0.14 mm² ... 1.5 mm²
	0.14 mm² ... 1.5 mm² (Ferrule with plastic sleeve)
	0.14 mm² ... 1 mm² (Ferrule with plastic sleeve, two conductors on double terminal block)
Conductor cross-section AWG	26 ... 16 (solid)
	26 ... 16 (flexible)

Dimensions

Item dimensions

Width	16 mm
Height	96 mm

Depth	75 mm

Drill hole

Diameter	3.2 mm

Material specifications

Color	gray (RAL 7042)

Environmental and real-life conditions

Ambient conditions

Degree of protection (Relay)	RT II (Relay)
Degree of protection (Relay base)	IP20 (Relay base)
Degree of protection (Installation location)	≥ IP54 (Installation location)
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

Approvals

Corrosive gas test

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

Standards and regulations

Standards/regulations

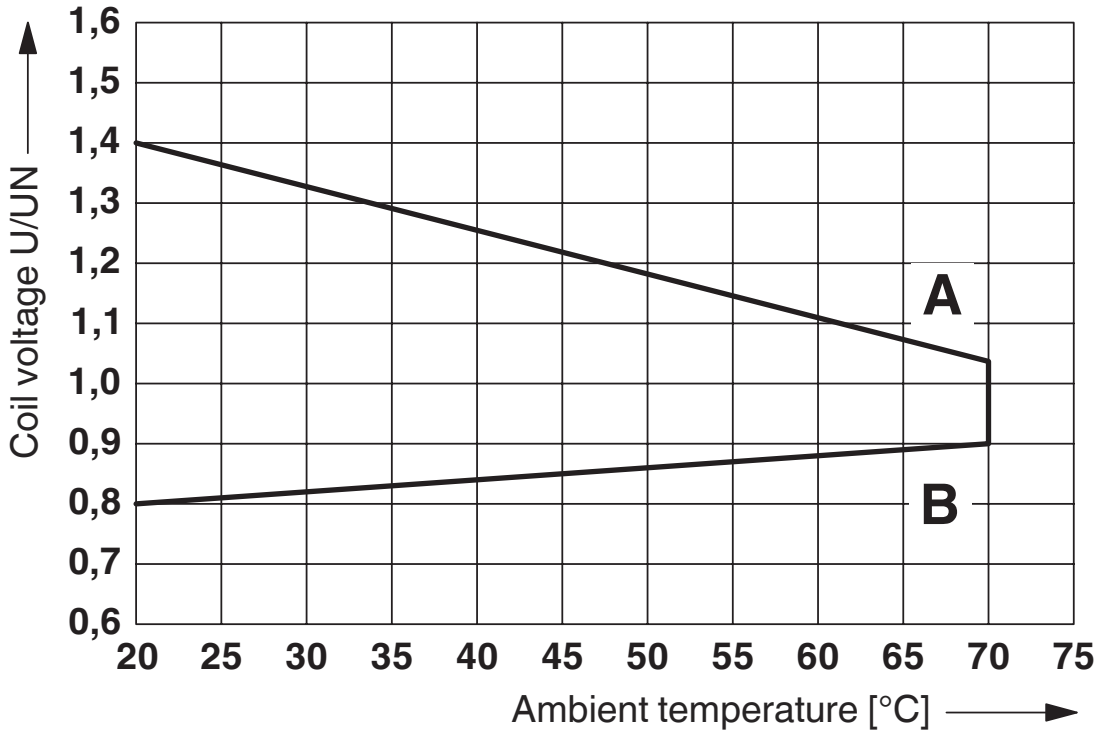
Standards/regulations	IEC 60947-5-1

Mounting

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

Drawings

Diagram



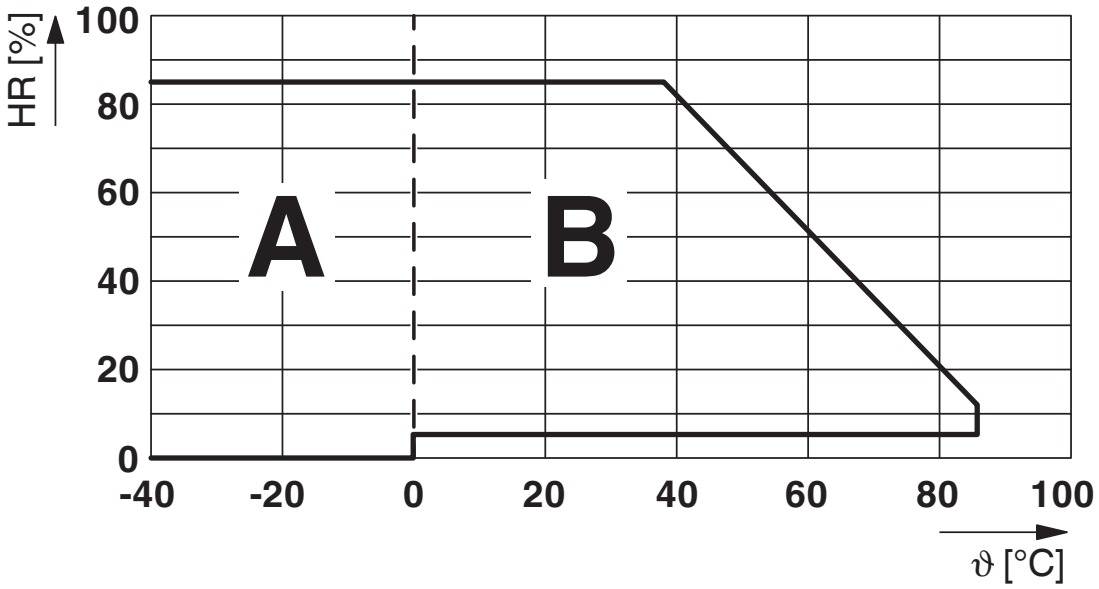
Curve A

Maximum permissible continuous voltage U_{max} with limiting continuous current on the contact side (see relevant technical data)

Curve B

Minimum permissible operate voltage U_{op} after pre-excitation (see relevant technical data)

Diagram

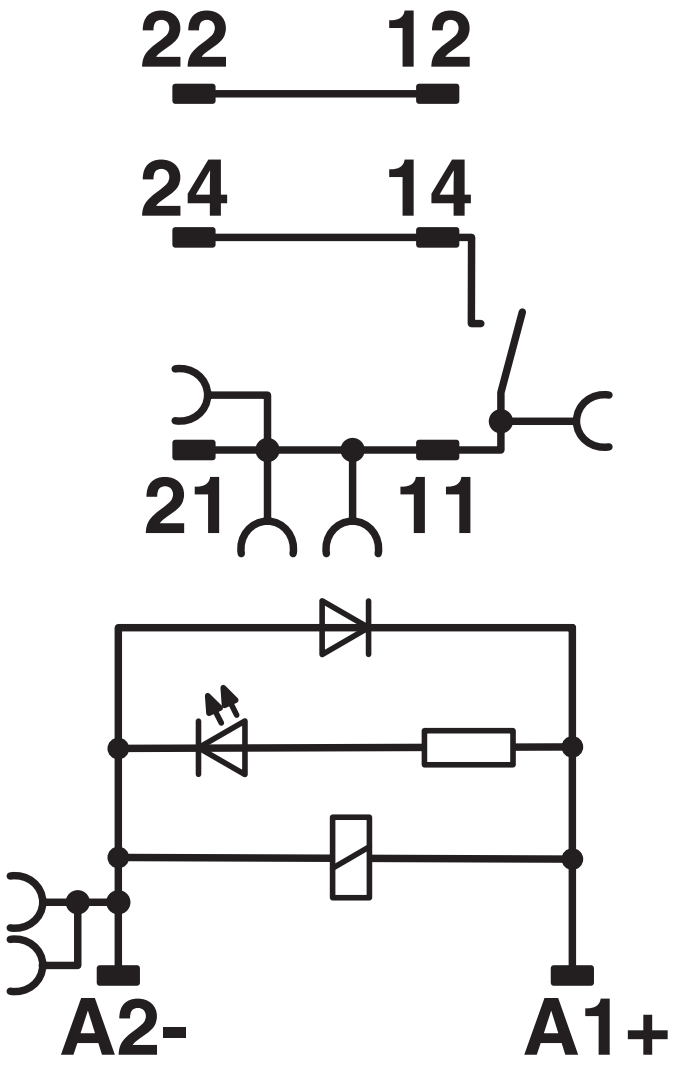


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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



Classifications

ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	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)
SCIP	33389331-9be9-40e1-a08f-ce6ccfd1a2c3

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