

RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - Relay module



1148703

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Relay module with Push-in connection, consisting of: relay base with status LED, freewheeling diode, and retaining bracket, safety relay with force-guided contacts in accordance with DIN EN 61810-3, contact switching type: 3 N/O contacts and 1 N/C contact, input voltage: 24 V DC

Commercial data

Item number	1148703
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C465
Product key	CK652E
GTIN	4063151142513
Weight per piece (including packing)	76.33 g
Weight per piece (excluding packing)	69.15 g
Customs tariff number	85364110
Country of origin	CN

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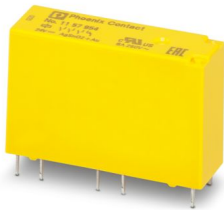
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Set consists of

REL-SR- 24DC/3X1AU/1X2AU/FG - Safety relays

1157954

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Safety relay with force-guided contacts in accordance with DIN EN 61810-3 (type A), input voltage 24 V DC, with multi-layer gold contact, 3 N/O contacts and 1 N/C contacts

Technical data

Product properties

Product type	Relay Module
Product family	RIFLINE complete
Application	Forcibly guided contacts
Operating mode	100% operating factor
Mechanical service life	approx. 10^7 cycles
B _{10d}	810000 Cycles (AC15, 250 V / 0.5 A, 1 NO)
	170000 Cycles (AC15; 250 V / 2 A; 1 NO)
	318000 Cycles (DC13, 24 V / 1 A, 1 NO)
	208000 Cycles (DC13, 24 V / 2 A, 1 NO)

Insulation characteristics: Air clearances and creepage distances between the power circuits

Insulation	Basic insulation
	Safe isolation, reinforced insulation and 6 kV between coil and contact circuit and between contacts 11-12 and 13-14, 41-42 to 23-24, 33-34
Overvoltage category	III
Pollution degree	2

Data management status

Date of last data management	10.06.2024
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Electrical properties

Maximum power dissipation for nominal condition	0.41 W
Test voltage (Winding/contact)	4 kV _{rms} (50 Hz, 1 min., winding/contact)
Test voltage ()	1.5 kV _{rms} (50 Hz, 1 min., open contact)
Test voltage ()	2.5 kV _{rms} (50 Hz, 1 min., between contacts: 7, 8 to 9, 10)
Test voltage ()	4 kV _{rms} (50 Hz, 1 min., between contacts: all others)

Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC (Input/output)
Rated surge voltage	6 kV (Input/output)

Short-circuit protection device

Current	10 A (RT28-32)
Voltage	500 V (SCPD)
Short-circuit current	1 kA (conditional short-circuit current)

Input data

Coil side

Nominal operating voltage U _N	24 V DC
Input voltage range in reference to U _N	See derating diagram
Drive and function	monostable

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Drive (polarity)	polarized
Typical input current at U_N	17 mA
Input power dissipation for U_N	0.4 W
Typical response time	10 ms
Typical release time	15 ms
Coil voltage	24 V DC
Protective circuit	Freewheeling diode
Status display	LED (yellow)

Output data

Switching

Contact switching type	3 N/O contacts, 1 N/C contact
Type of switch contact	Single contact
Contact material	AgSnO ₂ , hard gold-plated
Maximum switching voltage	250 V AC 300 V DC
Minimum switching voltage	10 V (5 mA)
Limiting continuous current	6 A
Maximum inrush current	35 A (20 ms)
Min. switching current	5 mA (10 V)
Interrupting rating (ohmic load) max.	144 W (24 V DC) 100 W (48 V DC) 75 W (60 V DC) 55 W (110 V DC) 50 W (220 V DC) 1500 VA (250 V AC)
Force-guided contacts in accordance with EN 61810-3	Type A
Utilization category CB Scheme (IEC 60947-5-1)	AC15, 2 A/240 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 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ² 0.14 mm ² ... 1.5 mm ² (Ferrule with plastic sleeve) 0.14 mm ² ... 1 mm ² (Ferrule with plastic sleeve, two conductors on double terminal block)
Conductor cross section AWG	26 ... 16 (solid) 26 ... 16 (flexible)

Dimensions

Width	21 mm
Height	96 mm

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Depth	67 mm
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Material specifications

Flammability rating according to UL 94	V2 (Housing)
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Environmental and real-life conditions

Ambient conditions

Degree of protection (Relay base)	IP20 (Relay base)
Degree of protection (Relay)	RT II (Relay)
Degree of protection (Installation location)	IP54 (Installation location)
Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

Approvals

UKCA

Certificate	UKCA-compliant
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Standards and regulations

All specifications in accordance with the standard

Standards/regulations	IEC 60947-5-1
	IEC 61810-3

Air clearances and creepage distances between the power circuits

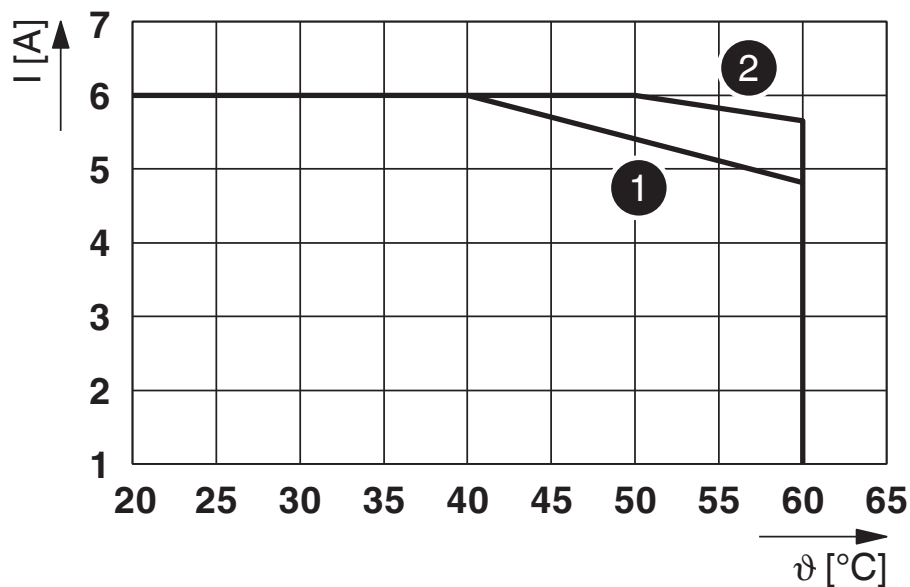
Standards/regulations	EN 61810-1
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Mounting

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

Drawings

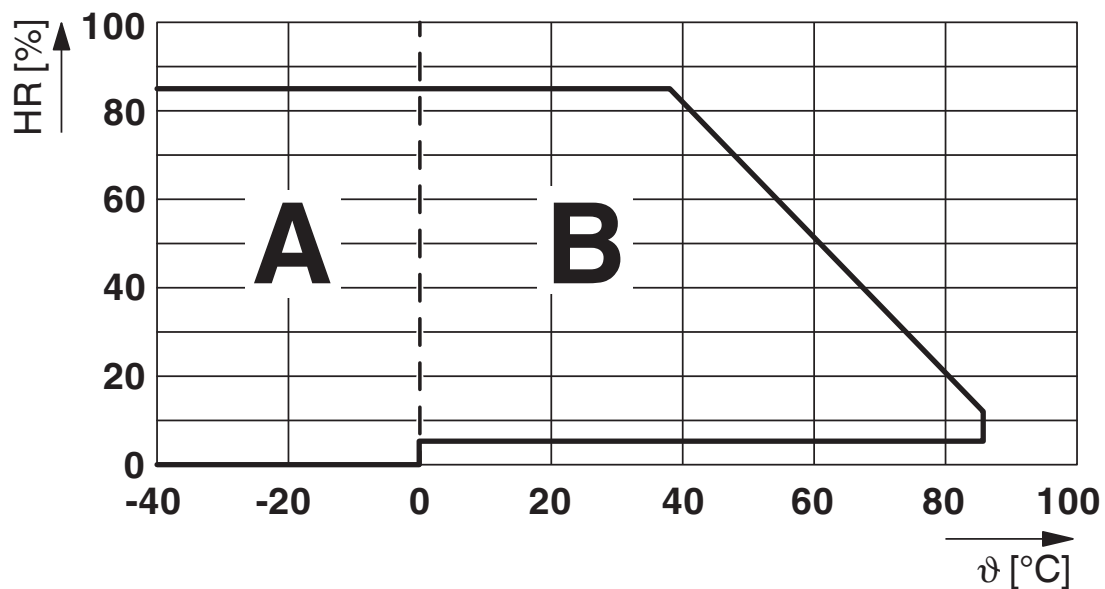
Diagram



Contact derating

- ① Aligned without clearance, nominal input voltage $1.1 \times U_N$
- ② Clearance ≥ 50 mm, nominal input voltage $1.0 \times U_N$

Diagram



Permissible humidity for operation and storage.

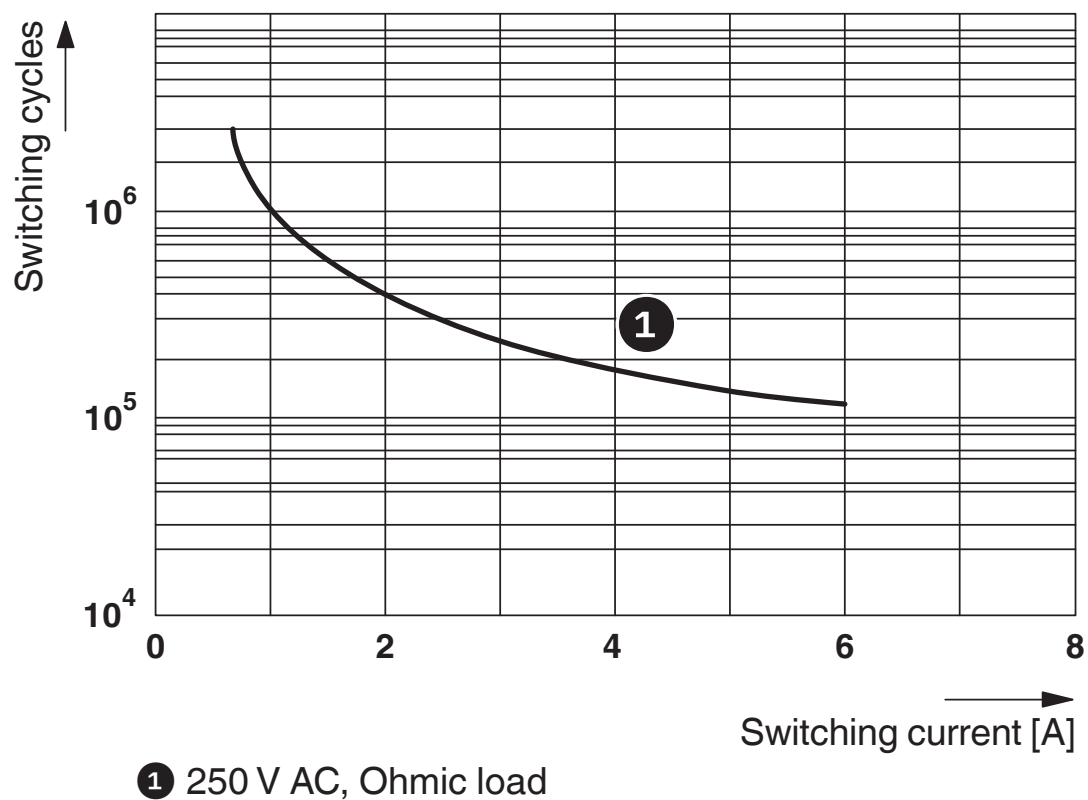
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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 $\leq 25^\circ\text{C}$.

Diagram



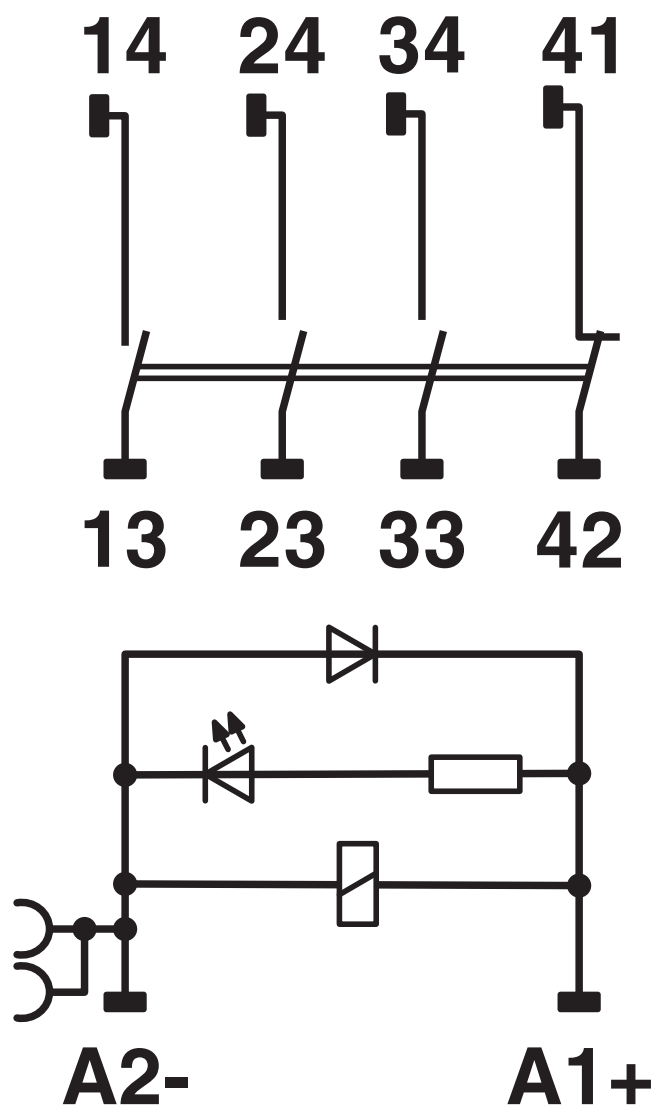
Electrical service life

Diagram



Service life reduction factor with various cos phi

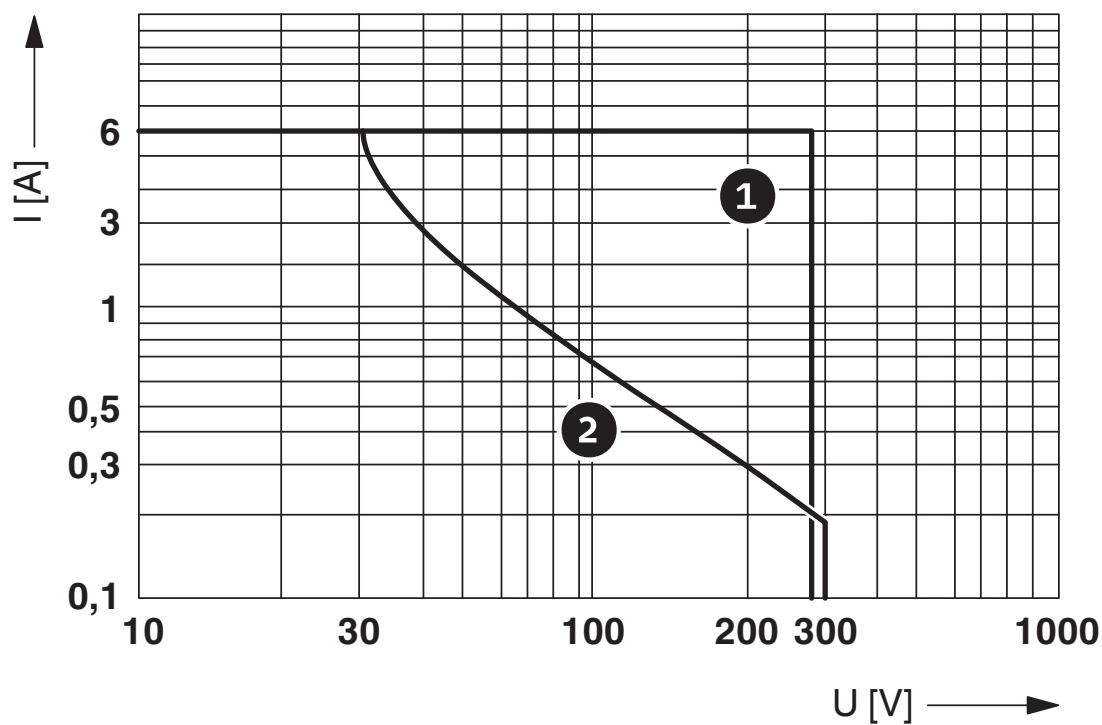
Circuit diagram



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Diagram

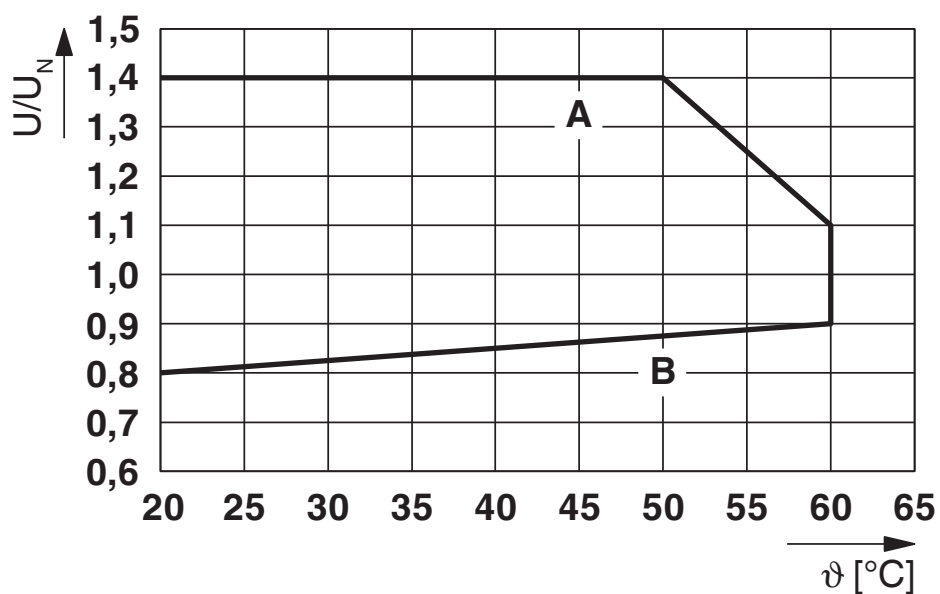


Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load

Diagram



Curve A: maximum continuous voltage at limiting continuous current

Curve B: minimum pick-up voltage for pre-excitation with U_N and limiting continuous current

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Approvals

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EAC

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



UL Listed

Approval ID: FILE E 172140



cUL Listed

Approval ID: FILE E 172140

cULus Listed

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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
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	b4dd0375-a05a-427a-8312-a7330483c926

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