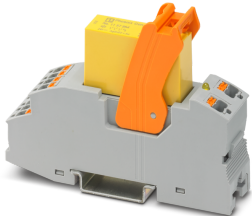


## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703


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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 type: 3 N/O contacts and 1 N/C contact, input voltage: 24 V DC



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 063151 142513
GTIN	4063151142513
Weight per Piece (excluding packing)	76.000 g
Custom tariff number	85364110
Country of origin	China

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	21 mm
Height	96 mm
Depth	67 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m

# Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

## Technical data

### Ambient conditions

Degree of protection	IP20 (Relay base)
	RT II (Relay)
	IP54 (Installation location)

### Coil side

Nominal input voltage $U_N$	24 V DC
Input voltage range in reference to $U_N$	See derating diagram
Typical input current at $U_N$	17 mA
Typical response time	10 ms
Typical release time	15 ms
Coil voltage	24 V DC
Protective circuit	Damping diode
Status display	Yellow LED

### Contact side

Contact type	3 N/O contacts, 1 N/C contact
Type of switch contact	Single contact
Contact material	AgSnO, hard gold-plated
Force-guided contacts in accordance with EN 61810-3	Type A
Maximum switching voltage	250 V AC
	300 V DC
Minimum switching voltage	10 V (5 mA)
Min. switching current	5 mA (10 V)
Maximum inrush current	35 A (20 ms)
Limiting continuous current	6 A
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)
Switching capacity	2 A (24 V, DC13)
	3 A (230 V, AC15)

### General

Test voltage	4 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)
	1.5 kV <sub>rms</sub> (50 Hz, 1 min., open contact)
	2.5 kV <sub>rms</sub> (50 Hz, 1 min., between contacts: 7, 8 to 9, 10)
	4 kV <sub>rms</sub> (50 Hz, 1 min., between contacts: all others)

# Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

## Technical data

### General

Operating mode	100% operating factor
Flammability rating according to UL 94	V2 (Housing)
Mechanical service life	approx. 10 <sup>7</sup> cycles
Mounting position	any
Assembly instructions	in rows with zero spacing
B <sub>10d</sub>	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)

### Connection data

Connection name	Coil side
Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve)
	0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve, two conductors on double terminal block)
Conductor cross section AWG	26 ... 16 (solid)
	26 ... 16 (flexible)

### Connection data 2

Connection name	Contact side
Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve)
	0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve, two conductors on double terminal block)
Conductor cross section AWG	26 ... 16 (solid)
	26 ... 16 (flexible)

### Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
	EN 61810-1
Rated insulation voltage	250 V AC

# Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

## Technical data

### Standards and Regulations

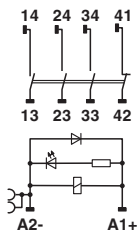
Rated surge voltage	4 kV
Insulation	Basic insulation
	Safe isolation, reinforced insulation and 6 kV between coil and contact circuit and between contacts 11-12 and 13-14, 41-42 to 23-24, 33-34
Pollution degree	2
Overvoltage category	III

### Environmental Product Compliance

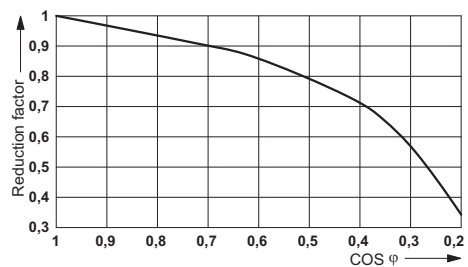
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Circuit diagram



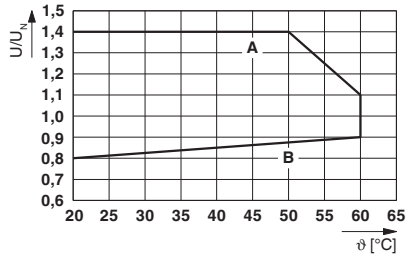
Diagram



Service life reduction factor with various cos phi

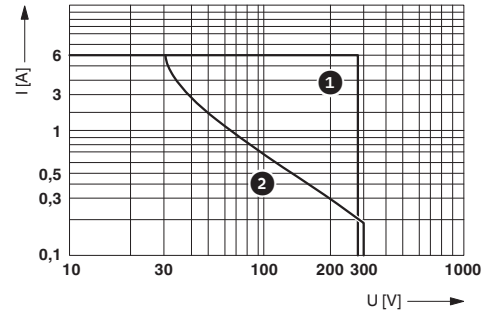
# Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

Diagram



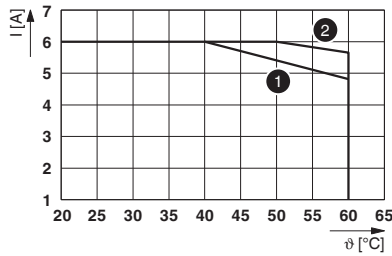
Curve A: maximum continuous voltage at limiting continuous current  
 Curve B: minimum pick-up voltage for pre-excitation with  $U_N$  and limiting continuous current

Diagram



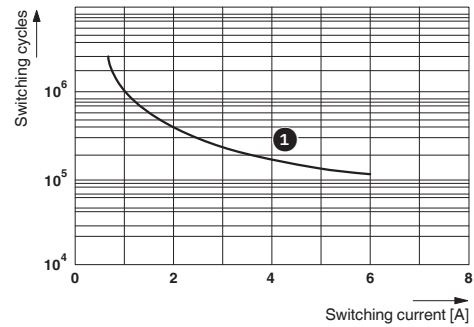
Interrupting rating  
 Curve 1: AC, ohmic load  
 Curve 2: DC, ohmic load

Diagram



Contact derating  
 # Aligned without clearance, nominal input voltage  $1.1 \times U_N$   
 # Clearance  $\geq 50$  mm, nominal input voltage  $1.0 \times U_N$

Diagram



Electrical service life

## Classifications

eCl@ss

eCl@ss 10.0.1	27371601
eCl@ss 11.0	27371601
eCl@ss 9.0	27371601

ETIM

ETIM 7.0	EC001437
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## Approvals

Approvals

# Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

## Approvals

### Approvals

UL Listed / cUL Listed / EAC / EAC / cULus Listed

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### Ex Approvals

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### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 172140
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EAC			TR_TS_D_00573_c
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EAC			RU*C- DE.*08.B.00010
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cULus Listed			
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## Accessories

### Accessories

#### DIN rail

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, acc. to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



DIN rail, unperforated, acc. to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



DIN rail perforated, acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, acc. to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

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DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile, color: silver

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## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, similar to EN 60715, material: Steel, Galvanized, white passivated, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, similar to EN 60715, material: Aluminum, uncoated, Standard profile, color: silver

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DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



DIN rail perforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



DIN rail, unperforated, similar to EN 60715, material: Steel, galvanized, Standard profile, color: silver

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## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, similar to EN 60715, material: Copper, uncoated, Standard profile, color: copper-colored

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End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

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DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, Standard profile 2.3 mm, color: silver

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End block

End clamp - CLIPFIX 35 - 3022218



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

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### Insulating sleeve

Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



Insulating sleeve - MPS-IH YE - 0201692

Insulating sleeve, color: yellow



## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

Insulating sleeve - MPS-IH GN - 0201702

Insulating sleeve, color: green



Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



### Jumper

Plug-in bridge - FBS 2-6 BU - 3036932



Plug-in bridge, pitch: 6.2 mm, color: blue

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### Labeled terminal marker

Zack marker strip - ZB 5 CUS - 0824962



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

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#### Zack marker strip - ZB 5,LGS:FORTL.ZAHLEN - 1050017



Zack marker strip, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

---

#### Zack marker strip - ZB 5,QR:FORTL.ZAHLEN - 1050020



Zack marker strip, white, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm

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#### Zack marker strip - ZB 5,LGS:GLEICHE ZAHLEN - 1050033



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

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#### Zack marker strip - ZB 5,LGS:L1-N,PE - 1050415



Zack marker strip, Strip, white, labeled, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.15 x 10.5 mm, Number of individual labels: 10

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#### Marker for terminal blocks - UC-TM 5 CUS - 0824581



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm, Number of individual labels: 96

## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

#### Marker for terminal blocks - UCT-TM 5 CUS - 0829595



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm, Number of individual labels: 72

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#### Zack marker strip - ZB 15 CUS - 0824945



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

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#### Zack marker strip - ZB 15,LGS:L1-N,PE - 0811998



Zack marker strip, Strip, white, labeled, printed horizontally: L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

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### Terminal marking

#### Zack marker strip - ZB 5 :UNBEDRUCKT - 1050004



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 5.1 x 10.5 mm, Number of individual labels: 10

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#### Marker for terminal blocks - UC-TM 5 - 0818108



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 10.5 x 4.6 mm, Number of individual labels: 96

## Relay Module - RIF-RPT-LDP-24DC/1X2/3X1/AU/FG - 1148703

### Accessories

#### Marker for terminal blocks - UCT-TM 5 - 0828734



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 5.2 mm, lettering field size: 4.6 x 10.5 mm, Number of individual labels: 72

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#### Zack marker strip - ZB 15:UNBEDRUCKT - 0811972



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 15.2 mm, lettering field size: 10.5 x 15.1 mm, Number of individual labels: 5

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#### Test plug terminal block

#### Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

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#### Spare parts

#### Safety relays - REL-SR- 24DC/3X1AU/1X2AU/FG - 1157954



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