

**Power PCB Relay RT1 bifurcated**

- 1 pole 12 / 16 A, 1 CO or 1 NO contact
- Sensitive DC-coil, 200 or 400 mW
- 5 kV / 10 mm coil-contact, reinforced insulation
- Ambient temperature 85°C
- RoHS compliant (Directive 2002/95/EC)

**Applications**

switching from dry circuit up to 16 A, including arc-less switching, with extra high reliability



FD144-B

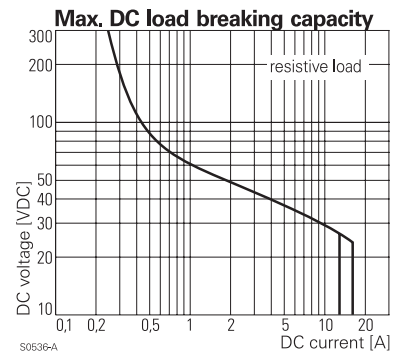
**Approvals**

VDE REG.-Nr. 6106, **UL** US E214025, **SP** US 14385  
 Technical data of approved types on request

**Contact data**

Contact configuration	1 CO or 1 NO contact	
Contact set	bifurcated contact	
Type of interruption	micro disconnection	
Rated current	12 A <sup>1)</sup>	16 A
Rated voltage / max.switching voltage AC	250/400 VAC	
Maximum breaking capacity AC	3000 VA	4000 VA
Limiting making capacity, max 4 s, df 10%	16 A	
Contact material	AgNi 90/10 gold plated	AgNi 90/10
Mechanical endurance	> 30 x 10 <sup>6</sup> cycles	
Rated frequency of operation with / without load	6 / 600 min <sup>-1</sup>	

<sup>1)</sup> recommended for switching load range ≤ 5 A



**Contact ratings**

Type	Load	Cycles
RT33C	16 A, 250 VAC, NO contact, 85°C	50x10 <sup>3</sup>
RT31C	10 mA, 24 V, CO contact, contact voltage drop < 0.1 V	10x10 <sup>6</sup>
RTB8D	12 A, 250 VAC, NO contact, 85°C	6x10 <sup>3</sup>
RTB7D	5A, 250 VAC, CO contact, 85°C	100x10 <sup>3</sup>
RTB7D	10 mA, 5V, CO contact, contact voltage drop < 0.5 V	1x10 <sup>6</sup>
RTB7D	10 mA, 24V, CO contact, contact voltage drop < 1 V	4x10 <sup>6</sup>

**Coil data**

	12 A version	16 A version
Rated coil voltage range	5...60 VDC	5...110 VDC
Coil power	typ 200 mW	typ 400 mW
Operative range	2	

**Power PCB Relay RT1 bifurcated (Continued)**

Coil insulation system according UL1446 class F

**Coil versions, 16 A version**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
005	5	3.5	0.5	62±10%	403
006	6	4.2	0.6	90±10%	400
012	12	8.4	1.2	360±10%	400
024	24	16.8	2.4	1440±10%	400
048	48	33.6	4.8	5520±10%	417
060	60	42.0	6.0	8570±12%	420
110	110	77.0	11.0	28800±12%	420

All figures are given for coil without preenergization, at ambient temperature +23°C  
Other coil voltages on request

**Coil versions, 12 A version**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ohm	Rated coil power mW
005	5	3.5	0.5	125±10%	200
006	6	4.2	0.6	190±10%	190
012	12	8.4	1.2	690±10%	210
024	24	16.8	2.4	2980±10%	190
048	48	33.6	4.8	10470±10%	220
060	60	42.0	6.0	16980±10%	210

All figures are given for coil without preenergization, at ambient temperature +23°C  
Other coil voltages on request

**Insulation**

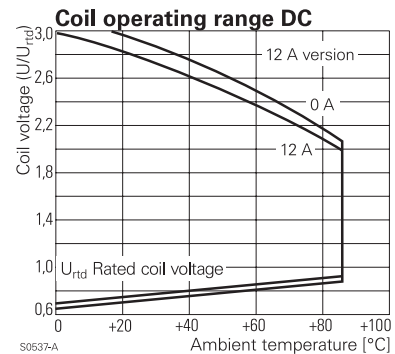
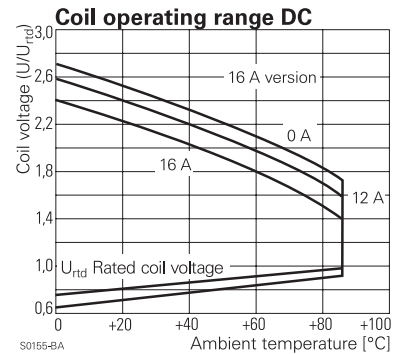
Dielectric strength coil-contact circuit	5000 V <sub>rms</sub>	
open contact circuit	1000 V <sub>rms</sub>	
Clearance / creepage coil-contact circuit	≥ 10 / 10 mm	
Material group of insulation parts	IIIa	
Tracking index of relay base	PTI 250 V	
Insulation to IEC 60664-1		
Type of insulation coil-contact circuit	reinforced	
open contact circuit	micro disconnection	
Rated insulation voltage	250 V	
Pollution degree 12 A version	3	3
16 A version	3	2
Rated voltage system	250 V	400 V
Overvoltage category	III	

**Other data**

RoHS - Directive 2002/95/EC	compliant
Ambient temperature range	-40...+85°C
Operate- / release time	typ 7 / 3 ms
Bounce time, NO contact	typ 3 ms
Vibration resistance (function), NO / NC contact	
12 A version	15 / 3 g, 30 ... 500 Hz
16 A version	15 / 4 g, 30 ... 500 Hz
Shock resistance (destruction)	100 g
Category of protection 12 A version	RTIII - wash tight
16 A version	RTII - flux proof
Mounting distance	5 mm
Resistance to soldering heat flux-proof version	270°C / 10 s
wash-tight version	260°C / 5 s
Relay weight	14 g
Packaging unit	20 / 500 pcs

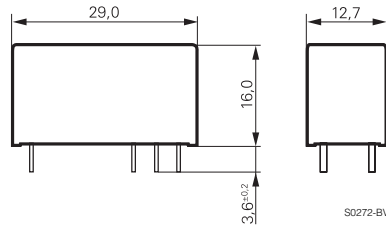
**Accessories**

For details see datasheet Accessories Power Relay RT



**Power PCB Relay RT1 bifurcated (Continued)**

**Dimensions**

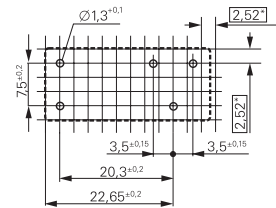


**PCB layout / terminal assignment**

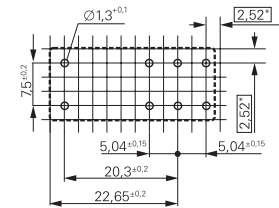
Bottom view on solder pins

\*) With the recommended PCB hole sizes a grid pattern from 2.5 mm to 2.54 mm can be used.

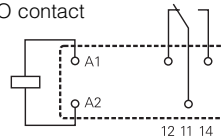
12 A, pinning 3.5 mm



16 A, pinning 5 mm

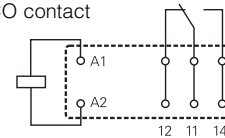


1 CO contact



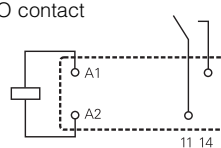
S0163-BG

1 CO contact



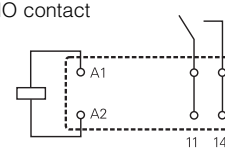
S0418-CA

1 NO contact



S0163-BH

1 NO contact



S0163-BE

S0163-BF

**Product key**

Type

Version

**3** 16 A, pinning 5 mm, flux proof      **B** 12 A, pinning 3.5 mm, wash tight

Configuration

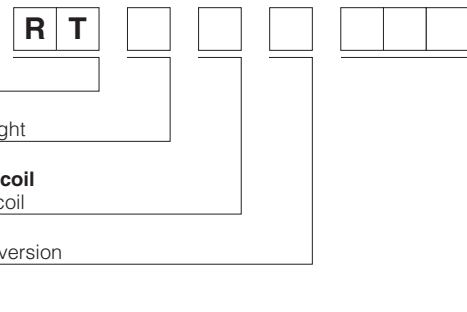
**1** 1 CO contact, 16 A, 400 mW coil      **7** 1 CO contact, 12 A, 200 mW coil  
**3** 1 NO contact, 16 A, 400 mW coil      **8** 1 NO contact, 12 A, 200 mW coil

Contact material

**C** AgNi 90/10, 16 A version      **D** AgNi 90/10 gold plated, 12 A version

Coil

Coil code: please refer to coil versions table



Product key	Version	Contacts	Cont. material	Coil	Coil	Part number
RT31C012	16 A, pinning 5mm	1 CO	AgNi 90/10	DC coil	12 VDC	1415900-2
RT31C024	flux proof	bifurcated contact			24 VDC	1415900-7
RTB7D012	12 A, 3.5mm		AgNi 90/10		12 VDC	1415900-5
RTB7D024	wash tight		gold plated		24 VDC	1415900-6