

Power PCB Relay RT1 bistable

- 1 pole 16 A, 1 CO or 1 NO contact
- Polarized bistable version with 1 or 2 coils
- 5 kV / 10 mm coil-contact
- Reinforced insulation

Applications

Battery powered equipment or applications with "memory function"



F0176-C

Approvals

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

Contact data

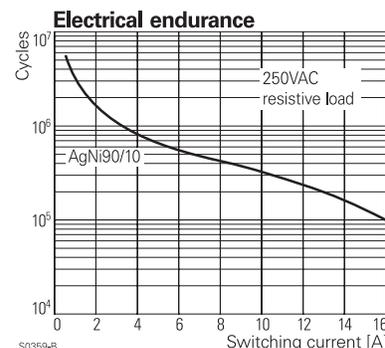
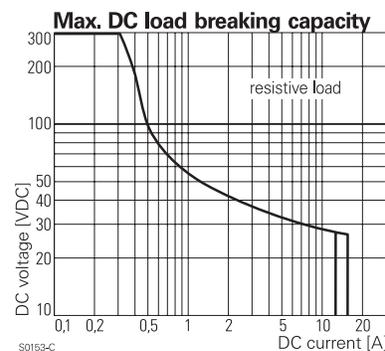
Contact configuration	1 CO or 1 NO contact
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	16 A
Limiting continuous current	16 A, UL: 20 A
Maximum breaking capacity AC	4000 VA
Limiting making capacity, max 4 s, duty factor 10%	30 A
Contact material	AgNi 90/10
Rated frequency of operation with / without load	6 / 1200 min ⁻¹
Operate- / reset time	max 10 / 10 ms
Bounce time NO / NC contact	max 3 / 6 ms

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
RT314	NO	16 A, 250 VAC, cosφ=1	85°C	30x10 ³
RT314	CO	16 A, 250 VAC, cosφ=1	85°C	10x10 ³
UL 508				
RT314	NO / NC	20 A, 250 VAC, general purpose	85°C	6x10 ³
RT334	NO	16 A, 250 VAC, general purpose	85°C	50x10 ³
RT314	NO	1 hp, 240 VAC	40°C	1x10 ³

Coil data

	1 coil	2 coils
Rated coil voltage range	5...24 VDC	
Operative range to IEC 61810	2	
Limiting voltage, % of rated coil voltage	120%	150%
Minimum energization duration	30 ms	
Maximum energization duration	1 min at < 10% DF	
Coil insulation system according UL1446	class F	



Power PCB Relay RT1 bistable (Continued)

Coil versions, bistable coil

Coil code	Rated voltage VDC	Operate voltage VDC	Reset voltage VDC	Coil resistance Ω	Rated coil power mW
bistable, 1 coil					
A05	5	3.5	2.8	62 ± 10%	403
A06	6	4.2	3.3	90 ± 10%	400
A12	12	8.4	6.6	360 ± 10%	400
A24	24	16.8	13.2	1440 ± 10%	400
bistable, 2 coils					
F05	5	3.5	2.8	42 ± 10%	595
F06	6	4.2	3.3	55 ± 10%	655
F12	12	8.4	6.6	240 ± 10%	600
F24	24	16.8	13.2	886 ± 10%	650

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

Coils operation

Version	1 coil		2 coils	
Coil terminals	A1	A2	A1	A3 A2
Pull-in	+	-	+	-
Reset	-	+	-	+

Contact position not defined at delivery

Insulation

Dielectric strength coil-contact circuit		5000 V _{rms}
open contact circuit		1000 V _{rms}
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 61810-1		
Type of insulation coil-contact circuit	reinforced	
open contact circuit	micro disconnection	
Rated insulation voltage	250 V	
Pollution degree	3	2
Rated voltage system	240 V	230 / 400 V
Overvoltage category	III	

Other data

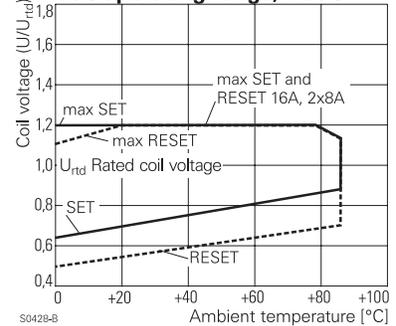
Mechanical endurance	> 5 x 10 ⁶ cycles
Material	
RoHS - Directive 2002/95/EC	compliant as per product date code 0413
Environment	
Ambient temperature range 1 coil	-10...+85°C
2 coils	-40...+85°C
Vibration / shock resistance (function) opening NC cont.	3 / 5 g
opening closed NO contact	6 / 15 g
Shock resistance (destruction)	100 g
Category of protection	RTII - flux proof
Processing	
Mounting	pcb or on socket*)
Mounting distance	≥ 0 mm
Resistance to soldering heat flux-proof version	270 °C / 10 s
Relay weight	14 g
Packaging unit 1 coil	20 / 500 pcs
2 coils	100 pcs

*) socket available for 1 coil version only, see Accessories

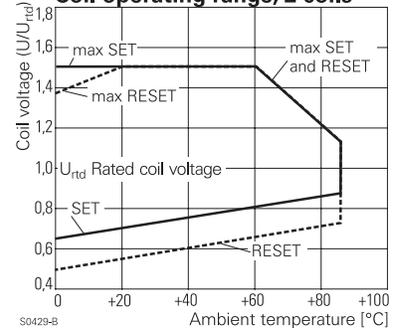
Accessories

For 1 coil version, details see datasheet	Accessories Power Relay RT
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Coil operating range, 1 coil

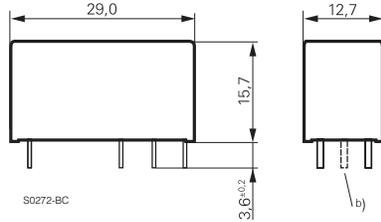


Coil operating range, 2 coils



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Dimensions



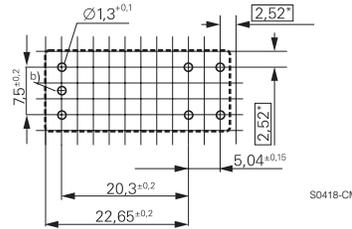
a) Indicated contact position during or after coil energization with reset voltage.

b) for 2 coil version only

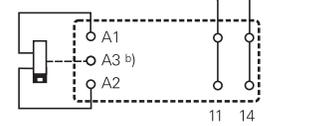
PCB layout / terminal assignment

Bottom view on solder pins

16 A, pinning 5 mm



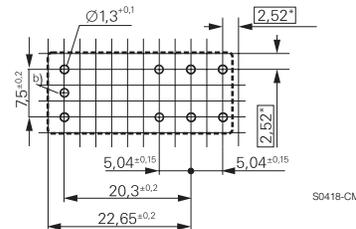
1 NO contact



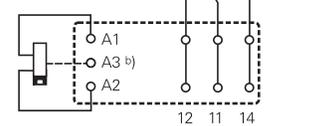
S0163-D1

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

16 A, pinning 5 mm



1 CO contact



S0163-D1

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

Product key

Typical product key

RT 3 1 4 F24

Type

RT Power PCB Relay RT1 bistable

Version

3 16 A, pinning 5 mm, flux proof

Contact configuration

1 1 CO contact (1 form C)

Contact material

4 AgNi 90/10

Coil

Coil code: please refer to coil versions table, preferred types in bold print

Product key	Version	Contacts	Cont. material	Coil	Coil	Part number
RT314A12	16 A	1 CO contact	AgNi 90/10	bistable	12 VDC	8-1393239-0
RT314A24	pinning 5 mm			1-coil	24 VDC	8-1393239-1
RT314F12	flux proof			bistable	12 VDC	8-1393239-7
RT314F24				2-coils	24 VDC	8-1393239-8