

# Power PCB Relay RT1 bistable

1 pole 16 A, polarized bistable version



## Features

- 1 C/O contact
- Bistable with 1 or 2 coils
- 5 kV / 10 mm coil-contact
- Height 15.7 mm
- Cadmium-free contacts
- Protection class II

## Applications

Battery powered equipment or applications with "memory function"

F0176-B



Technical data of approved types on request

### Contact data

Configuration	1 C/O contact
Type of contact	single contact
Rated current	16 A
Rated voltage / max. breaking voltage	250 Vac / 440 Vac
Rated breaking capacity	4000 VA
Make current (max. 4 s at duty cycle 10%)	30 A
Contact material	AgNi 90/10

### Coil data

	1 coil	2 coils
Nominal voltage	5...24 Vdc	
Nominal coil power	typ. 400 mW	typ. 600 mW
Minimum energization time	30 ms	
Information on reduced pulse duration with higher energization voltages on demand		
Max. energization for version with 2 coils	1 min at <10% duty cycle	
Reset voltage max.	120 % U <sub>nom</sub>	150 % U <sub>nom</sub>

### Coil versions, bistable

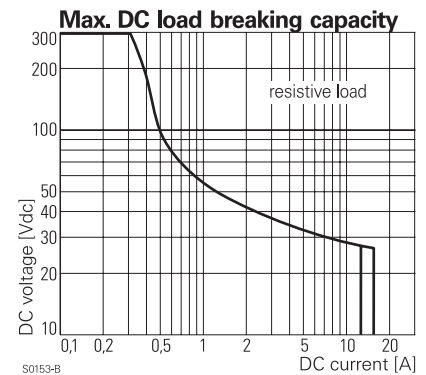
Coil code	Nominal voltage Vdc	Pull-in voltage Vdc	Reset voltage Vdc	Coil resistance Ω	Coil current mA
<b>bistable, 1 coil</b>					
A05	5	3.5	3.5	62 ± 10%	80.0
A06	6	4.2	4.2	90 ± 10%	66.7
<b>A12</b>	<b>12</b>	<b>8.4</b>	<b>8.4</b>	<b>360 ± 10%</b>	<b>33.3</b>
<b>A24</b>	<b>24</b>	<b>16.8</b>	<b>16.8</b>	<b>1440 ± 10%</b>	<b>16.7</b>
<b>bistable, 2 coils</b>					
F05	5	3.5	3.5	42 ± 10%	120.0
F06	6	4.2	4.2	55 ± 10%	110.0
<b>F12</b>	<b>12</b>	<b>8.4</b>	<b>8.4</b>	<b>240 ± 10%</b>	<b>50.0</b>
<b>F24</b>	<b>24</b>	<b>16.8</b>	<b>16.8</b>	<b>886 ± 10%</b>	<b>27.0</b>

All figures are given for coil without preenergization, at ambient temperature +20°C  
Other coil voltages on request

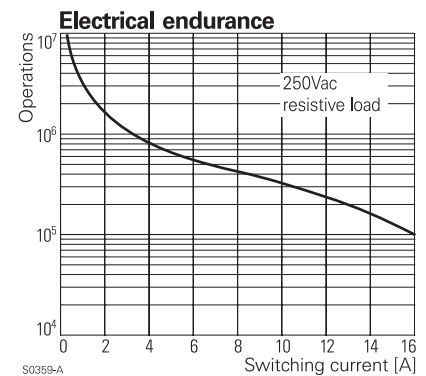
### Coils - operation

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

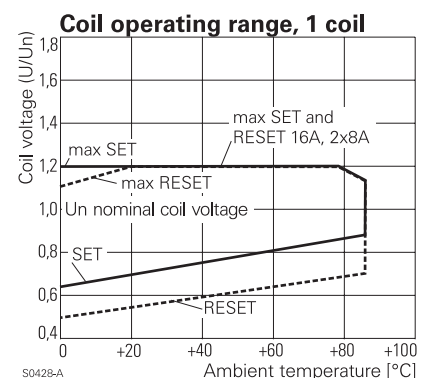
Contact position not defined at delivery



S0153-B



S0359-A



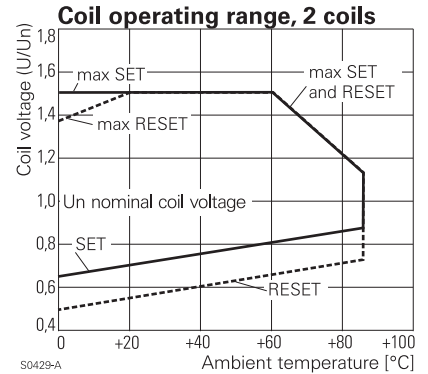
S0428-A

# Power PCB Relay RT1 bistable

1 pole 16 A, polarized bistable version

Insulation		
Dielectric strength	coil-contacts	5000 V <sub>rms</sub>
	open contact circuit	1000 V <sub>rms</sub>
Clearance / creepage		10 / 10 mm
Insulation to IEC 60664		
	Voltage rating	250 V
	Pollution degree	3
	Overvoltage category	III
Insulation to VDE 0110b (2/79)		
	Insulation category / reference voltage	C / 250
Tracking resistance of relay base		CTI 250

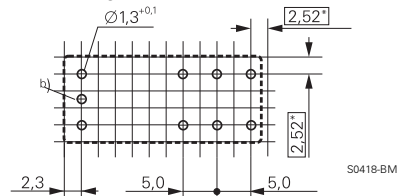
Other data		
Flammability class according to UL 94		V-0
Coil insulation system according to UL 1446		Class F
Ambient temperature	1 coil	-10...+85 °C
	2 coils	-40...+85 °C
Mechanical life		5x10 <sup>6</sup> operations
Max. switching rate at rated- / minimum load		6 min <sup>-1</sup> / 600 min <sup>-1</sup>
Operate- / release time		typ. 5 / 4 ms
Bounce time N/O contact/N/C contact		typ. 1 / 3 ms
Vibration resistance / shock resistance		
	opening N/C contact	3 / 5 g
	opening closed N/O contact	6 / 15 g
Shock resistance (destruction)		100 g
Category of protection (IEC 61810)		RT II - flux proof
Relay weight		13 g
Packaging unit	1 coil	20 / 500 pcs.
	2 coils	25 / 100 pcs.
Accessories		see accessories RT



## PCB layout / terminal assignment

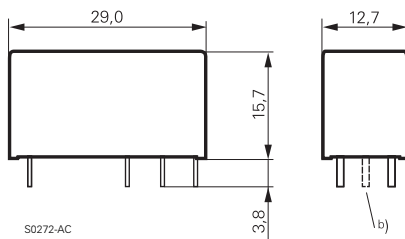
View on solder pins  
Dimensions in mm

16 A, pinning 5 mm



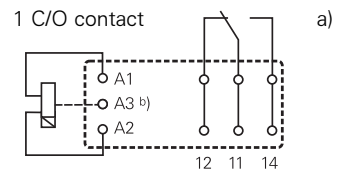
\*) With the recommended PCB hole sizes a grid pattern from 2.5 mm to 2.54 mm can be used.

## Dimensions



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

b) for 2 coil version only



## Product key

Type

Version

**3** 16 A, pinning 5 mm, flux proof

Contacts

**1** 1 C/O contact

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 C/O 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