

**Power PCB Relay RT1**

- 1 pole 12A/16A, 1 form C (CO) or 1 form A (NO) contact
- Sensitive coil 400mW
- 5kV/10mm coil-contact, reinforced insulation
- Ambient temperature 85°C



Typical applications  
Boiler control, timers, garage door control, POS automation, interface modules



**Approvals**

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

Contact Data	12A	16A
Contact arrangement	1 form C (CO) or 1 form A (NO)	
Rated voltage	250VAC	
Max. switching voltage	400VAC	
Rated current	12A	16A
Limiting continuous current	12A	16A, UL: 20A
Limiting making current max. 4s, duty factor 10%	25A	30A
Breaking capacity max.	3000VA	4000VA
Contact Material	AgNi 90/10	
Frequency of operation, with/without load	360/72000h <sup>-1</sup>	
Operate/release time max., DC coil	8/6ms	
Bounce time max., DC coil, form A/form B	4/6ms	

**Contact ratings**

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
RT314 DC-coil	A (NO)	16A, 250VAC, cosφ=1, 85°C	30x10 <sup>3</sup>
RT314 DC-coil	C (CO)	16A, 250VAC, cosφ=1, 85°C	10x10 <sup>3</sup>
RT314 DC-coil	A (NO)	10A, 400VAC, cosφ=1, 85°C	150x10 <sup>3</sup>
RT114 DC-coil	A (NO)	12A, 250VAC, cosφ=1, 85°C	50x10 <sup>3</sup>
RT114 AC-coil	A (NO)	12A, 250VAC, cosφ=1, 70°C	100x10 <sup>3</sup>
<b>UL 508</b>			
RT314	A/B (NO/NC)	20A, 250VAC, general purpose, 85°C	6x10 <sup>3</sup>
RT334	A (NO)	16A, 250VAC, gen. purpose, 85°C	50x10 <sup>3</sup>
RT314	A (NO)	1hp, 240VAC, 40°C	1x10 <sup>3</sup>
<b>EN60947-5-1</b>			
RT314 DC-coil	A/B (NO/NC)	2A, 24VDC, DC13	6.050
<b>EN60730-1</b>			
RT314 DC-coil	A (NO)	12(2)A, 250VAC, 85°C	100x10 <sup>3</sup>

**Contact Data (continued)**

**Contact ratings**

Type	Load	Cycles
RT3, RTD	1 HP @ 480VAC* motor	6x10 <sup>3</sup>
RT3, RTD	1 HP @ 240VAC* motor	6x10 <sup>3</sup>
RT3, RTD	1/2 HP @ 120VAC* motor	6x10 <sup>3</sup>
RT3, RTD	60 LRA/10 FLA @ 250VAC* motor	30x10 <sup>3</sup>
RT3, RTD	TV-5 @ 120VAC* Tungsten	25x10 <sup>3</sup>
RT3, RTD	A300, 720VA @ 240VAC* Pilot Duty	30x10 <sup>3</sup>
RT3, RTD	B300, 360VA @ 240VAC** Pilot Duty	30x10 <sup>3</sup>

\*) form A (NO) contact only, \*\*) form B (NC) contact only

Mechanical endurance >30x10<sup>6</sup> operations

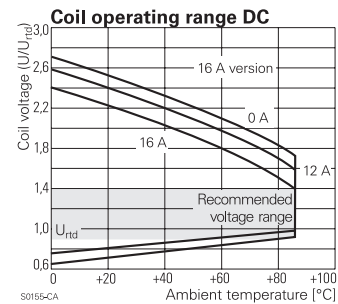
**Coil Data**

Coil voltage range	5 to 110VDC
Operative system, IEC 61810	2
Coil insulation system according UL	class F

**Coil versions, DC coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
005	5	3.5	0.5	62	403
006	6	4.2	0.6	90	400
009	9	6.3	0.9	200	400
012	12	8.4	1.2	360	400
024	24	16.8	2.4	1440	400
048	48	33.6	4.8	5520	417

All figures are given for coil without pre-energization, at ambient temperature +23°C. Other coil voltages on request.



**Power PCB Relay RT1** (Continued)

**Insulation Data**

Initial dielectric strength	
between open contacts	1000V <sub>rms</sub>
between contact and coil	5000V <sub>rms</sub>
Clearance/creepage	
between contact and coil	≥10/10mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 250V

**Other Data** (continued)

Terminal type	PCB-THT, plug-in
Weight	14g
Resistance to soldering heat	THT, IEC 60068-2-20
RTII	270°C/10s
RTIII	260°C/5s
Packaging/unit	tube/20 pcs., box/500 pcs.

**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at [www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

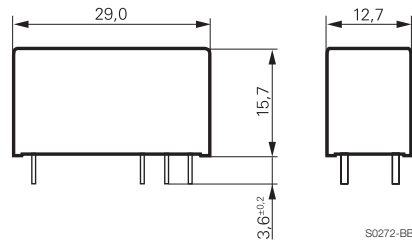
Ambient temperature	-40 to 85°C
Category of environmental protection	
IEC 61810	RTII - flux proof, RTIII - wash tight
Vibration resistance (functional)	
form A/form B contact, 30 to 500Hz	20g/5g
Shock resistance (destructive)	100g

**Accessories**

For details see datasheet [Accessories Industrial Power Relay RT](#)

NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

**Dimensions**

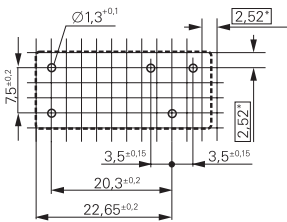


**PCB layout / terminal assignment**

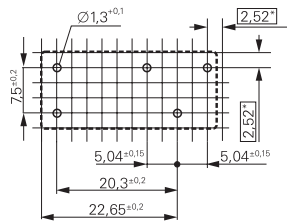
Bottom view on solder pins

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

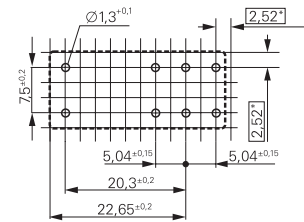
12A, pinning 3.5mm



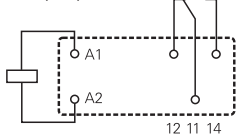
12A, pinning 5mm



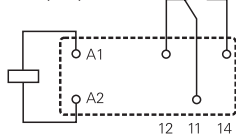
16A, pinning 5mm



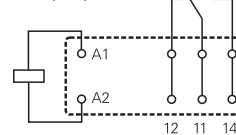
1 form C (CO) contact



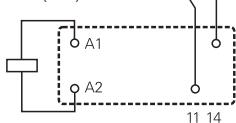
1 form C (CO) contact



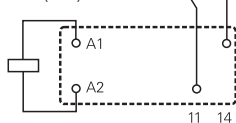
1 form C (CO) contact



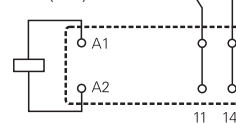
1 form A (NO) contact



1 form A (NO) contact



1 form A (NO) contact



**Power PCB Relay RT1** (Continued)

<b>Product code structure</b>		Typical product code	<b>RT</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>024</b>	<b>F</b>
<b>Type</b>		RT Power PCB Relay RT1						
<b>Version</b>		<ul style="list-style-type: none"> <li><b>1</b> 12A, pinning 3.5mm, flux proof</li> <li><b>2</b> 12A, pinning 5mm, flux proof *)</li> <li><b>3</b> 16A, pinning 5mm, flux proof</li> <li><b>B</b> 12A, pinning 3.5mm, wash tight</li> <li><b>D</b> 16A, pinning 5mm, wash tight</li> </ul>						
<b>Contact arrangement</b>		<ul style="list-style-type: none"> <li><b>1</b> 1 form C (CO) contact</li> <li><b>3</b> 1 form A (NO) contact</li> </ul>						
<b>Contact material</b>		<ul style="list-style-type: none"> <li><b>4</b> AgNi 90/10</li> </ul>						
<b>Coil</b>		Coil code: please refer to coil versions table						
<b>Version</b>		<ul style="list-style-type: none"> <li><b>F</b> Standard version</li> </ul>						

Product code	Version	Contacts	Contact material	Coil	Part number
RT114012F	12A, pinning 3.5mm, flux proof	1 form C (CO) contact	AgNi 90/10	12VDC	1419108-2
RT114024F		1 form A (NO) contact		24VDC	1419108-3
RT134012F	16A, pinning 5mm, flux proof	1 form C (CO) contact		12VDC	5-1415020-1
RT134024F		1 form A (NO) contact		24VDC	2-1393242-1
RT314005F	12A, pinning 3.5mm, flux proof	1 form C (CO) contact		5VDC	1419108-8
RT314012F		1 form A (NO) contact		12VDC	2-1393237-2
RT314024F	12A, pinning 3.5mm, wash tight	1 form C (CO) contact		24VDC	2-1393237-3
RT334012F		1 form A (NO) contact		12VDC	2-1393237-5
RT334024F	16A, pinning 3.5mm, wash tight	1 form C (CO) contact		24VDC	2-1393237-7
RTB14005F		1 form A (NO) contact		5VDC	2-1419108-4
RTB14012F	16A, pinning 5mm, flux proof	1 form C (CO) contact		12VDC	2-1419108-5
RTB14024F		1 form A (NO) contact		24VDC	2-1419108-6
RTB34012F	12A, pinning 3.5mm, wash tight	1 form C (CO) contact		12VDC	2-1419108-7
RTD14005F		1 form A (NO) contact		5VDC	2-1419108-8
RTD14012F	16A, pinning 3.5mm, wash tight	1 form C (CO) contact		12VDC	2-1419108-9
RTD14024F		1 form A (NO) contact		24VDC	3-1419108-1
RTD34012F	12A, pinning 3.5mm, wash tight	1 form C (CO) contact		12VDC	3-1419108-6
RTD34024F		1 form A (NO) contact		24VDC	3-1419108-9

This list represents the most common types and does not show all variants covered by this datasheet. Other types on request