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

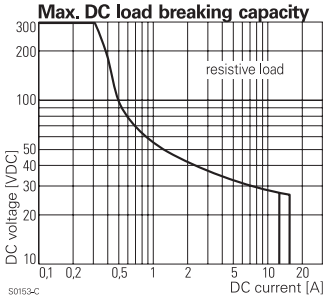
VDE REG.-Nr. 6106, UL E214025, cCSAus 14385
Technical data of approved types on request

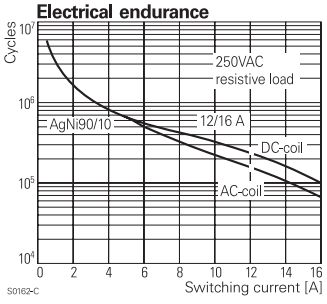
Contact Data

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





Contact Data (continued)

Contact ratings

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

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

Mechanical endurance	>30x10^6 operations

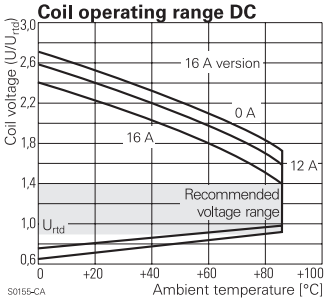
Coil Data

Coil voltage range	5 to 110VDC
Operative range, 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_{rms}
between contact and coil	5000V_{rms}
Clearance/creepage	
between contact and coil	≥10/10mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 250V

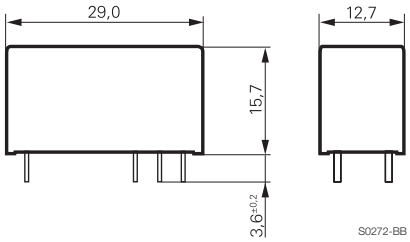
Other Data	
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	-40 to 85°C
Category of environmental protection	
IEC 61810	RTII - flux proof, RTIII - wash tight
Vibration resistance (functional)	
form A/form B contact, 30 to 500Hz	20g/5g
Shock resistance (destructive)	100g

Other Data (contiinued)	
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.

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

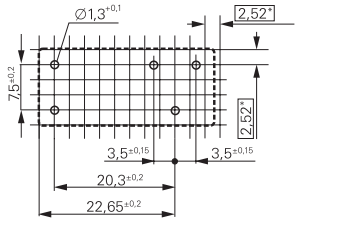


PCB layout / terminal assignment

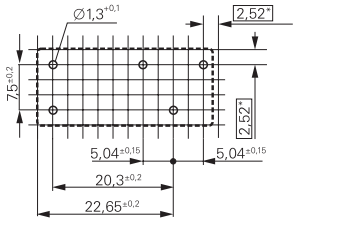
Bottom view on solder pins

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

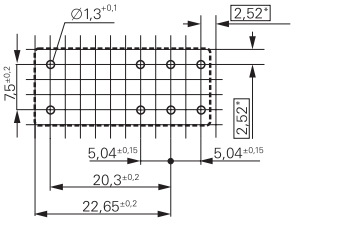
12A, pinning 3.5mm



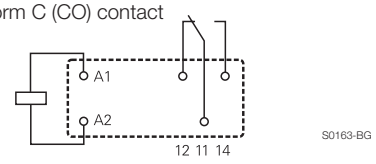
12A, pinning 5mm



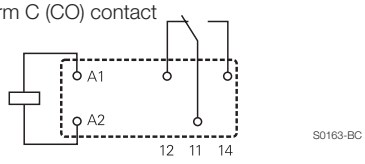
16A, pinning 5mm



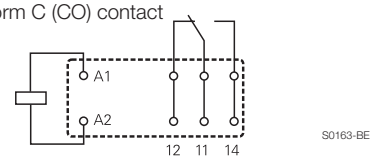
1 form C (CO) contact



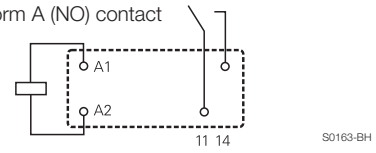
1 form C (CO) contact



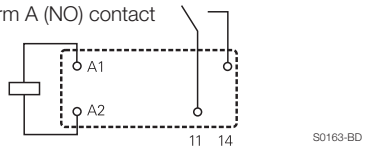
1 form C (CO) contact



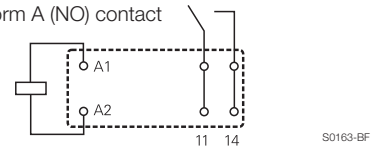
1 form A (NO) contact



1 form A (NO) contact



1 form A (NO) contact



Power PCB Relay RT1 (Continued)

Product code structure	Typical product code	RT	3	1	4	024	F

Type
RT Power PCB Relay RT1

Version
1 12A, pinning 3.5mm, flux proof
2 12A, pinning 5mm, flux proof *)
3 16A, pinning 5mm, flux proof
B 12A, pinning 3.5mm, wash tight
D 16A, pinning 5mm, wash tight

Contact arrangement
1 1 form C (CO) contact
3 1 form A (NO) contact

Contact material
4 AgNi 90/10

Coil
Coil code: please refer to coil versions table

Version
F Standard version

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				24VDC	1419108-3
RT134012F		1 form A (NO) contact		12VDC	5-1415020-1
RT134024F				24VDC	2-1393242-1
RT314005F	16A, pinning 5mm, flux proof	1 form C (CO) contact		5VDC	1419108-8
RT314012F				12VDC	2-1393237-2
RT314024F				24VDC	2-1393237-3
RT334012F		1 form A (NO) contact		12VDC	2-1393237-5
RT334024F				24VDC	2-1393237-7
RTB14005F	12A, pinning 3.5mm, wash tight	1 form C (CO) contact		5VDC	2-1419108-4
RTB14012F				12VDC	2-1419108-5
RTB14024F				24VDC	2-1419108-6
RTB34012F		1 form A (NO) contact		12VDC	2-1419108-7
RTD14005F	16A, pinning 3.5mm, wash tight	1 form C (CO) contact		5VDC	2-1419108-8
RTD14012F				12VDC	2-1419108-9
RTD14024F				24VDC	3-1419108-1
RTD34012F		1 form A (NO) contact		12VDC	3-1419108-6
RTD34024F				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