

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

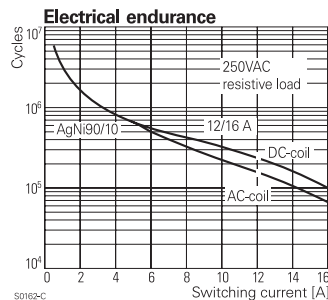
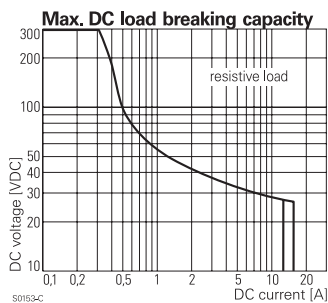
RT314	A/B (NO/NC)	20A, 250VAC, general purpose, 85°C	6x10 ³
RT334	A (NO)	16A, 250VAC, gen. purpose, 85°C	50x10 ³
RT314	A (NO)	1hp, 240VAC, 40°C	1x10 ³

EN60947-5-1

RT314 DC-coil	A/B (NO/NC)	2A, 24VDC, DC13	6.050
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EN60730-1

RT314 DC-coil	A (NO)	12(2)A, 250VAC, 85°C	100x10 ³
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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 >30x10⁶ operations

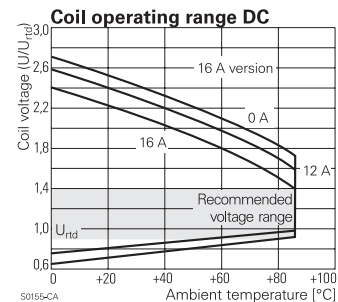
Coil Data

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 (continued)

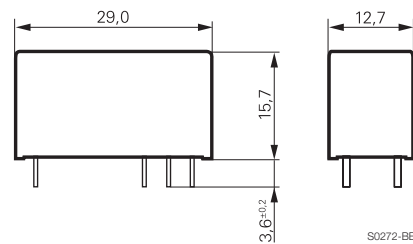
Terminal type	PCB-THT, plug-in
Weight	14g
Resistance to soldering heat	THT, IEC 60068-2-20
RTII	270°C/10s
RTIII	260°C/5s
Packaging/unit	tube/20 pcs., box/500 pcs.

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

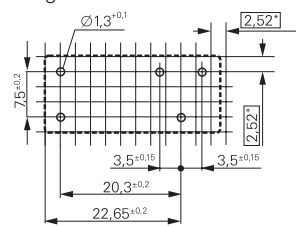


PCB layout / terminal assignment

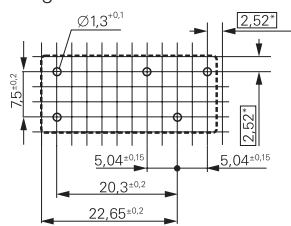
Bottom view on solder pins

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

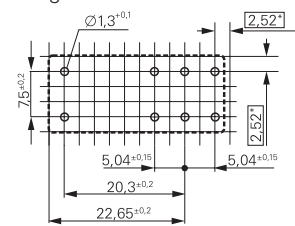
12A, pinning 3.5mm



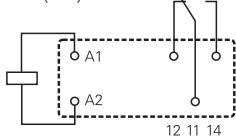
12A, pinning 5mm



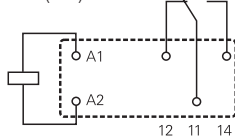
16A, pinning 5mm



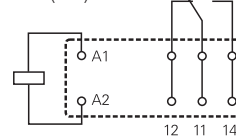
1 form C (CO) contact



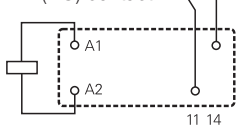
1 form C (CO) contact



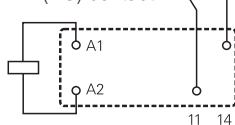
1 form C (CO) contact



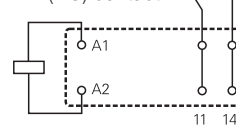
1 form A (NO) contact



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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[RTD14005F](#)