

Power PCB Relay RT1 DC and AC (for Asia/Pacific markets)

- 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
- WG version: product in accordance to IEC 60335-1



Typical applications

Boiler control, timers, garage door control, POS automation, interface modules.



Approvals

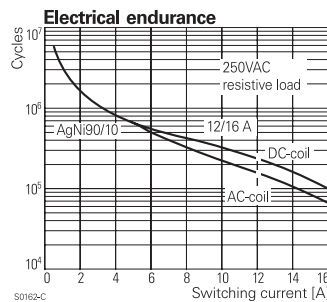
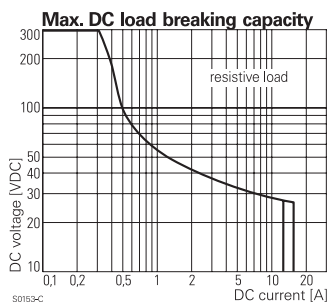
VDE Cert. No. 40007571, UL E214025, cCSAus 1142018
Technical data of approved types on request.

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

Mechanical endurance >30x10⁶ operations



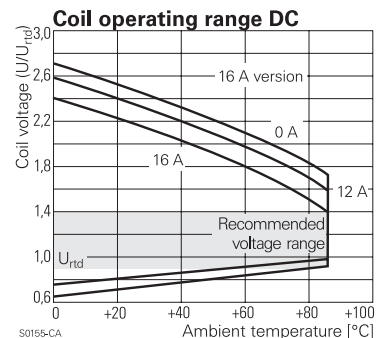
Coil Data

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.



Insulation Data

Initial dielectric strength	
between open contacts	1000V _{ms}
between contact and coil	5000V _{ms}
Clearance/creepage	
between contact and coil	≥10/10mm
Material group of insulation parts	IIla
Tracking index of relay base	PTI 250V

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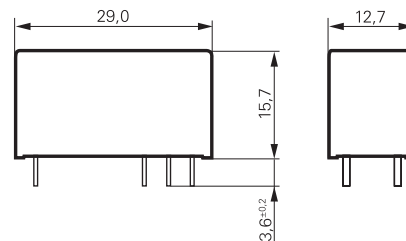
Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter	
China RoHS compliance no hazardous material over threshold	
Resistance to heat and fire	
WG version	according EN60335, par30
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
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

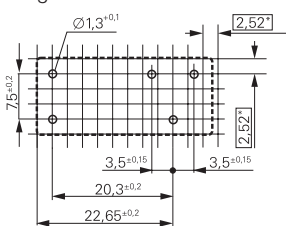


PCB layout / terminal assignment

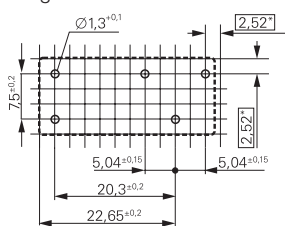
Bottom view on solder pins

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

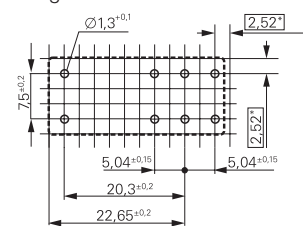
12A, pinning 3.5mm



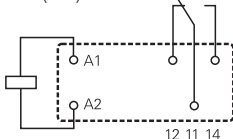
12A, pinning 5mm



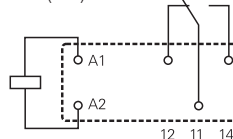
16A, pinning 5mm



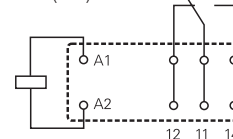
1 form C (CO) contact



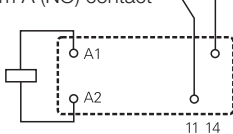
1 form C (CO) contact



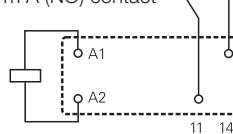
1 form C (CO) contact



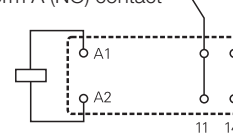
1 form A (NO) contact



1 form A (NO) contact



1 form A (NO) contact



Power PCB Relay RT1 DC and AC (for Asia/Pacific markets) (Continued)

Product code structure		Typical product code				RT	3	1	4	024	AP
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											
AP	Standard version										
WGAP	Product in accordance with IEC 60335-1 (domestic appliances)										

*) Wash tight version on request

*) Wash tight version on request.

Product code	Version	Contacts	Contact material	Coil	Version	Part number
RT114024AP	12A, pinning 3.5mm,	1 form C (CO)	AgNi 90/10	24VDC	standard	1-1649326-5
RT134024AP	flux proof	1 form A (NO)				3-1649326-3
RT214024AP	12A, pinning 5mm,	1 form C (CO)				1-1649327-5
RT234024AP	flux proof	1 form A (NO)				3-1649327-3
RT314012AP	16A, pinning 5mm,	1 form C (CO)		12VDC		1-1649328-3
RT314012WGAP	flux proof	contact			IEC60335-1 compliant	5-1833002-0
RT314024AP				24VDC	standard	1-1649328-5
RT314048AP				48VDC		1-1649328-6
RT334012AP		1 form A (NO)		12VDC		3-1649328-1
RT334024AP		contact		24VDC		3-1649328-3
RTD14012AP	16A, pinning 5mm,	1 form C (CO)		12VDC		1649328-4
RTD14024AP	wash tight	contact		24VDC		1649328-6
RTD34012AP				12VDC		2-1649328-2
RTH34012AP	16A, 105°C, 5mm,	1 form A (NO)				1-1649357-3
RTH34012WGAP	wash tight	contact			IEC60335-1 compliant	5-1833004-0

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