

Power PCB Relay RT1

- 1 pole 12A/16A, 1 form C (CO) or 1 form A (NO) contact
- DC or AC coil
- 5kV/10mm coil-contact, reinforced insulation
- Ambient temperature 85°C (DC coil)
- WG version: product in accordance to IEC 60335-1
- Reflow version: for THR (Through-Hole Reflow) soldering process



F0144-C



Typical applications

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

Approvals

VDE Cert. No. 40007571, cULus E214025, cCSAus 1142018;

CQC in preparation

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, AgNi 90/10 gold plated	
Frequency of operation, with/without load		
DC coil	360/72000h ¹	
AC coil	360/36000h ¹	
Operate/release time max., DC coil	8/6ms	
Bounce time max., DC coil, form A/form B	4/6ms	
Electrical endurance	see electrical endurance graph ¹⁾	
Contact ratings		
Type	Contact	Load
IEC 61810		Cycles
RT314 DC-coil	A (NO)	16A, 250VAC, cosφ=1, 85°C
RT314 DC-coil	C (CO)	16A, 250VAC, cosφ=1, 85°C
RT314 DC-coil	A (NO)	10A, 400VAC, cosφ=1, 85°C
RT114 DC-coil	A (NO)	12A, 250VAC, cosφ=1, 85°C
RT114 AC-coil	A (NO)	12A, 250VAC, cosφ=1, 70°C

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
RT314	A (NO)	FLA/LRA, 4.5/13.1A, 480VAC, 70°C	100x10 ³

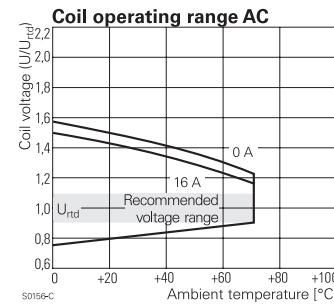
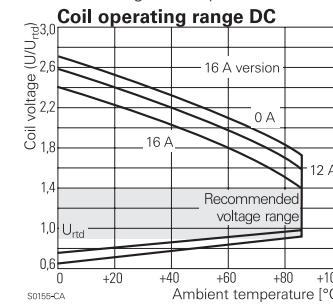
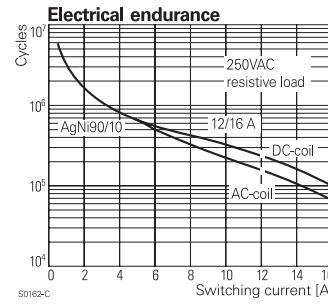
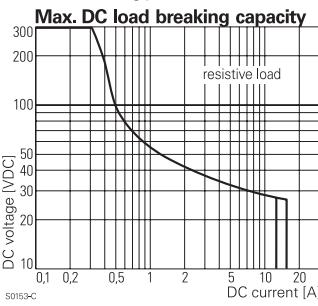
EN60947-5-1

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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1) For reflow solderable versions: actual contact performance may be influenced by the reflow soldering process.



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	$\geq 10/10\text{mm}$
Material group of insulation parts	IIIa
Tracking index of relay base reflow version	PTI 250V PTI 175V

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	
Resistance to heat and fire WG version or Reflow version	according EN60335, par30
Ambient temperature	
DC coil	-40 to 85°C
AC coil	-40 to 70°C
Category of environmental protection, IEC 61810	
standard version	RTII - flux proof, RTIII - wash tight
reflow version	RTII - flux proof
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
standard version	PCB-THR
reflow version	
Mounting distance	AC coil: $\geq 2.5\text{mm}$
Weight	14g
Resistance to soldering heat THT, IEC 60068-2-20	
RTII	270°C/10s
RTIII	260°C/5s
Resistance to soldering heat THR	forced gas convection ⁴⁾ or reflow soldering (for reflow version)
temperature profile	vapour phase ⁵⁾
Packaging/unit	according EN61730
4) infrared heating not allowed	
5) recommended fluid LS/230	tube/20 pcs., box/500 pcs.

Accessories

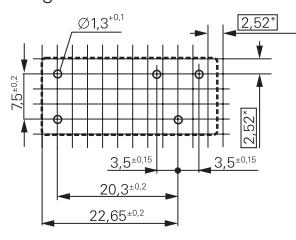
For details see datasheet	Accessories Industrial Power Relay RT
NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.	

PCB layout / terminal assignment

Bottom view on solder pins

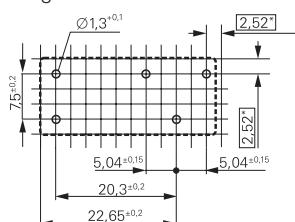
*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

12A, pinning 3.5mm



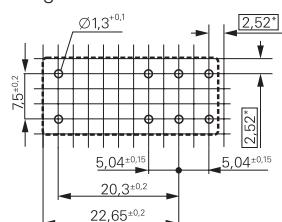
S0418-CB

12A, pinning 5mm



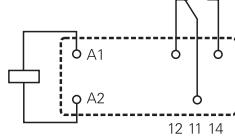
S0418-CN

16A, pinning 5mm



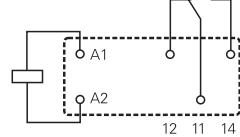
S0418-CA

1 form C (CO) contact



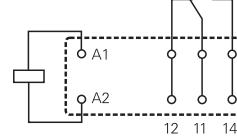
S0163-BG

1 form C (CO) contact



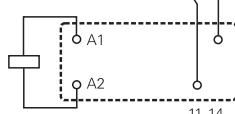
S0163-BC

1 form C (CO) contact



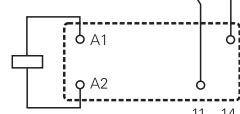
S0163-BE

1 form A (NO) contact



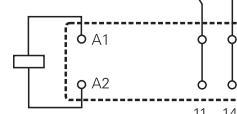
S0163-BH

1 form A (NO) contact



S0163-BD

1 form A (NO) contact

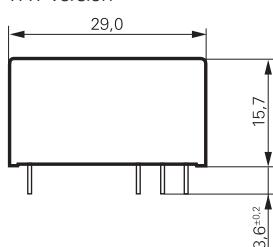


S0163-BF

Power PCB Relay RT1 (Continued)

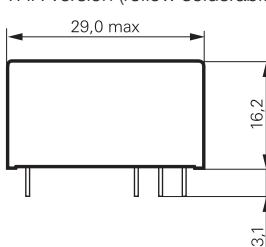
Dimensions

THT version

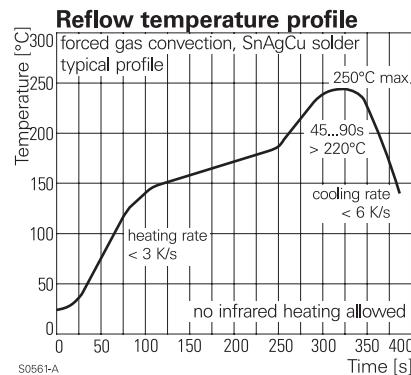
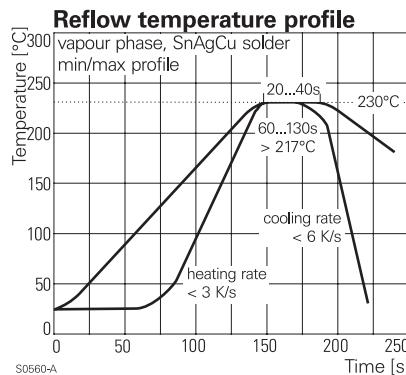


S0272-BB

THR version (reflow solderable)



S0272-BRB

Process conditions for Reflow soldering
 according to EN61760-1

Product code structure

 Typical product code **RT 3 1 4 024**
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
- 5** AgNi 90/10 gold plated (for type RT31.)

Coil

Coil code: please refer to coil versions table

Version

- Blank** Standard version
- WG** Product in accordance with IEC 60335-1 (domestic appliances)
- R** Reflow solderable

*) Wash tight version on request

Power PCB Relay RT1 (Continued)

Product code	Version	Contacts	Contact material	Coil	Version	Part number
RT114009	12A, pinning 3.5mm, flux proof	1 form C (CO) contact	AgNi 90/10	9VDC	Standard	1393239-9
RT114012				12VDC		1419108-1
RT114012WG					IEC60335-1 compliant	7-1415538-6
RT114024				24VDC	Standard	1-1393239-3
RT114024WG					IEC60335-1 compliant	1415539-4
RT114730				230VAC	Standard	1-1393239-9
RT115024			AgNi 90/10 gold pl.	24VDC		2-1393239-1
RT134012		1 form A (NO) contact	AgNi 90/10	12VDC		2-1393239-6
RT134024				24VDC		3-1393239-0
RT214012	12A, pinning 5mm, flux proof	1 form C (CO) contact		12VDC		5-1393239-4
RT214024				24VDC		5-1393239-5
RT214524				24VAC		5-1393239-9
RT214730				230VAC		1419108-6
RT314005	16A, pinning 5mm, flux proof			5VDC		9-1393239-1
RT314006				6VDC		9-1393239-3
RT314012				12VDC		9-1393239-5
RT314012WG					IEC60335-1 compliant	8-1415535-6
RT314024				24VDC	Standard	9-1393239-8
RT314024WG					IEC60335-1 compliant	1415538-7
RT314048				48VDC	Standard	1393240-1
RT314730				230VAC		1393240-7
RT315024			AgNi 90/10 gold pl.	24VDC		1-1393240-4
RT334009WG		1 form A (NO) contact	AgNi 90/10	9VDC	IEC60335-1 compliant	3-1415538-1
RT334012				12VDC	Standard	4-1393240-5
RT334012WG					IEC60335-1 compliant	1-1415527-1
RT334024				24VDC	Standard	4-1393240-8
RT334048				48VDC		5-1393240-0
RTB14005	12A, pinning 3.5mm, wash tight	1 form C (CO) contact		5VDC		1-1393238-2
RTB14012				12VDC		1-1393238-5
RTB14024				24VDC		1-1393238-9
RTB14524				24VAC		2-1393238-4
RTD14005	16A, pinning 5mm, wash tight			5VDC		5-1393238-9
RTD14012				12VDC		6-1393238-2
RTD14024				24VDC		6-1393238-8
RTD14048				48VAC		6-1393238-9
RTD34012		1 form A (NO) contact		12VDC		3-1419108-5
RTD34024				24VDC		3-1419108-8

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:](#)

[RTD34730](#)