

## Power PCB Relay RT2 DC and AC

- 2 pole 8A, 2 form C (CO) or 2 form A (NO) contacts
- DC or AC coil
- 5kV/10mm coil-contact, reinforced insulation
- Ambient temperature up to 85°C
- Product in accordance to IEC60335-1
- Reflow version: for THR (Through-Hole Reflow) soldering process

### Typical applications

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

### Approvals

VDE Cert. No. 40007571, UL E214025, cCSAus 1142018  
CQC 18002197247 (monostable), CQC 20002275223 (China production),  
CQC 08001027262 (China production)  
Technical data of approved types on request.

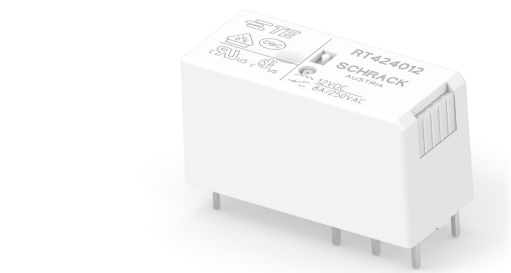
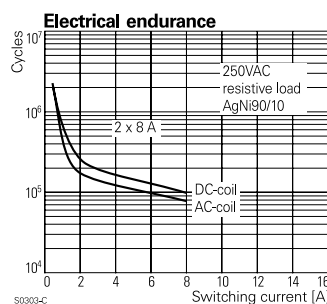
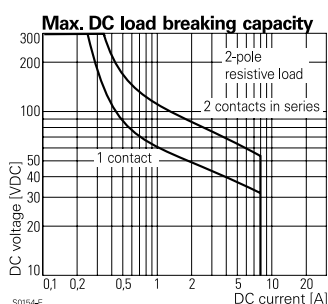
### Contact Data

Contact arrangement	2 form C (CO) or 2 form A (NO)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	8A, UL: 10A
Limiting continuous current	8A, UL: 10A
Limiting making current, max. 4s, duty factor 10%	15A
Breaking capacity max.	2000VA
Contact material	AgNi 90/10, AgNi 90/10 gold plated, AgSnO <sub>2</sub>
Frequency of operation, with/without load	
DC coil	360/72000h <sup>-1</sup>
AC coil	360/36000h <sup>-1</sup>
Operate/release time max., DC coil	8/6ms
Bounce time max., DC coil, form A/form B	4/10ms
Electrical endurance	see electrical endurance graph <sup>1)</sup>

### Contact ratings

Type	Contact	Load	Cycles
<b>IEC 61810</b>			
RT424 DC coil	C (CO)	8A, 250VAC, cosφ=1, 85°C	10x10 <sup>3</sup>
RT444 AC coil	A (NO)	8A, 250VAC, cosφ=1, 70°C	50x10 <sup>3</sup>
RT424 AC coil	C (CO)	8A, 250VAC, cosφ=1, 70°C	30x10 <sup>3</sup>
<b>UL 61810-1 (former UL 508)</b>			
RT424 DC coil	A/B (NO/NC)	10A, 250VAC, gen. purpose, 85°C	20x10 <sup>3</sup>
RT424 DC coil	A/B (NO/NC)	1/2hp, 240VAC, 85°C	1x10 <sup>3</sup>
RT424 DC coil	A/B (NO/NC)	Pilot duty, B300, R300, 85°C	6x10 <sup>3</sup>
<b>EN60947-5-1</b>			
RTE24 DC coil	A/B (NO/NC)	AC15, 250VAC, 3A	6.050
RTE24 DC coil	A/B (NO/NC)	DC13, 24VDC, 2A	6.050
RTE24 DC coil	A/B (NO/NC)	DC13, 250VDC, 0.2A	6.050
<b>EN60730-1</b>			
RT424 DC coil	A/B (NO/NC)	6(2)A, 250VAC, 85°C	100x10 <sup>3</sup>

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



### Contact Data (continued)

Mechanical endurance	
DC coil	>30x10 <sup>6</sup> operations
DC coil, reflow version	>10x10 <sup>6</sup> operations
AC coil	>5x10 <sup>6</sup> operations
AC coil, reflow version	>2x10 <sup>6</sup> operations

### Coil Data

Coil voltage range, DC coil/AC coil	5 to 110VDC / 24 to 230VAC
Operative range, IEC 61810	2
Coil insulation system according UL	class F

### Coil versions, DC coil

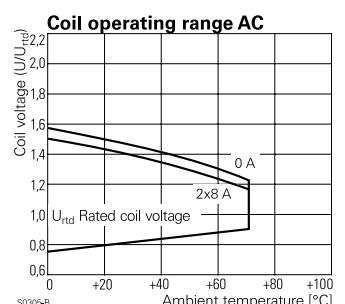
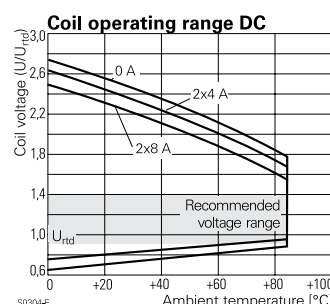
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10% <sup>2)</sup>	Rated coil power mW
005	5	3.5	0.5	62	403
006	6	4.2	0.6	90	400
009	9	6.3	0.9	200	400
012	12	8.4	1.2	360	400
024	24	16.8	2.4	1440	400
048	48	33.6	4.8	5520	417
060	60	42.0	6.0	8570 <sup>2)</sup>	420
110	110	77.0	11.0	28800 <sup>2)</sup>	420

2) Coil resistance ±12%. All figures are given for coil without pre-energization, at ambient temperature +23°C. Other coil voltages on request.

### Coil versions, AC coil 50Hz

Coil code	Rated voltage VAC	Operate voltage VAC	Release voltage VAC	Coil resistance Ω±15% <sup>3)</sup>	Rated coil power VA
524	24	18.0	3.6	350 <sup>3)</sup>	0.76
615	115	86.3	17.3	8100	0.76
620	120	90.0	18.0	8800	0.75
700	200	150.0	30.0	24350	0.76
730	230	172.5	34.5	32500	0.74

3) Coil resistance ±10%. All figures are given for coil without pre-energization, at ambient temperature +23°C, 50Hz. Other coil voltages on request.



**Power PCB Relay RT2 DC and AC** (Continued)

**Insulation Data**

Initial dielectric strength	
between open contacts	1000V <sub>rms</sub>
between contact and coil	5000V <sub>rms</sub>
between adjacent contacts	2500V <sub>rms</sub>
Clearance/creepage	
between contact and coil	≥10/10mm
between adjacent contacts	≥3/4mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 250V
reflow version	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/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

Resistance to heat and fire	according EN60335, par30
Ambient temperature	
DC coil	-40 to 85°C
AC coil	-40 to 70°C
AgSnO <sub>2</sub> contacts	-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 300Hz	20g/5g
Shock resistance (destructive)	100g

**Other Data** (continued)

Terminal type	PCB-THT, plug-in
reflow version	PCB-THR
Mounting distance, AC coil	≥2.5mm
Weight	13g
Resistance to soldering heat THT, IEC 60068-2-20	
RTII	270°C/10s
RTIII	260°C/5s
Resistance to soldering heat THR	
reflow soldering (for reflow version)	forced gas convection <sup>4)</sup> or vapour phase <sup>5)</sup>
temperature profile	according EN61730
Packaging/unit	tube/20pcs., box/500pcs.

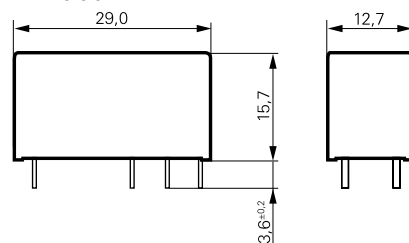
4) infrared heating not allowed.  
5) recommended fluid LS/230.

**Accessories**

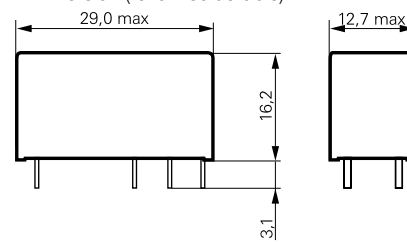
For details see datasheet [Accessories Industrial Power Relay RT](#)  
NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

**Dimensions**

THT version

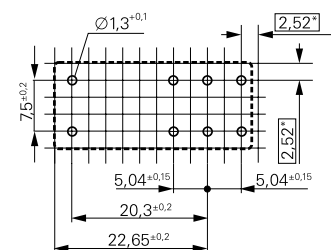


THR version (reflow solderable)



**PCB layout / terminal assignment**

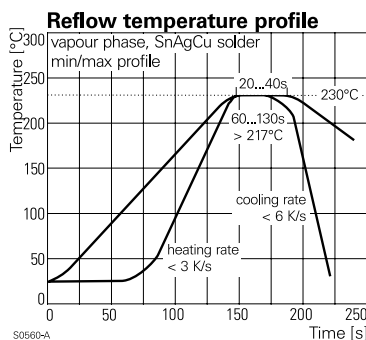
Bottom view on solder pins



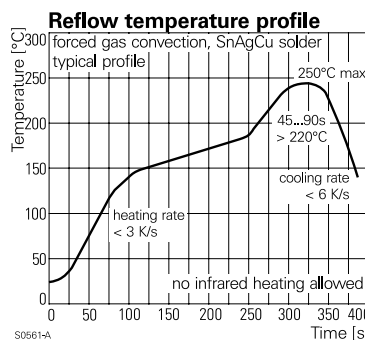
\*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

**Process conditions for Reflow soldering**

according to EN61760-1

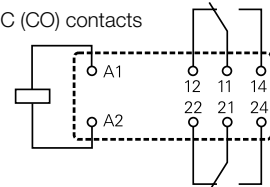


S0560-A

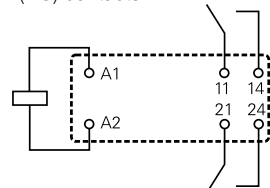


S0561-A

2 form C (CO) contacts



2 form A (NO) contacts



**Power PCB Relay RT2 DC and AC** (Continued)

Product code structure		Typical product code			
Type	RT Power PCB Relay RT2	RT	4	2	4 024
Version					
4	8A, pinning 5mm, flux proof				
E	8A, pinning 5mm, wash tight (not for Reflow version)				
Contact arrangement					
2	2 form C (CO) contacts				
4	2 form A (NO) contacts				
Contact material					
3	AgSnO				
4	AgNi 90/10				
5	AgNi 90/10 gold plated				
Coil	Coil code: please refer to coil versions table				
Version					
Blank	Standard version				
R	Reflow solderable				

Product code	Version	Contacts	Contact material	Coil	Version	Part number	
						Austria	China
RT423730	8A,	2 form C (CO)	AgSnO	230VAC	Standard	4-1393243-3	
RT424005	pinning 5mm,	contacts	AgNi 90/10	5VDC		5-1393243-9	1-1649329-0
RT424006	flux proof			6VDC		6-1393243-1	1-1649329-1
RT424009				9VDC			1-1649329-2
RT424012				12VDC		6-1393243-3	1-1649329-3
RT424024				24VDC		6-1393243-8	1-1649329-5
RT424048				48VDC		7-1393243-0	1-1649329-6
RT424060				60VDC		7-1393243-3	1-1649329-7
RT424110				110VDC		7-1393243-5	1-1649329-8
RT424524				24VAC		7-1393243-6	
RT424615				115VAC		7-1393243-8	
RT424730				230VAC		7-1393243-9	
RT425003			AgNi 90/10	3VDC		7-1415525-1	
RT425005			gold plated	5VDC		8-1393243-0	4-1649329-6
RT425012				12VDC		8-1393243-2	4-1649329-9
RT425024				24VDC		8-1393243-5	5-1649329-1
RT444012		2 form A (NO)	AgNi 90/10	12VDC		9-1393243-7	3-1649329-1
RT444024		contacts		24VDC		9-1393243-9	3-1649329-3
RTE23012	8A,	2 form C (CO)	AgSnO	12VDC		3-1415536-3	7-1649329-7
RTE24005	pinning 5mm,	contacts	AgNi 90/10	5VDC		1393243-1	1649329-1
RTE24006	wash tight			6VDC		1393243-2	1649329-2
RTE24012				12VDC		1393243-4	1649329-4
RTE24024				24VDC		1-1393243-0	1649329-6
RTE24048				48VDC		1-1393243-1	1649329-7
RTE24060				60VDC			1649329-8
RTE24110				110VDC		1-1393243-4	1649329-9
RTE24524				24VAC		1-1393243-5	
RTE24615				115VAC		1-1393243-7	
RTE24730				230VAC		1-1393243-8	
RTE25005			AgNi 90/10	5VDC		1-1393243-9	3-1649329-7
RTE25012			gold plated	12VDC		2-1393243-0	4-1649329-0
RTE25024				24VDC		2-1393243-1	4-1649329-2
RTE25524						2-1393243-4	
RTE43009		2 form A (NO)		9VDC		4-1415535-1	
RTE44009		contacts	AgNi 90/10	9VDC		3-1393243-1	2-1649329-1
RTE44012				12VDC			2-1649329-2
RTE44024				24VDC			2-1649329-4
RTE44048				48VDC			2-1649329-5
RTE44730				230VAC		3-1393243-5	

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

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Authorized Distributor

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[1-1419108-6](#) [RT424005F](#)