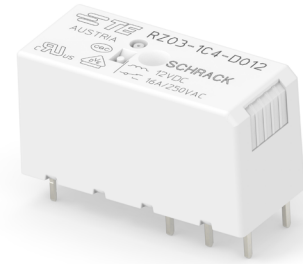


Power PCB Relay RZ

- 1 pole 12/16 A, 1 form C (CO) or 1 form A (NO) contact
- DC coil 400 mW
- 5kV/10mm coil-contact, reinforced insulation
- Ambient temperature 85°C
- Product in accordance to IEC 60335-1
- Reflow version for THR mounting process

Typical applications

Household appliances, boiler control, timers, garage door control, POS automation



Approvals

VDE Cert. No. 40023970, UL E214025

CQC 12002066685, CQC 18002189312 (China production)

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 making current (form A contact)	30A	
max. 4s, duty factor 10%	80A (Only AgSnO type)	
max. 20ms (incandescent lamp);	3000VA	
Breaking capacity max.	3000VA	4000VA
Contact material	AgNi 90/10 or AgSnO ₂	
Frequency of operation, with/without load	360/72000h ⁻¹	
Operate/release time max.	8/6ms	
Bounce time max., form A/form B	4/10ms	

Contact ratings for standard version

Type	Contact	Load	Cycles
IEC 61810-1			
RZ03-1A4	A (NO)	16A, 250VAC, 85°C	50x10 ³
RZ03-1C4	C (CO)	16A, 250VAC, 85°C	10x10 ³
RZ01-1A3	A (NO)	12A, 250VAC, 85°C	100x10 ³
RZ01-1A4	A (NO)	12A, 250VAC, 85°C	50x10 ³
RZ01-1C4	C (CO)	12A, 250VAC, 85°C	30x10 ³
RZ01/3-1A4	A (NO)	10A, 250VAC, 85°C	150x10 ³
RZ0H-1A4	A (NO)	12A, 250VAC, 85°C	150x10 ³
RZ0H-1A4	A (NO)	16A, 250VAC, 85°C	50x10 ³
RZ0H-1A4	A (NO)	18A, 250VAC, 85°C	30x10 ³
UL 61810-1 (former UL 508)			
RZ03-1A.	A (NO)	16A, 250VAC, 85°C	50x10 ³
RZ03-1A4	A (NO)	12A, 250VAC, 85°C	100x10 ³
RZ03-1A4	A (NO)	10A, 250VAC, 85°C	100x10 ³
RZ01-1A3	A (NO)	12A, 250VAC, 85°C	50x10 ³
RZ03-1.4	A (NO)	B300, R300, 85°C	6x10 ³
RZ03-1.4	A (NO)	12A, 250VAC, 85°C	100x10 ³
RZ03-1.4	A (NO)	1/2HP, 125VAC, 85°C	6x10 ³
RZ03-1A.	A (NO)	1HP, 277VAC, 85°C	30x10 ³

Contact Data (continued)

Contact ratings for RZ reinforced flux proof version

Type	Contact	Load	Cycles
IEC 61810-1			
RZ03-1C3-D...-R	A (NO)	16A, 250VAC, 85°C	40x10 ³
RZ03-1C3-D...-R	C (CO)	16A, 250VAC, 85°C	3x10 ³
RZ01-1C3-D...-R	A (NO)	12A, 250VAC, 85°C	30x10 ³
RZ01-1C3-D...-R	C (CO)	12A, 250VAC, 85°C	6x10 ³
RZ03-1C4-D...-R	A (NO)	16A, 250VAC, 85°C	50x10 ³
RZ03-1C4-D...-R	C (CO)	16A, 250VAC, 85°C	10x10 ³
RZ02/3-1C4-D...-R	A (NO)	12A, 250VAC, 85°C	50x10 ³
RZ02/3-1C4-D...-R	C (CO)	12A, 250VAC, 85°C	20x10 ³
RZ0H-1A4-D...-R	A (NO)	16A, 250VAC, 85°C	50x10 ³
IEC 60947-5-1			
RZ03-1.4	A (NO)	250VAC/6A AC-15	6.050

UL 61810-1 (former UL 508)

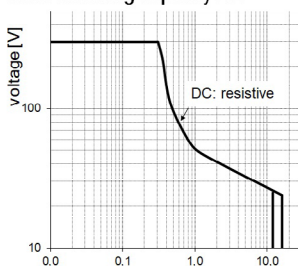
RZ03-1C3-D...-R	A (NO)	16A, 277VAC, 85°C	30x10 ³
RZ03-1C3-D...-R	C (CO)	16A, 277VAC, 85°C	6x10 ³
RZ01-1C3-D...-R	A (NO)	12A, 277VAC, 85°C	30x10 ³
RZ01-1C3-D...-R	C (CO)	12A, 277VAC, 85°C	6x10 ³
RZ03-1C4-D...-R	A (NO)	16A, 277VAC, 85°C	30x10 ³
RZ03-1C4-D...-R	C (CO)	16A, 277VAC, 85°C	10x10 ³
RZ02/3-1C4-D...-R	A (NO)	12A, 277VAC, 85°C	50x10 ³
RZ02/3-1C4-D...-R	C (CO)	12A, 277VAC, 85°C	20x10 ³
RZ0H-1A4-D...-R	A (NO)	16A, 250VAC, 85°C	50x10 ³

Contact ratings for RZ reflow version

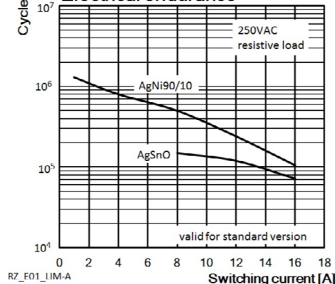
Type	Contact	Load	Cycles
IEC 61810-1			
RZR3-1C4-D...-R	A (NO)	16A, 250Vac, 85°C	30x10 ³
RZR1-1C4-D...-R	C (CO)	12A, 250Vac, 85°C	20x10 ³
RZR1-1C4-D...-R	A (NO)	12.5A, 400Vac, 85°C	50x10 ³
UL 61810-1 (former UL 508)			
RZR3-1C4-D...-R	A (NO)	16A, 277Vac, 85°C	30x10 ³
RZR1-1C4-D...-R	C (CO)	12A, 277Vac, 85°C	30x10 ³
RZR1-1C4-D...-R	A (NO)	1HP, 277Vac, 85°C	30x10 ³
RZR3-1C4-D...-R	A (NO)	1/8 HP, 120Vac, 85°C	100x10 ³

Mechanical endurance >10x10⁶ operations

Max. breaking capacity RZ



Electrical endurance



Power PCB Relay RZ (Continued)

Coil Data

Coil voltage range	3 to 48VDC
Operative range, IEC 61810-1	2
Coil insulation system according UL1446	class F

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
D003	3	2.1	0.3	22	410
D005	5	3.5	0.5	60	420
D006	6	4.2	0.6	90	400
D009	9	6.3	0.9	200	400
D012	12	8.4	1.2	360	400
D015	15	10.5	1.5	562	410
D024	24	16.8	2.4	1440	400
D048	48	33.6	4.8	5730	400

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 _{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	PTI250V

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

Resistance to heat and fire
standard and reflow cover version according EN 60335-1, par.30

Ambient temperature
standard version -40 to 85°C

Category of environmental protection
IEC 61810-1 RTII - flux proof

Vibration resistance (functional), 30 to 500Hz
closing form A contact >15g
opening form A contact >20g
opening form B contact >5g

Shock resistance (destructive) 100g

Other Data (continued)

Terminal type	PCB -THT ²⁾
standard version	PCB -THT, plug-in
reinforced sealed version	PCB -THR
reflow version	$\geq 0\text{mm}$
Mounting distance	10g
Weight	

Resistance to soldering heat	RTII 270°C/10s
THT, IEC 60068-2-20	gas convection ³⁾
THR: reflow version forced	or vapour phase ⁴⁾

temperature profile according EN61730

Packaging/unit tube/20 pcs., box/500 pcs.

suffix -00001/-R0001 & -00002/-R0002 See details C-1558100

²⁾ The use of foaming flux is not permitted.

³⁾ Infrared heating not allowed

⁴⁾ Recommended fluid LS-230

⁵⁾ only for reflow version 2,5mm

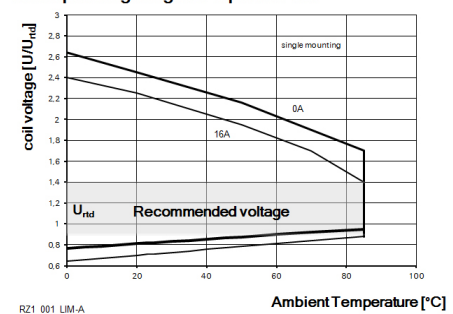
⁶⁾ only for reflow version 15,7 +0,3/-0mm

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.

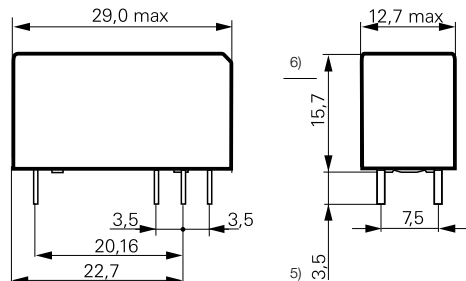
Coil operating range RZ 1pol DC-coil



RZ1_001_UIM-A

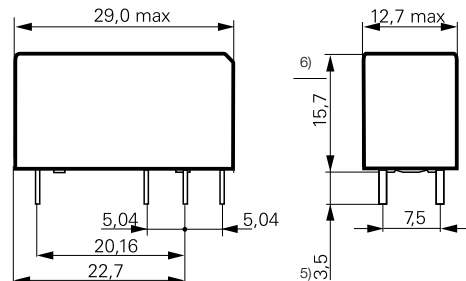
Dimensions

12A, pinning 3.5mm



S0557-AB

12A, 16A, pinning 5mm



S0557-AA

⁵⁾ only for reflow version 2,5mm

⁶⁾ only for reflow version 15,7 +0,3/-0mm

⁵⁾ only for reflow version 2,5mm

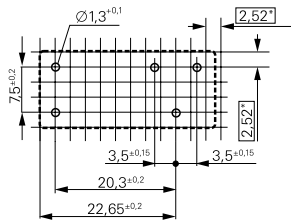
⁶⁾ only for reflow version 15,7 +0,3/-0mm

Power PCB Relay RZ (Continued)

PCB layout / terminal assignment

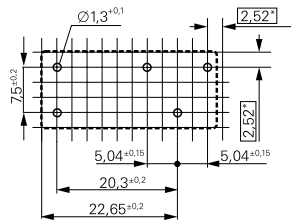
Bottom view on solder pins

12A, pinning 3.5mm



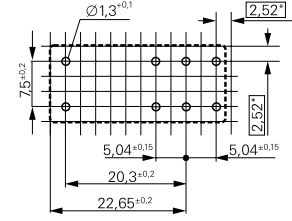
S0418-CB

12A, pinning 5mm



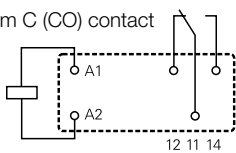
S0418-CN

16A, pinning 5mm



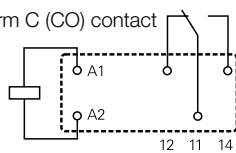
S0418-CA

1 form C (CO) contact



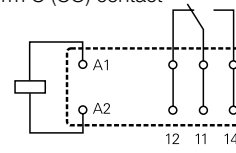
S0163-BG

1 form C (CO) contact



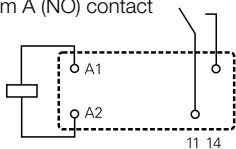
S0163-BC

1 form C (CO) contact



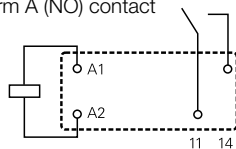
S0163-BE

1 form A (NO) contact



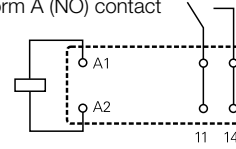
S0163-BH

1 form A (NO) contact



S0163-BD

1 form A (NO) contact

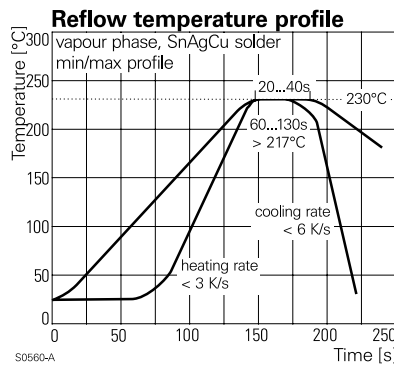


S0163-BF

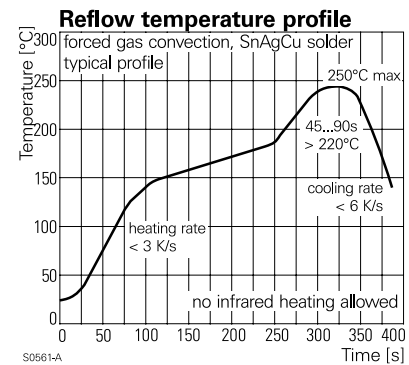
Process conditions for Reflow soldering
according to EN61760-1

Recommended pcb hole for manual mounting:
Ø1.3mm

For automated mounting please ask for
detailed drawing.



S0560-A



S0561-A

Product code structure

Typical product code

RZ **0** **3** **-1C** **4** **-D012**

Type

RZ Power PCB Relay RZ

Version

0 standard version

R reflow version (only with AgNi contacts and reinforced cover)

Version

1 3.5mm pinning, 12 A

3 5mm double pinning, 16 A

2 5mm pinning, 12 A

H High Performance 5mm double pinning, 16 A

Contact configuration

1A 1 form A (1 NO) contact

1C 1 form C (1 CO) contact

Contact material

4 AgNi 90/10

3 AgSnO₂

Coil version

Coil code: please refer to coil versions table

Cover version

blank standard (hot-stamped)

-R reinforced flux proof (epoxy) and Plug-In capable (only AgNi contact versions)

Power PCB Relay RZ (Continued)

Product code	Version	Contacts	Contact material	Coil	Part number				
					Austria	China			
RZ01-1A3-D005	12A pinning 3.5mm	1 form A (NO)	AgSnO ₂	5VDC	3-1415899-7				
RZ01-1A3-D006				6VDC	3-1415899-8				
RZ01-1A3-D012				12VDC	3-1415899-9				
RZ01-1A3-D024				24VDC	4-1415899-0				
RZ01-1A3-D048				48VDC	4-1415899-1				
RZ01-1A4-D005			AgNi 90/10	5VDC	1415899-1				
RZ01-1A4-D006				6VDC	1415899-2				
RZ01-1A4-D009				9VDC	1415899-3				
RZ01-1A4-D012				12VDC	1415899-4				
RZ01-1A4-D024				24VDC	1415899-5				
RZ01-1A4-D048			48VDC	1415899-6					
RZ01-1C3-D005			1 form C (CO)	AgSnO ₂	5VDC		4-1415899-2		
RZ01-1C3-D006					6VDC		4-1415899-3		
RZ01-1C3-D012					12VDC		4-1415899-4		
RZ01-1C3-D024					24VDC		4-1415899-5		
RZ01-1C3-D048	48VDC	4-1415899-6							
RZ01-1C4-D005			AgNi 90/10	5VDC	1415899-7				
RZ01-1C4-D006				6VDC	1415899-8				
RZ01-1C4-D009				9VDC	1415899-9				
RZ01-1C4-D012				12VDC	1-1415899-0				
RZ01-1C4-D024				24VDC	1-1415899-1				
RZ01-1C4-D048			48VDC	1-1415899-2					
RZ02-1C4-D012			12A pinning 5 mm				12VDC	3-1415899-5	
RZ02-1C4-D024							24VDC	3-1415899-6	
RZ03-1A3-D005			16A pinning 5mm	1 form A (NO)	AgSnO ₂		5VDC	4-1415899-7	
RZ03-1A3-D006							6VDC	4-1415899-8	
RZ03-1A3-D012	12VDC	4-1415899-9							
RZ03-1A3-D024	24VDC	5-1415899-0							
RZ03-1A3-D048	48VDC	5-1415899-1							
RZ03-1A4-D005		AgNi 90/10		5VDC	1-1415899-3				
RZ03-1A4-D006				6VDC	1-1415899-4				
RZ03-1A4-D009				9VDC	1-1415899-5				
RZ03-1A4-D012				12VDC	1-1415899-6				
RZ03-1A4-D024				24VDC	1-1415899-7				
RZ03-1A4-D048				48VDC	1-1415899-8				
RZ03-1C3-D005				1 form C (CO)	AgSnO ₂		5VDC	5-1415899-2	
RZ03-1C3-D006							6VDC	5-1415899-3	
RZ03-1C3-D012							12VDC	5-1415899-4	
RZ03-1C3-D024							24VDC	5-1415899-5	
RZ03-1C3-D048		48VDC	5-1415899-6						
RZ03-1C4-D005			AgNi 90/10	5VDC	1-1415899-9				
RZ03-1C4-D006				6VDC	2-1415899-0				
RZ03-1C4-D009				9VDC	2-1415899-1				
RZ03-1C4-D012				12VDC	2-1415899-2				
RZ03-1C4-D015	15VDC			8-1415899-2					
RZ03-1C4-D024				24VDC	2-1415899-3				
RZ03-1C4-D048				48VDC	2-1415899-4				
RZ03-1A4-D012-R	16A, pinning 5mm reinforced flux proof	1 form A (NO)	AgNi 90/10	12VDC	7-1415899-5				
RZ03-1A4-D012-R0001				12VDC			2071452-3		
RZ03-1A4-D009-R0001				9VDC			2071452-2		
RZ03-1A4-D024-R				24VDC	9-1415899-1				
RZ03-1A4-D024-R0001				24VDC			2071452-4		
RZ03-1C4-D005-R		1 form C (CO)		5VDC	7-1415899-6				
RZ03-1C4-D012-R				12VDC	7-1415899-7				
RZ03-1C4-D024-R				24VDC	7-1415899-9				
RZ03-1A3-D012-R		1 form A (NO)	AgSnO ₂	12VDC	4-2158000-2				
RZ03-1A3-D012-R0001				12VDC				2-2071452-4	
RZ03-1A3-D024-R0001	24VDC				2-2071452-5				
RZ0H-1A4-D012	16A, pinning 5mm, High Performance	1 form A (NO)	AgNi 90/10	12VDC	9-1415899-4				
RZ0H-1A4-D012-R0001	16A, pinning 5mm, High Performance reinforced flux proof			12VDC		2071452-9			
RZR3-1C4-D005-R	16A, pinning 5mm, reinforced flux proof and reflow solderable	1 form C (CO)	AgNi90/10	5VDC	2-2158001-9				

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