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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**



F0305-A

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

Approvals

VDE Cert. No. 40023970, UL E214025, CQC 12002066685
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)		
max. 4s, duty factor 10%	30A	
max. 20ms (incandescent lamp); $AgSnO_2$	80A	
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			
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 508			
RZ03-1A.	A (NO)	16A, 250VAC, 85°C	50x10^3
RZ03-1A4	A (NO)	12A, 250VAC, 85°C	150x10^3
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 ratings for RZ reinforced flux proof version

Type	Contact	Load	Cycles
IEC 61810			
RZ03-1C4-D...-R	A (NO)	16A, 250VAC, 85°C	30x10^3
RZ03-1C4-D...-R	C (CO)	16A, 250VAC, 85°C	6x10^3
RZ02/3-1C4-D...-R	A (NO)	12A, 250VAC, 85°C	50x10^3
RZ02/3-1C4-D...-R	C (CO)	16A, 250VAC, 85°C	20x10^3
UL 508			
RZ03-1C4-D...-R	A (NO)	16A, 277VAC, 85°C	30x10^3
RZ03-1C4-D...-R	C (CO)	16A, 277VAC, 85°C	6x10^3
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

Mechanical endurance >10x10^6 operations

Coil Data

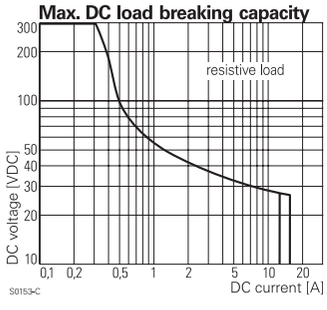
Coil voltage range	3 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL1446	class F

Coil versions, DC coil

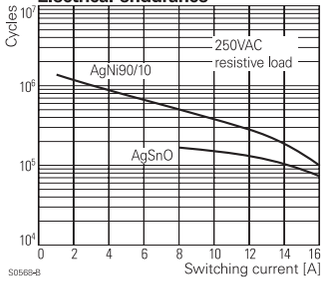
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
D003	3	2.1	0.3	22	410
D005	5	3.5	0.5	60	420
D006	6	4.2	0.6	90	400
D009	9	6.3	0.9	200	400
D012	12	8.4	1.2	360	400
D015	15	10.5	1.5	562	410
D024	24	16.8	2.4	1440	400
D048	48	33.6	4.8	5730	400

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

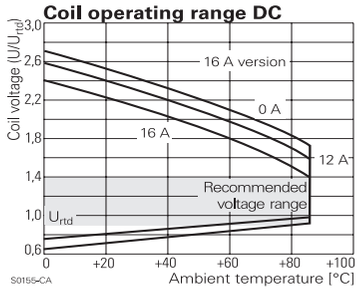
Max. DC load breaking capacity



Electrical endurance 1)



Coil operating range DC



1) valid for standard version

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Power PCB Relay RZ (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	PTI250V

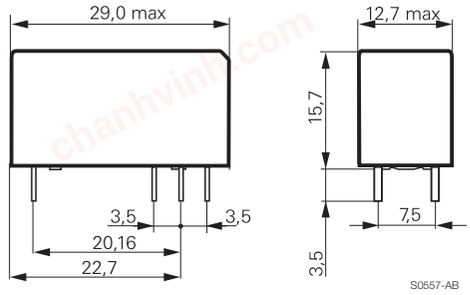
Other Data

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	
standard cover version	according EN 60335-1, par.30
Ambient temperature	
standard version	-40 to 85°C
Category of environmental protection	
IEC 61810	RTII - flux proof
Vibration resistance (functional), 30 to 100Hz	
closing form A contact	>15g
opening form A contact	>20g
opening form B contact	>5g
Shock resistance (destructive)	100g
Terminal type	PCB-THT
Mounting distance	
standard version	≥0mm
Weight	10g
Resistance to soldering heat THT	
IEC 60068-2-20	270°C/10s[2)]
Packaging/unit	tube/20 pcs., box/500 pcs.

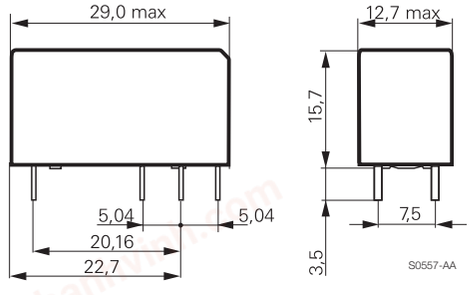
2) The use of foaming flux is not permitted.

Dimensions

12A, pinning 3.5mm



12A, 16A, pinning 5mm



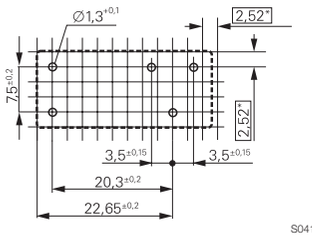
Recommended pcb hole for manual mounting: Ø1.3mm

For automated mounting please ask for detailed drawing.

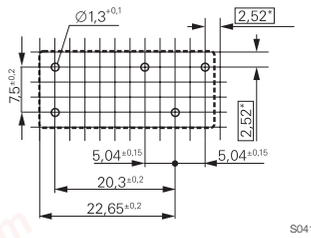
PCB layout / terminal assignment

Bottom view on solder pins

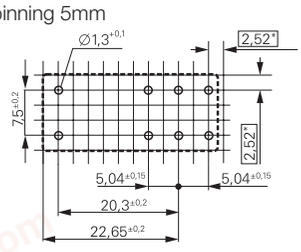
12A, pinning 3.5mm



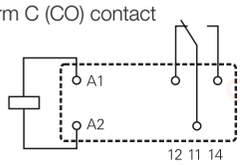
12A, pinning 5mm



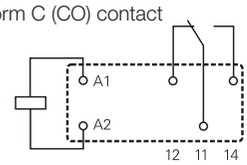
16A, pinning 5mm



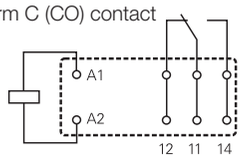
1 form C (CO) contact



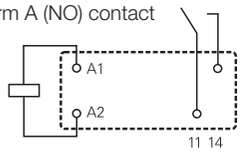
1 form C (CO) contact



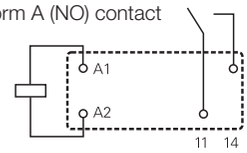
1 form C (CO) contact



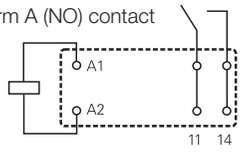
1 form A (NO) contact



1 form A (NO) contact



1 form A (NO) contact



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Power PCB Relay RZ (Continued)

Product code structure Typical product code: **RZ 0 3 -1C 4 -D012**

Type
RZ Power PCB Relay RZ

Version
0 standard version

Version
1 3.5mm pinning, 12 A
2 5mm pinning, 12 A
3 5mm double pinning, 16 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 $AgSnO_2$

Coil version
Coil code: please refer to coil versions table

Cover version
blank standard (orange)
R reinforced flux proof (epoxy)

Product code	Version	Contacts	Contact material	Coil	Part number
RZ01-1A3-D005	12A	1 form A (NO)	$AgSnO_2$	5VDC	3-1415899-7
RZ01-1A3-D006	pinning 3.5mm			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
RZ03-1A3-D005	16A	1 form A (NO)	$AgSnO_2$	5VDC	4-1415899-7
RZ03-1A3-D006	pinning 5mm			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
RZ03-1C4-D012-R	16A, pinning 5mm	1 form C (CO)	AgNi 90/10	12VDC	7-1415899-7
RZ03-1C4-D024-R	reinforced flux proof			24VDC	7-1415899-9
RZ0H-1A4-D012	16A, pinning 5mm, High Performance	1 form A (NO)	AgNi 90/10	12VDC	9-1415899-4

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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