

Power PCB Relay RZ

- 1 pole 12/16 A, 1 CO or 1 NO contact
- DC-coil 400 mW
- 5 kV / 10 mm coil-contact, reinforced insulation
- Ambient temperature 85°C, HOT version for 105°C
- Product in accordance to IEC60335-1

Applications

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



F0305-A

Approvals

VDE REG.-Nr. C693, **UL** US E214025
Technical data of approved types on request

Contact data

Contact configuration	1 CO or 1 NO contact	
Contact set	single contact	
Type of interruption	micro disconnection	
Rated voltage / max. switching voltage AC	250 / 400 VAC	
Rated current	12 A	16 A
Maximum breaking capacity AC	3000 VA	4000 VA
Contact material	AgNi 90/10 or AgSnO	
Rated frequency of operation with / without load	6 / 1200 min ⁻¹	
Operate- / release time DC coil	max 8 / 6 ms	
Bounce time NO / NC contact	max 4 / 6 ms	

Contact ratings

Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
RZ03-1.4-D...	NO	16 A, 250 VAC	85°C	30x10 ³
RZ03-1C4-D...	CO	16 A, 250 VAC	85°C	10x10 ³
RZ03-1.4-D...	NO	16 A, 250 VAC	70°C	50x10 ³
RZ01-1.4-D...	NO	12 A, 250 VAC	85°C	50x10 ³
RZ01-1C4-D...	CO	12 A, 250 VAC	85°C	30x10 ³
RZ01-1.4-D...	NO	12 A, 250 VAC	70°C	100x10 ³
RZH3-1.4-D...	NO	10 A, 250 VAC	105°C	100x10 ³
RZH3-1C4-D...	CO	16 A, 250 VAC	105°C	10x10 ³

UL 508

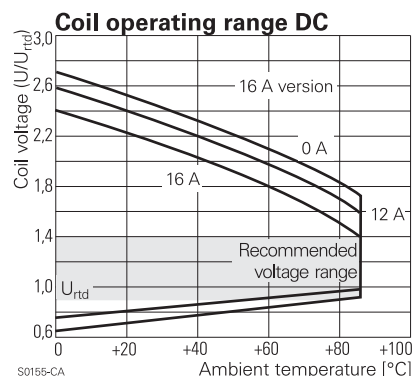
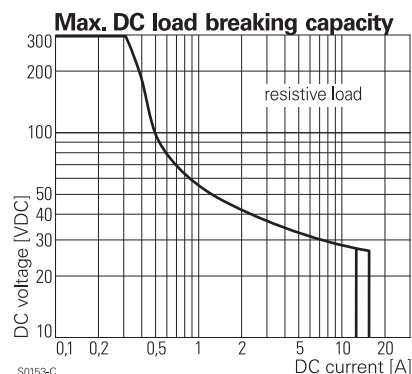
RZ03-1.4-D...	NO	B300	85°C	6x10 ³
RZ03-1.4-D...	NO	R300	85°C	6x10 ³
RZ03-1.4-D...	NO	1/2 hp, 125 VAC	85°C	6x10 ³
RZ03-1.4-D...	NO	1 hp, 277 VAC	85°C	6x10 ³
RZH3-1.4-D...	NO	10 A, 250 VAC	105°C	150x10 ³

Approvals in process

RZ03-1.3-D...	NO	16 A, 250 VAC	85°C	50x10 ³
RZ03-1.3-D...	CO	16 A, 250 VAC	85°C	10x10 ³
RZ03-1.3-D...	NO	1 hp, 277 VAC	85°C	30x10 ³

Coil data

Rated coil voltage range	5...48 VDC
Operative range to IEC 61810 standard / HOT-version	2 / 90...110% U _{RTD}
Coil insulation system according UL1446	class F



Power PCB Relay RZ (Continued)

Coil versions, DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω	Rated coil power mW
D005	5	3.5	0.5	60 $\pm$ 10%	420
D006	6	4.2	0.6	90 $\pm$ 10%	400
D009	9	6.3	0.9	200 $\pm$ 10%	400
D012	12	8.4	1.2	360 $\pm$ 10%	400
D024	24	16.8	2.4	1440 $\pm$ 10%	400
D048	48	33.6	4.8	5730 $\pm$ 10%	400

All figures are given for coil without preenergization, at ambient temperature +23°C
Continuous thermal load > 10 A at 105°C requires reduction of coil power to 64% of rated power after 100 ms.

Other coil voltages on request

Insulation

Dielectric strength coil-contact circuit	5000 V _{rms}
open contact circuit	1000 V _{rms}
Clearance / creepage coil-contact circuit	$\geq 10 / 10$ mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 250 V
Insulation to EN61810-1	
Type of insulation coil-contact circuit	reinforced
open contact circuit	micro disconnection
Rated insulation voltage	250 V
Pollution degree 12 A version	3
16 A version	3
Rated voltage system	240 V
Overvoltage category	III

Other data

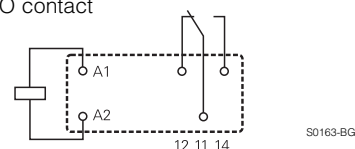
Mechanical endurance	> 10 x 10 ⁶ cycles
Material	
RoHS - Directive 2002/95/EC	compliant
Resistance to heat and fire	according EN60335-1, par.30
Environment	
Ambient temperature range Standard version	-40...+85°C
HOT version	-40...+105°C
Vibration resistance (function; 30...500 Hz)	
closing NO contact	> 15 g
opening NO contact	> 20 g
opening NC contact	> 5 g
Shock resistance (destruction)	100 g
Category of protection	RTII - flux proof, RTIII - wash tight
Processing	
Mounting	pcb
Mounting distance Standard version	≥ 0 mm
HOT version	≥ 2 mm
Resistance to soldering heat flux proof version	270°C / 10 s
Relay weight	10 g
Packaging unit	20 / 500 pcs

PCB layout / terminal assignment

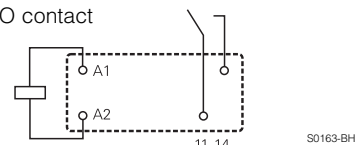
Bottom view on solder pins

12 A, pinning 3.5 mm

1 CO contact

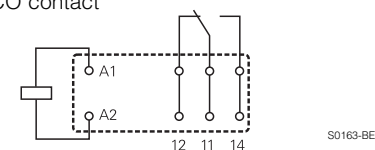


1 NO contact

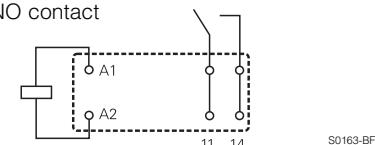


16 A, pinning 5 mm

1 CO contact



1 NO contact



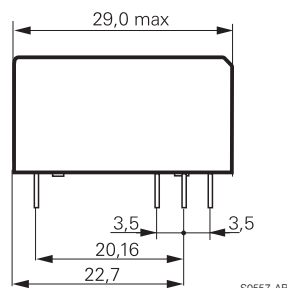
Recommended pcb hole for manual mounting: $\varnothing 1.3$

For automated mounting please ask for detailed drawing.

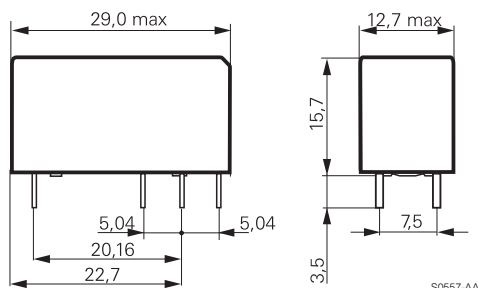
Power PCB Relay RZ (Continued)

Dimensions

12 A, pinning 3.5 mm



16 A, pinning 5 mm



Product key

Typical product key

RZ

0

3

-1C

4

-D012

Type

RZ Power PCB Relay RZ

Version

- 0** standard version
- H** HOT-version

Version

- 1** 3.5 mm pinning, 12 A
- 3** 5 mm double pinning, 16 A

Contact configuration

- 1A** 1 form A (NO contact)
- 1C** 1 form C (CO contact)

Contact material

- 4** AgNi 90/10
- 3** AgSnO₂

Coil version

Coil code: please refer to coil versions table

Sealing level

- blank** standard (RT II - flux proof)
- W** wash tight (RT III - wash tight)

Power PCB Relay RZ (Continued)

Product key	Version	Contacts	Contact material	Coil	Part number
RZ01-1A3-D005	12A pinning 3.5 mm flux proof	1 NO (form A)	AgSnO ₂	5 VDC	3-1415899-7
RZ01-1A3-D006				6 VDC	3-1415899-8
RZ01-1A3-D012				12 VDC	3-1415899-9
RZ01-1A3-D024				24 VDC	4-1415899-0
RZ01-1A3-D048				48 VDC	4-1415899-1
RZ01-1A4-D005		1 NO (form A)	AgNi 90/10	5 VDC	1415899-1
RZ01-1A4-D006				6 VDC	1415899-2
RZ01-1A4-D009				9 VDC	1415899-3
RZ01-1A4-D012				12 VDC	1415899-4
RZ01-1A4-D024				24 VDC	1415899-5
RZ01-1A4-D048				48 VDC	1415899-6
RZ01-1C3-D005	16A pinning 5 mm flux proof	1 CO (form C)	AgSnO ₂	5 VDC	4-1415899-2
RZ01-1C3-D006				6 VDC	4-1415899-3
RZ01-1C3-D012				12 VDC	4-1415899-4
RZ01-1C3-D024				24 VDC	4-1415899-5
RZ01-1C3-D048				48 VDC	4-1415899-6
RZ01-1C4-D005		1 CO (form C)	AgNi 90/10	5 VDC	1415899-7
RZ01-1C4-D006				6 VDC	1415899-8
RZ01-1C4-D009				9 VDC	1415899-9
RZ01-1C4-D012				12 VDC	1-1415899-0
RZ01-1C4-D024				24 VDC	1-1415899-1
RZ01-1C4-D048				48 VDC	1-1415899-2
RZ03-1A3-D005	16A, 105°C pinning 5 mm flux proof	1 NO (form A)	AgSnO ₂	5 VDC	4-1415899-7
RZ03-1A3-D006				6 VDC	4-1415899-8
RZ03-1A3-D012				12 VDC	4-1415899-9
RZ03-1A3-D024				24 VDC	5-1415899-0
RZ03-1A3-D048				48 VDC	5-1415899-1
RZ03-1A4-D005		1 NO (form A)	AgNi 90/10	5 VDC	1-1415899-3
RZ03-1A4-D006				6 VDC	1-1415899-4
RZ03-1A4-D009				9 VDC	1-1415899-5
RZ03-1A4-D012				12 VDC	1-1415899-6
RZ03-1A4-D024				24 VDC	1-1415899-7
RZ03-1A4-D048				48 VDC	1-1415899-8
RZ03-1C3-D005	16A, 105°C pinning 5 mm flux proof	1 CO (form C)	AgSnO ₂	5 VDC	5-1415899-2
RZ03-1C3-D006				6 VDC	5-1415899-3
RZ03-1C3-D012				12 VDC	5-1415899-4
RZ03-1C3-D024				24 VDC	5-1415899-5
RZ03-1C3-D048				48 VDC	5-1415899-6
RZ03-1C4-D005		1 NO (form A)	AgNi 90/10	5 VDC	1-1415899-9
RZ03-1C4-D006				6 VDC	2-1415899-0
RZ03-1C4-D009				9 VDC	2-1415899-1
RZ03-1C4-D012				12 VDC	2-1415899-2
RZ03-1C4-D024				24 VDC	2-1415899-3
RZ03-1C4-D048				48 VDC	2-1415899-4
RZH3-1C4-D012	16A, 105°C pinning 5 mm flux proof	1 NO (form A)		12 VDC	2-1415899-5
RZH3-1C4-D024				24 VDC	2-1415899-6
RZH3-1A4-D009				9 VDC	2-1415899-7
RZH3-1A4-D012				12 VDC	2-1415899-8
RZH3-1A4-D024				24 VDC	2-1415899-9