

**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, c **RU** 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 <sup>-1</sup>	
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 <sup>3</sup>
RZ03-1C4-D...	CO	16 A, 250 VAC	85°C	10x10 <sup>3</sup>
RZ03-1.4-D...	NO	16 A, 250 VAC	70°C	50x10 <sup>3</sup>
RZ01-1.4-D...	NO	12 A, 250 VAC	85°C	50x10 <sup>3</sup>
RZ01-1C4-D...	CO	12 A, 250 VAC	85°C	30x10 <sup>3</sup>
RZ01-1.4-D...	NO	12 A, 250 VAC	70°C	100x10 <sup>3</sup>
RZH3-1.4-D...	NO	10 A, 250 VAC	105°C	100x10 <sup>3</sup>
RZH3-1C4-D...	CO	16 A, 250 VAC	105°C	10x10 <sup>3</sup>

**UL 508**

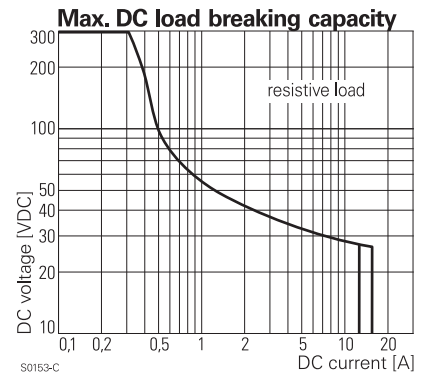
RZ03-1.4-D...	NO	B300	85°C	6x10 <sup>3</sup>
RZ03-1.4-D...	NO	R300	85°C	6x10 <sup>3</sup>
RZ03-1.4-D...	NO	1/2 hp, 125 VAC	85°C	6x10 <sup>3</sup>
RZ03-1.4-D...	NO	1 hp, 277 VAC	85°C	6x10 <sup>3</sup>
RZH3-1.4-D...	NO	10 A, 250 VAC	105°C	150x10 <sup>3</sup>

**Approvals in process**

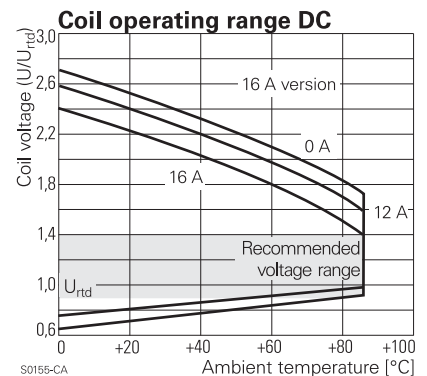
RZ03-1.3-D...	NO	16 A, 250 VAC	85°C	50x10 <sup>3</sup>
RZ03-1.3-D...	CO	16 A, 250 VAC	85°C	10x10 <sup>3</sup>
RZ03-1.3-D...	NO	1 hp, 277 VAC	85°C	30x10 <sup>3</sup>

**Coil data**

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



S0153-C



S0155-CA

**Power PCB Relay RZ (Continued)**

**Coil versions, DC-coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance $\Omega$	Rated coil power mW
D005	5	3.5	0.5	60 ± 10%	420
D006	6	4.2	0.6	90 ± 10%	400
D009	9	6.3	0.9	200 ± 10%	400
D012	12	8.4	1.2	360 ± 10%	400
D024	24	16.8	2.4	1440 ± 10%	400
D048	48	33.6	4.8	5730 ± 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 <sub>rms</sub>	
open contact circuit	1000 V <sub>rms</sub>	
Clearance / creepage coil-contact circuit	≥ 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	3
16 A version	3	2
Rated voltage system	240 V	230 / 400 V
Overtoltage category	III	

**Other data**

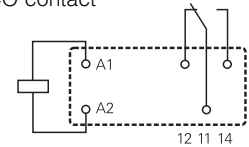
Mechanical endurance	> 10 x 10 <sup>6</sup> cycles	
Material		
RoHS - Directive 2002/95/EC	compliant	
Resistance to heat and fire	according EN60335-1, par.30	
Environment		
Ambient temperature range Standard version	-40...+85°C	
HOT version	-40...+105°C	
Vibration resistance (function; 30...500 Hz)		
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

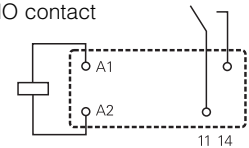
12 A, pinning 3.5 mm

1 CO contact



S0163-BG

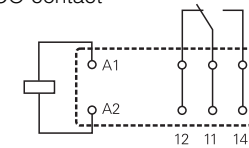
1 NO contact



S0163-BH

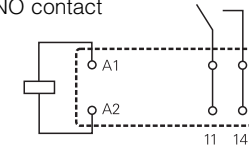
16 A, pinning 5 mm

1 CO contact



S0163-BE

1 NO contact



S0163-BF

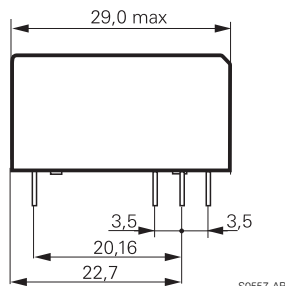
Recommended pcb hole for manual mounting:  $\varnothing 1.3$

For automated mounting please ask for detailed drawing.

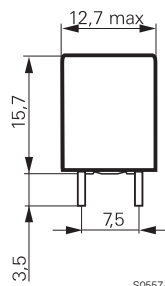
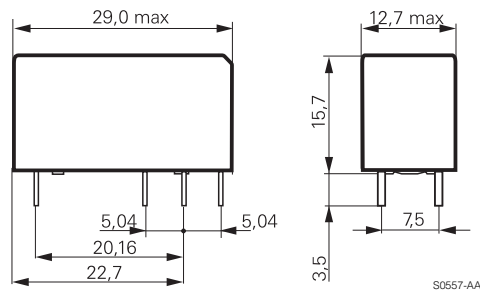
**Power PCB Relay RZ (Continued)**

**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** AgSnO<sub>2</sub>

**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	1 NO (form A)	AgSnO <sub>2</sub>	5 VDC	3-1415899-7
RZ01-1A3-D006	pinning 3.5 mm flux proof			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			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		1 CO (form C)	AgSnO <sub>2</sub>	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			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	1 NO (form A)	AgSnO <sub>2</sub>	5 VDC	4-1415899-7
RZ03-1A3-D006	pinning 5 mm flux proof			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			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		1 CO (form C)	AgSnO <sub>2</sub>	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			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			12 VDC	2-1415899-5
RZH3-1C4-D024	pinning 5 mm flux proof			24 VDC	2-1415899-6
RZH3-1A4-D009				1 NO (form A)	9 VDC
RZH3-1A4-D012				12 VDC	2-1415899-8
RZH3-1A4-D024				24 VDC	2-1415899-9