

**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 (clear cover: 70°C)
- Product in accordance to IEC60335-1

**Applications**

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



F0305-A

**Approvals**

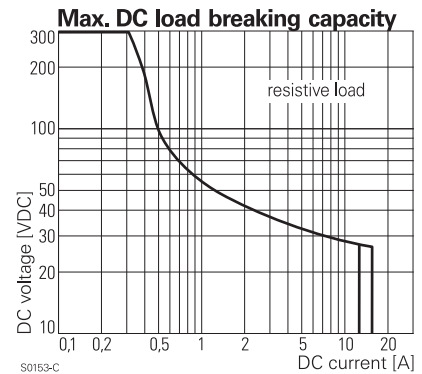
VDE REG.-Nr. C693, c **RU** US E214025  
 Technical data of approved types on request

**Contact data**

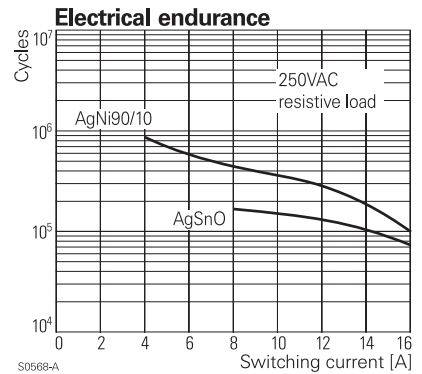
Contact configuration	1 form C (CO) or 1 form A (NO)	
Rated voltage / max. switching voltage AC	250 / 400 VAC	
Rated current	12 A	16 A
Maximum breaking capacity AC	3000 VA	4000 VA
Contact material	AgNi 90/10 or AgSnO	
Rated frequency of operation with / without load	6 / 1200 min <sup>-1</sup>	
Operate- / release time	max 8 / 6 ms	
Bounce time NO / NC contact	max 4 / 6 ms	

**Contact ratings**

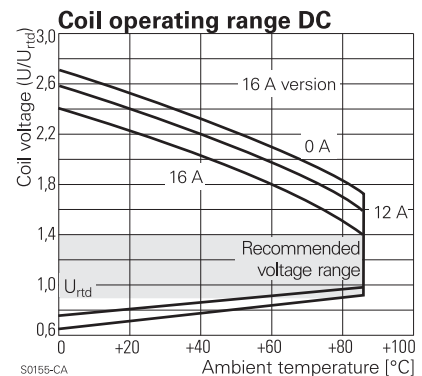
Type	Contact	Load	Ambient temp.	Cycles
<b>IEC 61810</b>				
RZ03-1..	NO	16 A, 250 VAC	85°C	50x10 <sup>3</sup>
RZ03-1C.	CO	16 A, 250 VAC	85°C	10x10 <sup>3</sup>
RZ01-1..	NO	12 A, 250 VAC	85°C	50x10 <sup>3</sup>
RZ01-1C4	CO	12 A, 250 VAC	85°C	30x10 <sup>3</sup>
RZ01-1.4	NO	12 A, 250 VAC	70°C	100x10 <sup>3</sup>
RZ0.-1A4	NO	10 A, 250 VAC	85°C	250x10 <sup>3</sup>
<b>UL 508</b>				
RZ03-1A.	NO	16 A, 250 VAC	85°C	50x10 <sup>3</sup>
RZ03-1A4	NO	12 A, 250 VAC	85°C	150x10 <sup>3</sup>
RZ01-1A3	NO	12 A, 250 VAC	85°C	50x10 <sup>3</sup>
RZ03-1.4	NO	B300, R300	85°C	6x10 <sup>3</sup>
RZ03-1.4	NO	12 A, 250 VAC	85°C	100x10 <sup>3</sup>
RZ03-1.4	NO	1/2 hp, 125 VAC	85°C	6x10 <sup>3</sup>
RZ03-1A.	NO	1 hp, 277 VAC	85°C	30x10 <sup>3</sup>



S0153-C



S0568-A



S0155-CA

**Power PCB Relay RZ (Continued)**

**Coil data**

Rated coil voltage range	3...48 VDC
Operative range to IEC 61810 standard / HOT-version	2 / 90...110% U <sub>RTD</sub>
Coil insulation system according UL1446	class F

**Coil versions, DC-coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance $\Omega$	Rated coil power mW
D003	3	2.1	0.3	22 ± 10%	410
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  
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
16 A version	3
Rated voltage system	240 V
Overvoltage 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 (standard cover version)	according EN60335-1, par.30
Environment	
Ambient temperature range Standard version	-40...+85°C
clear cover	-40...+70°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
Processing	
Mounting	pcb
Mounting distance Standard version	≥ 0 mm
clear cover	≥ 14 mm
Resistance to soldering heat	270°C / 10 s <sup>1)</sup>
Relay weight	10 g
Packaging unit	20 / 500 pcs

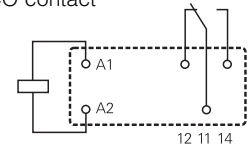
<sup>1)</sup> the use of foaming flux is not permitted.

**PCB layout / terminal assignment**

Bottom view on solder pins

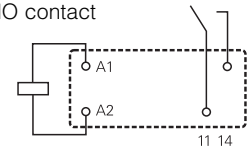
12 A, pinning 3.5 mm

1 CO contact



S0163-BG

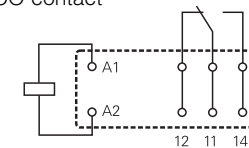
1 NO contact



S0163-BH

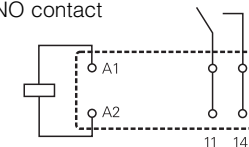
16 A, pinning 5 mm

1 CO contact



S0163-BE

1 NO contact



S0163-BF

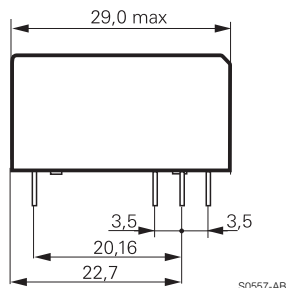
Recommended pcb hole for manual mounting:  $\varnothing 1.3$

For automated mounting please ask for detailed drawing.

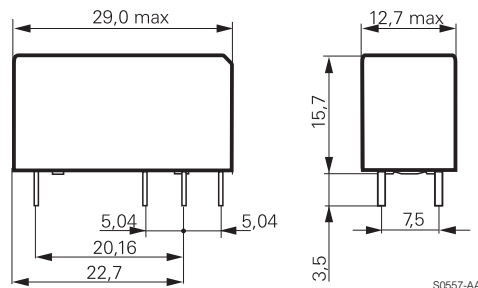
**Power PCB Relay RZ (Continued)**

**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

**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

**Cover version**

- blank** standard (orange)
- 000C** clear (transparent)

**Power PCB Relay RZ** (Continued)

Product key	Version	Contacts	Contact material	Coil	Part number
RZ01-1A3-D005	12A	1 form A (NO)	AgSnO <sub>2</sub>	5 VDC	3-1415899-7
RZ01-1A3-D006	pinning 3.5 mm			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 form C (CO)	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 form A (NO)	AgSnO <sub>2</sub>	5 VDC	4-1415899-7
RZ03-1A3-D006	pinning 5 mm			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 form C (CO)	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
RZ01-1C4-D012-000C	Clear cover		AgNi 90/10	12 VDC	6-1415899-8
RZ01-1C4-D024-000C	12A, pinning 3.5 mm			24 VDC	6-1415899-9
RZ03-1A4-D012-000C	Clear cover	1 form A (NO)		12 VDC	7-1415899-2
RZ03-1A4-D024-000C	16A, pinning 5 mm			24 VDC	7-1415899-3
RZ03-1C4-D012-000C		1 form C (CO)		12 VDC	7-1415899-0
RZ03-1C4-D024-000C				24 VDC	7-1415899-1

This list represents the most common types and does not show all variants covered by this data sheet.