

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



F0305-A

Applications

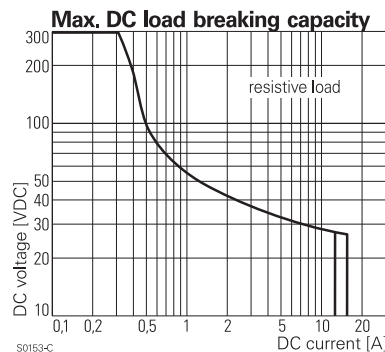
Household appliances, boiler control, timers, garage door control, POS automation

Approvals

REG.-Nr. C693, 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	



S0153-C

Contact ratings

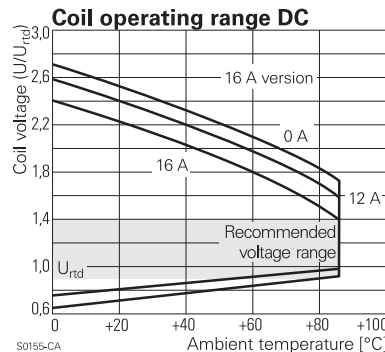
Type	Contact	Load	Ambient temp. [°C]	Cycles
IEC 61810				
RZ03-1.4-D...	NO	16 A, 250 VAC	85°C	30x10 ³
RZ03-1C4-D...	CO	16 A, 250 VAC	85°C	10x10 ³
RZ03-1.4-D...	NO	16 A, 250 VAC	70°C	50x10 ³
RZ01-1.4-D...	NO	12 A, 250 VAC	85°C	50x10 ³
RZ01-1C4-D...	CO	12 A, 250 VAC	85°C	30x10 ³
RZ01-1.4-D...	NO	12 A,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



S0155-CA

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±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 _{rms}	
open contact circuit	1000 V _{rms}	
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
Overvoltage category	III	

Other data

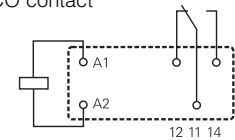
Mechanical endurance	> 10 x 10 ⁶ cycles	
Material		
RoHS - Directive 2002/95/EC	compliant	
Resistance to heat and fire	according EN60335-1, par.30	
Environment		
Ambient temperature range Standard version	-40...+85°C	
HOT version	-40...+105°C	
Vibration resistance (function; 30...500 Hz)		
closing NO 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

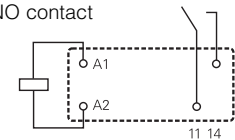
12 A, pinning 3.5 mm

1 CO contact



S0163-BG

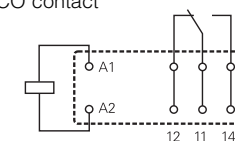
1 NO contact



S0163-BH

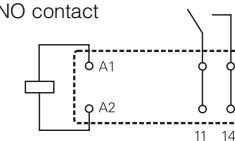
16 A, pinning 5 mm

1 CO contact



S0163-BE

1 NO contact



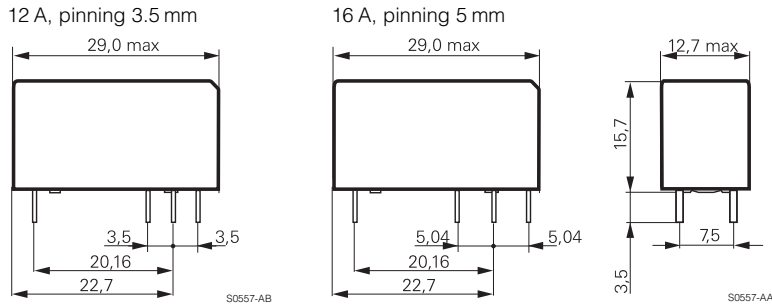
S0163-BF

Recommended pcb hole for manual mounting: \varnothing 1.3

For automated mounting please ask for detailed drawing.

Power PCB Relay RZ (Continued)

Dimensions



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					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 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					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 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					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 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					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					12 VDC	2-1415899-5	
RZH3-1C4-D024						24 VDC	2-1415899-6	
RZH3-1A4-D009						1 NO (form A)	9 VDC	2-1415899-7
RZH3-1A4-D012							12 VDC	2-1415899-8
RZH3-1A4-D024			24 VDC	2-1415899-9				