

# Power PCB Relay RZH 105°C 16A

- 1 pole 16A, 1 form C (CO) or 1 form A (NO) contact
- DC coil 400mW
- 5kV/10mm coil-contact, reinforced insulation
- Ambient temperature 105°C
- Product in accordance to IEC 60335-1

Typical applications Oven control, cooking plate control



F0305-A



**Approvals** 

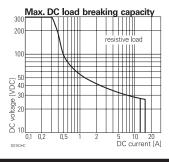
VDE Cert. No. 40023970, cULus E214025, CQC

Technical data of approved types on request

Contact Data	
Contact arrangement 1 for	orm C (CO) or 1 form A (NO)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	16A <sup>1)</sup>
Limiting making current,	
form A contact, max. 4 s, duty factor 10	) % 30A
Breaking capacity max.	4000VA
Contact material	AgNi 90/10 or AgSnO <sub>2</sub>
Frequency of operation, with/without load	360/72000h <sup>-1</sup>
Operate/release time max.	8/6ms
Bounce time max., form A/form B	4/6ms

Contact ratings

3		
Contact	Load	Cycles
A/C (NO/NC)	16 A, 250 VAC, resistive, 105°C	10x10 <sup>3</sup>
A (NO)	16 A, 250 VAC, resistive, 85°C	40x10 <sup>3</sup>
A (NO)	12 A, 250 VAC, resistive, 105°C	20x 10 <sup>3</sup>
A (NO)	10 A, 250 VAC, resistive, 105°C	150x10 <sup>3</sup>
A (NO)	12 A, 250 VAC, resistive, 85°C	150x10 <sup>3</sup>
A (NO)	18 A, 250 VAC, resistive, 85°C	$30x10^3$
A (NO)	12 A, 250 VAC, resistive, 105°C	100x10 <sup>3</sup>
A (NO)	10 A, 250 VAC, resistive, 105°C	300x10 <sup>3</sup>
A (NO)	16 A, 250 VAC, resistive, 105°C	$30x10^3$
A (NO)	16 A, 250 VAC, resistive, 85°C	50x10 <sup>3</sup>
A (NO)	10 A, 250 VAC, resistive, 105°C	150x10 <sup>3</sup>
A/C (NO/NC)	16 A, 250 VAC, resistive, 105°C	10x10 <sup>3</sup>
A (NO)	10 A, 250 VAC, resistive, 105°C	$300x10^3$
A (NO)	12 A, 250 VAC, resistive, 105°C	150x10 <sup>3</sup>
A (NO)	12 A, 250 VAC, resistive, 85°C	150x10 <sup>3</sup>
A (NO)	16 A, 250 VAC, resistive, 105°C	$30x10^3$
A (NO)	16 A, 250 VAC, resistive, 85°C	50x10 <sup>3</sup>
	Contact  A/C (NO/NC) A (NO)	Contact Load  A/C (NO/NC) 16 A, 250 VAC, resistive, 105°C A (NO) 16 A, 250 VAC, resistive, 85°C A (NO) 12 A, 250 VAC, resistive, 105°C A (NO) 10 A, 250 VAC, resistive, 105°C A (NO) 12 A, 250 VAC, resistive, 85°C A (NO) 18 A, 250 VAC, resistive, 85°C A (NO) 12 A, 250 VAC, resistive, 105°C A (NO) 10 A, 250 VAC, resistive, 105°C A (NO) 10 A, 250 VAC, resistive, 105°C A (NO) 16 A, 250 VAC, resistive, 105°C A (NO) 16 A, 250 VAC, resistive, 105°C A (NO) 10 A, 250 VAC, resistive, 105°C A/C (NO/NC) 16 A, 250 VAC, resistive, 105°C A (NO) 10 A, 250 VAC, resistive, 105°C A (NO) 10 A, 250 VAC, resistive, 105°C A (NO) 12 A, 250 VAC, resistive, 105°C



Contact Data (continued)

Mechanical endurance >10x10<sup>6</sup> operations

 Continuous thermal load >10A at 105°C requires reduction of coil power to 49% of rated power after 100ms.

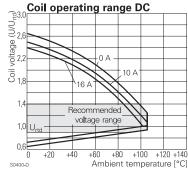
Coil Data		
Coil voltage range	3 to 48VDC	
Operative range, IEC 61810	90110% U <sub>RTD</sub>	
Coil insulation system according UL1446	class F	

Coil versions, DC coil

Coil	Rated	Operate	Release	Coil	Rated coil
code	voltage	voltage	voltage	resistance	power
	VDC	VDC	VDC	Ω±10%	$mW^{1)}$
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
D024	24	16.8	2.4	1440	400
D048	48	33.6	4.8	5730	400

1) Continuous thermal load > 10 A at 105 °C requires reduction of coil power to 49% of rated power after 100 ms.

All figures are given for coil without pre-energization, at ambient temperature  $+23^{\circ}$ C. Other coil voltages on request.



Insulation Data		
Initial dielectric strength		
between open contacts	1000V <sub>rms</sub>	
between contact and coil	5000V <sub>rms</sub>	
Clearance/creepage		
between contact and coil	≥10/10mm	
Material group of insulation parts	Illa	-
Tracking index of relay base	PTI250V	
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Datasheets and product data is subject to the

terms of the disclaimer and all chapters of

the 'Definitions' section, available at

http://relays.te.com/definitions



# Power PCB Relay RZH 105°C 16A (Continued)

## **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

according EN 60335-1, par.30

270°C/10s<sup>2)</sup>

tube/20 pcs., box/500 pcs.

Resistance to heat and fire standard cover version

Ambient temperature -40 to 105°C Category of environmental protection IEC 61810 RTII - flux proof

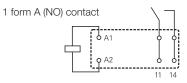
Vibration resistance (functional), 30 to 500Hz closing form A contact >15g opening form A contact >20g opening form B contact >5g Shock resistance (destructive) 100g Terminal type PCB-THT Mounting distance ≥2mm Weight 10g Resistance to soldering heat THT

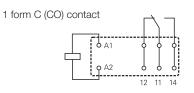
Packaging/unit 2) The use of foaming flux is not permitted.

#### PCB layout / terminal assignment

Bottom view on solder pins

16A, pinning 5mm





S0163-BE

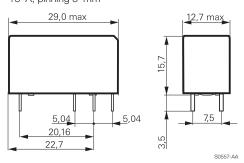
Recommended pcb hole for manual mounting: Ø1.3mm

For automated mounting please ask for detailed drawing.

### **Dimensions**

16 A, pinning 5 mm

IEC 60068-2-20



#### **Product code structure** RZ Н -D012 Typical product code -1A Type RZ Power PCB Relay RZ Version Hot version 105°C Version double pinning 5mm, 16A (1 form A or 1 form C) double pinning 5mm, 16A High performance (1 form A) н **Contact Configuration** 1A 1 form A (1 NO) contact 1C 1 form C (1 CO) contact **Contact material** 4 AgNi 90/10 AgSnO<sub>2</sub> 3 **Coil version** Coil code: please refer to coil versions table

Product code	Version	Contacts	Contact material	Coil	Part number
RZH3-1C4-D012	16A, 105°C	1 form C (CO)	AgNi 90/10	12VDC	2-1415899-5
RZH3-1C4-D024	pinning 5mm			24VDC	2-1415899-6
RZH3-1A4-D009		1 form A (NO)		9VDC	2-1415899-7
RZH3-1A4-D012				12VDC	2-1415899-8
RZH3-1A4-D024				24VDC	2-1415899-9
RZHH-1A4-D009	16A, 105°C			9VDC	6-1415899-2
RZHH-1A4-D012	pinning 5mm			12VDC	6-1415899-6
RZHH-1A4-D024	High performance			24VDC	6-1415899-7
RZH3-1A3-D012	16A, 105°C, pinning 5mm	1 form A (NO)	AgSnO <sub>2</sub>	12VDC	9-1415899-0

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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7-1393144-5 7-1393767-8
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