Power PCB Relay RZL

- **1 pole 12/16 A, 1 form C (CO) or 1 form A (NO) contact**
- **DC coil 530 mW**
- **5kV/10mm coil-contact, reinforced insulation**
- **Ambient temperature 70°C (special applications 85°C)**



Typical applications
Household appliances, boiler control, timers, garage door control

F0305-A

Approvals

VDE Cert. No. 40023970, UL E214025, CQC 14001114367, CQC 14002113865
Technical data of approved types on request

Contact Data

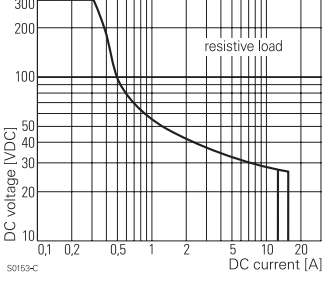
	12A	16A
Contact arrangement	1 form C (CO) or 1 form A (NO)	
Rated voltage	250VAC	
Max. switching voltage	400VAC	
Rated current	12A	16A
Limiting making current (form A contact) max. 4s, duty factor 10%	30A	
Breaking capacity max.	3000VA	4000VA
Contact material	AgNi 90/10	
Initial contact resistance	≤100 mΩ at 1A/24Vdc	
Contact style	single contact	
Frequency of operation, with/without load	360/72000h^{-1}	
Operate/release time max.	8/6ms	
Bounce time max., form A/form B	4/6ms	

Contact ratings

Type	Contact	Load	Cycles
IEC 61810[1)]			
RZL3-1A4.	A (NO)	16A, 250VAC, 85°C	50x10^3
RZL3-1C4.	C (CO)	16A, 250VAC, 85°C	10x10^3
RZL3-1A4.	A (NO)	16A, 250VAC, 70°C	100x10^3
RZL1-1A4	A (NO)	12A, 250VAC, 85°C	100x10^3
RZL1-1A4	A (NO)	16A, 250VAC, 70°C	100x10^3
RZL3-1A4.	A (NO)	8A, cosφ=0.4, 250VAC, 25°C	100x10^3
RZL3-1C4.	B (NC)	8A, 250VAC, 25°C	100x10^3
UL 508[1)]			
RZL3-1A4.	A (NO)	16A, 250VAC, 85°C	50x10^3
RZL3-1C4.	C (CO)	16A, 250VAC, 85°C	10x10^3
RZL3-1A4.	A (NO)	16A, 250VAC, 70°C	100x10^3
RZL1-1A4	A (NO)	12A, 250VAC, 85°C	100x10^3
RZL1-1A4	A (NO)	16A, 250VAC, 70°C	100x10^3
RZL1/3-1A4.	A (NO)	1hp, 240VAC, 25°C	6x10^3
RZL1/3-1A4.	A (NO)	1/2hp, 120VAC, 70°C	6x10^3
Mechanical endurance			10x10^6

1) Ratings only for RZL flux proof (R) version. Wash tight ratings on request

Max. DC load breaking capacity



Coil Data

Coil voltage range	5 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL1446	class F

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
L005	5	3,5	0,5	47	530
L006	6	4,2	0,6	67	530
L009	9	6,3	0,9	153	530
L012	12	8,4	1,2	272	530
L024	24	16,8	2,4	1086	530
L048	48	33,6	4,8	4347	530

All figures are given for coil without pre-energization, at ambient temperature +23°C.
Other coil voltages on request.

Insulation Data

Initial dielectric strength	
between open contacts	1000V$_{rms}$
between contact and coil	5000V$_{rms}$
Clearance/creepage	
between contact and coil	≥10/10mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI250V

Other Data

Material compliance: EU RoHS/ELV, China RoHS compliance,	
Ambient temperature	
standard version	-40 to 70°C
special applications	-40 to 85°C
Category of environmental protection	
IEC 61810	RTII - flux proof; RTIII wash tight
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	
standard version	≥0mm
Weight	10g
Resistance to soldering heat THT	
IEC 60068-2-20	260°C/10s[2)]
Packaging/unit	tube/20 pcs., box/500 pcs.

2) The use of foaming flux is not permitted.

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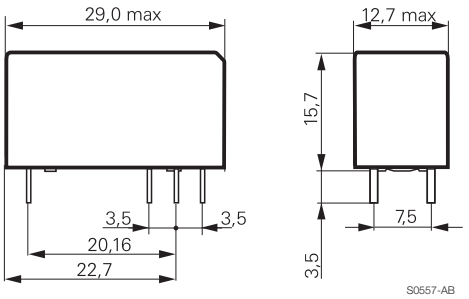
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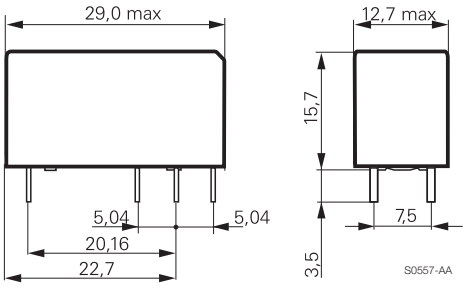
Power PCB Relay RZL (Continued)

Dimensions

12A/16A, pinning 3.5mm [2)]



12A, 16A, pinning 5mm [2)]



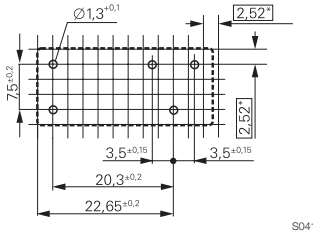
Recommended pcb hole for manual mounting:
Ø1.3mm

For automated mounting please ask for detailed drawing.

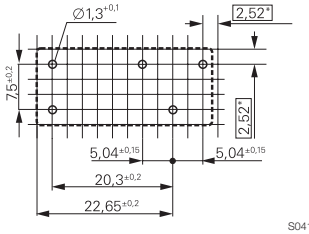
PCB layout / terminal assignment

Bottom view on solder pins

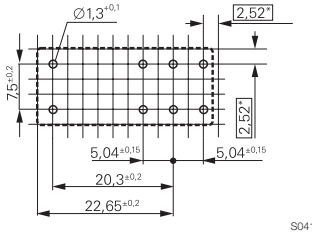
12A/16A, pinning 3.5mm [2)]



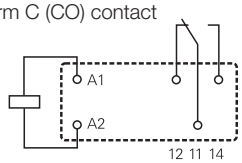
16A, pinning 5mm



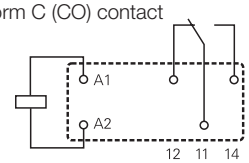
16A, pinning 5mm



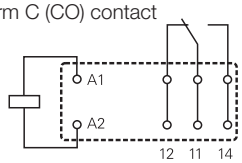
1 form C (CO) contact



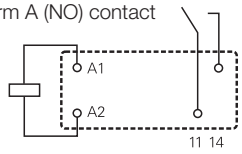
1 form C (CO) contact



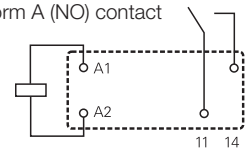
1 form C (CO) contact



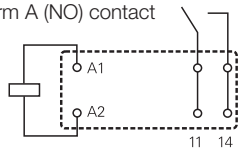
1 form A (NO) contact



1 form A (NO) contact



1 form A (NO) contact



2) For 1 Form C type, subject to develop as market requirement

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Power PCB Relay RZL (Continued)

Product code structure Typical product code **RZ L 3 -1C 4 -L012**

Type
RZ Power PCB Relay RZ

Version
L Black Cover

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

Contact configuration
1A 1 form A (1 NO) contact **1C** 1 form C (1 CO) contact

Contact material
4 AgNi 90/10

Coil version
Coil code: please refer to coil versions table

Sealing Level
R flux proof **W** wash tight (only for 1 form C version)

Product code	Version	Contacts	Contact material	Coil	Part number
RZL1-1A4-L012-R	12A/16A, pinning 3.5mm, flux proof	1 form A (NO)	AgNi 90/10	12VDC	2158100-4
RZL3-1A4-L012-R	16A, pinning 5mm, flux proof	1 form A (NO)		12VDC	1-2158100-6
RZL3-1A4-L024-R		1 form A (NO)		24VDC	1-2158100-7
RZL3-1C4-L012-R		1 form C (CO)		12VDC	2-2158100-2
RZL3-1C4-L024-R		1 form C (CO)		24VDC	2-2158100-3
RZL3-1C4-L024-W	16A, pinning 5mm, wash tight	1 form C (CO)		24VDC	4-2158100-7

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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