Special Load PCB Relay RP3SL

- **1 pole 16A, 1 form A (NO) contact**
- **For high inrush currents up to 120A**
- **Mono- or bistable**
- **4kV/8mm coil-contact**

Typical applications
Lighting control, timers, motor control, building automation.

Approvals

VDE Cert. No. 40025448 (DC versions only), UL E214024
Technical data of approved types on request.

Contact Data

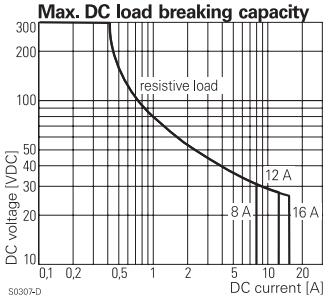
Contact arrangement	1 form A (NO)
Rated voltage	250VAC
Max. switching voltage	400VAC
Rated current	
flux proof version	16A
wash tight version	12A
Limiting making current	
max. 4 s, duty factor 10 %	25A
max. 20 ms (incandescent lamp)	120A
Breaking capacity max.	
flux proof version	4000VA
wash tight version	3000VA
Contact material	AgSnO
Frequency of operation, with/without load	960/72000h^{-1}
Operate/release time max., monostable	14/12ms
Set/reset time max., bistable	30/25ms
Bounce time max.	
monostable	5/7ms
bistable	5/15ms

Contact ratings

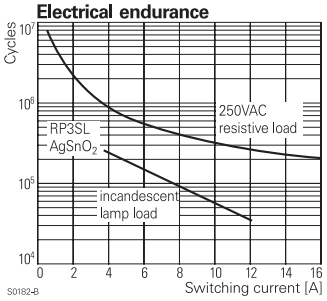
Type	Contact	Load	Cycles
IEC61810			
RP3SL	A (NO)	16A, 250VAC resistive, 70°C	50x10^3
RP7SL	A (NO)	12A, 250VAC resistive, 70°C	100x10^3

Mechanical endurance	
monostable	>20x10^6 operations
bistable	>1x10^6 operations

Max. DC load breaking capacity



Electrical endurance



Coil Data

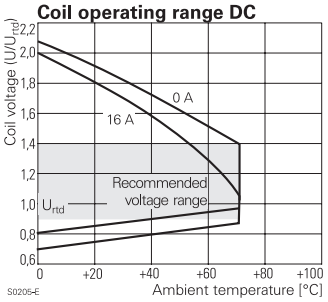
Coil data, monostable coil

Coil voltage range	5 to 110VDC
Operative range, IEC 61810	
flux proof version	2
wash tight version	1

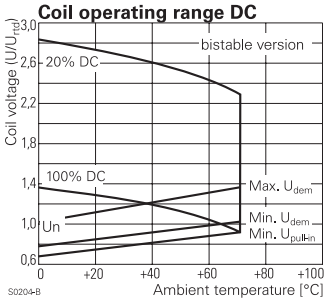
Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%[1]	Rated coil power mW
005	5	3.8	0.5	54	500
006	6	4.5	0.6	68	500
012	12	9.0	1.2	270	500
024	24	18.0	2.4	1100[1]	500
048	48	36.0	4.8	4400[1]	500
060	60	45.0	6.0	6540[1]	500

Coil operating range DC



Coil operating range DC



Coil Data, bistable coil	1 coil	2 coils
Coil voltage range	5 to 24VDC	
Operative range, IEC 61810	1	
Reset voltage min/max, % of Urtd	70/110%	75/120%
Min./Max. energization duration	20ms/1min at < 50%DF	

Coil versions, bistable

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Reset R1 Ω/W	Coil resistance Ω±10%[1]	Rated coil power mW
Coil versions, bistable 1 coil						
A05	5	3.7	3.6	39/0.5	21	1250
A12	12	9.0	8.7	220/0.5	115	1250
A24	24	18.0	16.7	820/0.5	460	1250
Coil versions, bistable 2 coils						
F12	12	9.0	9.0		105[1]	1250
F24	24	18.0	18.0		460[1]	1250

1) Coil resistance ±15% .

All figures are given for coil without pre-energization, at ambient temperature +23°C, duty factor 20%. Other coil voltages on request.

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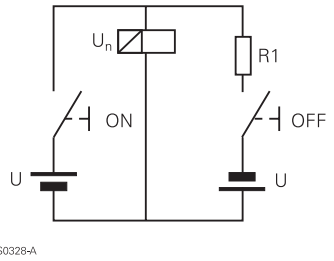
Special Load PCB Relay RP3SL (Continued)

Insulation Data	
Initial dielectric strength	
between open contacts	2000V$_{rms}$
between contact and coil	4000V$_{rms}$
Clearance/creepage	
between contact and coil	≥8/8mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI250V

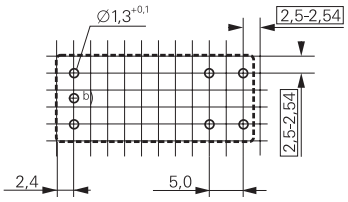
Other Data	
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	
flux proof version	-40 to +70°C
wash tight version	-40 to +35°C
Category of environmental protection	
IEC 61810	RTII - flux proof, RTIII - wash tight
Vibration resistance (functional), form A contact	20g
Shock resistance (destructive)	100g
Terminal type	PCB-THT
Mounting distance, 12A/16A	0mm/≥3mm
Weight	18g
Resistance to soldering heat THT, IEC 60068-2-20	
flux proof version	270°C/10s
wash tight version	260°C/5s
Packaging/unit	
monostable and bistable 1coil version	tube/20 pcs., box/500 pcs.
bistable 2coil version	tray/25 pcs., box/100 pcs.

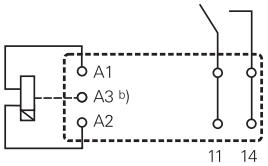
Circuit scheme for bistable 1 coil



PCB layout / terminal assignment

Bottom view on solder pins



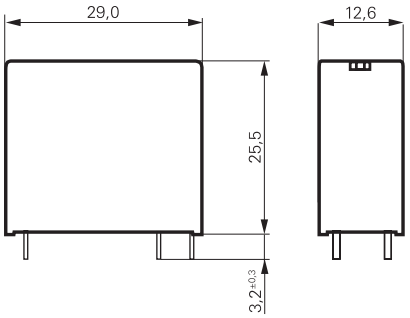


Bistable versions:
Indicated contact position during or after coil energization with reset voltage.

2-coil versions:
Operate A2, A3
Reset A1, A3

b) for 2 coil version only

Dimensions



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Special Load PCB Relay RP3SL (Continued)

Product code structure

Typical product code	RP	3	SL	012

Type
RP Special Load PCB Relay RP 3 SL

Version
3 Flux proof **7** Wash tight

Contact configuration / contact material
SL 1 form A contact (1 NO), $AgSnO_2$

Coil
Coil code: please refer to coil versions table

Product code	Version	Contact material	Coil version	Coil	Part number
RP3SL005	1 form A (NO) contact	AgSnO	DC coil	5VDC	1393230-7
RP3SL012	16A			12VDC	1393230-9
RP3SL018	flux proof			18VDC	1-1393230-0
RP3SL024				24VDC	1-1393230-1
RP3SL048				48VDC	1-1393230-2
RP3SL060				60VDC	1-1393230-3
RP3SLA06			Bistable 1 coil	6VDC	1393230-2
RP3SLA24				24VDC	1393230-4
RP3SLF12			Bistable 2 coils	12VDC	1393230-5

This list represents the most common types and does not show all variants covered by this datasheet.
Other types on request.