

# Special Load PCB Relay RP 3 SL

1 pole 16 A, for high inrush currents,  
mono- or bistable



## Features

- 1 N/O contact
- 120 A / 20 ms inrush peak current
- DC- or bistable version
- 4 kV / 8 mm coil-contact

## Applications

Lighting control, timers, motor control, building automation



Technical data of approved types on request

F0147-A

### Contact data

Configuration	1 N/O contact
Type of contact	single contact
Rated current	16 A
Rated voltage / max.breaking voltage AC	250 Vac / 440 Vac
Maximum breaking capacity AC	4000 VA
Make current (max. 4 s at duty cycle 10%)	25 A
Peak inrush current	120 A
Contact material	AgSnO <sub>2</sub>

### Contact ratings

Type	Load	Operations	Standard
RP3SL	12 A, 250 Vac, cosφ=1	3x10 <sup>5</sup>	
RP3SL	TV 8	25x10 <sup>3</sup>	UL 508
RP3SL	2500 W, 230 Vac, halogen lamps	>10 <sup>4</sup>	
RP3SL	1000 W, 250 Vac, incandescent lamps	2.3x10 <sup>5</sup>	
RP3SL	3000 W, 250 Vac, incandescent lamps	3.6x10 <sup>4</sup>	
RP3SL	1500 VA, fluorescent lamps 163 μF	10 <sup>4</sup>	

### Coil data monostable DC coil

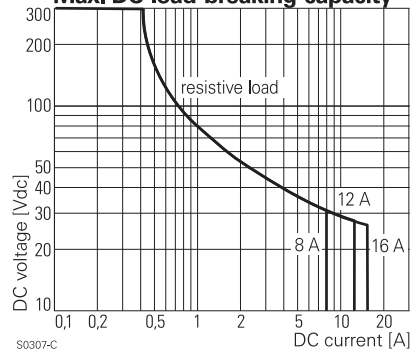
Nominal voltage	5...110 Vdc
Nominal coil power	500 mW
Operate category	2 / b

### Coil versions monostable DC coil

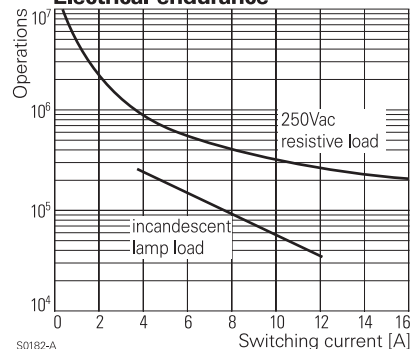
Coil code	Nominal voltage Vdc	Pull-in voltage Vdc	Release voltage Vdc	Maximum voltage Vdc	Coil resistance Ω	Coil current mA
<b>012</b>	<b>12</b>	<b>9.0</b>	<b>1.2</b>	<b>21.6</b>	<b>270±10%</b>	<b>44.4</b>
<b>024</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>43.2</b>	<b>1100±15%</b>	<b>21.8</b>
048	48	36.0	4.8	86.4	4400±15%	10.9
060	60	45.0	6.0	108.0	6540±15%	9.2

All figures are given for coil without preenergization, at ambient temperature +20°C  
Other coil voltages on request

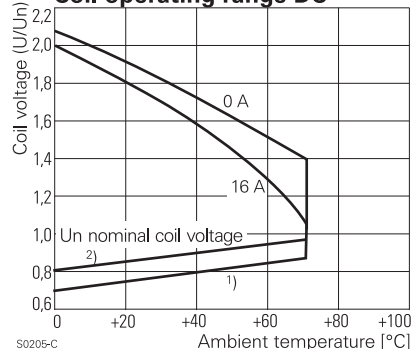
### Max. DC load breaking capacity



### Electrical endurance



### Coil operating range DC



# Special Load PCB Relay RP 3 SL

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mono- or bistable

Coil data bistable	1 coil	2 coils
Nominal voltage	5...110 Vdc	5...60 Vdc
Nominal coil power	1.2...1.4 W	1.2...1.5 W
Minimum energization time	20 ms	
Reset voltage min.	70 % $U_{nom}$	75 % $U_{nom}$
Reset voltage max.	110 % $U_{nom}$	120 % $U_{nom}$

## Coil versions bistable

Coil code	Nominal voltage Vdc	Pull-in voltage Vdc	Reset voltage Vdc	Reset R1 $\Omega$ / W	Coil resistance $\Omega$	Coil current mA
<b>bistable, 1 coil</b>						
A05	5	3.7	3.6	39 / 0.5	21 ± 10%	238.1
A12	12	9.0	8.7	220 / 0.5	115 ± 10%	104.3
A24	24	18.0	16.7	820 / 0.5	460 ± 10%	52.2
<b>bistable, 2 coils</b>						
F12	12	9.0	9.0		105 ± 15%	114.3
F24	24	18.0	18.0		460 ± 15%	52.2

All figures are given for coil without preenergization, at ambient temperature +20°C, duty cycle 20%

Other coil voltages on request

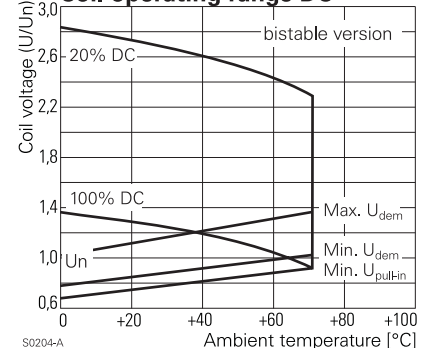
## Insulation

Dielectric strength	coil-contacts	4000 $V_{rms}$
	open contact circuit	2000 $V_{rms}$
Clearance / creepage		8 / 8 mm
Insulation to IEC 60664		
	Voltage rating	250 V
	Pollution degree	3
	Overvoltage category	III
Insulation to VDE 0110b (2/79)		
	Insulation category / reference voltage	C / 250

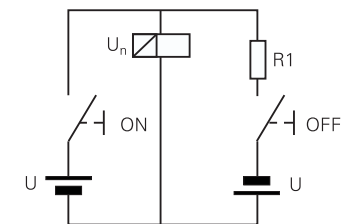
## Other data

Ambient temperature	-40...+70 °C	
Mechanical life	30x10 <sup>6</sup> operations	
Max. switching rate at rated- / minimum load	10 min <sup>-1</sup> / 1200 min <sup>-1</sup>	
Operate- / release time monostable	typ. 8 / 2 ms	
Operate- / reset time bistable	typ. 6 / 2 ms	
Bounce time	typ. 2 ms	
Vibration resistance	20 g, 30...300 Hz	
Shock resistance (destruction)	100 g	
Protection category	RT II - flux proof, RT III - wash tight	
Relay weight	18 g	
Packaging unit	1 coil	20 / 500 pcs.
	2 coils	25 / 100 pcs.
Accessories	see accessories RP	

## Coil operating range DC



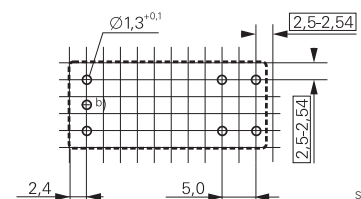
Circuit scheme for bistable 1 coil



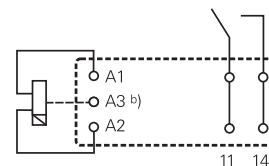
S0328-A

## PCB layout / terminal assignment

View on solder pins  
Dimensions in mm



S0163-CR



S0163-CS

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

