

**Special Load PCB Relay RP 3 SL**

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

**Applications**

Lighting control, timers, motor control, building automation



F0147-B

**Approvals**

REG.-Nr. 3736 (DC versions only), E214024  
Technical data of approved types on request

**Contact data**

Contact configuration	1 NO
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current relay version RP3 / RP7	16 A / 12 A
Limiting continuous current	16 A
Maximum breaking capacity AC, relay version RP3 / RP7	4000 VA / 3000 VA
Limiting making capacity, max 4 s, duty factor 10% peak value, max 20 ms	25 A / 120 A
Contact material	AgSnO <sub>2</sub>
Rated frequency of operation with / without load	16 / 1200 min <sup>-1</sup>
Operate- / release time monostable DC coil	max 14 / 12 ms
Operate- / reset time bistable DC coils	max 30 / 25 ms
Bounce time NO / NC monostable DC coil	max 5 / 7 ms
Bounce time NO / NC bistable DC coil	max 5 / 15 ms

**Contact ratings**

Type	Contact	Load	Ambient temp. [°C]	Cycles
<b>IEC 61810</b>				
RP3SL	NO	16 A, 250 VAC, cosφ=1	70°C	50x10 <sup>3</sup>
RP3SL	NO	12 A, 250 VAC, cosφ=1	70°C	100x10 <sup>3</sup>
<b>UL 508</b>				
RP3SL	NO	12 A, 250 VAC, general purpose	40°C	6x10 <sup>3</sup>
RP3SL	NO	10 A, 35 VDC, general purpose	40°C	30x10 <sup>3</sup>
RP3SL	NO	1/2 hp, 240 VAC	70°C	1x10 <sup>3</sup>

**Coil data**

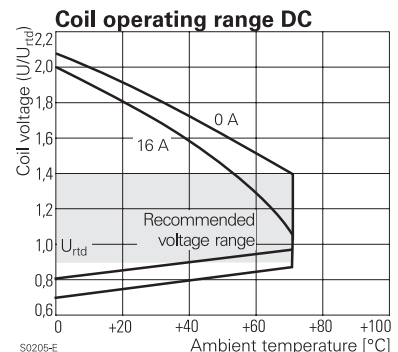
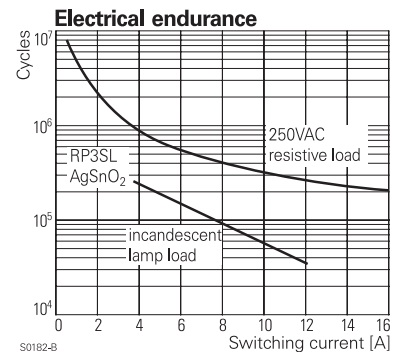
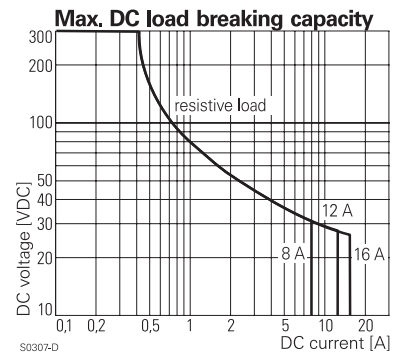
**Coil data, monostable coil**

Rated coil voltage range	5...110 VDC
Operative range to IEC 61810 RTII / RTIII	2 / 1

**Coil versions, DC-coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω	Rated coil power mW
<b>012</b>	<b>12</b>	<b>9.0</b>	<b>1.2</b>	<b>270±10%</b>	<b>533</b>
<b>024</b>	<b>24</b>	<b>18.0</b>	<b>2.4</b>	<b>1100±15%</b>	<b>524</b>
048	48	36.0	4.8	4400±15%	524
060	60	45.0	6.0	6540±15%	550

All figures are given for coil without preenergization, at ambient temperature +23°C  
Other coil voltages on request



**Special Load PCB Relay RP 3 SL (Continued)**

Coil data, bistable coils	1 coil	2 coils
Rated coil voltage range	5...24 VDC	
Operative range to IEC 61810	1	
Reset voltage minimum / maximum, % of $U_{rd}$	70% / 110%	75% / 120%
Minimum energization duration	20 ms	
Maximum energization duration	1 min at < 50% DF	

**Coil versions, bistable coil**

Coil code	Rated voltage VDC	Operate voltage VDC	Reset voltage VDC	Reset R1 $\Omega$ /W	Coil resistance $\Omega$	Rated coil power mW
<b>bistable, 1 coil</b>						
A05	5	3.7	3.6	39/0.5	21 ± 10%	1190
A12	12	9.0	8.7	220/0.5	115 ± 10%	1252
A24	24	18.0	16.7	820/0.5	460 ± 10%	1252
<b>bistable, 2 coils</b>						
F12	12	9.0	9.0		105 ± 15%	1371
F24	24	18.0	18.0		460 ± 15%	1252

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

**Insulation**

Dielectric strength coil-contact circuit	4000 $V_{rms}$	
open contact circuit	2000 $V_{rms}$	
Clearance / creepage coil-contact circuit	≥ 8 / 8 mm	
Material group of insulation parts	IIIa	
Tracking index of relay base	PTI 250 V	
Insulation to IEC 61810-1		
Type of insulation coil-contact circuit	reinforced	
open contact circuit	micro disconnection	
Rated insulation voltage	250 V	
Pollution degree	3	2
Rated voltage system	240 V	230 / 400 V
Overvoltage category	III	

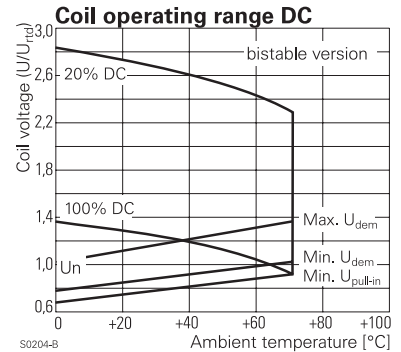
**Other data**

Mechanical endurance DC-coil	> 20x10 <sup>6</sup> cycles
bistable coil	> 1x 10 <sup>6</sup> cycles
Material	RoHS - Directive 2002/95/EC compliant as per product date code 0404
Environment	
Ambient temperature range RTII - flux proof	-40...+70°C
RTIII - wash tight	-40...+35°C
Vibration resistance (function), opening of closed cont.	20 g
Shock resistance (destruction)	100 g
Category of protection	RTII - flux proof, RTIII - wash tight
Processing	
Mounting	pcb or on socket*)
Mounting distance 12A / 16A	≥ 0 / ≥ 3 mm
Resistance to soldering heat flux proof version	270 °C / 10 s
wash tight version	260°C / 5 s
Relay weight	18 g
Packaging unit monostable, bistable 1 coil	20 / 500 pcs
bistable 2 coils	100 pcs

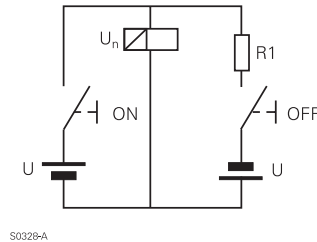
\*) no socket available for bistable 2 coil version, see Accessories

**Accessories**

For monostable and bistable 1 coil version, details see PCB accessories RT

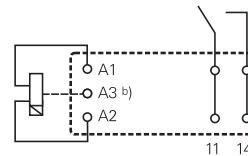
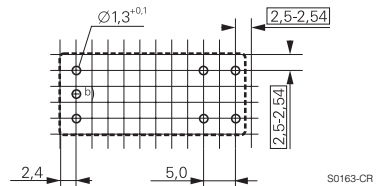


Circuit scheme for bistable 1 coil



**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