Special Load PCB Relay RP 3 SL

- **1 pole 16 A, 1 NO contact**
- **For high inrush currents,**
- **120 A / 20 ms inrush peak current**
- **Mono- or bistable**
- **4 kV / 8 mm coil-contact**
- **RoHS compliant (Directive 2002/95/EC) as per product date code 0404**

F0147-A

Applications

Lighting control, timers, motor control, building automation

Approvals

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

Contact data

Contact configuration	1 NO
Contact set	single contact
Type of interruption	micro-disconnection
Rated current relay version RP3 / RP7	16 A / 12 A
Rated voltage / max.switching voltage AC	250/400 VAC
Limiting continuous current	16 A
Maximum breaking capacity AC RP3 / RP7	4000 VA / 3000 VA
Limiting making capacity, max 4 s, duty factor 10%	25 A
peak value, max 20 ms	120 A
Contact material	$AgSnO_2$
Mechanical endurance DC-coil	> $20x10^6$ cycles
bistable coil	> $1x\ 10^6$ cycles
Rated frequency of operation with / without load	16 / 1200 min^{-1}

Contact ratings

Type	Load	Cycles
RP3SL	16 A, 250 VAC, 70°C, 16 min^{-1}, IEC61810-1	$5x10^4$
RP3SL	12 A, 250 VAC, 70°C, 16 min^{-1}, IEC61810-1	$1x10^5$

Coil data

Coil data, monostable coil

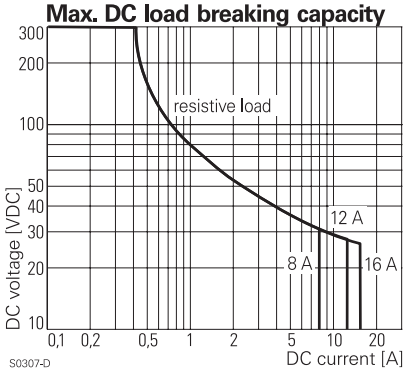
Rated coil voltage range	5...110 VDC
Coil power	typ 520 mW
Operative range RTII / RTIII	2 / 1

Coil versions, DC-coil

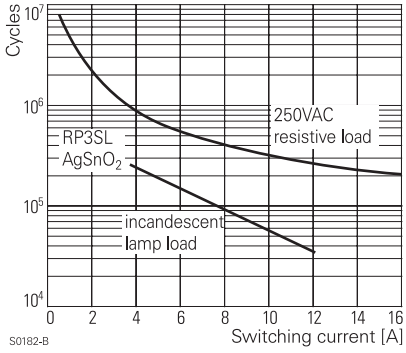
Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω	Rated coil power mW
012	**12**	**9.0**	**1.2**	**270±10%**	**533**
024	**24**	**18.0**	**2.4**	**1100±15%**	**524**
048	48	36.0	4.8	4400±15%	524
060	60	45.0	6.0	6540±15%	550

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

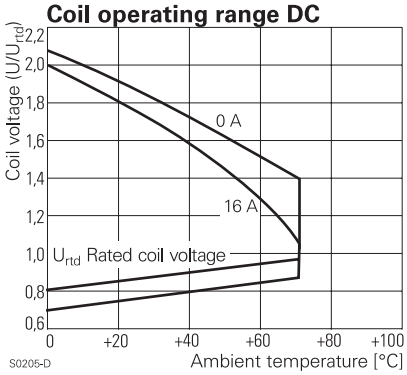
Max. DC load breaking capacity



Electrical endurance



Coil operating range DC



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Dimensions are in mm unless otherwise specified and are shown for reference purposes only.

Product specification according to IEC 61810-1. Product data, technical parameters, test conditions and processing information only to be used together with the 'Definitions' at schrackrelays.com in the 'Schrack' section.

Specifications subject to change.

Special Load PCB Relay RP 3 SL (Continued)

Coil data, bistable coils	1 coil	2 coils
Rated coil voltage range	5...24 VDC	
Coil power	typ 1,25 W	
Operative range	1	
Reset voltage minimum / maximum, % of U_{rtd}	70% / 110%	75% / 120%
Minimum energization duration	20 ms	
Maximum energization duration	1 min at < 50% DF	

Coil versions, bistable DC-coil

Coil code	Rated voltage VDC	Operate voltage VDC	Reset voltage VDC	Reset R1 Ω / W	Coil resistance Ω	Rated coil power mW
bistable, 1 coil						
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
bistable, 2 coils						
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 60664-1		
Type of insulation coil-contact circuit	basic	
open contact circuit	functional	
Rated insulation voltage	250 V	
Pollution degree	3	2
Rated voltage system	240 V	400 V
Overvoltage category	III	

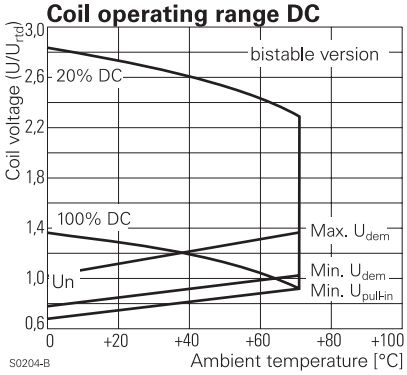
Other data

RoHS - Directive 2002/95/EC	compliant as per product date code 0404
Flammability class according to UL94	V-2
Ambient temperature range RTII - flux proof	-40...+70°C
RTIII - wash tight	-40...+35°C
Operate- / release time DC coil	typ 8 / 2 ms
Operate- / reset time bistable coils	typ 6 / 2 ms
Bounce time	typ 2 ms
Vibration resistance (function), opening of closed contact	20 g
Shock resistance (destruction)	100 g
Category of protection	RTII - flux proof, RTIII - wash tight
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

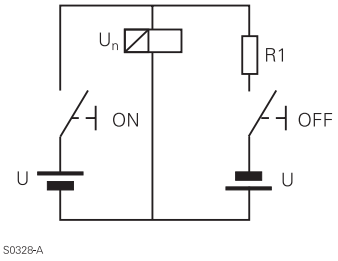
Accessories

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

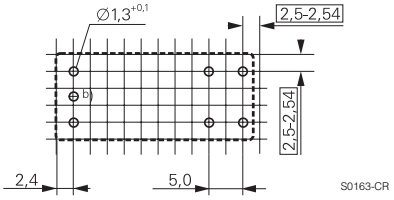
Coil operating range DC

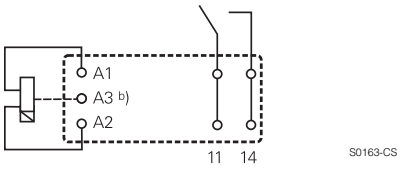


Circuit scheme for bistable 1 coil



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

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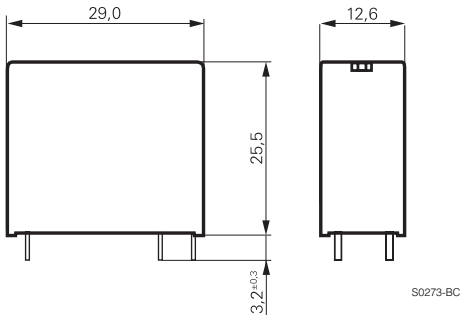
Dimensions



Product key

R	P		S	L			

Type

Version
3 flux proof **7** wash tight

Contact configuration / contact material
SL 1 NO contact, $AgSnO_2$

Coil
Coil code: please refer to coil versions table

Preferred types in bold print

Product key	Version	Contacts	Coil	Coil	Part number
RP3SL005	16 A	1 NO contact	DC-coil	5 VDC	0-1393230-7
RP3SL012	flux proof	$AgSnO_2$		12 VDC	0-1393230-9
RP3SL024				24 VDC	1-1393230-1
RP3SLA12			bistable	12 VDC	0-1393230-3
RP3SLA24			1-coil	24 VDC	0-1393230-4
RP3SLF12			bistable	12 VDC	0-1393230-5
RP3SLF24			2-coils	24 VDC	0-1393230-6
RP7SL012	12 A		DC-coil	12 VDC	6-1393231-5
RP7SL024	wash tight			24 VDC	6-1393231-6

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