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

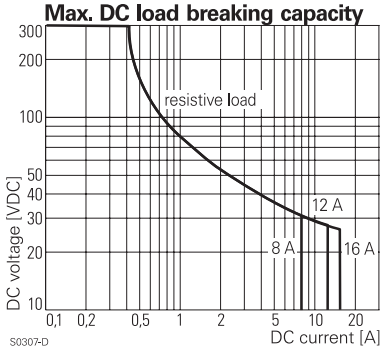
Coil versions, DC-coil

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

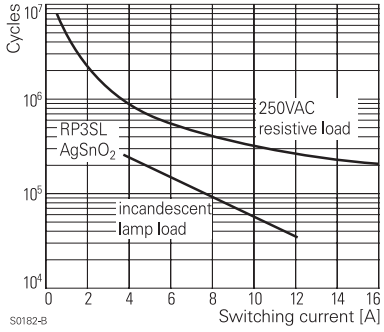
All figures are given for coil without preenergization, at ambient temperature +23°C

Other coil voltages on request

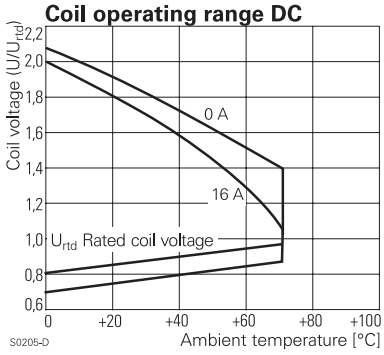
Max. DC load breaking capacity



Electrical endurance



Coil operating range DC



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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	

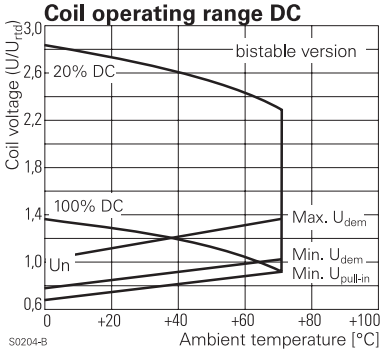
Other data

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

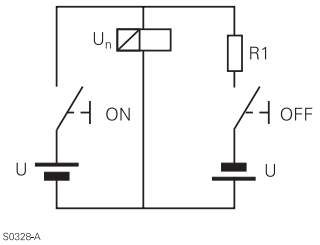
Accessories

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

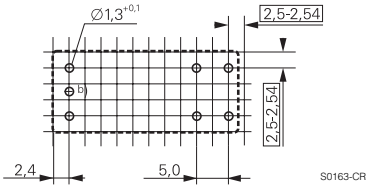
Coil operating range DC

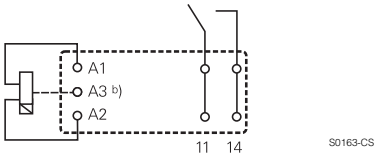


Circuit scheme for bistable 1 coil



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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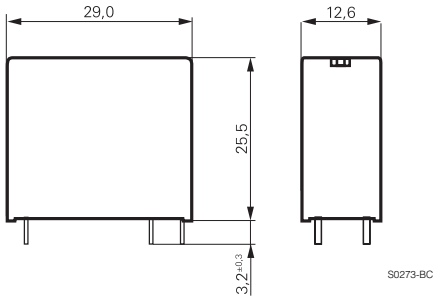

Product key

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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