

Power PCB Relay RT1 Inrush Power

- 1 pole 16A, 1 form A (NO) contact (W pre-make contact + AgSnO₂)
- 10A/250VAC making and breaking capacity acc. to IEC 60669-1
- 165A/20ms inrush peak current
- Mono- or bistable coil
- 5kV/10mm coil-contact
- Reinforced insulation
- Test tab (manual operator) optional

Typical applications

Lighting systems, movement sensors, filament and incandescent lamp loads, motors



F0272-B



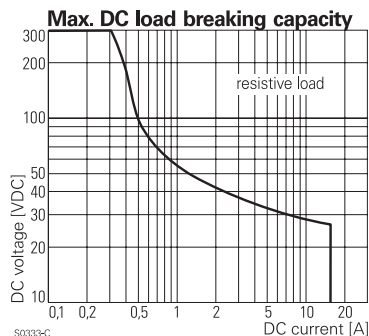
Approvals

VDE REG.-Nr. 6106, UL E214025, cCSAus 14385
Technical data of approved types on request

Contact Data	RT.3T	RTS3L
Contact arrangement	1 form A (NO) contact	
Rated voltage	250VAC	
Max. switching voltage	400VAC	
Rated current	16A	
Limiting continuous current	16A, UL: 20A (RTS3L)	
Limiting making current, max. 20ms (incand. lamps)	165A	120A
max. 200µs (fluorescent lamps)	800A	-
Breaking capacity max.	4000VA	
Contact material	W (pre-make cont.) + AgSnO ₂	AgSnO ₂
Contact style	pre-make contact	single contact
Frequency of operation, with/without load	360/3600h ⁻¹	
Operate/release time max., DC coil	10/5ms	
Operate/Reset time max., bistable version	10/10ms	
Bounce time max.	4ms	

Contact ratings

Type	Contact	Load	Cycles
IEC 61810			
RTS3L	A (NO)	20A, 250VAC resistive, 70°C	20x10 ³
RTS3L	monostable A (NO)	16A, 250VAC resistive, 85°C	100x10 ³
RTS3T	A (NO)	16A, 250VAC resistive, 85°C	5x10 ³
UL 508			
RTS3L	A (NO)	20A, 250VAC, general purpose, 70°C	20x10 ³
RTS3L	A (NO)	16A, 250VAC, resistive, 85°C	50x10 ³
RTS3L	A (NO)	TV8, 240VAC, 40°C	25x10 ³
RTS3L	A (NO)	1.5hp, 240VAC, 70°C	30x10 ³
RTS3T	A (NO)	1200W Tungsten, 120VAC/277VAC, 60Hz, 50°C	6x10 ³
RTS3T	A (NO)	620W Discharge lamps (standard ballast), 120VAC/277VAC, 60Hz, 50°C	6x10 ³



Contact Data (continued)

Mechanical endurance		
DC coil	>5x10 ⁶ ops.	>10x10 ⁶ ops.
bistable version	>3x10 ⁶ ops.	>5x10 ⁶ ops.
tab manually operated	>1x10 ³ ops.	-

Coil Data, monostable DC coil

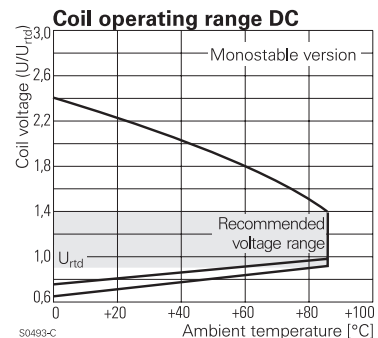
Coil voltage range	5 to 110VDC
Operative range, IEC 61810	2
Coil insulation system according UL1446	class F

Coil versions, monostable DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10% ¹⁾	Rated coil power mW
005	5	3.5	0.5	62	403
006	6	4.2	0.6	90	400
012	12	8.4	1.2	360	400
024	24	16.8	2.4	1440	400
048	48	33.6	4.8	5520	417
060	60	42.0	6.0	8570 ¹⁾	420
110	110	77.0	11.0	28800 ¹⁾	420

1) Coil resistance ±12%.

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



Coil Data, bistable coils

	1 coil	2 coils
Magnetic system	polarized, bistable	
Coil voltage range	3 to 24VDC	
Operative range, IEC 61810	2	
Limiting voltage, % of rated coil voltage	120%	150%
Min./Max. energization duration	30ms/1min at <10% duty factor	
Coil insulation system according UL1446	class F	

Power PCB Relay RT1 Inrush Power (Continued)

Coil Data (continued)

Coil versions, bistable

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
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Coil versions, bistable 1 coil

A03	3	2.1	1.7	21	429
A12	12	8.4	6.6	360	400
A24	24	16.8	13.2	1440	400

Coil versions, bistable 2 coils

F03	3	2.1	1.7	15	600
F12	12	8.4	6.6	240	600
F24	24	16.8	13.2	886	650

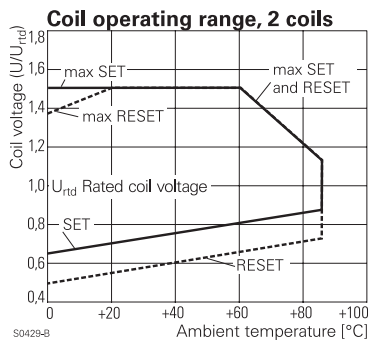
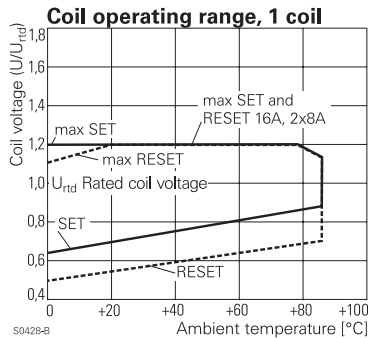
All figures are given for coil without pre-energization, at ambient temperature +23°C.

Other coil voltages on request.

Bistable coils - operation

Version	1 coil		2 coils	
Coil terminals	A1	A2	A1	A3 A2
Operate	+	-	+	-
Reset	-	+	-	+

Contact position not defined at delivery



Insulation Data

Initial dielectric strength	
between open contacts	1250V _{rms}
between contact and coil	5000V _{rms}
Clearance/creepage	
between contact and coil	≥10/10mm
Material group of insulation parts	IIIa
Tracking index of relay base	PTI 250V

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

	RT.3T	RTS3L
Ambient temperature		
monostable DC coil		-40 to 85°C
bistable 1 coil		-10 to 85°C
bistable 2 coils		-40 to 85°C
Category of environmental protection		RTII - flux proof
IEC 61810		
Vibration resistance (functional), monostable version	10g	20g
Shock resistance (destructive)		100g
Terminal type		PCB-THT, plug-in ²⁾
Weight, without / with test tab	14/16g	14g/-
Resistance to soldering heat THT		270°C/10s
IEC 60068-2-20		
Packaging/unit		
without test tab	tube/20 pcs., box/500 pcs.	tube/20 pcs., box/500 pcs.
with test tab	tray/25 pcs., box/100 pcs.	-

2) RTT3T or bistable 2 coil version: pcb mounting only. See Accessories

Accessories RTS3.

For details see datasheet [Accessories Industrial Power Relay RT](#)

Socket available for 1 coil version only.

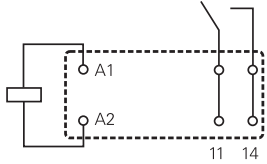
NOTE: indicated contact ratings and electrical endurance data for direct wiring of relays (according IEC 61810-1); for relays mounted on sockets deratings may apply.

Power PCB Relay RT1 Inrush Power (Continued)

Terminal assignment

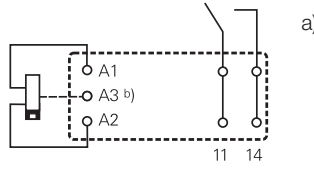
Bottom view on solder pins

monostable version



S0163-BF

bistable version



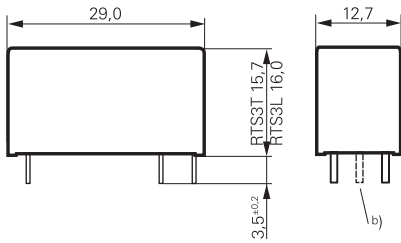
S0163-DPS

a) Indicated contact position during or after coil energization with reset voltage.

b) for 2 coil version only

Dimensions / PCB layout

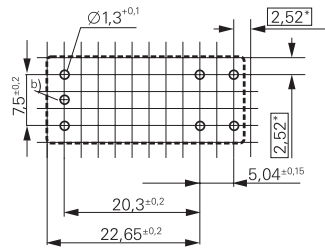
version without test tab



S0272-BW

S0272-BC

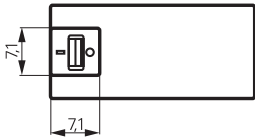
16A, pinning 5mm



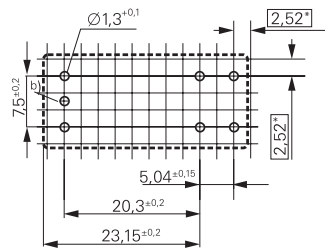
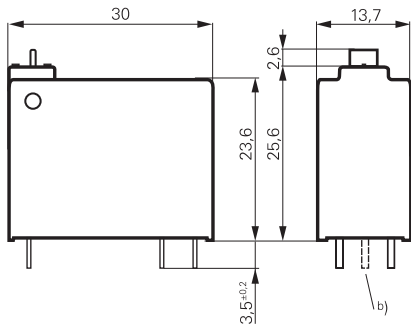
S0418-CV

b) for 2 coil version only

version with test tab



S0491-B



S0492-CU

*) With the recommended PCB hole sizes a grid pattern from 2.5mm to 2.54mm can be used.

Power PCB Relay RT1 Inrush Power (Continued)

Product code structure	Typical product code					RT	S	3	T	A12
Type	RT Power PCB Relay RT1 Inrush Power									
Version	S Without test tab		T With test tab (manual operator) for contact material ,T' and bistable coil only							
Contact configuration	3 1 form A (NO) contact									
Contact material	L AgSnO ₂		T Tungsten (W) pre-make + AgSnO ₂							
Coil	Coil code: please refer to coil versions table									

Product code	Version	Contacts	Contact material	Coil version	Coil	Part number	
RTS3L005	Without test tab, 16mm high	1 form A (NO) contact	AgSnO ₂	Monostable	5VDC	1-1415898-8	
RTS3L006					6VDC	4-1415898-4	
RTS3L012					12VDC	1-1415898-9	
RTS3L024					24VDC	1-1415898-4	
RTS3LA12					Bistable, 1 coil	12VDC	2-1415898-3
RTS3LF12	Without test tab, 15.7mm high		W pre-make + AgSnO ₂	Monostable	Bistable, 2 coils	2-1415898-5	
RTS3T005					5VDC	1-1415898-6	
RTS3T012					12VDC	1415898	
RTS3T024					24VDC	1415898-1	
RTS3T048					48VDC	1-1415898-1	
RTS3T060					60VDC	1-1415898-2	
RTS3TA05					Bistable, 1 coil	5VDC	1-1415898-5
RTS3TA06						6VDC	3-1415898-1
RTS3TA12						12VDC	1415898-2
RTS3TF03					Bistable, 2 coils	3VDC	1415898-4
RTS3TF12	12VDC	1415898-5					
RTS3TF24	24VDC	1415898-6					
RTT3TA12	With test tab, 23.6mm high			Bistable, 1 coil	12VDC	1415898-7	
RTT3TF24					Bistable, 2 coils	24VDC	1-1415898-0

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