Power PCB Relay RT Inrush Power

- **1 pole 16A, 1 form A (NO) contact ($AgSnO_2$ or W pre-make contact + $AgSnO_2$)**
- **Mono- or bistable coil**
- **5kV/10mm coil-contact**
- **Reinforced insulation**
- **Test tab (manual operator) optional for bistable versions**
- **WG version: product in accordance to IEC60335-1**
- **RTS3T: Electronic ballast UL508/NEMA 410 rated**

Typical applications
LED lighting systems, filament and incandescent lamp loads, movement detectors, light sensors, intelligent wall sockets, motors (RTS3L), bus system actuators.



Approvals

VDE Cert. No. 40007571,UL E214025, cCSAus 1142018
Technical data of approved types on request.

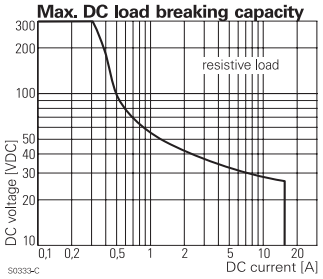
Contact Data	RT.3T	RTS3L
Contact arrangement	1 form A (NO) contact	
Rated voltage	250VAC	
Max. switching voltage	480VAC	
Rated current	16A	
Limiting continuous current	16A, 20A	
Limiting making current, max. 20ms (incand. lamps)	165A peak	120A peak
max. 200µs	800A peak	
Breaking capacity max.	4000VA	
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)	2A, 480VAC, magnetic ballast, 80°C	10x10^3 *
RTS3T	A (NO)	2A, 480VAC, electronic ballast, 80°C	10x10^3*
RTS3T	A (NO)	3A, 277VAC, electronic ballast, 80°C	15x10^3
RTS3T	A (NO)	5A, 120VAC, electronic ballast, 80°C	15x10^3
RTS3T	A (NO)	5A, 277VAC, electronic ballast, 85°C	10x10^3
RTS3T	A (NO)	5A, 347VAC, electronic ballast, 105°C, with z.c.	10x10^3*
RTS3T	A (NO)	5A, 347VAC, magnetic ballast, 105°C	10x10^3
RTS3T	A (NO)	3A, 480VAC, magnetic ballast, 105°C	10x10^3*

* Special test conditions available on request

Max. DC load breaking capacity



Contact Data (continued)	RT.3T	RTS3L
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

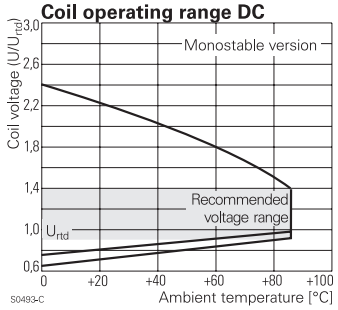
Coil voltage range	5 to 110VDC
Operative range, IEC 61810	2
Coil insulation system according UL1446	class F

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
009	9	6.3	0.9	203	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 operating range DC



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Power PCB Relay RT Inrush Power (Continued)

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	

Coil Data (continued)

Coil versions, bistable

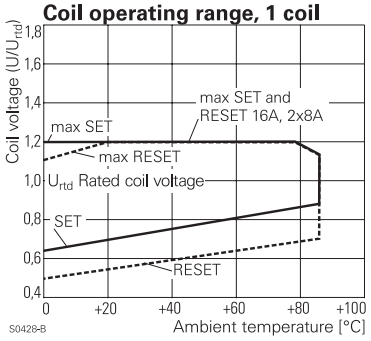
Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power mW
Coil versions, bistable 1 coil					
A03	3	2.1	1.7	21	429
A12	12	8.4	6.6	360	400
A24	24	16.8	13.2	1440	400
Coil versions, bistable 2 coils					
F03	3	2.1	1.7	15	600
F12	12	8.4	6.6	240	600
F24	24	16.8	13.2	886	650

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

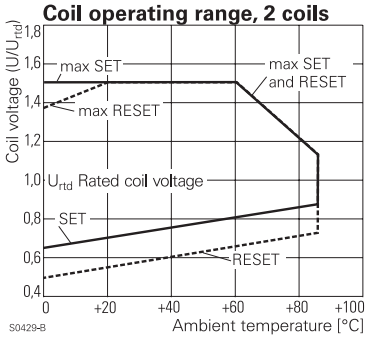
Bistable coils - operation

Version	1 coil		2 coils		
Coil terminals	A1	A2	A1	A3	A2
Operate	+	-		+	-
Reset	-	+	-	+	
Contact position not defined at delivery					

Coil operating range, 1 coil



Coil operating range, 2 coils



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	RT.3T	RTS3L
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter		
Ambient temperature		
monostable DC coil	-40 to 105°C	
bistable 1 coil	-10 to 105°C	
bistable 2 coils	-40 to 105°C	
Category of environmental protection		
IEC 61810	RTII - flux proof	
RTIII - wash tight available upon request		
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 IEC 60068-2-20	270°C/10s	
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.

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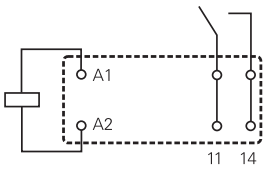
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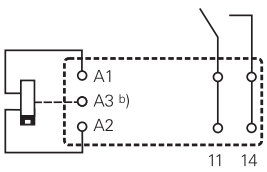
Power PCB Relay RT Inrush Power (Continued)

Terminal assignment
Bottom view on solder pins

monostable version



bistable version

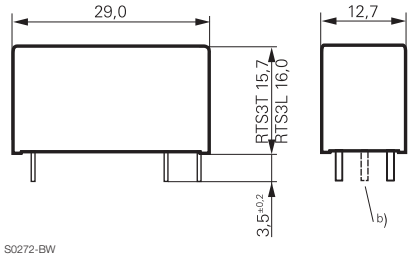


a) Indicated contact position during or after coil energization with reset voltage.

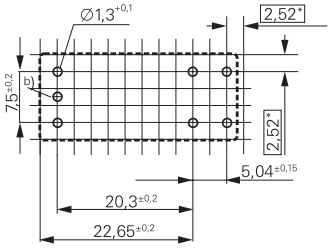
b) for 2 coil version only

Dimensions / PCB layout

version without test tab

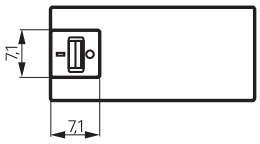


16A, pinning 5mm

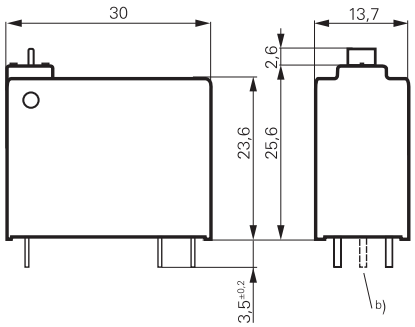


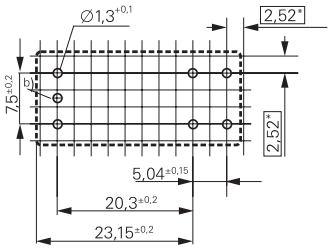
b) for 2 coil version only

version with test tab



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





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Power PCB Relay RT 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

Version
Blank Standard Version
WG Product in accordance to IEC 60335-1

Product code	Version	Contacts	Contact material	Coil version	Coil	Version	Part number
RTS3L005	Without test tab,	1 form A (NO)	$AgSnO_2$	Monostable	5VDC	Standard	1-1415898-8
RTS3L006	16mm high	contact			6VDC		4-1415898-4
RTS3L012					12VDC		1-1415898-9
RTS3L024					24VDC		1-1415898-4
RTS3LA12				Bistable, 1 coil	12VDC		2-1415898-3
RTS3LF12				Bistable, 2 coils			2-1415898-5
RTS3T005	Without test tab,		W pre-make + $AgSnO_2$	Monostable	5VDC		1-1415898-6
RTS3T012	15.7mm high				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,			Bistable, 1 coil	12VDC		1415898-7
RTT3TF24	23.6mm high			Bistable, 2 coils	24VDC		1-1415898-0
RTS3L012WG	Without test tab,	1form A (NO)	$AgSnO_2$	Monostable	12VDC	IEC60335-1	2-1415898-7
RTS3L024WG	15.7 mm high	contact			24VDC	compliant	5-1415898-1
RTS3T012WG			W pre-make + $AgSnO_2$		12VDC		5-1415898-6
RTS3TA24WG				Bistable 1 coil	24VDC		4-1415898-7

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

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