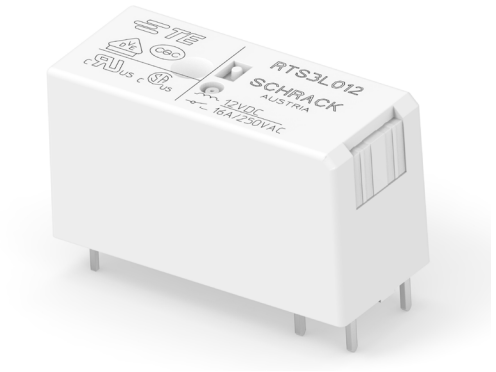
Power PCB Relay RT Inrush Power

- **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**
- **Product in accordance to IEC60335-1**
- **RTS3T: Electronic ballast UL508/NEMA 410 rated**
- **RTSET: 8A Electronic ballast 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.

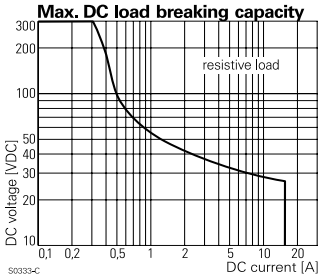
Contact Data	RTSET	RTS3L
Contact arrangement	1 form A (NO) contact	
Rated voltage	250VAC	
Max. switching voltage	480VAC	
Rated current	16A	
Limiting continuous current	16A	20A
Limiting making current, max. 20ms (incand. lamps)	165A peak	120A peak
max. 200µs	800A peak	
Breaking capacity max.	4000VA	
Contact 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
RTSET	A (NO)	16A, 250VAC resistive, 85°C	5x10^3
UL 61810-1 (former 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, magnetic ballast, 105°C	10x10^3
RTS3T	A (NO)	3A, 480VAC, magnetic ballast, 105°C	10x10^3*
RTSET	A (NO)	16A, 250VAC, general purpose, 85°C	5x10^3
RTSET	A (NO)	8A, 277VAC, electronic ballast, 85°C	6x10^3
RTSET	A (NO)	5A, 277VAC, electronic ballast, 85°C	10x10^3
RTSET	A (NO)	3A, 277VAC, electronic ballast, 85°C	20x10^3
RTSET	A (NO)	5A, 120VAC, electronic ballast, 85°C	20x10^3

* Special test conditions available on request

Max. DC load breaking capacity



Contact Data (continued),

Mechanical endurance	RTS3T / RTSET	RTS3L
DC coil	>5x10^6 ops.	>10x10^6 ops.
bistable version	>3x10^6 ops.	>5x10^6 ops.

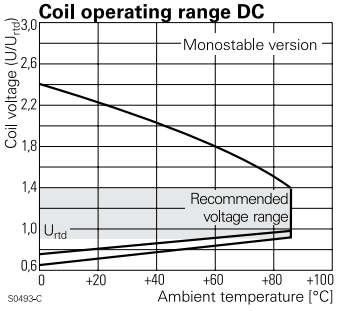
Coil Data, monostable DC coil	RTS3T	RTSET	RTS3L
Coil voltage range		5 to 110VDC	
Operative range, IEC 61810		2	
Coil insulation system according UL1446		class F	

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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Catalog product data, 'Definitions' section, application notes and all specifications are subject to change.

Power PCB Relay RT Inrush Power (Continued)

Coil Data (continued),

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

Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power mW
Coil versions, bistable	**RTS3T**			**RTS3L**	
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.

Coil Data

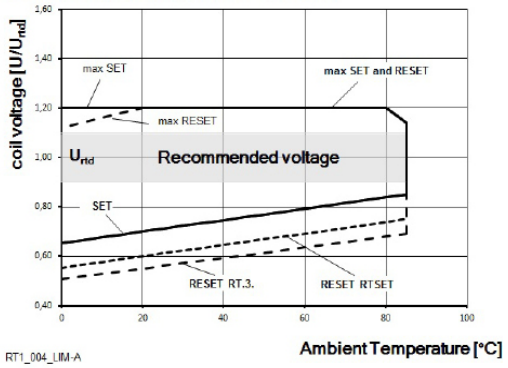
Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance Ω±10%	Rated coil power mW
Coil versions, bistable			**RTSET**		
Coil versions, bistable 1 coil					
A03	3	2.1	1.8	21	429
A12	12	8.4	7.2	360	400
A24	24	16.8	14.4	1440	400
Coil versions, bistable 2 coils					
F03	3	2.1	1.8	15	600
F12	12	8.4	7.2	240	600
F24	24	16.8	14.4	886	650

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

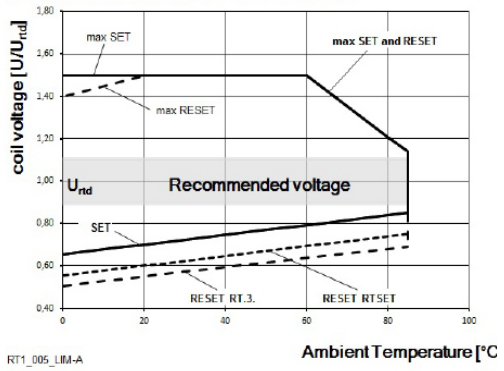
Bistable coils - operation

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

Coil operating range: 1 bistable coil



Coil operating range: 2 bistable 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

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 RTS3T / RTS3L	
monostable DC coil	-40 to 105°C
bistable 1 coil	-10 to 105°C
bistable 2 coils	-40 to 105°C
Ambient temperature RTSET	
monostable DC coil	-40 to 85°C
bistable 1 coil	-10 to 85°C
bistable 2 coils	-40 to 85°C

	RTS3T / RTSET	RTS3L
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	14g	14g
Resistance to soldering heat THT IEC 60068-2-20	270°C/10s	
	RTS3T / RTSET	**RTS3L**
Packaging/unit	tube/20 pcs., box/500 pcs.	tube/20 pcs., box/500 pcs.

2) bistable 2 coil version: PCB mounting only. See Accessories.

Accessories RTS.

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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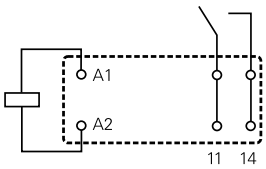
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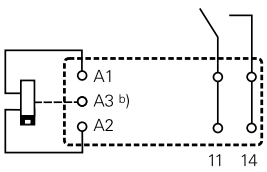
Power PCB Relay RT Inrush Power (Continued)

Terminal assignment
Bottom view on solder pins

monostable version



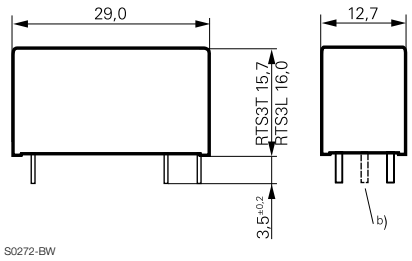
bistable version



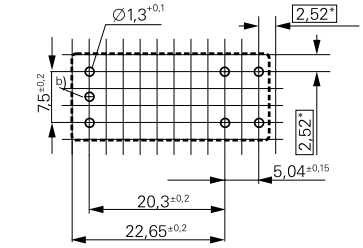
a) Indicated contact position during or after coil energization with reset voltage.

b) for 2 coil version only

Dimensions / PCB layout



16A, pinning 5mm



b) for 2 coil version only

*) 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 16A, pinning 5mm, flux proof

Contact configuration
3 1 form A (NO) contact
E 1 form A(NO) ‚electronic ballast' 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

Product code	Version	Contacts	Contact material	Coil version	Coil	Version	Part number
RTS3L005	16A	1 form A (NO)	$AgSnO_2$	Monostable	5VDC	Standard	1-1415898-8
RTS3L006	pinning 5mm	contact			6VDC		4-1415898-4
RTS3L012	flux proof,				12VDC		1-1415898-9
RTS3L024	16mm hight				24VDC		1-1415898-4
RTS3LA12				Bistable, 1 coil	12VDC		2-1415898-3
RTS3LF12				Bistable, 2 coils			2-1415898-5
RTS3T005	16A		W pre-make + $AgSnO_2$	Monostable	5VDC		1-1415898-6
RTS3T012	pinning 5mm				12VDC		1415898
RTS3T024	flux proof,				24VDC		1415898-1
RTS3T048	15.7mm hight				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
RTSET005	16A	1 form A (NO)	W pre-make + $AgSnO_2$	Monostable	5VDC	Standard	7-1415898-7
RTSET012	pinning 5mm	contact			12VDC		7-1415898-9
RTSET024	flux proof,				24VDC		8-1415898-0
RTSETA12	16mm hight			Bistable, 1 coil	12VDC		8-1415898-6
RTSETA24					24VDC		8-1415898-7
RTSETF12				Bistable, 2 coils	12VDC		9-1415898-1
RTSETF24					24VDC		9-1415898-3

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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