

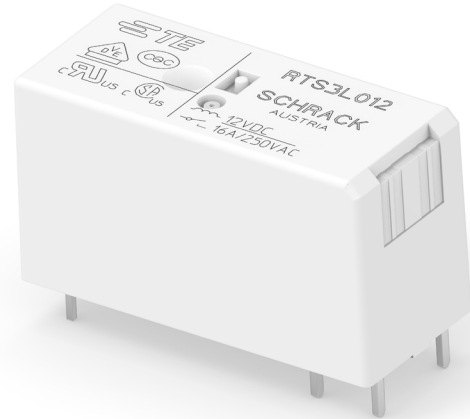
SCHRACK

POWER PCB RELAY RT INRUSH POWER

GENERAL PURPOSE
RT-IPOWER

INTRODUCTION

TE Connectivity (TE)'s SCHRACK Power PCB RT Inrush Power series line comprises single-pole 16A PCB relays optimized for high inrush current applications. These relays feature mono- and bistable coil configurations, reinforced insulation (5kV/10mm), and meet IEC 60335-1 standards for enhanced safety. With switching capabilities up to 480VAC and inrush current tolerance up to 800A (200μs), they are ideal for robust industrial and household loads.



FEATURES

- 1 pole 16A, 1 form A (NO) contact (AgSnO₂ or W pre-make contact + AgSnO₂)
- 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

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

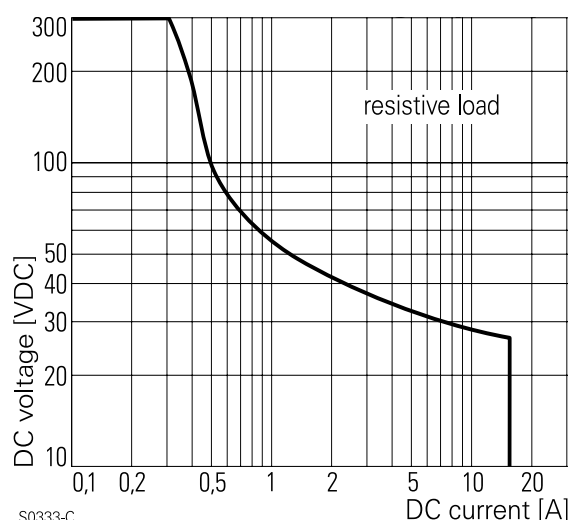
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CONTACT DATA

	RTS3T / 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. 1.5ms	500A 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	

MAX. DC LOAD BREAKING CAPACITY



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)	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
UL 61810-1 (former UL 508) Tungsten Loads			
RTS3T	A (NO)	1200W, 120VAC/277VAC, 60Hz, 50°C	6x10 ³
RTS3T	A (NO)	3500W, 277VAC, 40°C	12x10 ³ **
Mechanical endurance			
DC coil		>5x10 ⁶ ops.	>10x10 ⁶ ops.
bistable version		>3x10 ⁶ ops.	>5x10 ⁶ ops.

* Special test conditions available on request

** Not yet available in UL certificate, in progress

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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		
Bistable coils	1 coil	2 coil	
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		

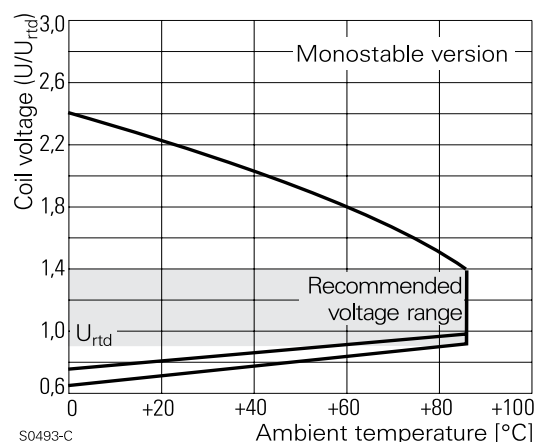
COIL VERSIONS, MONOSTABLE DC COIL

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance $\Omega \pm 10\%^{1)}$	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 $\pm 12\%$.

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

COIL OPERATING RANGE DC



COIL VERSIONS, BISTABLE

			RTS3T	RTS3L	
Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance $\Omega \pm 10\%$	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.

			RTSET		
Coil code	Rated voltage VDC	Set voltage VDC	Reset voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
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

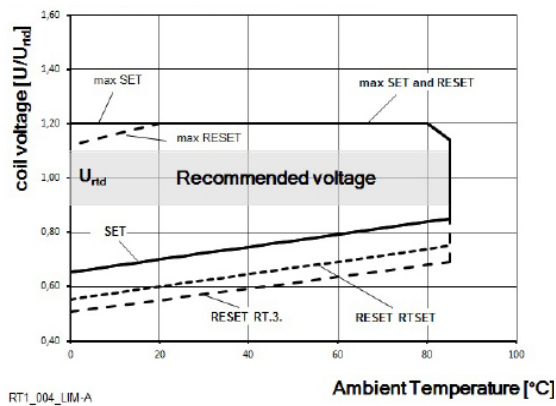
All figures are given for coil without pre-energization, at ambient temperature +23°C. Other coil voltages on request.

BISTABLE COILS - OPERATION

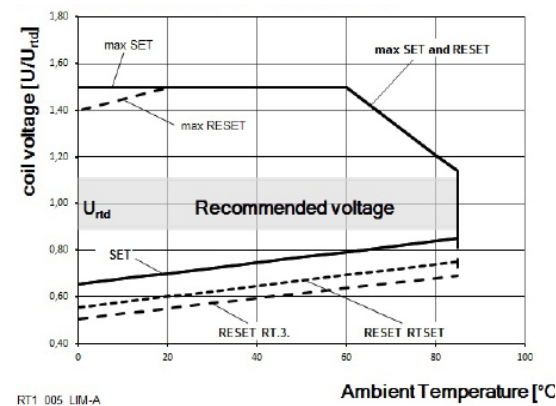
Version	1 coil		2 coils		
Coil terminals	A1	A2	A1	A3	A2
Operate	+	-		+	-
Reset	-	+	-	+	

Contacts are preferably in reset contact position leaving our production. During transportation and handling the position may change. Ensure reset position before any thermal processing (e.g. soldering).

COIL OPERATING RANGE: 1 BISTABLE COIL



COIL OPERATING RANGE: 2 BISTABLE COIL



INSULATION DATA

Initial dielectric strength	
between open contacts	1250V _{rms}
between contact and coil	5000V _{rms}
Clearance/creepage	
between contact and coil	≥ 10/10 mm
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
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

OTHER DATA CONTINUED

	RTS3T / RTSET*	RTS3L
Category of environmental protection		
IEC 61810	RTII - flux proof	
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	
Packaging/unit	tube/20 pcs., box/500 pcs.	tube/20 pcs., box/500 pcs.

2) bistable 2 coil version: PCB mounting only. See Accessorie.
*) RTIII - wash tight available upon request

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.

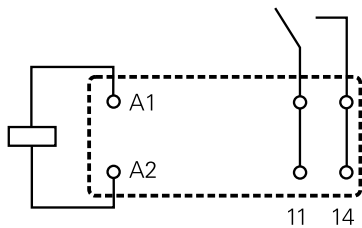
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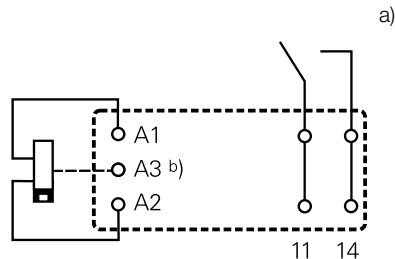
TERMINAL ASSIGNMENT

Bottom view on solder pins

Monostable version

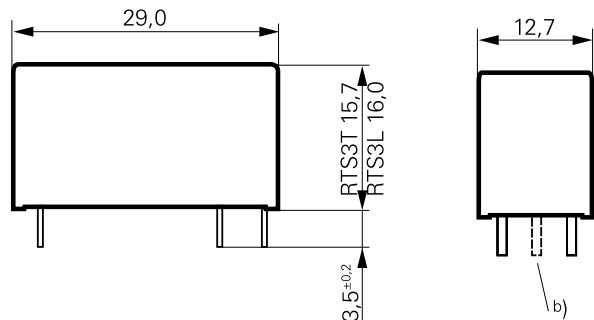


Bistable version

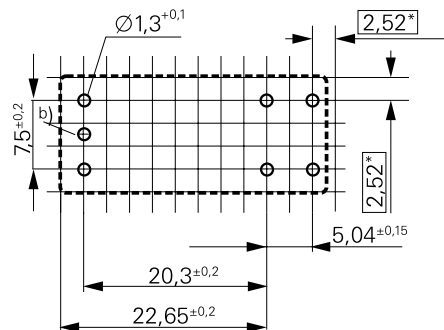


a) Indicated contact position during or after coil energization with reset voltage.
b) for 2 coil version only

DIMENSIONS (Unit:mm)

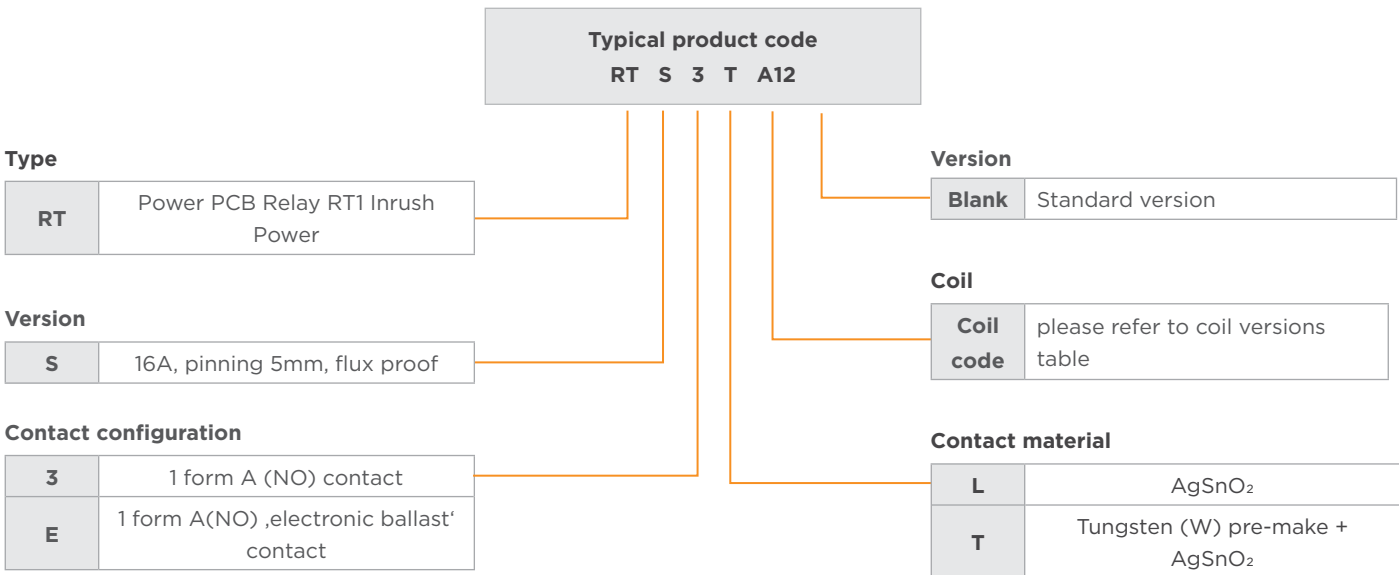


16 A, pinning 5 mm



b) for 2 coil version only
*) With the recommended PCB hole sizes a grid pattern from 2.5 mm to 2.54 mm can be used.

PRODUCT CODE STRUCTURE



PRODUCT INFORMATION

Product code	Version	Contacts	Contact material	Coil version	Coil	Version	Part Number
RTS3LO05	16A pinning 5mm flux proof, 16mm high	1 form A (NO) contact	AgSnO ₂	Monostable	5VDC	Standard	1-1415898-8
RTS3LO06					6VDC		4-1415898-4
RTS3LO12					12VDC		1-1415898-9
RTS3LO24					24VDC		1-1415898-4
RTS3LA12				Bistable, 1 coil	12VDC		2-1415898-3
RTS3LF12				Bistable, 2 coils	-		2-1415898-5
RTS3TO05	16A pinning 5mm flux proof, 15.7mm high		W pre- make + AgSnO ₂	Monostable	5VDC		1-1415898-6
RTS3TO12					12VDC		1415898
RTS3TO24					24VDC		1415898-1
RTS3TO48					48VDC		1-1415898-1
RTS3TO60					60VDC		1-1415898-2
RTS3TA05				Bistable, 1 coils	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 pinning 5mm flux proof, 16mm high	1 form A (NO) contact	W pre- make + AgSnO ₂	Monostable	5VDC	Standard	7-1415898-7
RTSET012					12VDC		7-1415898-9
RTSET024					24VDC		8-1415898-0
RTSETA12				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 type and does not show all variants covered by this datasheet.
Other types on request

Notes:

- Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
- Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at <http://relays.te.com/definitions>.
- Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.

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