Power PCB Relay RT1 Inrush Power

- **1 pole 16 A, 1 NO contact (W pre-make contact + $AgSnO_2$)**
- **12 A / 240 VAC making and breaking capacity acc. to IEC 60699-1**
- **165 A / 20 ms inrush peak current**
- **mono- or bistable coil**
- **5 kV / 10 mm coil-contact**
- **Reinforced insulation**
- **Ambient temperature 70°C**
- **Optional test tab (manual operator)**
- **RoHS compliant (Directive 2002/95/EC)**

Applications

Lighting systems, movement sensors, filament lamp loads, halogen bulbs and motors

F0272-A

Approvals

VDE in process, cULus E214025

Technical data of approved types on request

Contact data

Contact configuration	1 NO
Contact set	pre-make contact
Type of interruption	micro-disconnection
Rated current	16 A
Rated voltage / max.switching voltage AC	240/400 VAC
Limiting continuous current	16 A
Maximum breaking capacity AC	4000 VA
Limiting making capacity	
max 20 ms (incandescent lamps)	165 A
max 200 µs (fluorescent lamps)	800 A
Contact material	W (pre-make contact) + $AgSnO_2$
Mechanical endurance DC	> 5 10^6 cycles
bistable	> 3 10^6 cycles
test tab manually operated	> 10^3 cycles
Rated frequency of operation with / without load	6 / 60 min^{-1}

Contact ratings

Type	Load	Cycles
RTS3T	3000 W, 240 VAC, DF 8,3%, 5 min^{-1}, incandescent lamp	typ. $4x10^4$
RTT3T	3000 W, 240 VAC, DF 8,3%, 5 min^{-1}, incandescent lamp	typ. $2x10^4$
RT*3T	16 A, 240 VAC, capacitive load 140 µF, 7,5 min^{-1}, EN60669-1	> $2x10^4$
RT*3T	15 A, 264 VAC, cosφ=0.6, IEC 60699-1	> $3x10^4$

Coil data

Coil data, monostable coil

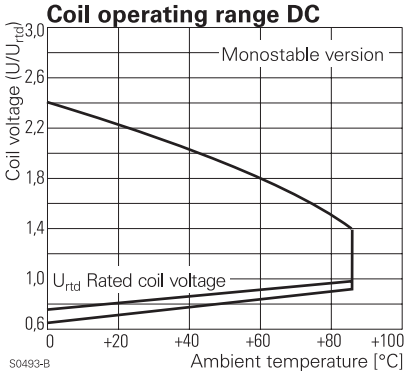
Rated coil voltage range	5...110 VDC
Coil power	typ 400 mW
Operative range	2
Coil insulation system according UL1446	class F

Coil versions, monostable DC-coil

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

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

Coil operating range DC



S0493-B

Datasheet
Issued 02/2005
www.tycoelectronics.com
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Dimensions are in mm unless otherwise specified and are shown for reference purposes only.

Product specification according to IEC 61810-1. Product data, technical parameters, test conditions and processing information only to be used together with the 'Definitions' at schrackrelays.com in the 'Schrack' section.

Specifications subject to change.

Power PCB Relay RT1 Inrush Power (Continued)

Coil data, bistable coils	1 coil	2 coils
Rated coil voltage range	3...24 VDC	
Coil power	typ 400 mW	typ 600 mW
Operative range	2	
Limiting voltage, % of rated coil voltage	120%	150%
Minimum energization duration	30 ms	
Maximum energization duration	1 min at < 10% DF	
Coil insulation system according UL1446	class F	

Coil versions, bistable 1 coil

Coil code	Rated voltage VDC	Operate voltage VDC	Reset voltage VDC	Coil resistance Ω	Rated coil power mW
A03	3	4.3	4.3	21±10%	429
A12	12	8.4	8.4	360±10%	400
A24	24	16.8	16.8	1440±10%	400
Coil versions, bistable 2 coils					
F03	3	4.3	4.3	15±10%	600
F12	12	8.4	8.4	240±10%	600
F24	24	16.8	16.8	886±10%	650

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

Coils - operation

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

Contact position not defined at delivery

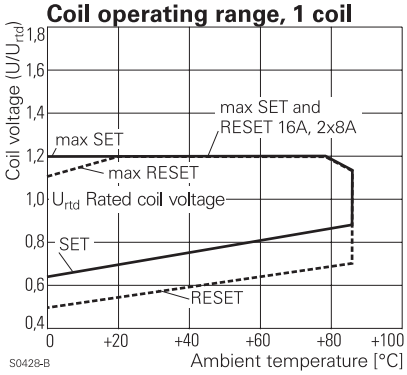
Insulation

Dielectric strength coil-contact circuit	4000 V_{rms}	
open contact circuit	1250 V_{rms}	
Clearance / creepage coil-contact circuit	≥ 10 / 10 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	reinforced	
open contact circuit	functional	
Rated insulation voltage	250 V	
Pollution degree	3	2
Rated voltage system	240 V	400 V
Overvoltage category	III	

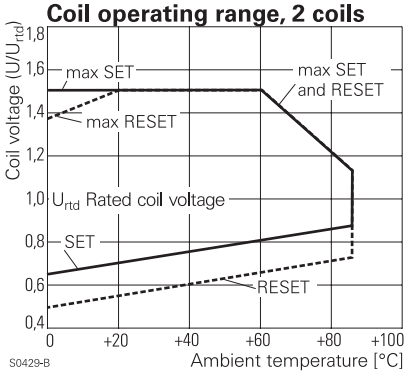
Other data

RoHS - Directive 2002/95/EC	compliant
Flammability class according to UL94	V-0
Ambient temperature range	-40...70°C
Vibration resistance (function) monostable	10 g
Shock resistance (destruction)	100 g
Category of protection	RTII - flux proof
Mounting	pcb
Mounting distance	0 mm
Resistance to soldering heat	270 °C / 10 s
Relay weight with / without test tab	16 / 14 g
Packaging unit with / without test tab	100 / 500 pcs

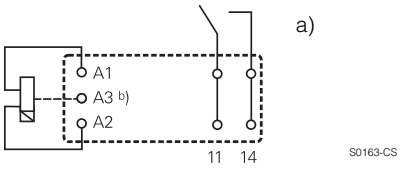
Coil operating range, 1 coil



Coil operating range, 2 coils



Terminal assignment
Bottom view on solder pins



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

b) for 2 coil version only

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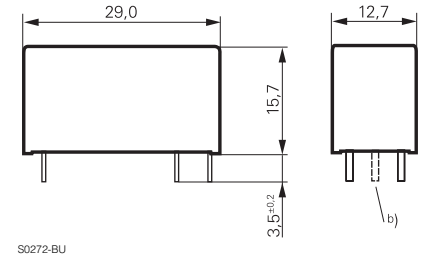
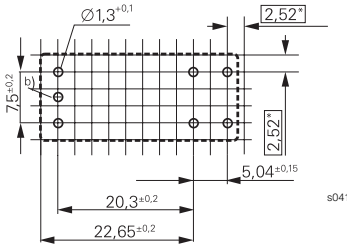
Dimensions / PCB layout

version without test tab

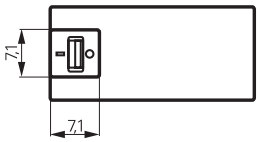


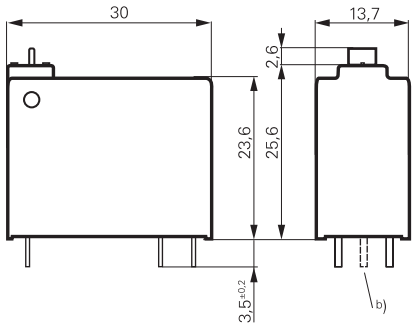
16 A, pinning 5 mm

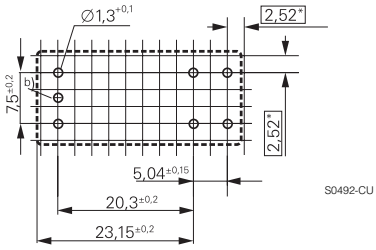


b) for 2 coil version only

version with test tab







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

Product key

R	T		3	T			

Type

Version
S without test tab **T** with test tab (manual operator)

Contact configuration
3 1 NO contact

Contact material
T Tungsten (W) pre-make + $AgSnO_2$

Coil
Coil code: please refer to coil versions table, preferred types in bold print

Product key	Version	Contacts	Cont. material	Coil	Coil	Part number
RTS3T012	without	1 NO contact	W pre-make +	monostable	12 VDC	0-1415898-0
RTS3T024	test tab		$AgSnO_2$	coil	24 VDC	0-1415898-1
RTS3TA12				bistable	12 VDC	0-1415898-2
RTS3TA24				1-coil	24 VDC	0-1415898-3
RTS3TF03				bistable	3 VDC	0-1415898-4
RTS3TF12				2-coils	12 VDC	0-1415898-5
RTS3TF24					24 VDC	0-1415898-6
RTT3TA12	with			bistable	12 VDC	0-1415898-7
RTT3TA24	test tab			1-coil	24 VDC	0-1415898-8
RTT3TF12				bistable	12 VDC	0-1415898-9
RTT3TF24				2-coils	24 VDC	1-1415898-0

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