

Power PCB Relay RT Inrush Power

- 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
- Test tab (manual operator) optional for RTT3T bistable versions
- WG version: 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.

ApprovalsVDE Cert. No. 40007571,UL E214025, cCSAus 1142018

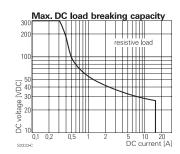
Technical data of approved types on request.

Contac	t Data	RT.3T / RT	SET	RTS3	L
Contact a	arrangement	-	I form A (NC) contact	i
Rated vo	ltage		250VA	AC .	
Max. swit	tching voltage		480VA	۱C	
Rated cu	rrent		16A	١	
Limiting of	continuous current	16A		20A	
Limiting r	naking current,				
max. 2	Oms (incand. lamps	s) 165A peak		120A p	oeak
max. 2	:00µs	800A peak			
Breaking	capacity max.		4000\	VΑ	
Contact r	material	W (pre-make	e cont.)	AgSr	10,
		+AgSnO ₂			
Contact s	style	pre-make co	ntact	single o	contact
Frequenc	y of operation, with	n/without load	360/360	00h ⁻¹	
Operate/i	release time max.,	DC coil	10/5n	ns	
Operate/I	Reset time max., b	istable version	10/10	ms	
Bounce t	ime max.		4ms	3	
Contact	ratings				
Туре	Contact	Load			Cycles
IEC 6181	10				
RTS3L	A (NO)	20A, 250VAC re	sistive, 70°C		20x10 ³
RTS3I m	onostable A (NO)	16A 250\/AC ro	cictivo 85°C		100×103

Contact	Load	Cycles
A (NO)	20A, 250VAC resistive, 70°C	20x10 ³
nostable A (NO)	16A, 250VAC resistive, 85°C	100x103
A (NO)	16A, 250VAC resistive, 85°C	5x10 ³
Contact	Load	Cycles
A (NO)	16A, 250VAC resistive, 85°C	5x10 ³
A (NO)	20A, 250VAC, general purpose, 70°C	20x10 ³
A (NO)	16A, 250VAC, resistive, 85°C	50x10 ³
A (NO)	TV8, 240VAC, 40°C	25x10 ³
A (NO)	1.5hp, 240VAC, 70°C	30x10 ³
A (NO)	1200W Tungsten, 120VAC/277VAC,	
		6x10 ³
A (NO)		10x10 ³
A (NO)		10x10 ³
` '	3A, 277VAC, electronic ballast, 80°C	15x10 ³
A (NO)	5A, 120VAC, electronic ballast, 80°C	15x10 ³
A (NO)	5A, 277VAC, electronic ballast, 85°C	10x10 ³
A (NO)	5A, 347VAC, electronic ballast, 105°C	
	with z.c	10x10 ³
	5A, 347VAC, magnetic ballast, 105°C	10x10
A (NO)	3A, 480VAC, magnetic ballast, 105°C	10x10 ³
A (NO)	16A, 250VAC, general purpose, 85°C	5x10 ³
A (NO)	8A, 277VAC, electronic ballast, 85°C	6x10 ³
A (NO)	5A, 277VAC, electronic ballast, 85°C	10x10 ³
A (NO)	3A, 277VAC, electronic ballast, 85°C	20x10
A (NO)	5A, 120VAC, electronic ballast, 85°C	20x10 ⁵
	A (NO) nostable A (NO) A (NO) Contact A (NO) A (NO)	A (NO) 20A, 250VAC resistive, 70°C nostable A (NO) 16A, 250VAC resistive, 85°C A (NO) 16A, 250VAC resistive, 85°C Contact Load A (NO) 16A, 250VAC resistive, 85°C A (NO) 16A, 250VAC resistive, 85°C A (NO) 16A, 250VAC, general purpose, 70°C A (NO) 16A, 250VAC, resistive, 85°C A (NO) 15A, 240VAC, 40°C A (NO) 1.5hp, 240VAC, 70°C A (NO) 1200W Tungsten, 120VAC/277VAC, 60Hz, 50°C A (NO) 2A, 480VAC, magnetic ballast, 80°C A (NO) 2A, 480VAC, electronic ballast, 80°C A (NO) 3A, 277VAC, electronic ballast, 80°C A (NO) 5A, 120VAC, electronic ballast, 80°C A (NO) 5A, 347VAC, electronic ballast, 105°C with z.c A (NO) 5A, 347VAC, magnetic ballast, 105°C with z.c A (NO) 3A, 480VAC, magnetic ballast, 105°C with z.c A (NO) 3A, 480VAC, magnetic ballast, 105°C A (NO) 3A, 480VAC, magnetic ballast, 105°C A (NO) 3A, 277VAC, electronic ballast, 85°C A (NO) 5A, 277VAC, electronic ballast, 85°C A (NO) 5A, 277VAC, electronic ballast, 85°C A (NO) 3A, 277VAC, electronic ballast, 85°C







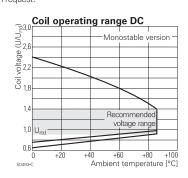
RT.3T / RTSET	RTS3L
,	ITTOOL
>5x10 ⁶ ops.	>10x10 ⁶ ops.
>3x10 ⁶ />1x10 ⁶ ops.	>5x10 ⁶ ops.
>1x10 ³ ops.	-
	>3x10 ⁶ />1x10 ⁶ ops.

Coil Data, monostable DC coil	RT.3T	RTSET	RTS3L
Coil voltage range	5 tc	110VDC	
Operative range, IEC 61810		2	
Coil insulation system according UL1446	(class F	
Coil insulation system according UL1446	(lass F	

ions, monos	stable DC co	il		
Rated	Operate	Release	Coil	Rated coil
voltage	voltage	voltage	resistance	power
VDC	VDC	VDC	$\Omega \pm 10\%^{1)}$	mW
5	3.5	0.5	62	403
6	4.2	0.6	90	400
9	6.3	0.9	203	400
12	8.4	1.2	360	400
24	16.8	2.4	1440	400
48	33.6	4.8	5520	417
60	42.0	6.0	8570 ¹⁾	420
110	77.0	11.0	288001)	420
	Rated voltage VDC 5 6 9 12 24 48 60	Rated Operate voltage voltage VDC VDC 5 3.5 6 4.2 9 6.3 12 8.4 24 16.8 48 33.6 60 42.0	voltage voltage voltage VDC VDC VDC 5 3.5 0.5 6 4.2 0.6 9 6.3 0.9 12 8.4 1.2 24 16.8 2.4 48 33.6 4.8 60 42.0 6.0	Rated voltage voltage Operate voltage voltage Release voltage resistance Coil resistance VDC VDC VDC Ω±10% ¹⁾ 5 3.5 0.5 62 6 4.2 0.6 90 9 6.3 0.9 203 12 8.4 1.2 360 24 16.8 2.4 1440 48 33.6 4.8 5520 60 42.0 6.0 8570 ¹⁾

¹⁾ Coil resistance ±12%.

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





Power PCB Relay RT Inrush Power (Continued)

Coil Data (continued),		
bistable coils	1 coil	2 coils
Magnetic system	polarize	d, bistable
Coil voltage range	3 to	24VDC
Operative range, IEC 61810		2
Limiting voltage, % of rated coil voltage	ge 120%	150%
Min./Max. energization duration	30ms/1min at -	<10% duty factor
Coil insulation system according UL14	146 cla	ass F

Coil Da	ta		RT.3T	RT	S3L
Coil vers	ions, bista	ble			
Coil	Rated	Set	Reset	Coil	Rated coil
code	voltage	voltage	voltage	resistance	power
	VDC	VDC	VDC	Ω±10%	mW
Coil vers	ions, bista	ble 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 vers	ions, bista	ble 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.

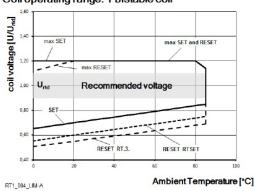
Coil Da	ıta		R	TSET	
	sions, bista	ble			
Coil	Rated	Set	Reset	Coil	Rated coil
code	voltage	voltage	voltage	resistance	power
	VDC	VDC	VDC	Ω±10%	mW
Coil vers	sions, bista	ble 1 coil			
A03	3	2.1	1.8	21	429
A12	12	8.4	7.2	360	400
A24	24	16.8	14.4	1440	400
Coil vers	sions, bista	ble 2 coils			
F03	3	2.1	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.

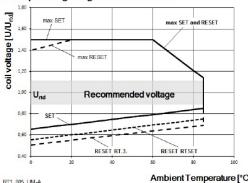
Bistable coils - operation

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 _{ms}
between contact and coil	5000V _m
Clearance/creepage	iiii
between contact and coil	≥10/10mm
Material group of insulation parts	Illa
Tracking index of relay base	PTI 250V

Other Data

RT1_005_LIM-A

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 RT.3T / 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 -40 to 85°C monostable DC coil bistable 1 coil -10 to 85°C bistable 2 coils -40 to 85°C

	RT.3T / RTSET	RTS3L
Category of environmental protection		
IEC 61810	RTII - flux	x proof
RTIII - wash tight available upon request		
Vibration resistance (functional),	10g	20g
monostable version		
Shock resistance (destructive)	10	0g
Terminal type	PCB-TH	T, plug-in ²⁾
Weight, without / with test tab	14/16g	14g/-
Resistance to soldering heat THT		
IEC 60068-2-20	270°	C/10s
	RT.3T / RTSET	RTS3L
Packaging/unit		
without test tab	tube/20 pcs.,	tube/20 pcs.,

box/100 pcs. 2) RTT3T or bistable 2 coil version: PCB mounting only. See Accessories.

Accessories RTS.

with test tab

For details see datasheet Accessories Industrial Power Relay RT Socket available for 1 coil version only.

box/500 pcs.

tray/25 pcs.,

box/500 pcs.

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.

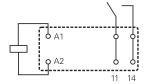


Power PCB Relay RT Inrush Power (Continued)

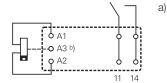
Terminal assignment

Bottom view on solder pins

monostable version



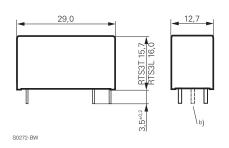
bistable version



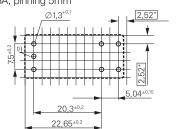
- a) Indicated contact position during or after coil energization with reset voltage.
- b) for 2 coil version only

Dimensions / PCB layout

version without test tab

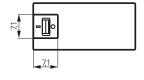


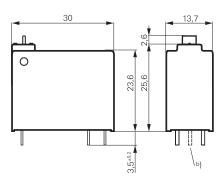
16A, pinning 5mm

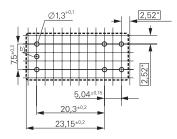


b) for 2 coil version only

version with test tab







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



Power PCB Relay RT Inrush Power (Continued)

Produc	t code structure		Typical product code	RT	S	3	Т	A12
Type R	T Power PCB Relay RT1 Inrush	Power		J				
Version S	Without test tab	т	With test tab (manual operator) for version ,RTT3T' bistable coil only					
Contact	configuration					_		
3	1 form A (NO) contact	E	1 form A(NO) ,electronic ballast' contact					
Contact	material						-	
L	AgSnO ₂	Т	Tungsten (W) pre-make + AgSnO ₂					
Coil								•
C	oil code: please refer to coil versions	table :						
Version								
В	lank Standard Version /G 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	12VDC		2-1415898-5
RTS3LF24					24VDC		2-1415898-6
RTS3T005	Without test tab,		W pre-make + AgSnO	Monostable	5VDC		1-1415898-6
RTS3T012	15.7mm high				12VDC		1415898
RTS3T024					24VDC		1415898-1
RTS3L048					48VDC		2-1415898-1
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	5 2		24VDC	compliant	5-1415898-1
RTS3T012WG			W pre-make + AgSnO		12VDC		5-1415898-6
RTS3TA24WG				Bistable 1 coil	24VDC		4-1415898-7
RTSET005	Without test tab,	1 form A (NO)	W pre-make + AgSnO ₂	Monostable	5VDC	Standard	7-1415898-7
RTSET012	15.7mm high	contact			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 types and does not show all variants covered by this datasheet. Other types on request.

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<u>TE Connectivity</u>: 2-1415898-1