

Power PCB Relay RT1 Inrush

- 1 pole 16 A, 1 CO or 1 NO contact
- For inrush peak currents up to 80 A
- Mono- or bistable coil
- 5 kV / 10 mm coil-contact
- Reinforced insulation
- Ambient temperature 85°C

Applications

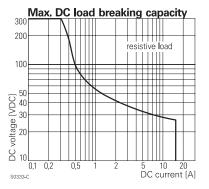
Approvals

Domestic appliances, heating control, lighting control

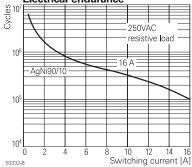


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REGNr. 6106, c R us E214025, D s	385
Technical data of approved types on request	
Contact data	
Contact configuration	1 CO or 1 NO
Contact set	single contact
Type of interruption	micro disconnection
Rated voltage / max. switching voltage AC	250 / 400 VAC
Rated current	16 A
Limiting continuous current	16 A, UL: 20 A (K-version only)
Maximum breaking capacity AC	4000 VA
Limiting making capacity, max 4 s, duty factor 10	0% 30 A
max 20 ms (incandescent lamps), RT33L	version 80 A
Contact material	AgNi 90/10, AgSnO₂
Rated frequency of operation with / without load	6 / 1200 min ⁻¹
Operate- / release time DC coil	max 9 / 6 ms
Operate- / reset time bistable	max 10 / 10 ms
Bounce time NO / NC contact	max 3 / 6 ms
Contact ratings	
Type Contact Load	Ambient Cycle



Electrical endurance



		temp. [°C]	
IEC 61810			
RT33L NO	16 A, 250 VAC, cosφ=1	85°C	50x10 ³
RT33K NO	16 A, 250 VAC, cosφ=1	85°C	30x10 ³
UL 508			
RT33K NO	20 A, 277 VAC, general purpose	40°C	10x10 ³
RT33L NO	16 A, 277 VAC, resistive	85°C	50x10 ³
RT33L NO	1000 W Tungsten, 120 VAC, 60 Hz	40°C	6x10 ³
RT33L NO	1000 W standard ballast, 120 VAC, 60 Hz	40°C	6x10 ³

Coil	data,	DC-co	oil
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Rated coil voltage range	5110 VDC	
Operative range to IEC 61810	2	
Coil insulation system according UL1446	class F	

Coil versions, DC-coil

0011 0010					
Coil	Rated	Operate	Release	Coil	Rated coil
code	voltage	voltage	voltage	resistance	power
	VDC	VDC	VDC	Ω	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
All figure	s are given for i	coil without pree	nergization at an	nhient temperature	+23°C

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

Datasheet Rev. IJ1 Issued 2009/10 www.tycoelectronics.com www.schrackrelays.com

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Product specification according to IEC 61810-1. Product data, technical parameters, test conditions and

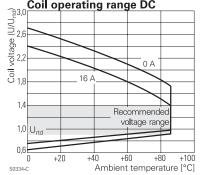
Coil operating range DC

processing information only

to be used together with the

'Definitions' section in the cat-

alogue or at schrackrelays.com



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in the 'Schrack' section. Specifications subject to change.



40 +60 +80 +100 Ambient temperature [°C]

· max SET ′and RESET

40 +60 +80 +100 Ambient temperature [°C]

Power PCB Relay RT1 Inrush (Continued)

Rated coil voltag Operative range	ble coils	1 c		coils	91.0	perating ra	nge, 1 coil
			524 VDC 2		Coll 1,4 Max S Coll 1,4 Max S Coll 1,2 Max S		
imiting voltage	, % of rated coil voltag	je 120		50%	⊇ 1,6		+ +
	zation duration	<u>,-</u> 120	30 ms	/	۵ 1,4		ax SET and
laximum energ	ization duration		1 min at < 10% DF		max S	et / ^{RE}	SET 16A, 2x8A
Coil insulation s	ystem according UL14	146	class F		<u></u> 1,2	max RESET	-+
						ted coil voltage-	
oil versions, b			0.1		r,o O _{rtd} r la		
	ted Operate	Reset	Coil	Rated coil	0,8- SET -		
	tage voltage DC VDC	voltage VDC	resistance Ω	power mW			
istable, 1 coil		VDC		11100	0,6	RESET	-
	5 3.5	2.8	62±10%	403	0,4		
	6 4.2	3.3	90±10%	400		+20 +40	+60 +80
	12 8.4	6.6	360±10%	400	S0428-B	Ambie	ent temperatu
	24 16.8	13.2	1440±10%	400			
stable, 2 coils	3						
-05	5 3.5	2.8	42±10%	595	Coil d	perating ra	nge, 2 coil
	6 4.2	3.3	55±10%	655			
	12 8.4	6.6	240±10%	600	⊇ 1,6 - max		
	24 16.8	13.2	886±10%	650		JEI	/and RE
	iven for coil without pr	eenergization, at ar	mbient temperature	+23°C	1,4	AX RESET	
her coil voltag	ges on request				College 1,4 1,2 0,1 0,1 0,1 0,1 0,1 0,1 0,1 0,1		
					<u>,</u> 1,2	+ +	$+ \lambda$
oils - operatio	n	4 1					
ersion			2 coil		I,U Urtd Ra	ted coil voltage -	
oil terminals		A1 A2	A1 A3		0.8- SET -		
III-in		+ -	+	-		+	
eset	not defined at deliver	- +	- +		0,6		-RESET -
ntact position	not defined at deliver	у			0,4		
	of relay base 61810-1 insulation coil-contact open contac isulation voltage	ot circuit	PTI 250 V reinforced micro disconnection 250 V				
Pollution	n degree oltage system	3 240	3	2 / 400 V			
Pollution Rated vo			3				
Pollution Rated vo Overvolt	oltage system		3 D V 230				
Pollution Rated vo Overvolt	oltage system age category		3 0 V 230 				
Pollution Rated vo Overvolt	oltage system age category urance monostable		3 0 V 230 111 > 30 × 10 ⁶ cycles				
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Pollution Rated vo Overvolt ther data echanical end aterial RoHS - I ivironment Ambient Vibration Shock re Categor ocessing Mounting	urance monostable bistable Directive 2002/95/EC temperature range D bistance DC coil (fun esistance (destruction) y of protection	240 compliant C coil istable 1 coil istable 2 coils iction) NO / NC cont.	 30 × 10⁶ cycles > 30 × 10⁶ cycles > 5 × 10⁶ cycles as per product date -40+85°C -10+85°C -40+85°C -20 / 5 g, 30 500 H 100 g RTII - flux proof pcb or on socket*) 	/ 400 V			
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Pollution Rated vo Overvolt ther data echanical end aterial RoHS - I invironment Ambient Vibration Shock re Catego ocessing Mountin Mountin	urance monostable bistable Directive 2002/95/EC temperature range D bistance DC coil (fun esistance (destruction) y of protection	240 compliant C coil istable 1 coil istable 2 coils iction) NO / NC cont.)	 30 × 10⁶ cycles > 30 × 10⁶ cycles > 5 × 10⁶ cycles as per product date -40+85°C -10+85°C -40+85°C -20 / 5 g, 30 500 H 100 g RTII - flux proof pcb or on socket*) 	/ 400 V			
Pollution Rated v Overvolt ther data echanical end aterial RoHS - 1 ivironment Ambient Vibration Shock re Categor occessing Mountin Resistar Relay w	oltage system age category urance monostable bistable Directive 2002/95/EC temperature range D bi resistance DC coil (fun esistance (destruction) y of protection g g distance hee to soldering heat fl eight	240 compliant C coil istable 1 coil istable 2 coils ction) NO / NC cont.) lux-proof version	3 3 3 3 3 3 3 3 3 3 3 3 3 3	/ 400 V			
Pollution Rated v Overvolt ther data echanical end aterial RoHS - 1 vironment Ambient Vibration Shock re Categor pocessing Mountin Resistar Relay w	urance monostable bistable Directive 2002/95/EC temperature range D bistance CC coil (fun esistance CC coil (fun y of protection g g distance nce to soldering heat fi eight ng unit DC coil, bistat	240 compliant C coil istable 1 coil istable 2 coils ction) NO / NC cont.) lux-proof version ble 1 coil	3 0 V 230 111 > 30 × 10 ⁶ cycles > 5 × 10 ⁶ cycles as per product date -40+85°C -10+85°C -40+85°C -20 / 5 g, 30 500 H 100 g RTII - flux proof pcb or on socket*) ≥ 0 mm 270 °C / 10 s 14 g 20 / 500 pcs	/ 400 V			
Pollution Rated vo Overvolt ther data echanical end aterial RoHS - 1 ivironment Ambient Vibration Shock re Categor ocessing Mountin Resistar Relay wo Packagi	urance monostable bistable Directive 2002/95/EC temperature range D bistance DC coil (fun esistance DC coil (fun g distance coe to soldering heat fl eight ng unit DC coil, bistat bistat	compliant C coil istable 1 coil istable 2 coils ction) NO / NC cont.) lux-proof version ble 1 coil ble 2 coils	3 0 V 230 111 > 30 × 10 ⁶ cycles > 5 × 10 ⁶ cycles as per product date -40+85°C -10+85°C -40+85°C -40+85°C -20 / 5 g, 30 500 H 100 g RTII - flux proof pcb or on socket*) ≥ 0 mm 270 °C / 10 s 14 g 20 / 500 pcs 100 pcs	/ 400 V			
Pollution Rated vo Overvolt ther data echanical end aterial RoHS - I ivironment Ambient Vibration Shock re Categor ocessing Mountin Resistar Relay wo Packagi	urance monostable bistable Directive 2002/95/EC temperature range D bistance CC coil (fun esistance CC coil (fun y of protection g g distance nce to soldering heat fi eight ng unit DC coil, bistat	compliant C coil istable 1 coil istable 2 coils ction) NO / NC cont.) lux-proof version ble 1 coil ble 2 coils	3 0 V 230 111 > 30 × 10 ⁶ cycles > 5 × 10 ⁶ cycles as per product date -40+85°C -10+85°C -40+85°C -40+85°C -20 / 5 g, 30 500 H 100 g RTII - flux proof pcb or on socket*1 ≥ 0 mm 270 °C / 10 s 14 g 20 / 500 pcs 100 pcs	/ 400 V			
Pollution Rated vo Overvolt ther data echanical end aterial RoHS - I hvironment Ambient Vibration Shock re Categor rocessing Mountin Resistar Relay wo Packagi	urance monostable bistable Directive 2002/95/EC temperature range D bistance DC coil (fun esistance (destruction) y of protection g g distance nce to soldering heat fi eight ng unit DC coil, bistat bistat bistat	240 compliant C coil istable 1 coil istable 2 coils iction) NO / NC cont.) lux-proof version ble 1 coil ble 2 coils hly, see Accessories	3 0 V 230 111 > 30 × 10 ⁶ cycles > 5 × 10 ⁶ cycles as per product date -40+85°C -10+85°C -40+85°C -40+85°C -20 / 5 g, 30 500 H 100 g RTII - flux proof pcb or on socket*1 ≥ 0 mm 270 °C / 10 s 14 g 20 / 500 pcs 100 pcs	/ 400 V			

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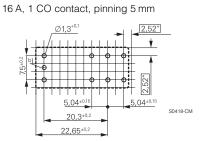
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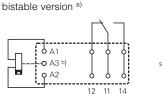


Power PCB Relay RT1 Inrush (Continued)

PCB layout / terminal assignment Bottom view on solder pins

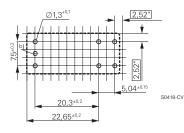


monostable version 6 A1 **9** A2 S0163-BE 12 14



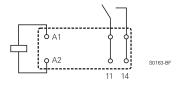
S0163-DI

16 A, 1 NO contact, pinning 5 mm

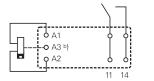


 $^{\ast})$ With the recommended PCB hole sizes a grid pattern from 2.5 mm to 2.54 mm can be used.







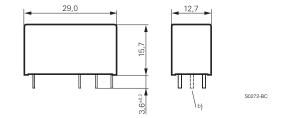


S0163DPS

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

b) for 2 coil version only

Dimensions



Product key	Typical product key		3	3	L	012
Type RT Power PCB Relay RT1 Inrush						
Version						
3 16 A, pinning 5 mm, flux proof Contact configuration						
1 1 CO contact (1 form C) Contact material	3 1 NO contact (1 form A)					
K AgNi 90/10	L AgSnO ₂					
Coil codo: plassa refer to coil versions tabl	proferred types in hold print					

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

Product key	Version	Contacts	Contact material	Coil	Part number
RT33K012	16 A	1 NO contact	AgNi 90/10	12 VDC	2-1393240-3
RT33K024	pinning 5 mm		_	24 VDC	2-1393240-4
RT33K048				48 VDC	2-1393240-5
RT33L012			AgSnO ₂	12 VDC	3-1393240-3
RT33L024			_	24 VDC	3-1393240-5
RT33L048				48 VDC	3-1393240-6

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