

RA Power Relay

- 1 Form A/C
- Rated current: 10 to 30 A
- High capacity, high endurance



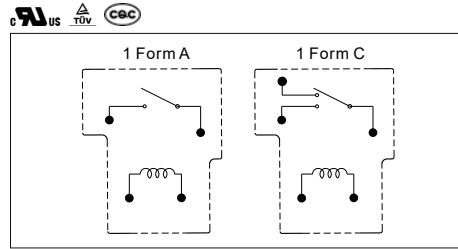
RA1

1 Form A/C, 30 A, Meets IEC 60079-15 Anti-Explosion standard



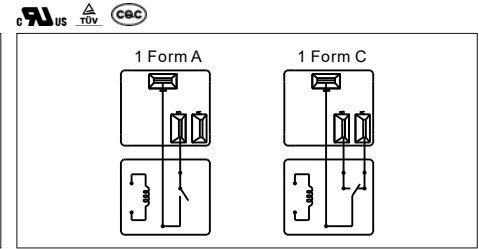
RA2

1 Form A/C, 30 A, #250 faston terminal, Meets IEC 60079-15 Anti-Explosion standard



Technical parameters

Coil data		
Coil input voltage		5/8/9/12/18/22/24/48 V DC
Coil power		L Type: 900 mW, D Type: 1,000 mW
Response voltage		< 75% (Room temp.)
Drop out voltage		> 5% (Room temp.)
Operation time / Release time		Less than 15 ms / less than 10 ms
Contact data		
Contact numbers		1 Form A/C
Contact material		Ag alloy
Max. switching voltage		28 V DC, 250 V AC
Max. switching power		A Type: 7,500 VA, C Type: N.O. 5,000 VA, N.C. 2,500 VA
Contact ratings		A Type: 30 A 250 V AC, C Type: N.O. 20 A 250 V AC, N.C. 10 A 250 V AC, 2HP 240 V AC
Contact resistance		Max. 100 mΩ (1 A / 6 V DC)
Mechanical service life		1×10 ⁷ times
Electrical Service life	AC1	1×10 ⁵ times
General data		
Rated withstand impulse voltage	Coil / Contact	4 kV AC / 1 min
	Between contacts	1.5 kV AC / 1 min
Surge voltage		4 kV AC (1.2/50 μs)
Insulation Resistance		1,000 MΩ (500 V DC)
Vibration		Malfunction 10~55 Hz (Amplitude 1.5 mm) Endurance 10~55 Hz (Amplitude 1.5 mm)
Shock		Malfunction 98 m/s ² , Endurance 980 m/s ²
Ambient temperature (Operation)		-40~85 °C (No condensation)
Operating humidity		20~85%
Dimension L×W×H (mm)		32.0×27.0×20.0
Enclosure type		Flux-proof, sealed
Mounting		PCB
Weight (g)		26
Compliance certification number		cULus:E345228, TUV:R50228669, CQC:CQCI2002078691



Technical parameters

Coil input voltage	5/8/9/12/18/22/24/48 V DC
Coil power	L Type: 900 mW, D Type: 1,000 mW
Response voltage	< 75% (Room temp.)
Drop out voltage	> 5% (Room temp.)
Operation time / Release time	Less than 15 ms / less than 10 ms
Contact numbers	1 Form A/C
Contact material	Ag alloy
Max. switching voltage	28 V DC, 250 V AC
Max. switching power	A Type: 7,500 VA, C Type: N.O. 5,000 VA, N.C. 2,500 VA
Contact ratings	A Type: 30 A 250 V AC, C Type: N.O. 20 A 250 V AC, N.C. 10 A 250 V AC, 2HP 240 V AC
Contact resistance	Max. 100 mΩ (1 A / 6 V DC)
Mechanical service life	1×10 ⁷ times
Electrical Service life	1×10 ⁵ times
Rated withstand impulse voltage	4 kV AC / 1 min
Surge voltage	1.5 kV AC / 1 min
Insulation Resistance	4 kV AC (1.2/50 μs)
Vibration	1,000 MΩ (500 V DC)
Shock	Malfunction 10~55 Hz (Amplitude 1.5 mm) Endurance 10~55 Hz (Amplitude 1.5 mm)
Ambient temperature (Operation)	Malfunction 98 m/s ² , Endurance 980 m/s ²
Operating humidity	-40~85 °C (No condensation)
Dimension L×W×H (mm)	20~85%
Enclosure type	32.5×27.0×20.4
Mounting	Flux-proof, sealed
Weight (g)	PCB & faston terminal
Compliance certification number	29
	cULus:E345228, TUV:R50228669, CQC:CQCI2002078691

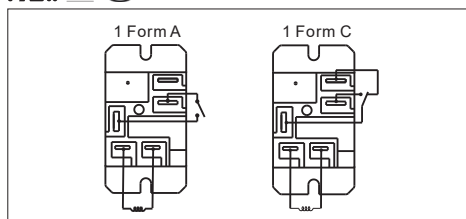
Type designation

Model designation	Number of poles	Coil voltage	Coil power	Contact configuration	Contact material	Insulation class	Enclosure type	Special request
RA1	-1	12	D	M	*	F	-S	XXX
RA1: A type case with PCB terminal RA2: B type case with PCB & faston terminal RA5: C type case with faston terminal	1: 1 pole	05: 5 V 08: 8 V 09: 9 V 12: 12 V 18: 18 V 22: 22 V 24: 24 V 48: 48V only for AgNi contacts	L: 900 mW D: 1000 mW	M: 1 Form A Blank: 1 Form C	Blank: AgSnO ₂ 4: AgNi	Blank: class A F: class F	Blank: flux-proof S: sealed	335: product in accordance IEC 60335-1 (GWT)



RA5

1 Form A/C, 30 A, #250 #187 faston terminal, control switch has enough insulation distance



Technical parameters

5/8/9/12/18/22/24/48 V DC
L Type: 900 mW, D Type: 1,000 mW
< 75% (Room temp.)
> 5% (Room temp.)
Less than 15 ms / less than 10 ms

1 Form A/C

Ag alloy

28 V DC, 250 V AC

A Type: 7,500 VA, C Type: N.O. 5,000 VA, N.C. 2,500 VA

A Type: 30 A 250 V AC, C Type: N.O. 20 A 250 V AC,
N.C. 10 A 250 V AC, 2HP 240 V AC

Max. 100 mQ (1 A / 6 V DC)

1×10⁷ times

1×10⁵ times

4 kV AC / 1 min

1.5 kV AC / 1 min

4 kV AC (1.2/50 μs)

1,000 MΩ (500 V DC)

Malfunction 10~55 Hz (Amplitude 1.5 mm)

Endurance 10~55 Hz (Amplitude 1.5 mm)

Malfunction 98 m/s², Endurance 980 m/s²

-40~85 °C (No condensation)

20~85%

50.1×27.4×27.7

Flux-proof, sealed

PCB & flange type

32

cULus:E345228, TUV:R50228669, CQC:CQCI2002078691

SSA approval rating

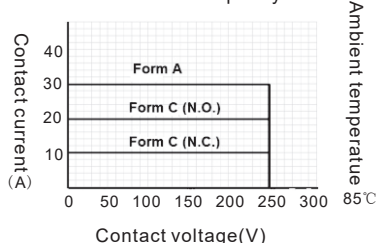
cULus				20A(10A)/28VDC (Resistive)		
(1formA)	30A/250VAC (Resistive)	85 °C	100,000ops			
	2HP/240VAC (HP)	85 °C	30,000ops			
UL508/UL60947				TUV		
	16FLA/96LRA/250VAC	85 °C	50,000ops	(1formA)	30A/250VAC	85 °C 100,000ops
	20(10)A/250VAC	85 °C	100,000ops	(1formC)	20A(10A)/250VAC	85 °C 100,000ops
IEC60730-1				CQC		
(1formC)	20A(10A)/250VAC (Resistive)	85 °C	100,000ops	(1formA)	30A/250VAC	85 °C 80,000ops
				(1formC)	20A(10A)/250VAC	85 °C 80,000ops

Coil rating

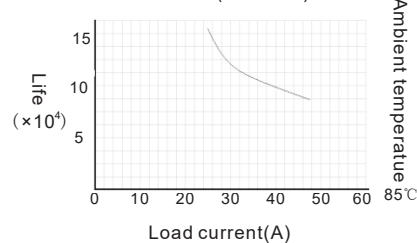
Rated voltage (VDC)	Rated current (mA)		Coil resistance (Ω±10%)		Operating power (mW)		Operating voltage (VDC)	Release voltage (VDC)
	L type	D type	L type	D type	L type	D type		
5	185.2	200	27	25	900	1000	≤3.75	≥0.25
8	112.7	125	71	64	900	1000	≤6.00	≥0.40
9	92.8	111.1	97	81	900	1000	≤6.75	≥0.45
12	77.4	83.3	155	144	900	1000	≤9.00	≥0.60
18	50.0	55.6	360	324	900	1000	≤13.50	≥0.90
22	41.0	45.5	537.8	484	900	1000	≤16.50	≥1.10
24	36.4	41.7	660	576	900	1000	≤18.00	≥1.20
48	18.8	20.8	2560	2304	900	1000	≤36.00	≥2.40

MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)

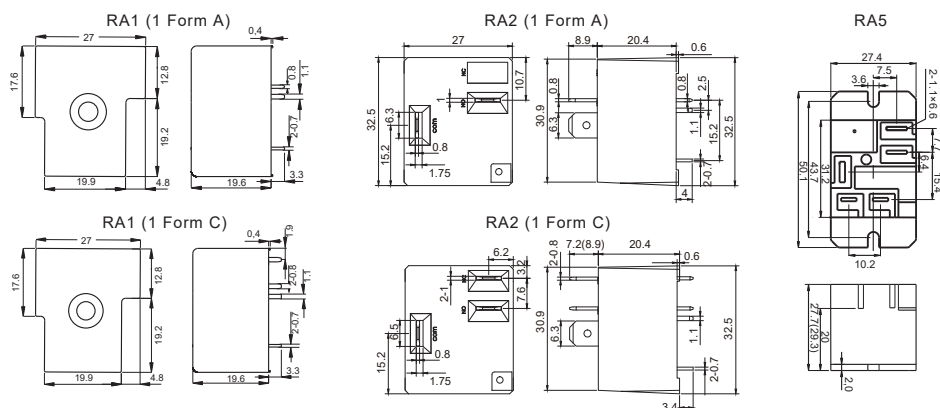
MAX. contact capacity



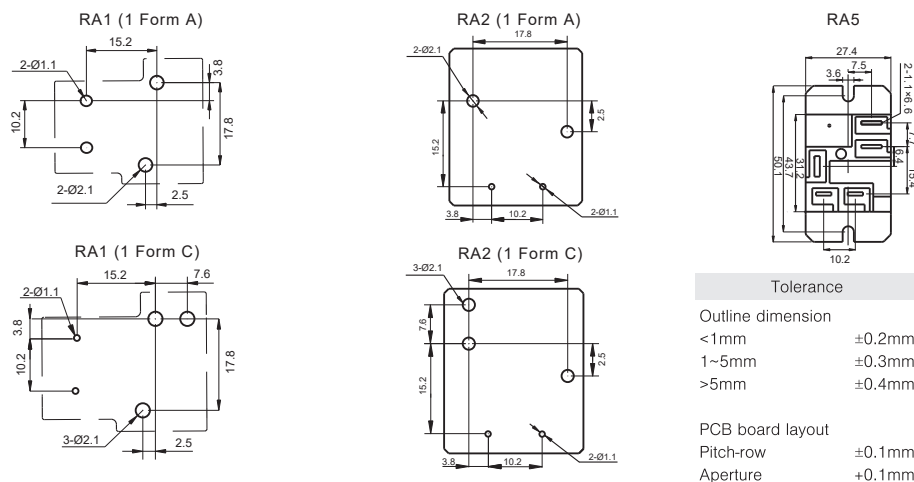
Life curve(1 Form A)



Outline dimensions



PCB board layout (Bottom view)



Tolerance

Outline dimension	
<1mm	±0.2mm
1~5mm	±0.3mm
>5mm	±0.4mm

PCB board layout

Pitch-row	±0.1mm
Aperture	+0.1mm