

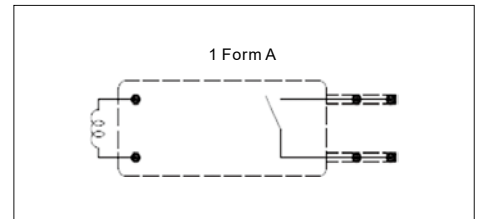
## RBF Power Relay

- 1 Form A and 1 Form B
- Rated current: 20 A
- Small high-capability relay
- Dielectric strength between coil & contact: 5,000 V AC
- Class F coil insulation
- #250 Faston terminal



RBF

1 Form A, 20 A



### Technical parameters

<b>Coil data</b>		
Coil input voltage		5/6/9/12/18/24 V DC
Coil power		400 mW
Response voltage		< 75% (Room temp.)
Drop out voltage		> 5% (Room temp.)
Operation time / Release time		Less than 20 ms / less than 10 ms
<b>Contact data</b>		
Contact numbers		1 Form A
Contact material		Ag alloy
Max. switching voltage		277 V AC
Max. switching power		5,000 VA
Contact ratings		20 A 250 V AC, 16 A 277 V AC
Contact resistance		Max. 100 mΩ (1 A / 6 V DC)
Mechanical service life		1×10 <sup>6</sup> times
Electrical Service life	AC1	1×10 <sup>5</sup> times
<b>General data</b>		
Rated withstand impulse voltage	Coil / Contact Between contacts	5 kV AC / 1 min 1 kV AC / 1 min
Surge voltage		10 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 <sup>2</sup> , Endurance 980 m/s <sup>2</sup>
Ambient temperature (Operation)		-40~105 °C (No condensation)
Operating humidity		20~85%
Dimension L×W×H (mm)		40,5(48.4)×12.7×16.0
Enclosure type		Flux-proof, sealed
Mounting		PCB & faston terminal
Weight (g)		14
Compliance certification number		cULus: E345228

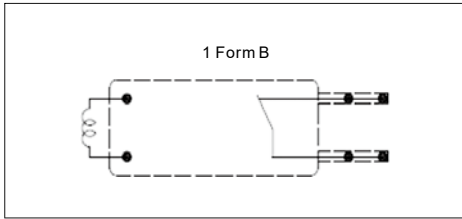
### Type designation

Model designation	Number of poles	Coil voltage	Coil power	Contact configuration	Contact material	Insulation class	Distance between different terminals	Contact dimension	Special request
RBF	-1	12	D	M	*	F	-A	-1	-XXX
RBF	1: 1 pole	05: 5 V 06: 6 V 09: 9 V 12: 12 V 18: 18 V 24: 24 V	D: 400 mW	M: Form A B: Form B	Blank: AgNi Other numbers: other materials	Blank: class A F: class F	A: Vertical, 5.0 mm pitch B: Vertical, 7.5 mm pitch C: Horizontal, 5.0 mm pitch D: Horizontal, 7.5 mm pitch	1: Ø4.5 mm Blank: Ø3.5 mm	



RBF

1 Form B, 20 A



Technical parameters

5/6/9/12/18/24 V DC  
 400 mW  
 < 75% (Room temp.)  
 > 5% (Room temp.)  
 Less than 20 ms / less than 10 ms

1 Form B  
 Ag alloy  
 277 V AC  
 5,000 VA  
 20 A 250 V AC, 16 A 277 V AC  
 Max. 100 mΩ (1 A / 6 V DC)  
 1×10<sup>6</sup> times  
 1×10<sup>5</sup> times

5 kV AC / 1 min  
 1 kV AC / 1 min  
 10 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/s<sup>2</sup>, Endurance 980 m/s<sup>2</sup>  
 -40~105 °C (No condensation)  
 20~85%  
 40.5(48.4)×12.7×16.0  
 Flux-proof, sealed  
 PCB & faston terminal  
 14  
 cULus: E345228

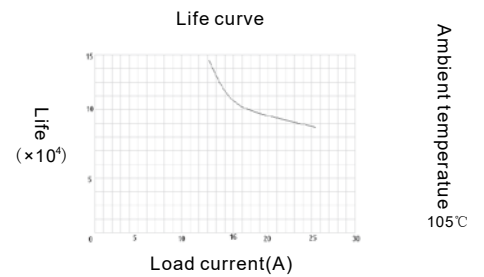
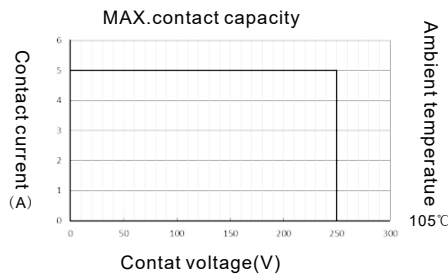
SSA approval rating

cULus							
(1formA)	16A/277VAC (Resistive)	105 °C	100,000ops	(1formB)	16A/277VAC (Resistive)	105 °C	100,000ops
	20A/250VAC (Resistive)	105 °C	30,000ops		20A/250VAC	105 °C	30,000ops

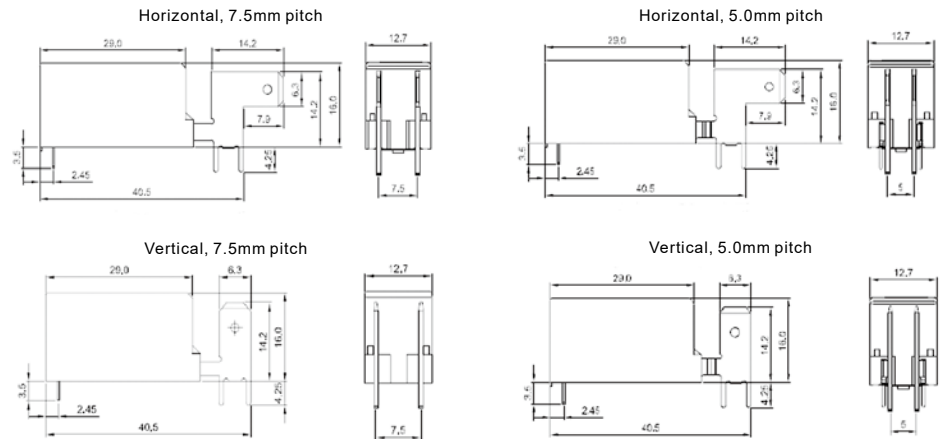
Coil rating

Rated voltage (VDC)	Rated current (mA)	Coil resistance (Ω±10%)	Operating power (mW)	Operating voltage (VDC)	Release voltage (VDC)
5	80.6	62	400	≤3.75	≥0.25
6	66.7	90	400	≤4.50	≥0.30
9	45	200	400	≤6.75	≥0.45
12	33.3	360	400	≤9.00	≥0.60
18	22.2	810	400	≤13.50	≥0.90
24	16.7	1440	400	≤18.00	≥1.20

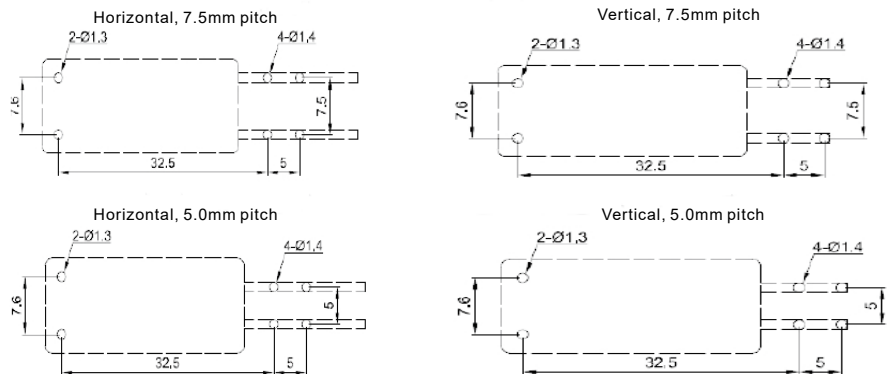
MAX. allowable coil voltage: 130% of rated coil voltage (Room temperature)



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