SANYOU RELAYS
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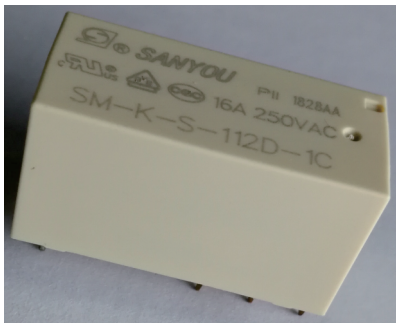
Relays for advanced technology

Magnetic Latching Relay SM-K-Series



Features

- 20Acontact swtching capability
- Magnetic latching relay
- Environmental friendly product (RoHS Compliant)
- Outline Dimensions:(29.0x13.0x16.0)mm

Safety Approval

UL,C-UL File No：E190598
CQC File No：CQC19002226456
VDE File No：in progress

Contact capacity

Model	SM-K
Nominal swtching resistance(res.load)	16A 250VAC
Max.switching current	20A
Max.switching voltage	277VAC
Max.switching power	5,540VA

Characteristic Data

Contact material	Silver alloy	
Initial contact resistance	≤100mΩ (1A 24VDC)	
Operate time(at nominal volt.)	≤10ms	
Release time(at nominal volt.)	≤10ms	
Insulation Resistance	1,000MΩ Min.(500VDC)	
Initial dielectric strength	Between open contacts: 1000VAC 1Min. Between coil and contanct: 4000VAC 1Min.	
Vibration resistance	10~55HZ at double amplitude of 1.5 mm.	
Shock resistance	Functional	98m/s^2
	Destructive	980m/s^2
Endurance	Mechanical (at 3600 ops./h)	1,000,000 cycles (at room temperature)
	Electrical (at 360 ops./h)	50,000 cycles (at room temperature)
Ambient temperature	- 40℃ ~ +85℃ (no condensation)	
Unit weight	Approx.13.5g	

Coil Data (at 20℃)

Single coil(0.4W)

Nonminal voltage (VDC)	Pulse duration ms	Coil resistance ±10% (Ω)	Operate voltage (Max)	Release voltage (Max)
5	≥50	62.5	80% of nominal voltage	80% of nominal voltage
6	≥50	90		
9	≥50	202.5		
12	≥50	360		
24	≥50	1440		

Dual coils(0.6W)

Nonminal voltage (VDC)	Pulse duration ms	Coil resistance ±10% (Ω)		Operate voltage (Max)	Release voltage (Max)
5	≥50	42	42	80% of nominal voltage	80% of nominal voltage
6	≥50	60	60		
9	≥50	135	135		
12	≥50	240	240		
24	≥50	886	886		

Safety Approval Ratings (Note:More detail of approval ratings,please refer to the safety certification)

Approval	VDE	UL	CQC
File No.	in progress	E190598	CQC19002226456
Approved ratings	16A 125/250/277VAC	16A 125/250/277VAC	16A 125/250/277VAC

(1) The above-mentioned unspecified temperature ratings, means that the ambient temperature is room temperature.

(2) Only some typical ratings are listed above. Each rating's test condition is different, so the electrical endurance will be different. If more details are required, please contact us.

(3) For sealed type testing, please open the ventilation hole of case before test.

Ordering Information

Nomenclature

SM-K - S - 1 12 D M 2 -1C -R -XX

Special Parameter: Nil-Standard tupe,Letter or number-Special requirement

Polarity : R-reverse polarity, Nil-positive polarity

Coil Type : 1C-Single coil, 2C-Dual coils

Contact Material : Nil-$AgSnO_2$ 2-$AgSnO_2$ & AgNi

Contact Form : Nil-Foem C,M-Form A,B-Form B

Coil Power:D-0.4W(Single coil);0.6W(Dual coils)

Coil Voltage (VDC): 05,06,09,12,24

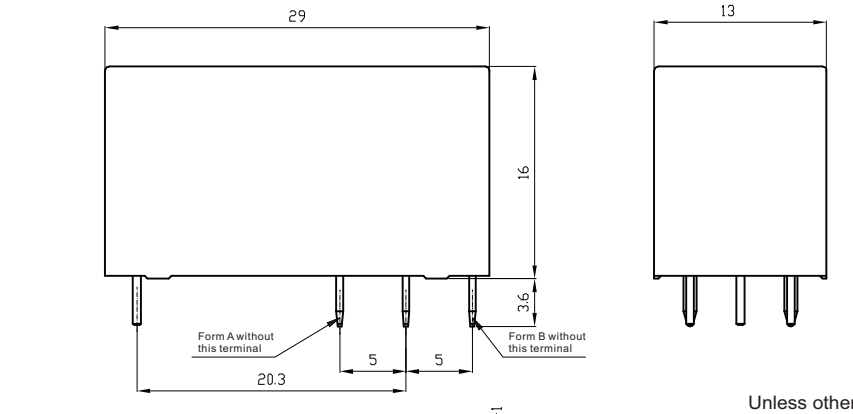
Number of Poles : 1-1 Pole

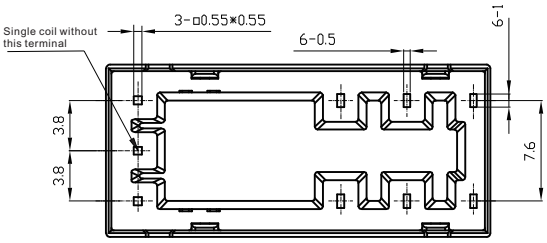
Protective Construction : S-Flux proofed,SH-Sealed type washable

Type Designation: SM-K

Outline Dimensions,Wir Diagram,P.C. Board Layout(unit: mm)

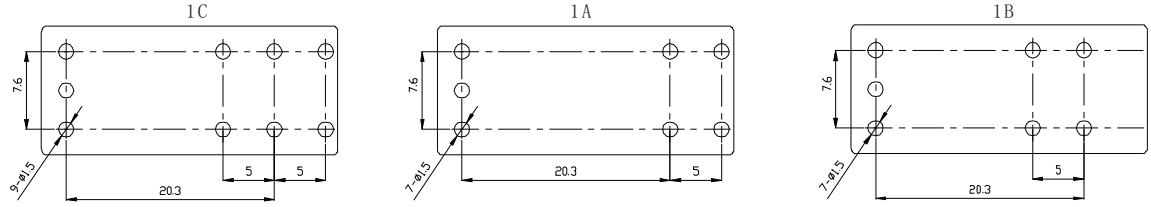
Outlie Dimensions





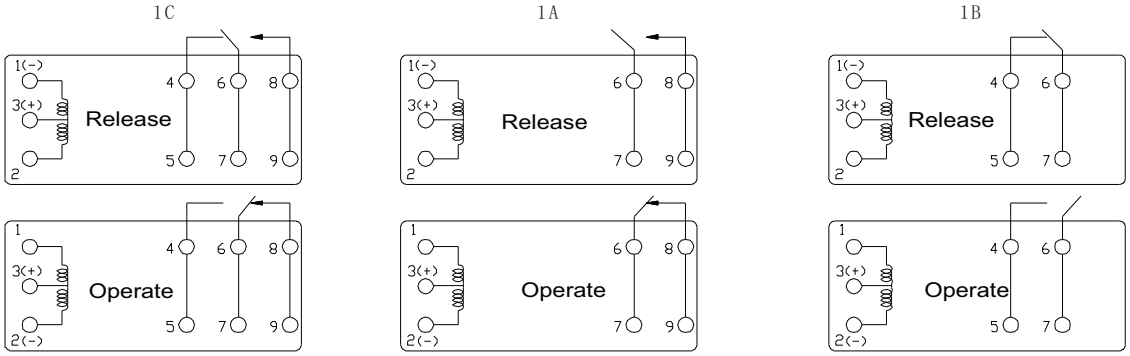
Unless otherwise specified :
If dimension < 1mm, tolerance : ±0.2mm;
If dimension 1~5mm, tolerance : ±0.3mm;
If dimension > 5mm, tolerance : ±0.4mm.
Note : 1. Extended terminal dimension is dimension before soldering.
2. Tolerance of mounting holes : ±0.1mm.

P.C. Board Layout of dual coils (bottom view)

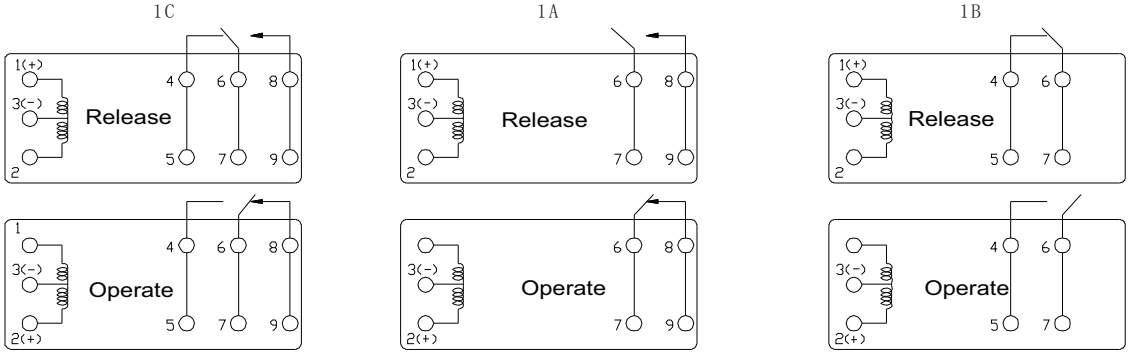


Wiring diagram of dual coils(bottom view)

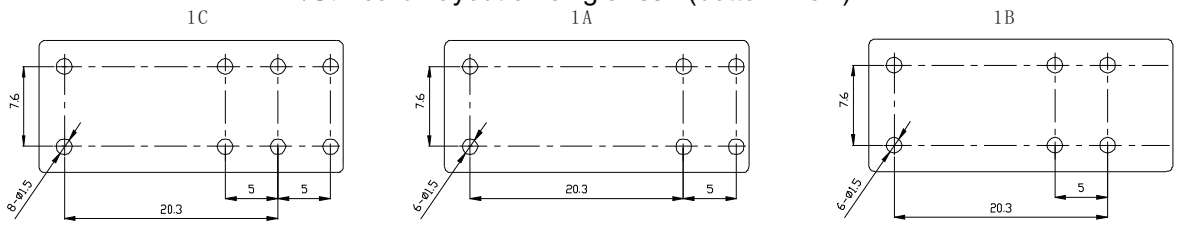
positive polarity(as below)



reverse polarity(as below)

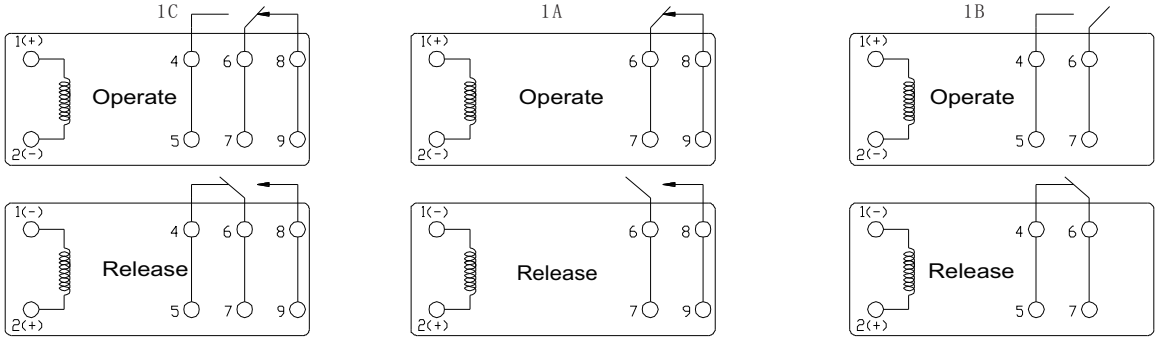


P.C. Board Layout of single coil (bottom view)

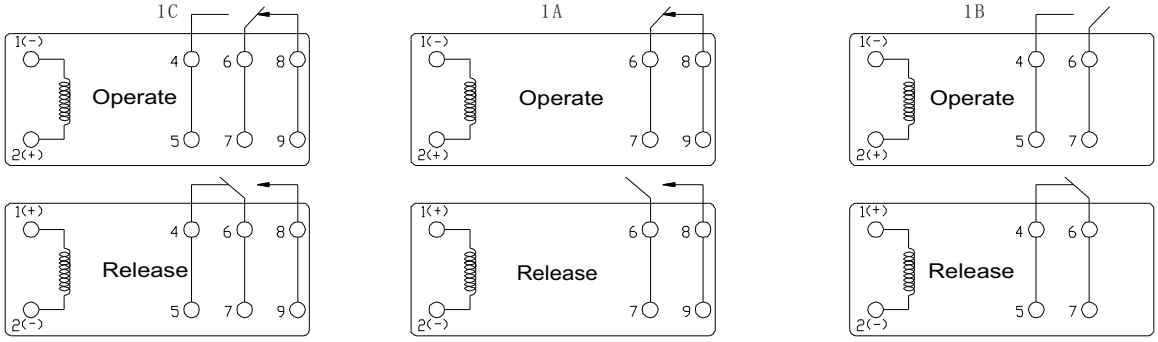


Wiring diagram of single coil (bottom view)

positive polarity(as below)



reverse polarity(as below)



Announcements：

1 The magnetic latching relay is to be supplied with contacts close(Operate) or contacts open(Release), but the contact status may got changed due to unexpected shock or vibration during delivering or mounting. You can reset the contact statusaccording to your requirement.

2 In order to make sure the contacts are completely closed or opened, energized voltage to Operate or Release coil should be the nominal operate/release voltage, impulse width should be 5 times more than specified operate/release time in the specification but less than 1 minute. Do not apply power to Operate and Release coils at the same time.

Disclaimer:

This datasheet is the customers' reference. All the specification are subject to change without notice.

We could not evaluate all the performance and all the parameters for every possible application.Thus the user should in a right position to choose the suitable product for their own application.For sealed relays after installation and cleaning, please open the vent hole on the case before use.If there is any query,please contact Sanyou for the technica service.