

Features:

- 16A switching capacity
- The withstand voltage between the contact and the coil is 5 kV
- Single/Dual coils available
- Environmentally friendly products(Accord RoHS)
- Dimensions: 29mm×13mm×16mm

Typical Application:

- Smart home
- Electrical control



Approvals

UL(File No.):E190598,VDE(File No.):40052321,CQC(File No.):CQC19002226456

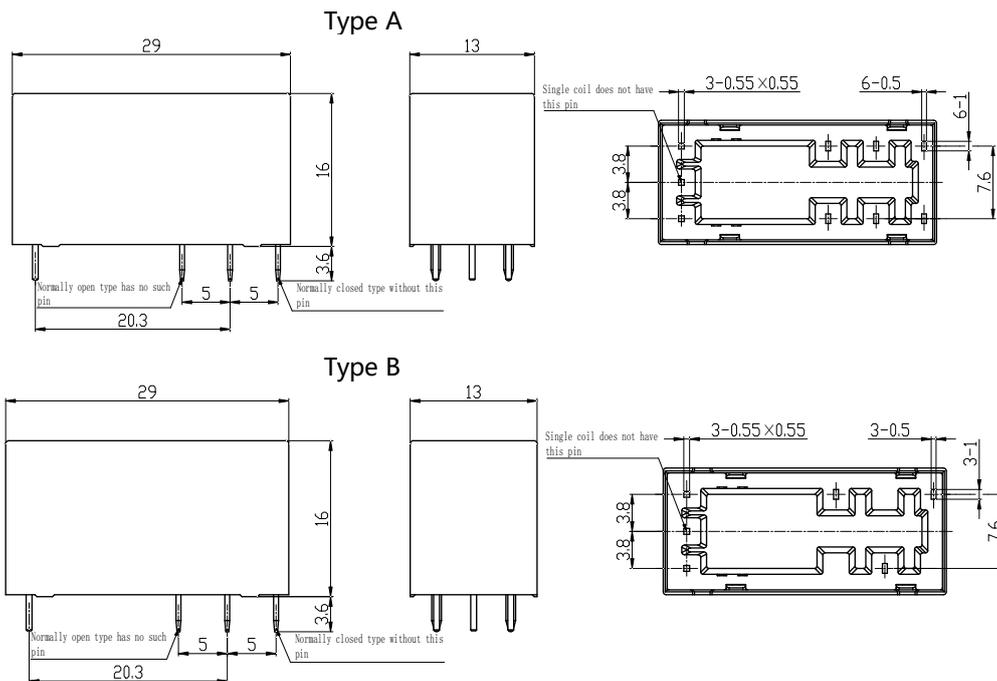
Contact Data

| | |
|--------------------------|---|
| Contact form | 1 Form A or 1 Form B or 1 Form C |
| Rated Load | 16A 250VAC |
| Max.switching voltage | 277V |
| Max.switching current | 20A |
| Max.switching power | 5,540VA |
| Contact Material | Silver alloy |
| Contact resistance | ≤100mΩ |
| Max.Operate/Release time | 10ms/10ms |
| Electrical Endurance | 5x10 ⁴ cycles (16A 250VAC Resistive load) |
| Mechanical Endurance | 1x10 ⁶ cycles |

Insulation Data

| | |
|-----------------------|--|
| Insulation Resistance | ≥1,000MΩ (500VDC) |
| Dielectric Strength | Contact-Contact AC1,000V; 50/60Hz 1min |
| | Contact-Coil AC5,000V; 50/60Hz 1min |

Outline Dimensions (Unit: mm)



Coil Data

| Coil voltage range | 5 to 24VDC | | | |
|-------------------------------------|-----------------------------|---------------------------------------|---------------------------|-------------------|
| Coil insulation system according UL | Class F | | | |
| Coil type, standard type | | | | |
| Rated Voltage VDC | Operate/Release Voltage VDC | Coil resistance Single/Dual Ω (1±10%) | Rated power Single/Dual W | Pulse Duration ms |
| 5 | ≤4.0 | 62.5/42 | 0.4/0.6 | ≥50 |
| 6 | ≤4.8 | 90/60 | 0.4/0.6 | ≥50 |
| 9 | ≤7.2 | 202.5/135 | 0.4/0.6 | ≥50 |
| 12 | ≤9.6 | 360/240 | 0.4/0.6 | ≥50 |
| 24 | ≤19.2 | 1440/960 | 0.4/0.6 | ≥50 |

All figures are given for coil without pre-energization, at ambient temperature 20°C.

Other Data

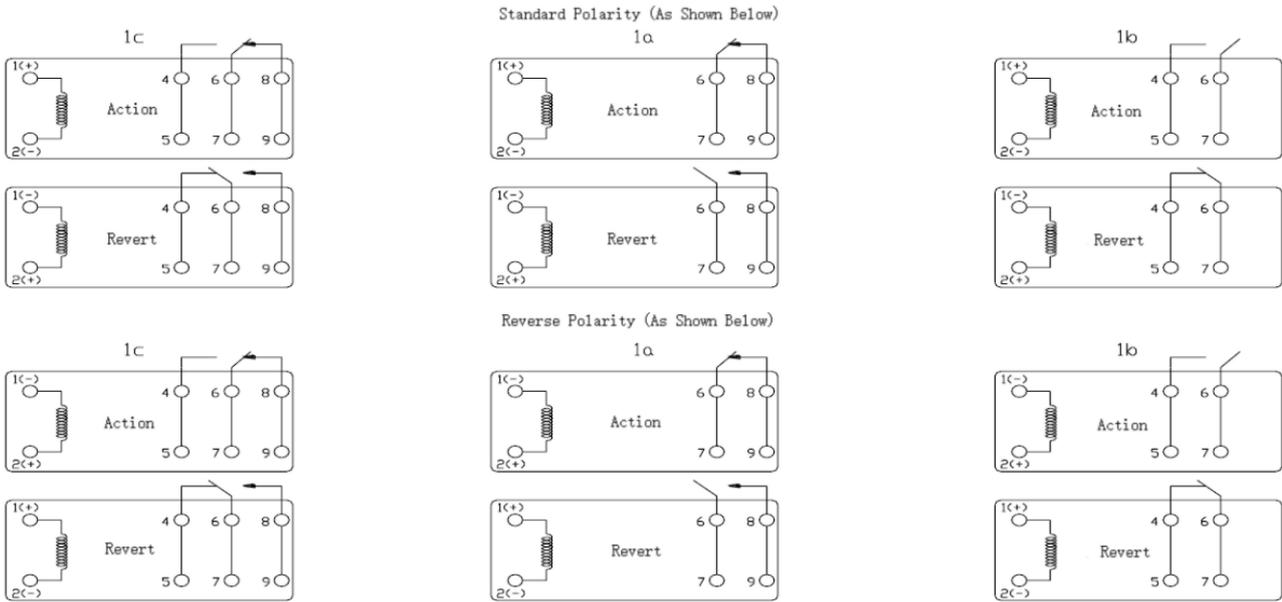
| | | |
|---|----------------------|------|
| Material compliance: EU RoHS/ELV, China RoHS, REACHHS | | |
| Ambient Temperature | -40°C to +85°C | |
| Ambient Humidity | 5% ~ 85% RH | |
| Vibration resistance | 10 ~ 55Hz, 1.5mm DA | |
| Shock resistance | Durability | 100g |
| | Malfunction | 10g |
| Packaging type | Plastic sealing type | |

Note: Some product dimensional tolerance is not specified. When < 1mm, the tolerance is ±0.2mm; when between 1~5mm, the tolerance is ±0.3mm; when > 5mm, the tolerance is ±0.4mm.

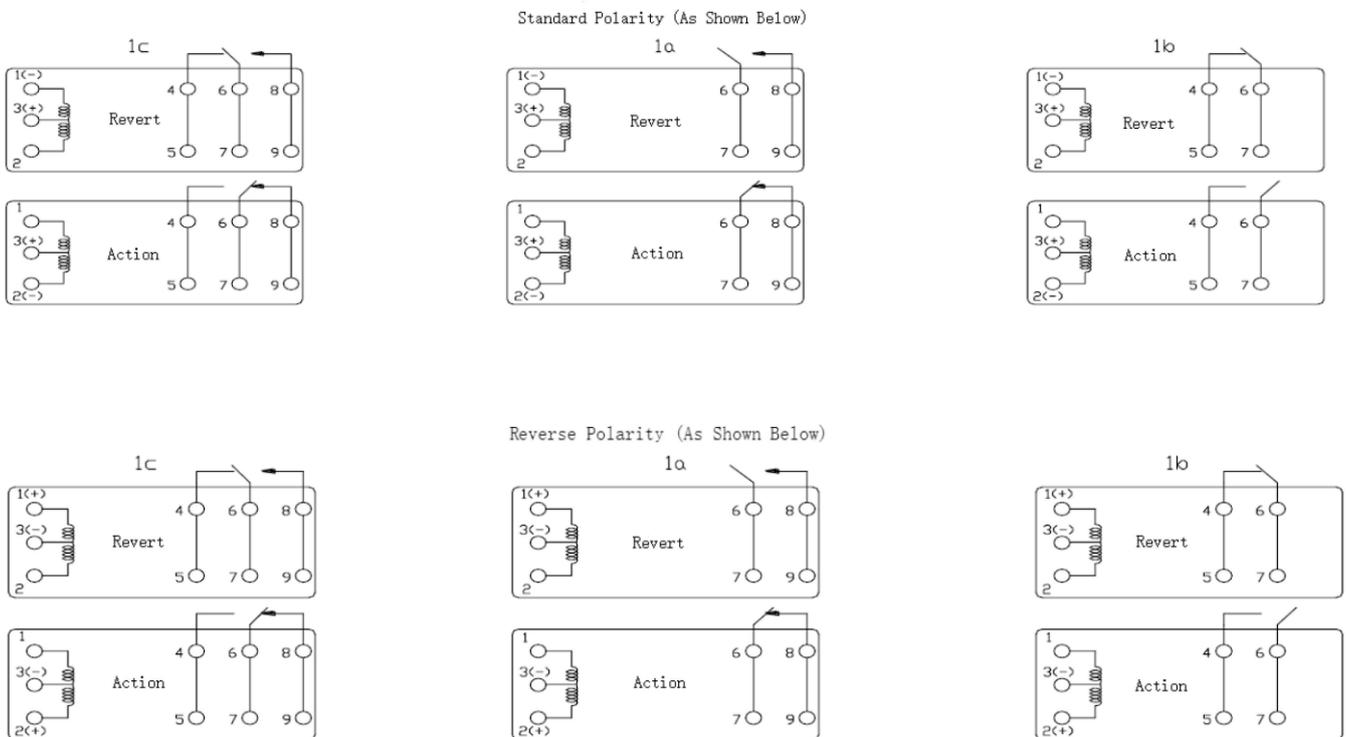
Wiring Diagrams

Double foot type single coil, double coil wiring diagram

Single Coil Wiring Diagram (Bottom View)



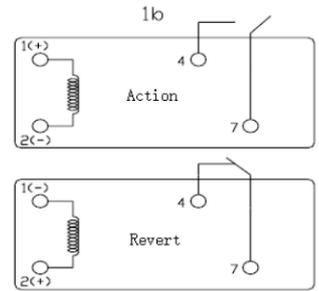
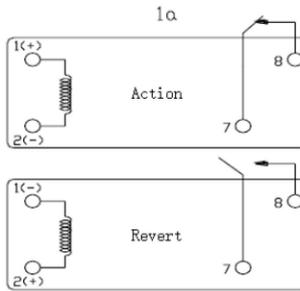
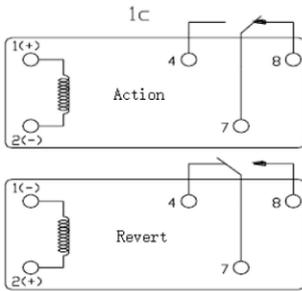
Dual Coil Wiring Diagram (Bottom View)



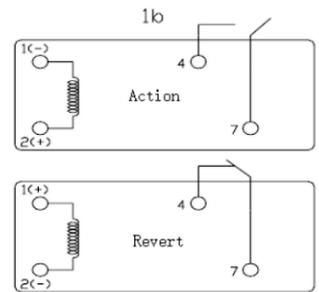
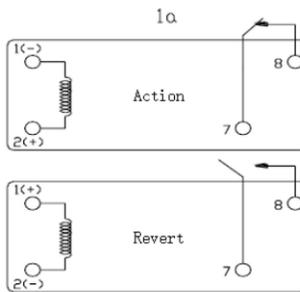
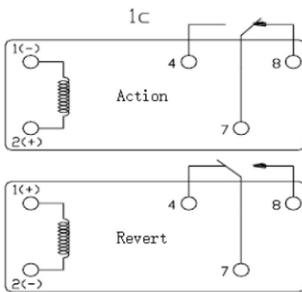
Single foot type single coil、 double coil wiring diagram

Single Coil Wiring Diagram (Bottom View)

Standard Polarity (As Shown Below)

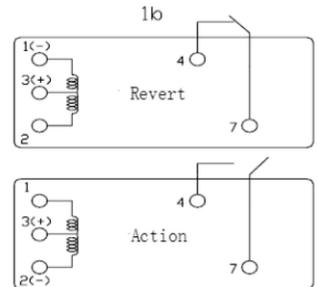
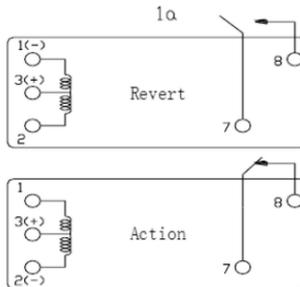
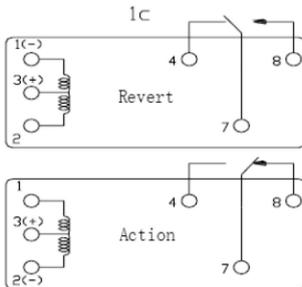


Reverse Polarity (As Shown Below)

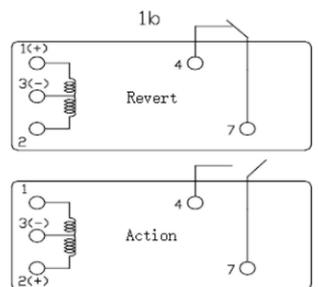
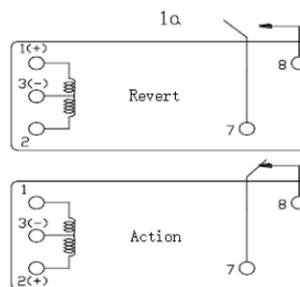
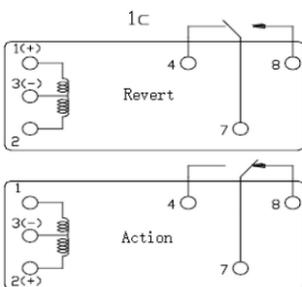


Dual Coil Wiring Diagram (Bottom View)

Standard Polarity (As Shown Below)



Reverse Polarity (As Shown Below)



Model naming rules

| | | | | | | | | | | | |
|------|----|----|----|---|---|---|-----|----|----|-----|--|
| SM-K | -S | -1 | 12 | D | M | 2 | -1C | -1 | -R | -XX | Special parameters: None - standard type, XX - customer required type |
| | | | | | | | | | | | Drive polarity: None - Standard polarity, R- Reverse polarity |
| | | | | | | | | | | | Pin type: None - dual pin type, 1 - single pin type |
| | | | | | | | | | | | Coil form: 1C-Single coil,2C-Dual coils |
| | | | | | | | | | | | Contact Material: None - AgSnO ₂ , 2- AgNi&AgSnO ₂ |
| | | | | | | | | | | | Contact type: None - indicates C type (conversion type) M - indicates A type (normally open type) B - indicates B type (normally closed type) |
| | | | | | | | | | | | Coil Power Consumption: D - Standard Type-Single/Dual: 0.4W/0.6W |
| | | | | | | | | | | | Coil Specifications(VDC): 05, 06, 09, 12, 24 |
| | | | | | | | | | | | Contact groups: 1-1 Group |
| | | | | | | | | | | | Packaging type: S- indicates plastic packaging |
| | | | | | | | | | | | Type: SM-K |

Customized special suffix is available after being evaluated by Sanyou.

Examples of Ordering Codes

SM-K-S-105DM-1C

Relay SM-K, Plastic encapsulation, 1 Group of contacts, Rated coil voltage 5VDC, Standard coil power, Normally open type, Single coil

Cautions

1. The original position of latching relay is "closed" when shipping. It is possible that during transit or installation, the relay may change its state to be "open" position, it is recommended to set the relay in to state needed via apply voltage to the coil.
2. In order to let relay operate normally, the voltage which apply to the coil should reach to the rated voltage, the pulse width should be 50ms to 100ms Do not energize both coil at the same time on Dual coil or energize the coil for longer than minute.
3. Relay without copper wire, the terminal can not be soldered, bend, and rigid fasten both two terminals.
4. Keep away from corrosive gas and other condition which may damage the relay.

Disclaimer

This product specification is for reference only and may change without prior notice. Customers should select the appropriate product model according to the performance parameter requirements of their specific application areas. The customer will bear the responsibility and loss caused by improper selection. For more technical support, please contact Sanyou Corporation Limited.