

Features:

- 100A switching capacity
- Low power consumption
- Strong anti-shock capability
- Withstand voltage between contacts and coil: 4 KV
- Single/Dual coils available
- Environmentally friendly products(Accord RoHS)
- Dimensions: 42 mm×32mm×20.8 mm

Typical Application:

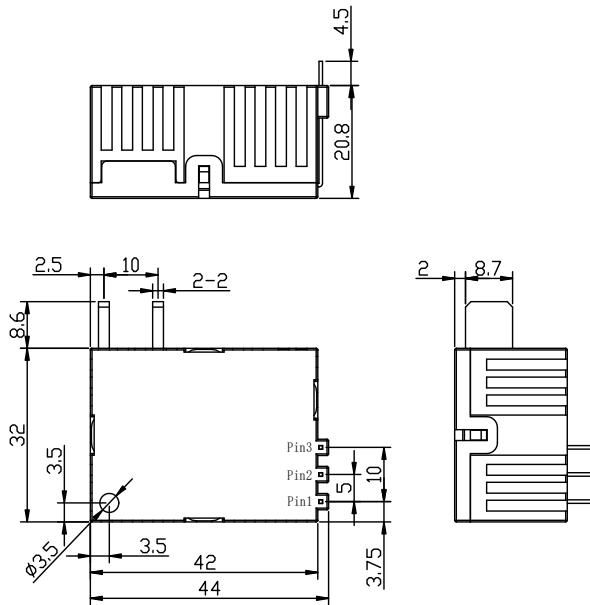
- Smart meter
- Remote electrical control
- Power composite switch
- Electrical equipment

**Contact Data**

Contact form	1 Form A or 1 Form B
Rated Load	100A 60VDC
Max.switching voltage	60VDC
Max.switching current	100A
Max.switching power	6,000VA
Contact Material	Silver alloy
Contact resistance	≤1 mΩ
Max.Operate/Release time	20ms/20ms
Electrical Endurance	6x10 ³ cycles (100A 60VDC)
Mechanical Endurance	1x10 ⁵ cycles

Insulation Data

Insulation Resistance	≥1,000MΩ (500VDC)
Dielectric Strength	Contact-Contact AC2,000V; 50/60Hz 1min Contact-Coil AC4,000V; 50/60Hz 1min
Contact-Coil (Creepage distance)	≥8.0mm

Outline Dimensions (Unit: mm)**Coil Data**

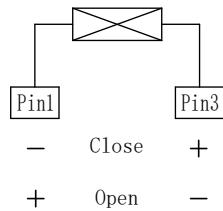
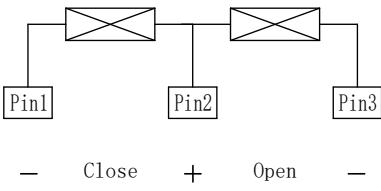
Coil voltage range		5 to 48VDC		
Coil insulation system according UL		Class F		
Coil type, standard type				
Rated Voltage VDC	Operate/Release Voltage VDC	Coil resistance Single/Dual Ω (1±10%)	Rated power Single/Dual W	Pulse Duration ms
5	≤3.5	5/2.5	5/10	≥100
9	≤6.3	16.2/8.1	5/10	≥100
12	≤8.4	28.8/14.4	5/10	≥100
24	≤16.8	115.2/57.6	5/10	≥100
48	≤33.6	460.8/230.4	5/10	≥100

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	Dust proof 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
Single

Dual

Model naming rules

SY31K-D -100 -12 D 2 XXX

Customer required type

Coil type: 1- means single coil; 2- means dual coil

Coil Power Consumption: D - Standard Type

Coil Specifications (VDC): 05 , 09 , 12 , 24 , 48

Rated current: 100-100A

Type: SY31K-D

Customized special suffix is available after being evaluated by Sanyou.

Examples of Ordering Codes

SY31K-D-100-12D2

Relay SY31K-D, Rated current 100 A, Coil Specifications12 VDC, Standard type, Dual 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.