



Features

- 90 A contact switching capability.
- Low coil power consumption and Pulse-driven.
- Dielectric Strength of 4KV between coil and contacts.
- Excellent anti- shock ability and high reliability.
- Both single and dual coil relay available.
- Environmental friendly product (RoHS Compliant)
- Through to 2,500 A, bear with short circuit current of 4,500 A

Contact Capacity

Model	SY31D
Nominal switching capacity (res. load)	90A 250VAC
Max switching current	90A
Max switching voltage	250 VAC
Max switching power	22,500 VA

Characteristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	1mΩ Max.	
Operate time (at nominal volt.)	20msec. Max.	
Release time (at nominal volt.)	20msec. Max.	
Initial insulation resistance	1,000MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts :	AC2,000V , 50/60Hz 1min
	Between coil and contact :	AC4,000V , 50/60Hz 1min
Vibration resistance	Functional	10~55Hz at double amplitude of 1.5 mm
	Destructive	10~55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	100 G min.
	Destructive	10 G min.
Endurance (operations)	Mechanical (at 1,800 ops./h)	100,000 cycles
	Electrical (at 120 ops./h)	10,000 cycles
Ambient temperature	-40°C~+70°C (no condensation)	

Coil Data (at 20°C)

Standard

Nominal voltage (VDC)	Singlecoil resistance ±10%(Ω)	Dualcoil resistance ±10%(Ω)		Operate voltage (Max.)	Release voltage (Max.)	Pulse duration (ms)	Nominal operating power
5	16.6	8.3	8.3	70% of nominal voltage	70% of nominal voltage	100 Min	Single/Dual: 1.5W/3.0W
6	24	12	12				
9	54	27	27				
12	96	48	48				
24	384	192	192				
48	1,536	768	768				

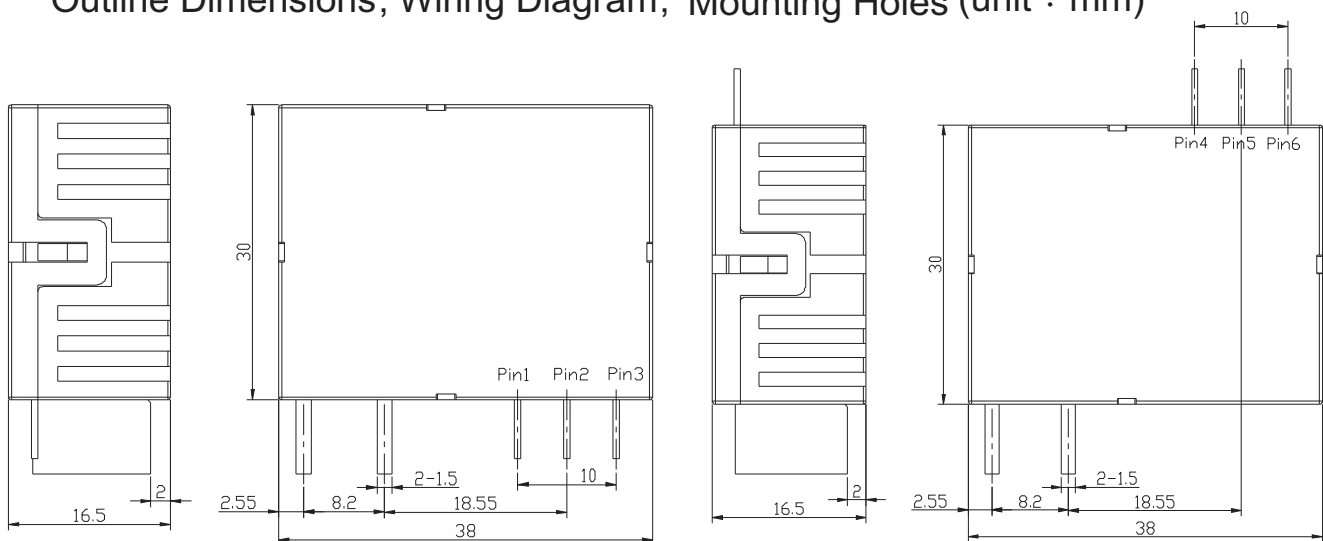
CoilData (at 20°C)

Nominal voltage (VDC)	Singlecoil resistance $\pm 10\%(\Omega)$	Dualcoil resistance $\pm 10\%(\Omega)$		Operate voltage (Max.)	Release voltage (Max.)	Pulse duration (ms)	Nominal operating power
5	25	12.5	12.5	70% of nominal voltage	70% of nominal voltage	100 Min.	Single/Dual: 1.0W/2.0W
6	36	18	18				
9	81	40.5	40.5				
12	144	72	72				
24	576	288	288				
48	2,304	1,152	1,152				

Ordering Information

Nomenclature									
SY31D	-90	-1	12	D	M	2	R	-XX	
Special Parameter : Nil-Standard type,XX-Customized Requirement									
Polarity : Nil-Positive polarity, R-Reverse polarity									
Coil Type:1-Single coil,2-Dual coils									
Contact Form : M-Form A,B-FormB									
Coil Power : D:Standard type -Single/Dual:1.5W/3.0W;L:Sensitive Type-Single/Dual:1.0W/2.0W									
Coil Voltage (VDC) : 05, 06, 09, 12, 24 , 48									
Number of Poles : 1-1 Pole									
Switching Capacity: 90 : 90A									
Type Designation : SY31D									

Outline Dimensions, Wiring Diagram, Mounting Holes (unit : mm)



Unless other wise specified :

Ifd imension < 1mm, tolerance : $\pm 0.2\text{mm}$;

Ifd imension 1~5mm, tolerance : $\pm 0.3\text{mm}$;

If dimension > 5mm, tolerance : $\pm 0.4\text{mm}$.

Note : 1. Extended terminal dimension is dimension before soldering.

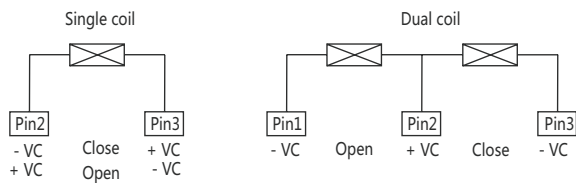
2. Tolerance of mounting holes : $\pm 0.5\text{mm}$.

Typical Applications

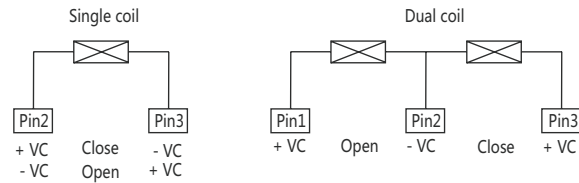
● Intelligent electric meter ● Electric remote control ● Composite power switch ● Electrical device

Wiring diagram

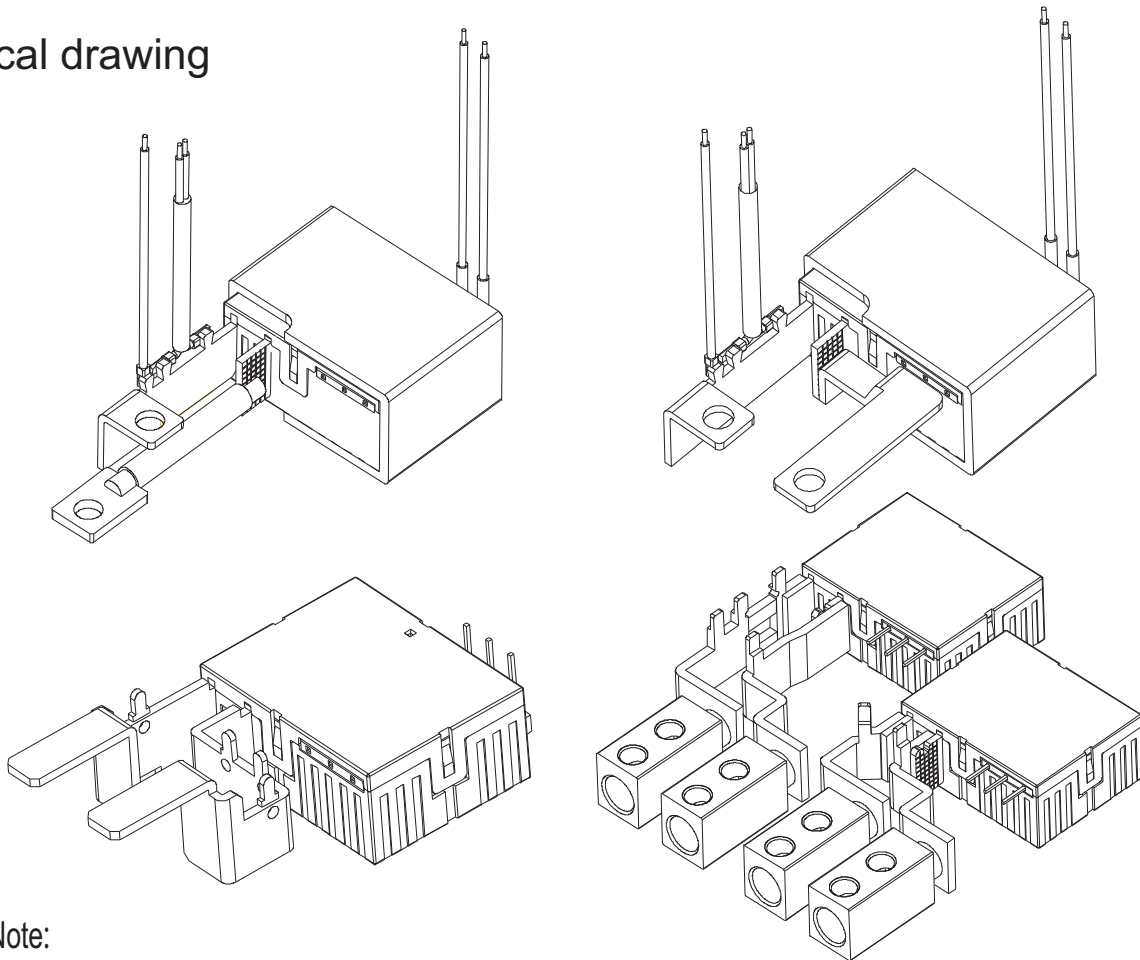
Positive polarity



Reverse polarity



Typical drawing



Note:

Typical drawings are just for reference, customized terminals with metering components are acceptable. Please contact us for any special requirements.

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 status according 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 just for customers' reference. The newest specification you can get from the website of sanyou relays. We could not evaluate all the performances and parameters for all possible applications,so the user should choose the suitable relay for their own application or require us to provide necessary help.If there is any query, please contact Sanyou for the technical service, however, it is the user's responsibility to determine which relay should be used.