

Features

- 120A contact switching capability.
- Dielectric Strength of 4KV between coil and contacts.
- Both single and dual coil relay available.
- Environmental friendly product (RoHS Compliant)
- Meet overload and short circuit requirement of IEC IEC62055-31 Uc3

Contact Capacity

Model	SY31X	
Nominal switching capacity (res. load)	100A 250VAC	120A 250VAC
Max. switching current	100A	120A
Max. switching voltage	250VAC	
Max. switching power	25,000 VA	30,000 VA

Characteristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	1mΩ Max.	
Operate time (at nominal volt.)	30msec. Max.	
Release time (at nominal volt.)	30msec. 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	10G Min
	Destructive	100G Min.
Endurance (operations)	Mechanical (at 3,600 ops./h)	100,000 cycles
	Electrical (at 600 ops./h)	10,000 cycles
Ambient temperature	-40°C ~ +70°C (no condensation)	
Weight	Approx.70g	

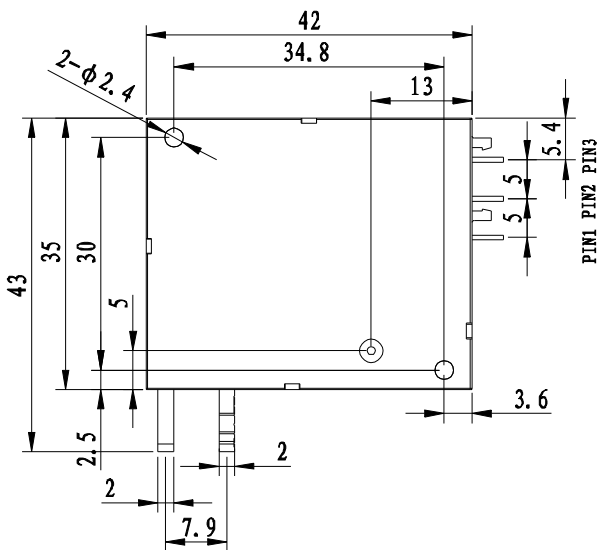
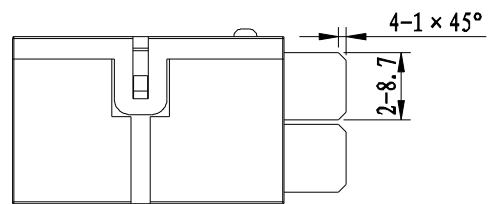
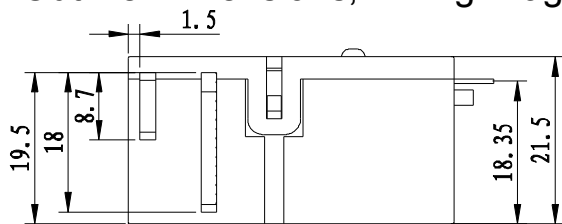
Coil Data (at 20°C)

Nominal voltage (VDC)	resistance ±10% (Ω)		Operate voltage (Max.)	Release voltage (Max.)	Pulse duration (ms)	Nominal operating power
	single coil	dual coil				
6	18	9	80 % of nominal voltage	80 % of nominal voltage	80 Min.	Single/Dual: 2.0W/4.0W
9	40.5	20				
12	72	36				
24	288	144				
48	1152	576				

Ordering Information

Nomenclature					
SY31X	-120A-	12	D	2	-XXX
Customer Requirement					
Coil Specification : 1-Single coil, 2-Dual coils					
Coil Type: L-sensitive, D-standard					
Coil Voltage (VDC) : 05 , 06 , 09 , 12 , 24 , 48					
Contact Capacity : 120A					
Type Designation : SY31X Number of Poles:1pole					

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



Unless otherwise specified :

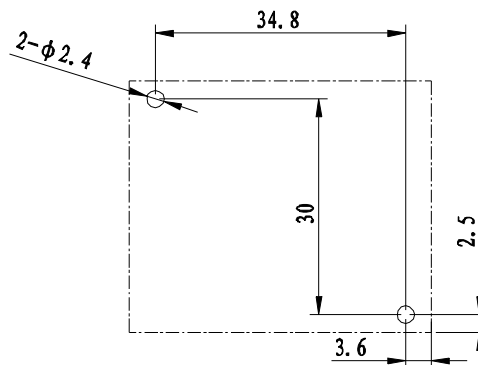
If dimension < 1mm, tolerance : ±0.2mm;

If dimension 1~5mm, tolerance : ±0.3mm;

If dimension > 5mm, tolerance : ±0.4mm.

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

Mounting Holes



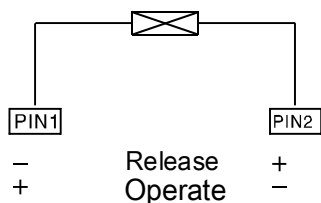
Note: Tolerance of mounting holes : ±0.1 mm.

Typical Applications

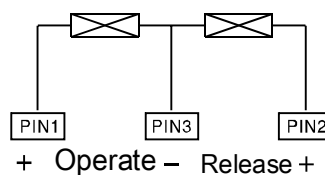
- Intelligent meter
- Electric remote control
- Electronic complex switch
- Electrical device

Wiring diagram

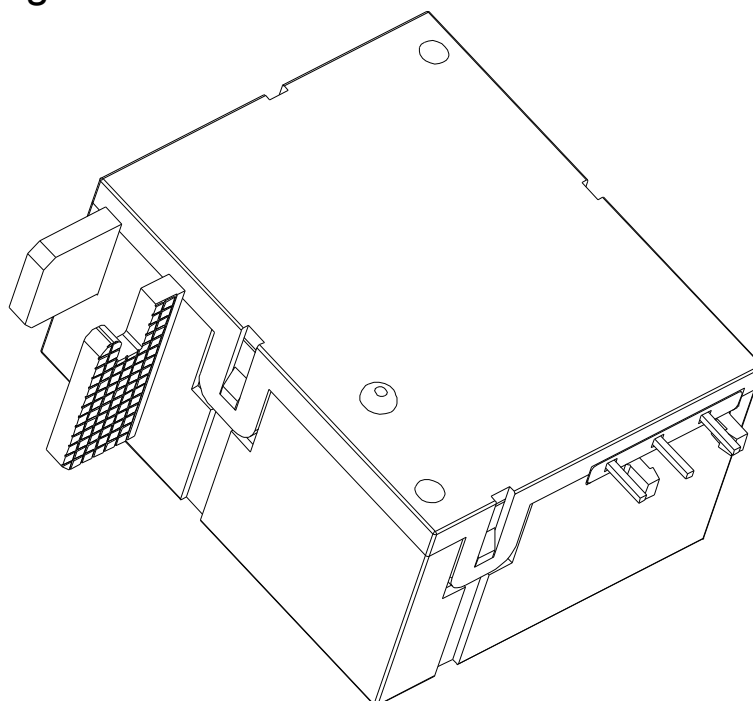
wiring diagram of single coil



Wiring diagram of dual coil



Typical drawing



Note:

Typical drawing is 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 sanyorelays. 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.