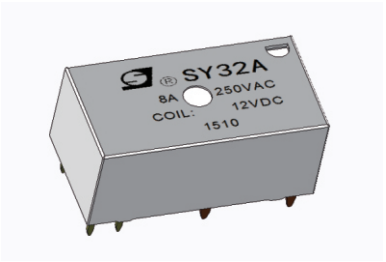
SANYOU RELAYS
® SANYOU RELAYS
Relays for advanced technology

# Magnetic Latching Relay

# SY32A-Series




## Features

- Safety product, small size, fit to crowded assemble .
- Low coil power , high load capacity switching ability.
- 3KV dielectric strength between coil and contact .
- Have three forms of 1-NO, 1-NO+1-NC, and 2-NO.

## Contact Capacity

| Model | 1A | 2A | 1A+1B |
|---|---|---|---|
| Nominal switching capacity (res. load) | 8A 250VAC(cosΦ=1.0)<br>5A 250VAC(cosΦ=0.4)<br>5A 30VDC | 5A 250VAC(cosΦ=1.0)<br>3A 250VAC(cosΦ=0.4)<br>5A 30VDC | |
| Max. switching current | 8A | 5A | |
| Max. switching voltage | 250VAC/30VDC | 250VAC/30VDC | |
| Max. switching power | 2,000VA/240W | 1,250VA/150W | |

## Characteristic Data

| | | | |
|---|---|---|---|
| Contact material | Silver alloy | | |
| Initial contact resistance | 100mΩ Max. | | |
| Operate time | 10msec. Max. | | |
| Release time | 10msec. Max. | | |
| Insulation resistance | 1,000MΩ Min. ( DC500V ) | | |
| Dielectric strength | Between coil & contacts | AC2,500V , 50/60Hz 1min | |
| | Between open contacts | AC1,000V , 50/60Hz 1min | |
| | Between contact sets | AC2,000V , 50/60Hz 1min | |
| Surge voltage (between coil & contacts) | 5kV ( 1.2x50μS ) | | |
| Vibration resistance | Destructive | 10 ~ 55Hz , 3.5 mm DA | |
| | Functional | 10 ~ 55Hz , 2 mm DA | |
| Shock resistance | Destructive | 100G Min. | |
| | Functional | 10G Min. | |
| Endurance(operations) | Mechanical (at 3,600 ops./h) | 100,000,000 cycles | |
| | Electrical (at 360 ops./h) | 100,000 cycles(5A 250VAC ) | |
| | Electrical (at 360 ops./h) | 50,000 cycles(8A 250VAC ) | |
| Ambient temperature | -40℃ ~ +85℃(No condensation) | | |
| Weight | Apro. 4.5g | | |

## Coil Data(at 20 ℃)

Standard type

| Nominal voltage (VDC) | Coil resistance±10%(Ω) | | | Operate voltage (Max.) | Release voltage (Max.) | Pulse duration (ms) | Nominal operating power |
|---|---|---|---|---|---|---|---|
| | Single coil | Dual coil | | | | | |
| 5 | 167 | 83.5 | 83.5 | 80 % of nominal voltage | 80 % of nominal voltage | 50 min. | Single/Dual: 0.15W/0.30W |
| 6 | 240 | 120 | 120 | | | | |
| 9 | 540 | 270 | 270 | | | | |
| 12 | 960 | 480 | 480 | | | | |
| 24 | 3,840 | 1,920 | 1,920 | | | | |

## Ordering Information

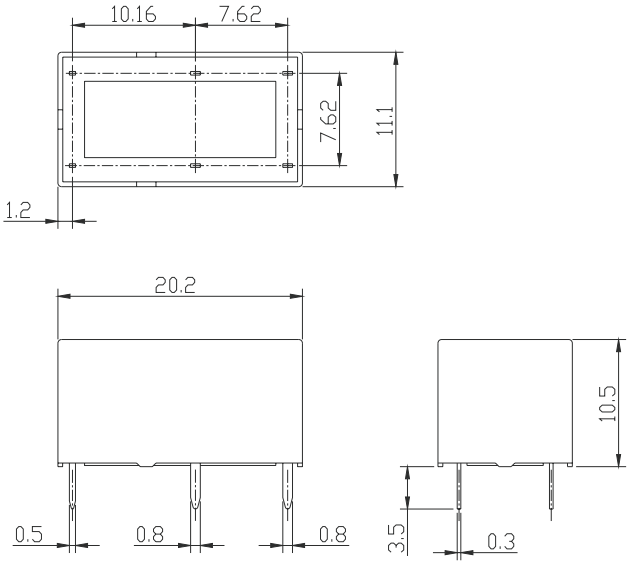
Nomenclature

| SY32A | -1 | 12 | D | M | 2 | R | -XX |
|---|---|---|---|---|---|---|---|

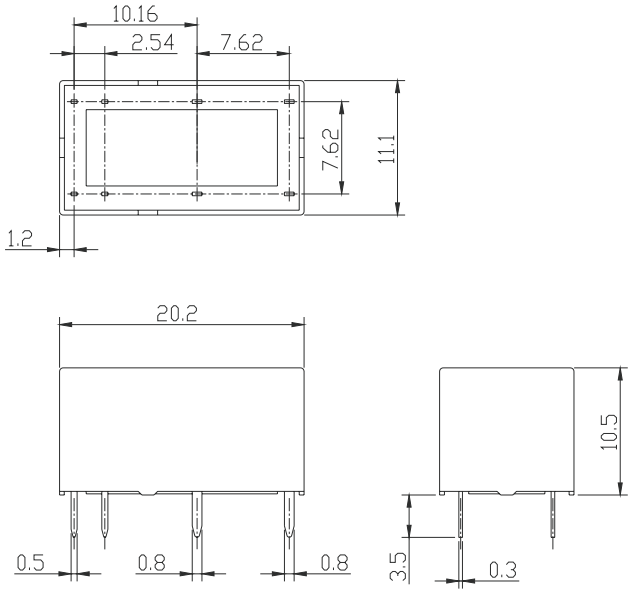
Special Parameter : Nil-Standard type,XX-Customized Requirement
Polarity : R-Reverse polarity, Nil-Positive polarity
Coil Type:1-Single coil,2-Dual coils
Contact Form : M-Form A/B, B-2Form A/B, C-FromA+FormB
Coil Power : Standard type -Single/Dual:0.15W/0.30W
Coil Voltage (VDC) : 05, 06, 09, 12, 24
Number of Poles : 1-1 Pole,2-2Pole
Type Designation: SY32A

## Outline Dimensions (Unit:mm)

### Dual coils




### Single coil



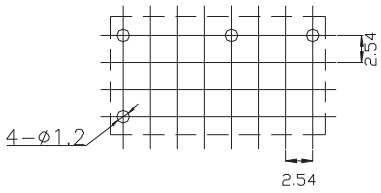

Unless otherwise specified :
If dimension < 1mm, tolerance : ±0.2mm;
If dimension 1~5mm, tolerance : ±0.3mm;
If dimension > 5mm, tolerance : ±0.4mm.
Note : 1. Extended terminal dimension is dimension before soldering.
2. Tolerance of mounting holes : ±0.1mm.

## Typical Applications

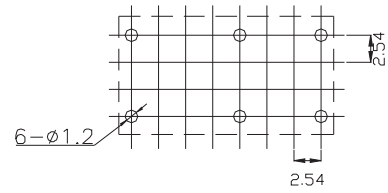
- remote control
- electric control

## PCB Layout(Bottom View)

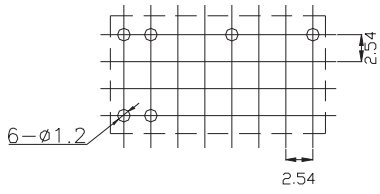
Single coil 1a



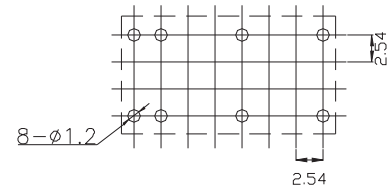

Single coil 1a+1b、2a




Dual coils 1a



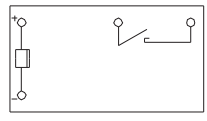

Dual coils 1a+1b、2a



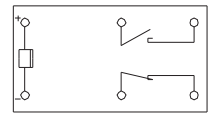

## Wiring Diagram(Bottom View)

### Positive polarity

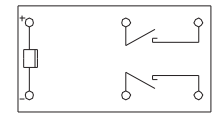
Single coil



1a

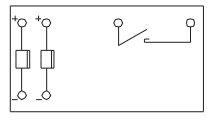


1a+1b

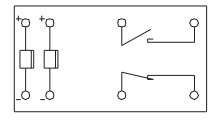


2a

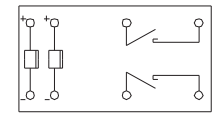
Dual coils



1a



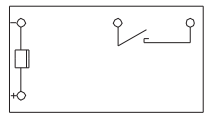
1a+1b



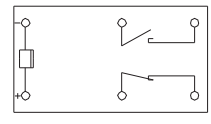
2a

### Reverse polarity

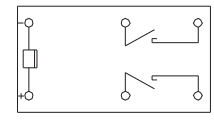
Single coil



1a

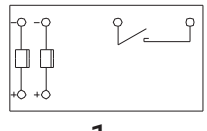


1a+1b

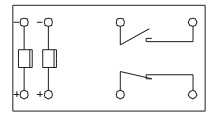


2a

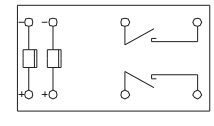
Dual coils



1a



1a+1b



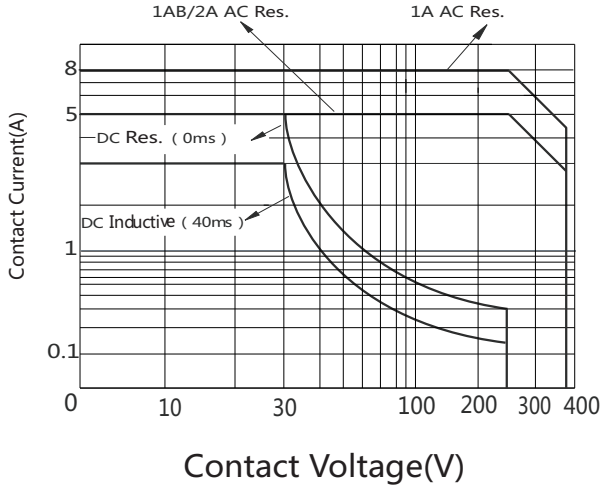
2a

## Typical Applications

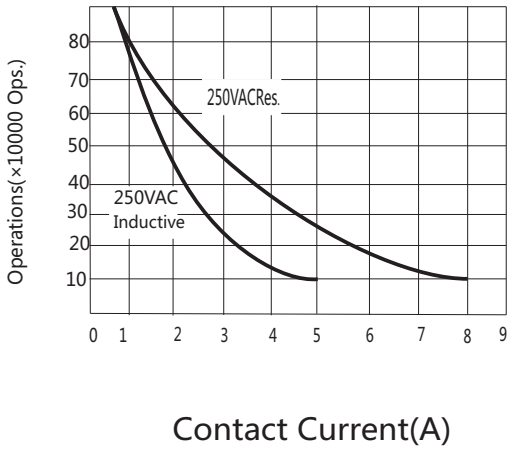
- ●Communication device
- ●Office device
- ●Computer peripherals
- ●Security warning system
- ●Medical system

## Characteristic Curves

Max. Switching Power




Endurance Curve




## 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.

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