

## Features

- 35A switching capability.
- NO type and CO type are available
- Satisfy RoHS and ELV

## Contact Capacity

|  |   |
|--|---|
| Model                                  | SARS  |
| Max. continuous current <sup>(1)</sup> | 35A   |
| Max. switching current                 | connect (NO):150A <sup>(2)</sup> , disconnect(NO):35A |
| Max. switching voltage                 | see performance curve                                 |

## Contact Data

| Contact Voltage | Load Type |     | Contact Current(A) |    | duty factor |       | endurance (cycles) | contact material   | test ambient temperature |
|-----------------|-----------|-----|--------------------|----|-------------|-------|--------------------|--------------------|--------------------------|
|                 |           |     | 1C, 1A             |    | ON S        | OFF S |                    |                    |                          |
|                 |           |     | NO                 | NC |             |       |                    |                    |                          |
| 14VDC           | resistive | on  | 35                 | 20 | 2           | 2     | 1x10 <sup>5</sup>  | AgSnO <sub>2</sub> | 23°C                     |
|                 |           | off | 35                 | 20 |             |       |                    |                    |                          |
|                 | lamp load | on  | 150                | —  | 2           | 2     | 1x10 <sup>5</sup>  | AgSnO <sub>2</sub> |                          |
|                 |           | off | 30                 | —  |             |       |                    |                    |                          |
|                 | general   | on  | 80                 | —  | 2           | 2     | 1x10 <sup>5</sup>  | AgSnO <sub>2</sub> |                          |
|                 |           | off | 30                 | —  |             |       |                    |                    |                          |

Note: If the load condition is not in the table. Please contact SANYOU with load details to get more support

## Characteristic Data

|  |   |                             |
|--|---|-----------------------------|
| Contact material                           | Silver alloy  |                             |
| contact voltage drop                       | 200mv/at 10A (max)  |                             |
| Operate time                               | 10msec. Max.  |                             |
| Release time <sup>(3)</sup>                | 10msec. Max.  |                             |
| Initial insulation resistance              | 100MΩ Min.(DC500V)  |                             |
| Initial dielectric strength <sup>(4)</sup> | Between open contacts : AC500V , 50/60Hz 1min.  |                             |
|  | Between coil and contact : AC500V , 50/60Hz 1min.   |                             |
| Vibration resistance <sup>(5)</sup>        | 10~25Hz 1.27mm double-amplitude   |                             |
|  | 25~500Hz 98m/s <sup>2</sup>   |                             |
| Shock resistance                           | NO 20G/ NC 5G   |                             |
| Endurance                                  | Mechanical (at 10,800 ops./h)   | 1x10 <sup>7</sup>           |
|  | Electrical  | see contact parameter table |
| mechanical behavior                        | Cover retentivity : ( pull and press ) ≥200N<br>Terminals retentivity : ( pull and press ) ≥100N<br>Terminals bending stiffness : ( all directios ) ≥10N <sup>(6)</sup> |                             |
| Ambient temperature                        | -40°C ~ +125°C (no condensation)  |                             |
| Unit weight                                | Approx.17.5 g   |                             |

Note : (1) For the normally open contact , the measurement of the 100% rated voltage is applied to the coil  
 (2) surge current in lamp load , 14VDC ;  
 (3) Rated voltage step up to 0VDC , And measurement without coil suppression circuit ;  
 (4) The leakage current is less than 1mA ;  
 (5) When the excitation is excited,the opening time of the normally open contact is less than 1ms;when no excitation,the normally closed contact time is less than 1ms,at the same time,the normally open contact can not be closed ;  
 (6) Test point for the distance 2mm from the end foot,when the test force is removed,the lead foot should be less than 0.5mm ;

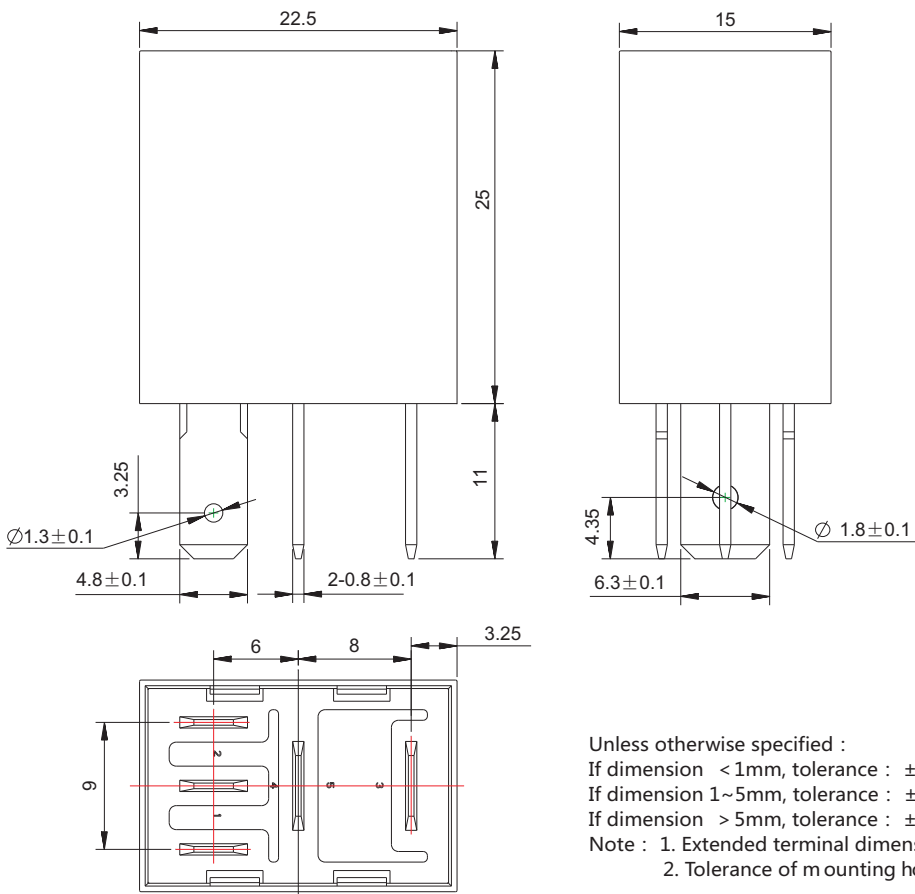
Coil Data (at 20°C)

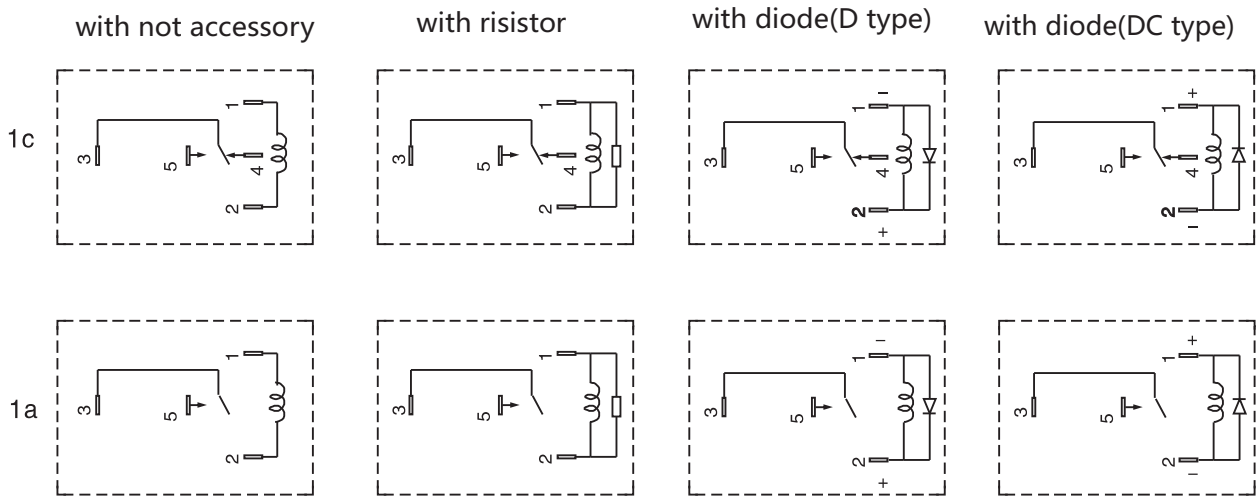
| Nominal voltage (VDC) | Nominal operating current ±10% (mA) | Coil resistance ± 10%(Ω) | Parallel resistance (Ω) | Equivalent resistance (Ω) | Pick-up voltage (VDC) | Drop-out voltage (Min.) | Max. Allowable voltage (VDC) | Nominal operating power (W) |
|-----------------------|-------------------------------------|--------------------------|-------------------------|---------------------------|-----------------------|-------------------------|------------------------------|-----------------------------|
| 12                    | 100                                 | 120                      | ---                     | ---                       | ≤7.2                  | ≥1.2                    | 15.6                         | 1.2                         |
| 12                    | 100                                 | 120                      | 680                     | 102                       | ≤7.2                  | ≥1.2                    | 15.6                         | 1.4                         |
| 24                    | 50                                  | 120                      | ---                     | ---                       | ≤14.4                 | ≥2.4                    | 31.2                         | 1.2                         |
| 24                    | 50                                  | 480                      | 2700                    | 407.5                     | ≤14.4                 | ≥2.4                    | 31.2                         | 1.4                         |

Ordering Information

| Nomenclature            |    |    |    |   |   |   |   |  |  |
|-------------------------|----|----|----|---|---|---|---|--|--|
| SARS                    | -S | -1 | 12 | D | M | R | -XX   |  |  |
|                         |    |    |    |   |   |   | Special Parameter : Nil-Standard type,<br>Letter or number-Special requirement                                |  |  |
|                         |    |    |    |   |   |   | Accessory Form : Nil-Without accessory, R-With resistor ,<br>D-With diode, DC-With diodes(see wiring diagram) |  |  |
|                         |    |    |    |   |   |   | Contact Form : Nil-Form C, M-Form A   |  |  |
|                         |    |    |    |   |   |   | Coil Power : D-1.2W/1.4W  |  |  |
|                         |    |    |    |   |   |   | Coil Voltage (VDC) : 12,24  |  |  |
|                         |    |    |    |   |   |   | Number of Poles : 1-1 Pole  |  |  |
|                         |    |    |    |   |   |   | Protective Construction : Nil-Dust cover<br>S-Flux proofed<br>SH-Sealed type washable                         |  |  |
| Type Designation : SARS |    |    |    |   |   |   |   |  |  |

Outline Dimensions, Wiring Diagram (unit : mm)





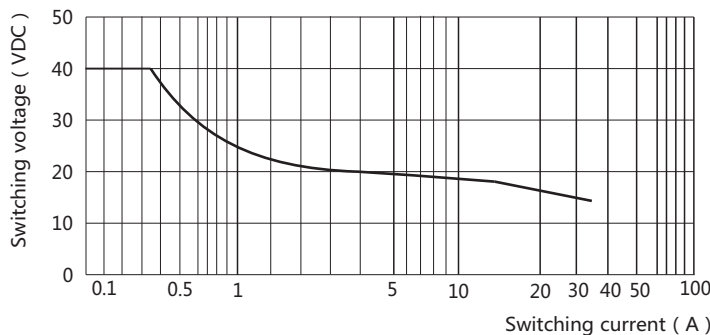
Wiring Diagram (bottom view)

## Typical Applications

- Heater, fan control, fuel pump control, wiper control, headlight control.
- Car air conditioner, electromagnet control, lighting control, interlocks, office equipment, etc.

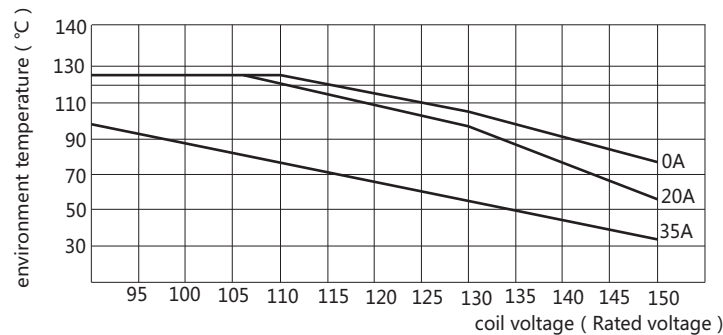
## Characteristic Curves

### 1、Max. Allowable load range



instruction : This figure is a case study of the NO open side

### 2.coil continuous voltage range



instruction : when the relay coil is applied to the maximum continuous operating voltage,the contact should not be loaded

### Disclaimer:

This datasheet is the customers' reference. All the specification are subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should in a right position to choose the suitable product for their own application. If there is any query, please contact Sanyou for the technical service. However it is the user's responsibility to determine which product should be used only.