

- Control input voltage: 4 V-32 V
- Control input current:  
S8 mA (rated current  $\leq 40$  A, solid state)  
S10 mA (rated current 260 A, solid state)
- Turn-off voltage:  $\geq 221.2$  V
- Control mode: Zero-crossing trigger
- On-state voltage drop:  $\leq 1.2$  V
- Leakage current:  $\leq 2$  mA
- Response time:  $< 10$  ms
- Insulation strength: 22500 V
- Insulation resistance:  $\geq 100$  M
- Voltage rate of rise (dv/dt):  $\geq 500$  VUS
- Operating indicator: LED light
- Operating temperature:  $-20^{\circ}\text{C} - 80^{\circ}\text{C}$
- Housing: flame-retardant and insulated
- Dimensions: 58L x 42W x 26H  
63L x 46W x 26H
- Weight: 85 g
- Mounting method: Bolt fixation



Scan the QR code to view the video tutorial

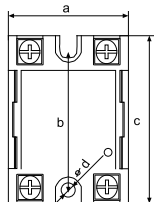


## Yudian Solid State Relay (SSR) User Manual

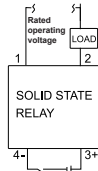
### I. Overview

The SSR series miniature solid state relays manufactured by Yudian adopt a constant current drive circuit used in high-end solid state relays, with a stable drive current of 5–6 mA, ensuring low power consumption and high reliability. Equipped with an optocoupler zero-cross trigger, they feature minimal interference with the power grid and high insulation withstand voltage. The output employs varistors to absorb voltage spikes from the power grid, resulting in low leakage current and long-term reliable operation.

### II. Dimensions and Wiring Diagram



| Model | a  | b         | c   | d   |
|-------|----|-----------|-----|-----|
| SSR15 | 42 | 46        | 58  | 5.5 |
| SSR20 | 42 | 46        | 58  | 5.5 |
| SSR25 | 42 | 46        | 58  | 5.5 |
| SSR40 | 42 | 46 <td 58 | 5.5 |     |
| SSR60 | 46 | 49        | 63  | 5.5 |
| SSR80 | 46 | 49        | 63  | 5.5 |



### III. Technical Specifications

#### Rated operating voltage, current, and recommended current

| Model    | Rated current | Rated operating voltage | Recommended current |
|----------|---------------|-------------------------|---------------------|
| SSR20    | 20A           | 100~240VAC              | 12A                 |
| SSR20H   | 20A           | 100~415VAC              | 12A                 |
| SSR20GW  | 20A           | 100~240VAC              | 12A                 |
| SSR25    | 25A           | 100~240VAC              | 15A                 |
| SSR25H   | 25A           | 100~415VAC              | 15A                 |
| SSR40    | 40A           | 100~240VAC              | 20A                 |
| SSR40H   | 40A           | 100~415VAC              | 20A                 |
| SSR40GW  | 40A           | 100~240VAC              | 20A                 |
| SSR40HGW | 40A           | 100~415VAC              | 20A                 |
| SSR60H   | 60A           | 100~415VAC              | 30A                 |
| SSR80H   | 80A           | 100~415VAC              | 40A                 |

Note: 1. The recommended current in the table refers to resistive loads. Our company's products are designed specifically for resistive load applications. If the customer intends to use the product for inductive or capacitive loads, due to the complexity and variability of such loads, the customer must apply additional margins to the voltage and current ratings, conduct their own testing, and independently determine the suitability of use. Our company does not provide any warranty for products used under these conditions.

2. SSRs must be paired with heatsinks rated for the same or higher current specifications. Do not use a high-current SSR with a heatsink designed for a lower current rating. It is also essential to apply appropriate silicone thermal grease between the SSR and the heatsink. If the SSR is not matched with a suitable heatsink, the operating current may fail to reach the recommended value, and the SSR may overheat and be damaged.

3. For inductive loads, the SSR output must be used in conjunction with appropriate RC snubber circuits. Customers should calculate the correct RC values based on load parameters; otherwise, improper operation, breakdown, or damage to the SSR may occur.

4. The maximum operating temperature of the standard model (general industrial grade) is 85°C. The reference temperature of the heatsink with applied suitable silicone thermal grease should not exceed 70°C. The high-temperature GW model allows a maximum operating temperature of 105°C, and the reference temperature of its heatsink with applied suitable silicone thermal grease should not exceed 85°C.

5. Customers should connect an appropriate fast-acting fuse in series within the load circuit for overcurrent protection. The rated current of the overcurrent protection device should not exceed 65% of the SSR's rated current and the operating current value of the matched heatsink.