## Product Description

- MOSFET Output
- Low Impedance
- Control Voltage : 4~32VDC
- Internal Over-voltage Protection
- Protective cover KPC-2A (Optional)
- Pannel Mount
- LED Indicator
- RoHS Compliant


## Product Selection

| KSJM | 60 | D | 40 | -L | (XXX) |
|---|---|---|---|---|---|
| KSJM Series | Load Voltage<br>30: 30VDC<br>60: 60VDC<br>100: 100VDC<br>200: 200VDC | Control Mode<br>D: :DC Control | Load Curren<br>10:10Amp<br>20:20Amp<br>40:40Amp<br>50:50Amp | L: LED | Customized Code |

**Available Part Numbers**

| Control Mode | 10A | 20A | 40A | 50A |
|---|---|---|---|---|
| 30VDC | | | | KSJM30D50-L |
| 60VDC | KSJM60D10-L | | KSJM60D40-L | |
| 100VDC | | KSJM100D20-L | | |
| 200VDC | KSJM200D10-L | | | |

## Technical Specifications

| Input Specifications (Ta=25°C) | |
|---|---|
| Control Voltage Range | 4~32VDC |
| Must Turn-on Voltage | 4VDC |
| Must Turn-off Voltage | 1VDC |
| Maximum Input Current | 25mA (@32VDC) |
| Maximum Reverse Voltage | 32VDC |

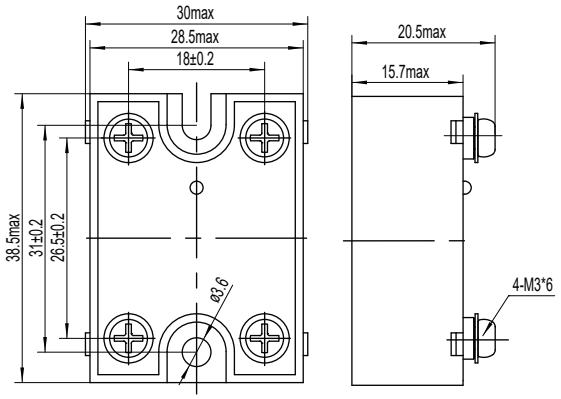
| Output Specifications (Ta=25°C) | | | | | |
|---|---|---|---|---|---|
| Ordering Information | KSJM30D50-L | KSJM60D10-L | KSJM60D40-L | KSJM100D20-L | KSJM200D10-L |
| Transistor Voltage (VDC) | 55 | 100 | 100 | 150 | 250 |
| Load Voltage Range (VDC) | 0~24 | 0~48 | 0~48 | 0~75 | 0~120 |
| TVS Breakdown Voltage Range (V) | 37.1~41 | 64.6~71.4 | 64.6~71.4 | 105~116 | 190~210 |
| Maximum Load Current (A) | 50 | 10 | 40 | 20 | 10 |
| Maximum Surge Current (Apk,@10ms) | 150 | 30 | 120 | 60 | 30 |
| Maximum On-State Resistance (mΩ) | 4.2 | 14 | 14 | 13 | 60 |
| Maximum Off-State Leakage Current (mA) | 0.1 | | | | |
| Minimum Load Current (mA) | 2 | | | | |
| Maximum Turn-on Time (ms) | 0.3 | | | | |
| Maximum Turn-off Time (ms) | 0.3 | | | | |

| General Specifications (Ta=25°C) | | |
|---|---|---|
| Dielectric Strength (50/60Hz) | Input/Output | 2500Vrms |
| | Input,Output/Base | 2000Vrms |
| Minimum Insulation Resistance (@500VDC) | | 1000mΩ |
| Ambient Temperature Range | | -30℃～+80℃ |
| Storage Temperature Range | | -30℃～+100℃ |
| Weight (Typical) | | 35g |

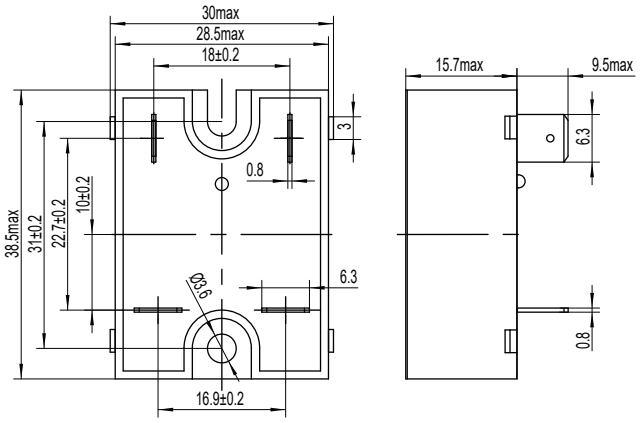
## Applications

Control heating, DC power supplies, electromechanical valves, motors, medical equipment, and etc.

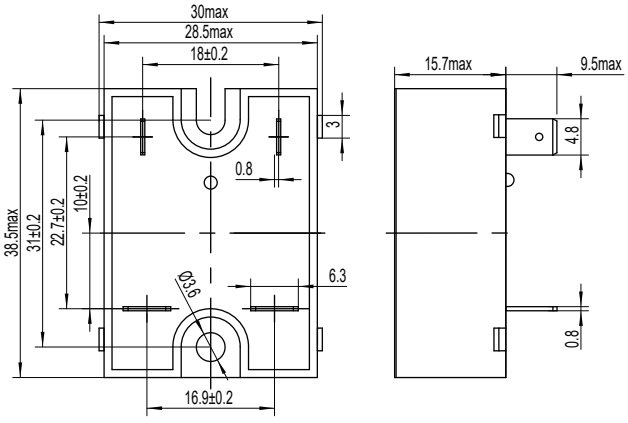
## Outline Dimensions



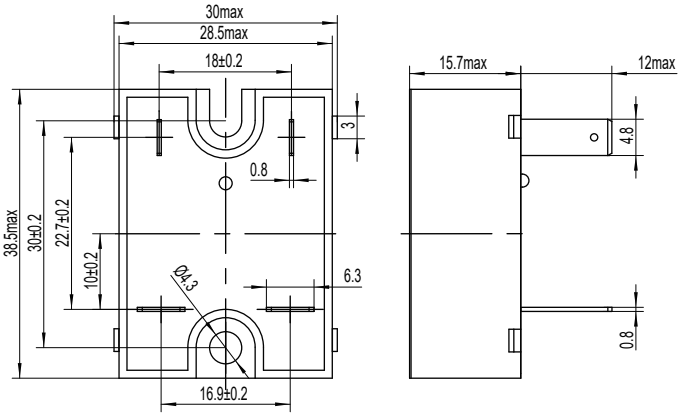

Typical




Customized Code 045

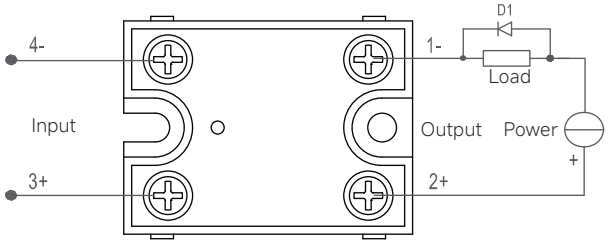



Customized Code 117




Customized Code 198

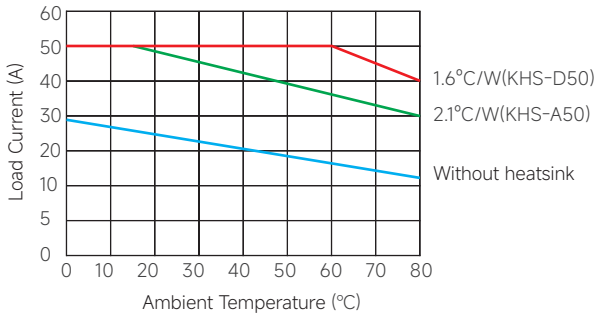
## Wiring Diagram



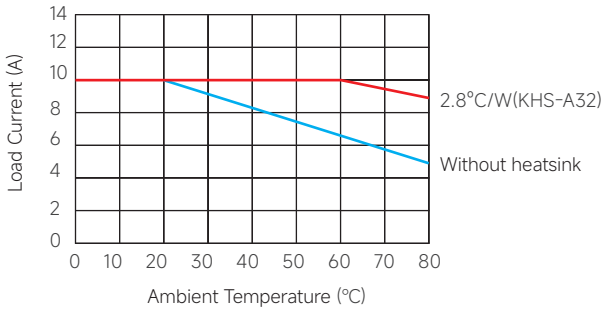

When the relay is used for inductive load control, please be sure to use a suppression circuit, just like the drawing above. Both load terminals are inverse parallelled with a fly-wheel diode D1.
D1: Fast Recovery Diode

## Thermal Derating Curve

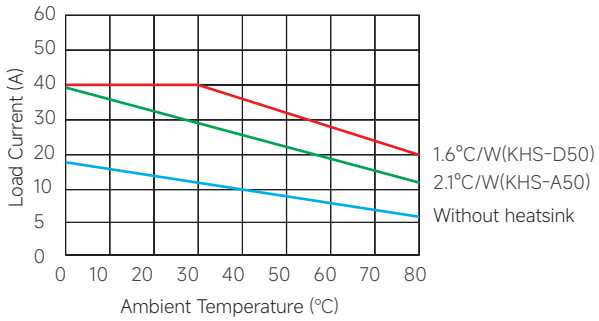
30VDC 50A



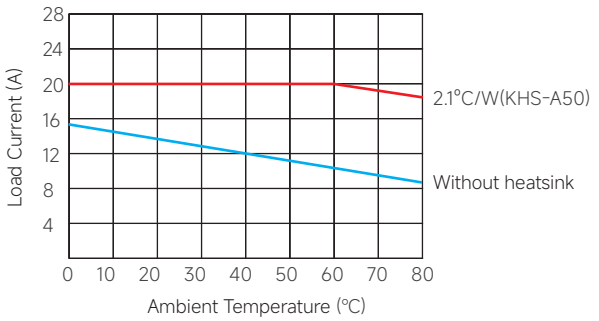

60VDC 10A



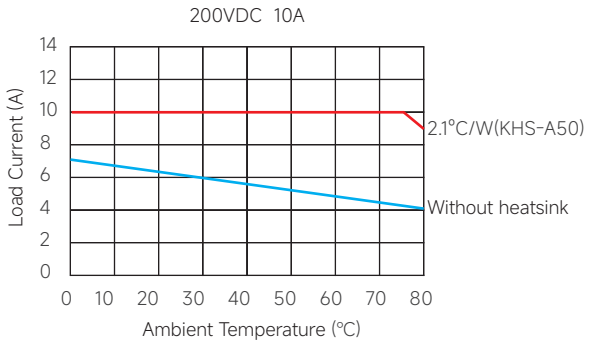

60VDC 40A




100VDC 20A

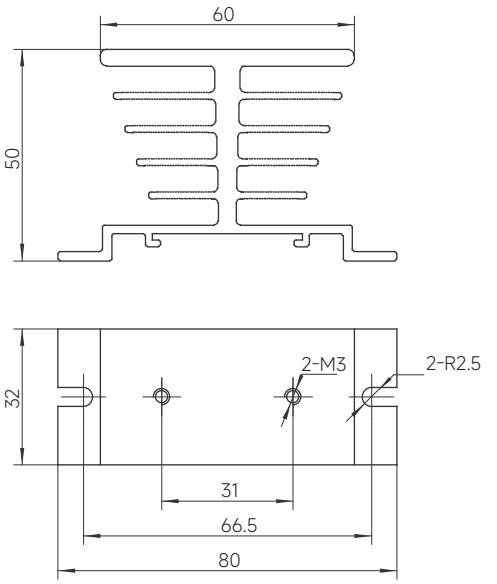



200VDC 10A



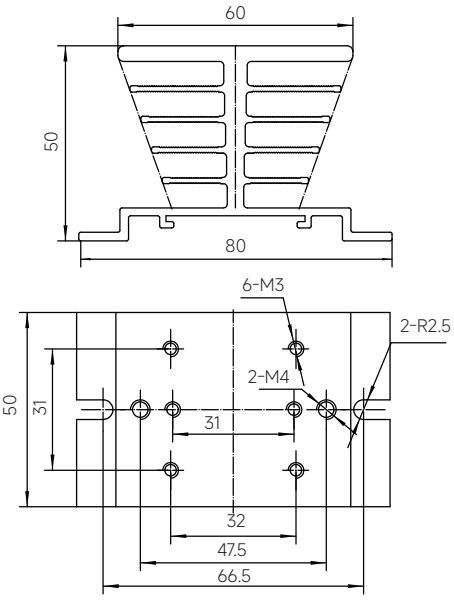

Note: The curve above shows the heatsink capability under the worst case (100% continuous operation) for a solid state relay. If your application involves intermitent operation, please contact us with your actual operating conditions (load current, on/off time, ambient temperature, etc.), and we will recommend the most suitable solution for you.

The above temperature curve is configured with radiator models as follows:



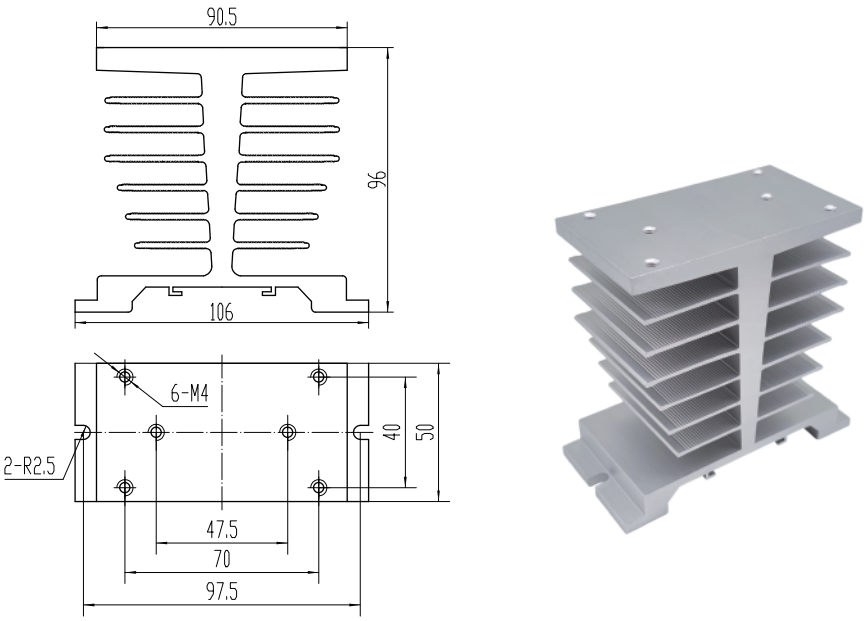

KHS-A32

(Note：The recommended mounting hole size is 68mm)




KHS-A50

(Note：The recommended mounting hole size is 68mm)




KHS-D50

## General Notes

1. Relay must be mounted to proper sized beat sink based on thermal curves. Thermal grease or a thermal pad must be used between relay and heat sink and be torqued down to (13-15)/(1.5-1.7) in-lb/Nm.
2. When connection wiring to SSR, please ensure screws are torqued down properly. Recommended torque for input screw is (13-15)/(1.5-1.7) in-lb/Nm, output screw is (13-15)/(1.5-1.7) in-lb/Nm.
3. SSR's carrying load capacity is related to the operation ambient temperature and heat dissipation condition, please refer to the Thermal Derating Curve for derating.
4. Capacitive load will produce very high surge current at the moment of conduction, which may lead to the damage of solid state relay due to the excessive surge current. Therefore, if the actual load is capacitive, or the load has parallelled large capacitance, it is strongly recommended that NTC should be connected in series in the load loop to suppress surge current in order to avoid damage to the product.

## ! Warnings

1. The product's side panels may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.