

Product Description

- ◆ Zero Crossing or Random-on Switching
- ◆ SCR Output
- ◆ Optical Isolation
- ◆ Control Voltage: DC4-32V or AC 90-280VAC
- ◆ Load Current: 25A, 40A, 60A, 80A
- ◆ Dielectric Strength: 4000Vrms
- ◆ Internal RC/MOV Protection Circuit
- ◆ RoHS Compliant



Notes: No TUV or S-mark for AC input.

Ordering Information

| | | | | | |
|-------------|--|--|--|---|-----------------|
| KSQF | 480 | D | 80 | R | (XXX) |
| KSQF Series | Load Voltage 480: 480VAC 600: 600VAC | Control Mode D: DC Control A: AC Control | Load Current 25: 25Amp 40: 40Amp 60: 60Amp 80: 80Amp | Blank: Zero Crossing R: Random-on | Customized Code |

| | | 25A | 40A | 60A | 80A |
|-------------|-----|-------------|-------------|-------------|-------------|
| D:4-32VDC | 480 | KSQF480D25 | KSQF480D40 | KSQF480D60 | KSQF480D80 |
| | | KSQF480D25R | KSQF480D40R | KSQF480D60R | KSQF480D80R |
| | 600 | KSQF600D25 | KSQF600D40 | KSQF600D60 | KSQF600D80 |
| | | KSQF600D25R | KSQF600D40R | KSQF600D60R | KSQF600D80R |
| A:90-280VAC | 480 | KSQF480A25 | KSQF480A40 | KSQF480A60 | KSQF480A80 |
| | | KSQF480A25R | KSQF480A40R | KSQF480A60R | KSQF480A80R |
| | 600 | KSQF600A25 | KSQF600A40 | KSQF600A60 | KSQF600A80 |
| | | KSQF600A25R | KSQF600A40R | KSQF600A60R | KSQF600A80R |

General Specifications

| Input Specifications (Ta=25°C) | | |
|--------------------------------|------------|-------------|
| Control Voltage Range | AC Control | 90-280VAC |
| | DC Control | 4-32VDC |
| Must Turn-on Voltage | AC Control | 90VAC |
| | DC Control | 4VDC |
| Must Turn-off Voltage | AC Control | 15VAC |
| | DC Control | 1VDC |
| Maximum Reverse Voltage | DC Control | 32VDC |
| Maximum Input Current | AC Control | 30mA@280VAC |
| | DC Control | 35mA@32VDC |

General Specifications

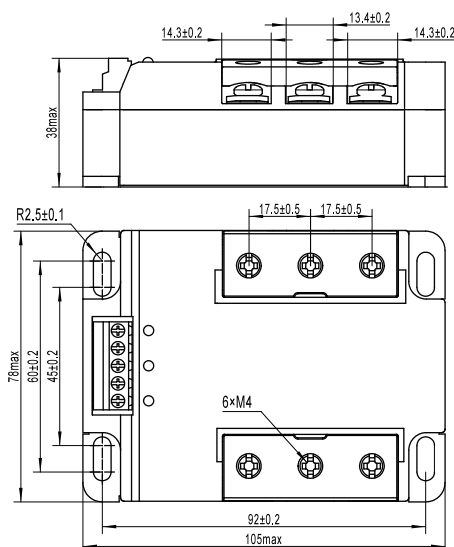
| Output Specifications (Ta=25°C) | | | |
|--|------------|---------------|----------------------|
| Load Voltage Range | | 480VAC | 24-530VAC |
| | | 600VAC | 24-660VAC |
| Maximum Turn-on Time | DC Control | AC Control | 40ms |
| | | Zero Crossing | 10ms |
| | | Random-on | 1ms |
| Maximum Turn-off Time | | AC Control | 20ms |
| | | DC Control | 10ms |
| Maximum Surge Current (@10ms) | | 25A | 300A |
| | | 40A | 500A |
| | | 60A | 700A |
| | | 80A | 1280A |
| Transient Overvoltage | | 480VAC | 1200Vpk |
| | | 600VAC | 1600Vpk |
| Maximum I ² t for Fusing (@10ms) | | 25A | 450A ² s |
| | | 40A | 1250A ² s |
| | | 60A | 2450A ² s |
| | | 80A | 8192A ² s |
| Maximum Off-State Leakage Current@Rated Load Voltage | | | 10mA |
| Maximum On-State Voltage Drop@Rated Current | | | 1.6Vrms |
| Minimum Off-State dv/dt@Maximum Rated Voltage | | | 500 V/μs |

| General Specifications (Ta=25°C) | | |
|---|--------------------|----------------|
| Dielectric Strength (50/60Hz) | Input/Output | 4000Vrms |
| | Input, output/Base | 2500Vrms |
| Minimum Insulation Resistance (@500VDC) | | 1000MΩ |
| Ambient Temperature Range | | -30°C ~ +80°C |
| Storage Temperature Range | | -30°C ~ +100°C |
| Weight (Typical) | 25A, 40A | 385g |
| | 60A, 80A | 530g |

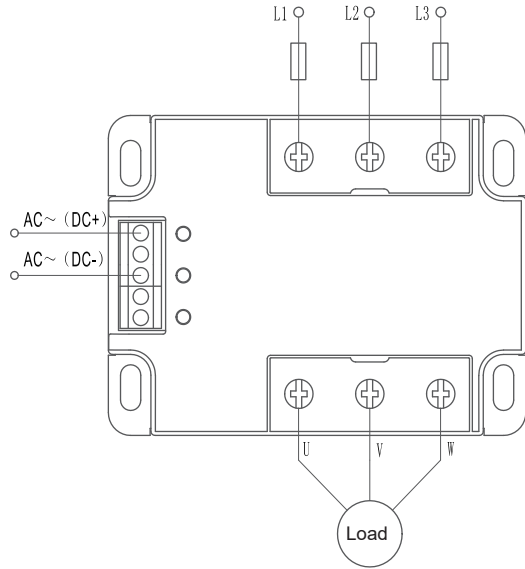
Applications

Suitable for three phase motor control, temperature control, large oven, and etc.

Outline Dimensions



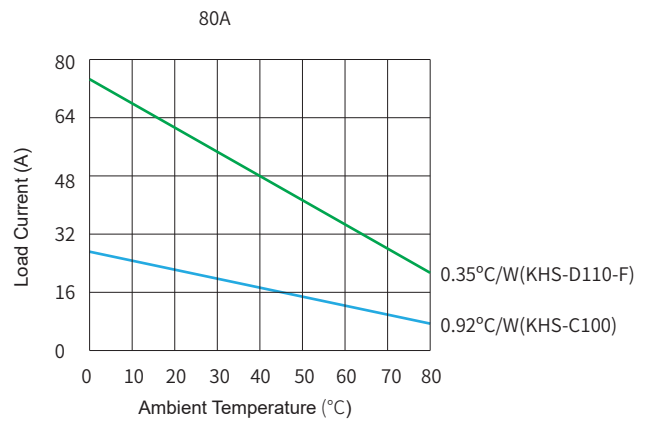
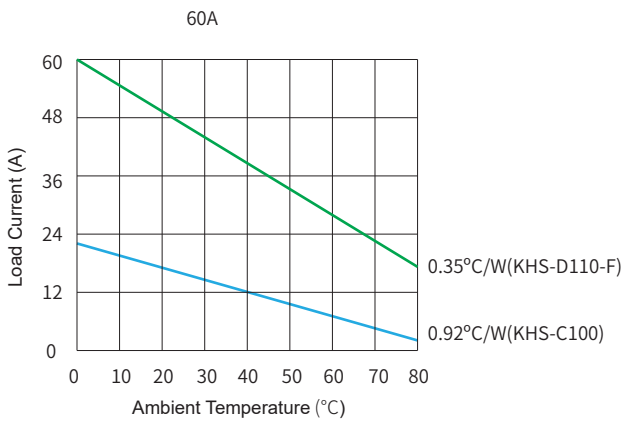
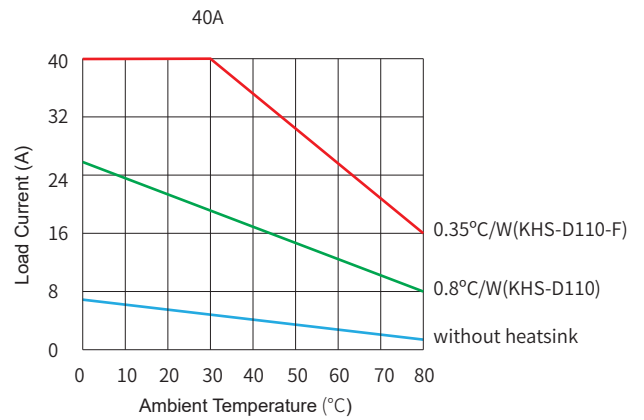
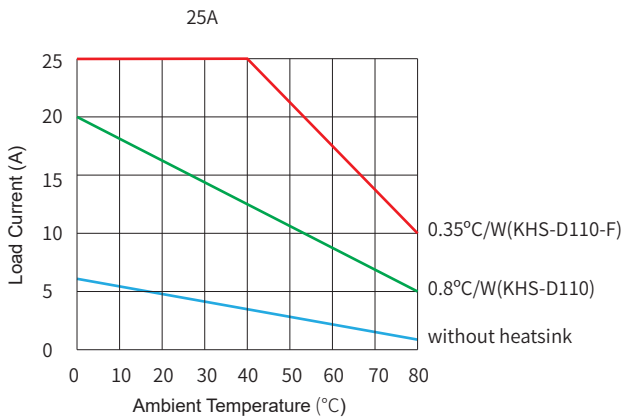
Wiring Diagram

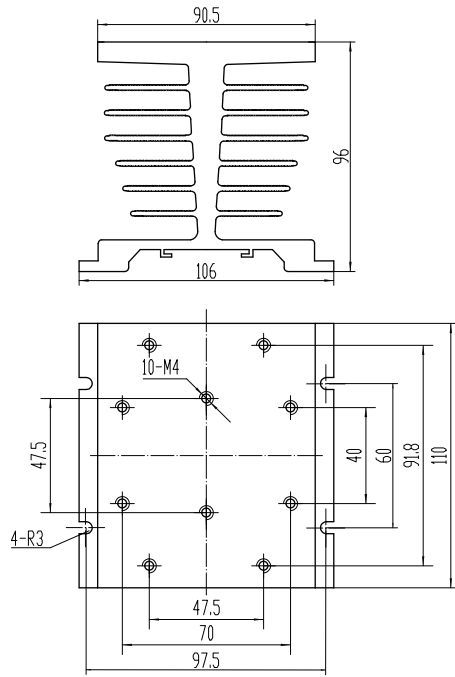


AC~ (DC+): AC Control Input (DC Control Anode Input)

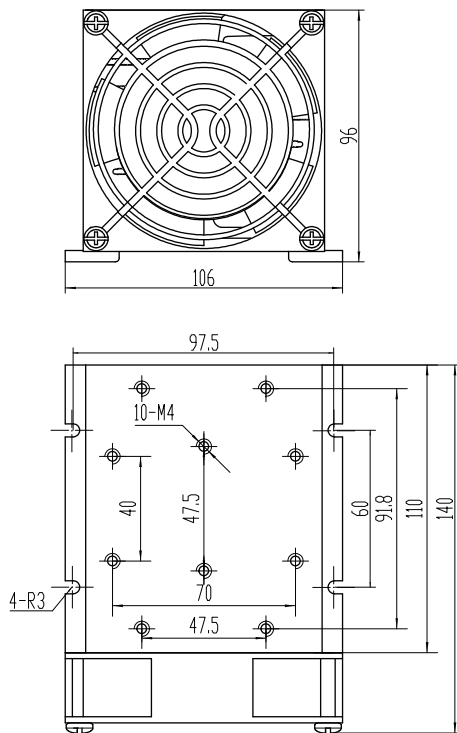
AC~ (DC-): AC Control Input (DC Control Cathod Input)

Thermal Derating Curve

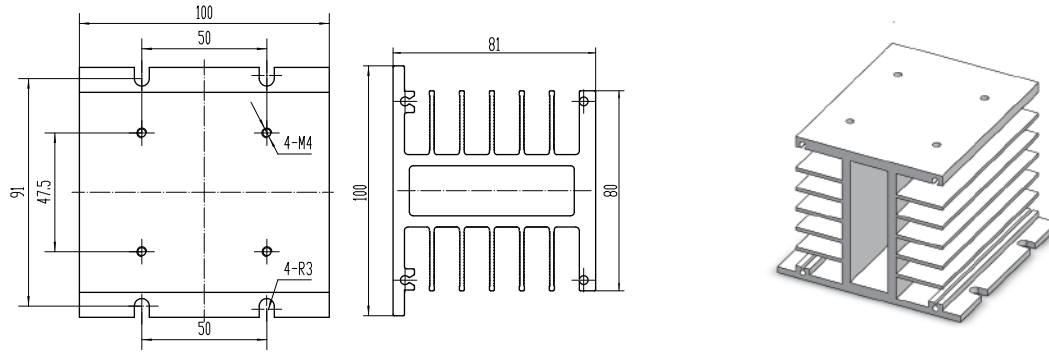




KHS-D110



KHS-D110-F



KHS-C110

General Notes

1. Relay must be mounted to proper sized heat sink based on thermal curves. Thermal grease or a thermal pad must be used between relay and heat sink and be torqued down to 18-20/2.0-2.2in-lb/Nm.
2. When connection wiring to SSR, please ensure screws are torqued down properly (input 4.43/0.5 in-lb/N·m, output 18-20/2.0-2.2 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.