

### 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



### Ordering Information

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

### 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  |  |

| Output Specifications (Ta=25°C) |            |               |           |
|---------------------------------|------------|---------------|-----------|
| Load Voltage Range              | 480VAC     |               | 24-530VAC |
|                                 | 600VAC     |               | 24-660VAC |
| Maximum Turn-On Time            | AC Control | 40ms          |           |
|                                 | DC Control | 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        |               | 860A      |
|                                 | 80A        |               | 1280A     |
| Transient Overvoltage           | 480VAC     |               | 1200Vpk   |
|                                 | 600VAC     |               | 1600Vpk   |

### General Specifications

|  |           |                      |
|--|-----------|----------------------|
| Maximum I <sup>2</sup> t for Fusing (@10ms)          | 25A       | 450A <sup>2</sup> s  |
|  | 40A       | 1250A <sup>2</sup> s |
|  | 60A       | 3698A <sup>2</sup> s |
|  | 80A       | 8192A <sup>2</sup> 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 |                      |

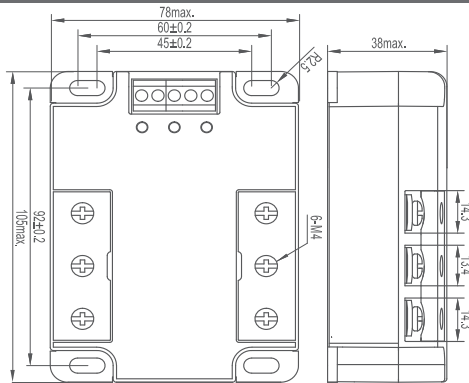
### General Specifications (Ta=25°C)

|   |                    |          |
|---|--------------------|----------|
| 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     |

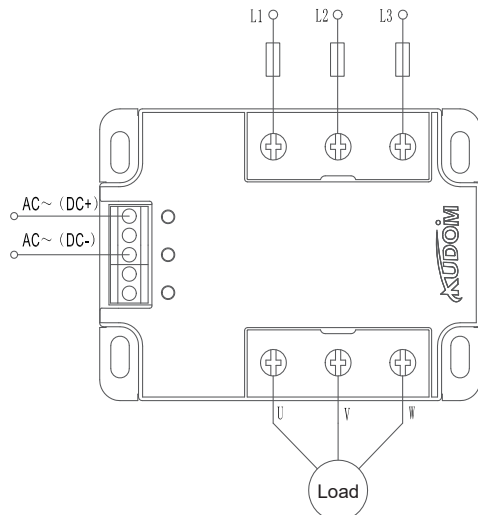
### Applications

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

### Outline Dimensions



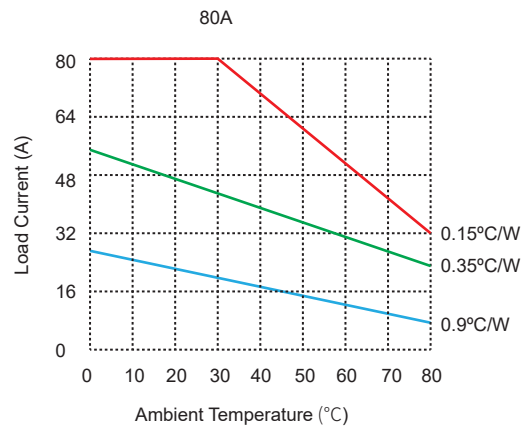
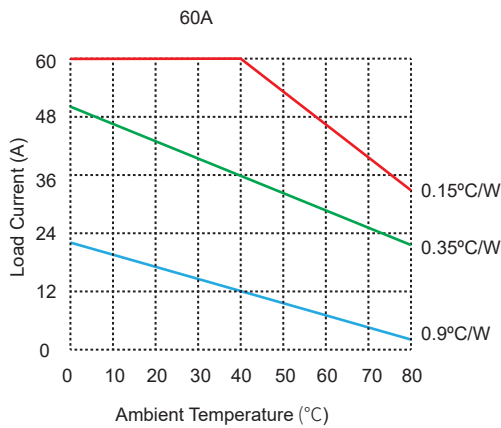
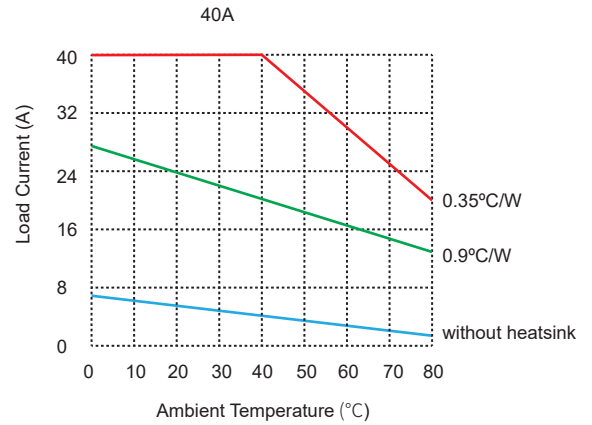
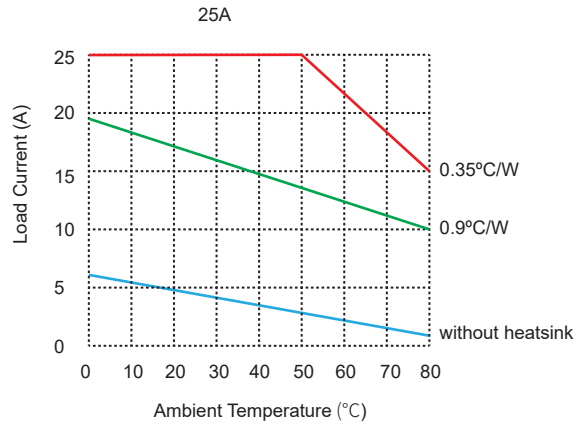
### Wiring Diagram



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

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

## Thermal Derating Curve



### 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 18-20/2.0-2.2 in-lb/N·m.
2. When connection wiring to SSR please ensure screws are torqued down properly (input 4.43/0.5in lb/N·m, output 18-20/2.0-2.2 in-lb/N·m).
3. When Ambient temperature is above 25 °C see thermal derating.

### Agency Approvals (Certification)



## Trademark Change Notification

Due to the company's strategic development needs, Xiamen Kudom Electronics Technology Co., Ltd will be acquired by i-Autoc (Xiamen) Investment Co., Ltd from 1<sup>st</sup> of July 2019. After the acquisition, all the products by Xiamen Kudom Electronics Technology Co., will no longer use Kudom trademark, but use i-Autoc trademark. The details of the change are as follows.

The original trademark  will be changed to . The original trademark  will still be used until 30<sup>th</sup> June 2019.

This is a change to the trademark only, the Company Name, Manufacturing Location, Management Team, Product Part Numbers and Safety Approval Licence Numbers (cUL, TUV, CCC, S-mark Etc) are to remain the same.