

## Product Description

- ◆ Zero Crossing or Random-on
- ◆ Load Current: 25-80A
- ◆ Over-temperature Protection
- ◆ Phase-loss Detection Function
- ◆ Fault Indication Function
- ◆ SCR Failure Detection Function
- ◆ Load Disconnection Detection Function
- ◆ Alarm Contact Output (Optional)
- ◆ Internal RC/MOV Protection Circuit
- ◆ RoHS Compliant



Note:(1) only KSQC XXX-C series products have TUV and S-mark certification.

## Ordering Information

KSQC	600	D	60	R	-C	(XXX)
KSQC Series	Load Voltage 480: 200-480VAC 600: 200-600VAC	DC Control	Load Current 25: 25Amp 40: 40Amp 60: 60Amp 80: 80Amp	Blank: Zero Crossing R: Random-on	C: Alarm Output Blank: without Alarm Output	Customized Code

	25A	40A	60A	80A
480VAC	KSQC480D25	KSQC480D40	KSQC480D60	KSQC480D80
	KSQC480D25R	KSQC480D40R	KSQC480D60R	KSQC480D80R
	KSQC480D25-C	KSQC480D40-C	KSQC480D60-C	KSQC480D80-C
	KSQC480D25R-C	KSQC480D40R-C	KSQC480D60R-C	KSQC480D80R-C
600VAC	KSQC600D25	KSQC600D40	KSQC600D60	KSQC600D80
	KSQC600D25R	KSQC600D40R	KSQC600D60R	KSQC600D80R
	KSQC600D25-C	KSQC600D40-C	KSQC600D60-C	KSQC600D80-C
	KSQC600D25R-C	KSQC600D40R-C	KSQC600D60R-C	KSQC600D80R-C

## General Specifications

Input Specifications (Ta=25°C)		
External Power Parameters	Rated Voltage Range	10-32VDC
	Max Current Consumption	70mA
Control Voltage	Control Voltage Range	10-32VDC
	Must Turn-on Voltage	10VDC
	Must Turn-off Voltage	2VDC
	Maximum Input Current	10mA

General Specifications

Output Specifications (Ta=25°C)		
Load Voltage Range	480VAC	200-530VAC
	600VAC	200-660VAC
Transient Overvoltage	480VAC	1200Vpk
	600VAC	1600Vpk
MOV Protection Voltage Range	480VAC	819-1001V
	600VAC	990-1210V
Voltage Sensitivity Allows Maximum Operating Voltage	480VAC	550VAC
	600VAC	680VAC
Maximum Turn-on Time	100ms	
Maximum Turn-off Time	100ms	
Maximum Surge Current (@10ms)	25A	300A
	40A	500A
	60A	700A
	80A	1280A
Maximum I <sup>2</sup> t for Fusing (@10ms)	25A	450A <sup>2</sup> s
	40A	1250A <sup>2</sup> s
	60A	2450A <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	1.7Vrms	
Minimum Off-State dv/dt@Maximum Rated Voltage	500 V/μs	

General Specifications (Ta=25°C)		
EMR Alarm Node Parameters	Output type	A set of normally open electromagnetic relays
	Dielectric Withstand (Between Disconnecting Contacts)	1000VAC
	Contact load (Resistance)	2A @250VAC/30VDC
Dielectric Strength, Input/Output/Base[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)	290g	

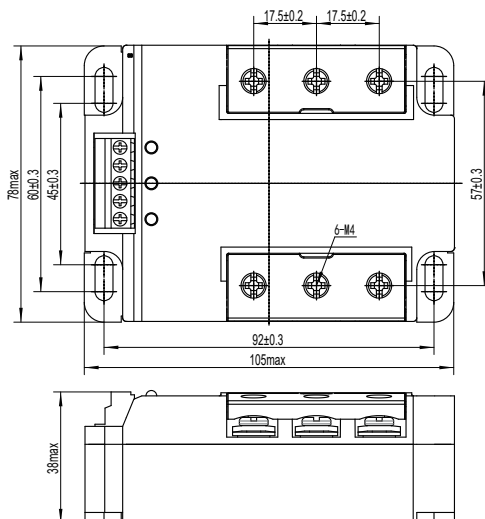
Function Introduction	
Over-temperature Protection <sup>(2)</sup>	When the product is working, the product temperature is monitored in real time. When the temperature exceeds the set value, say 100 °C (typical value), the product output will be cut off. At the same time, the fault indicator light will be turned on and the output normally open alarm contacts (NO, COM) will be closed. The product can return to normal working state by itself when the product temperature drops below the set value 60 °C (typical value).
SCR Failure and Load Disconnection Detection	When no control signal is added, in case of SCR short circuit or load breakage, the product will output the fault state and the fault indicator light will be on at the same time.
Phase-loss Detection	If the three-phase voltage input fault occurs, the product will automatically cut off the output, and the fault indicator light will be on and the fault signal will be output.

Note: (2) if you need to change the threshold value of overtemperature protection temperature setting and recovery temperature setting in the overtemperature protection function, you can contact the manufacturer to customize.

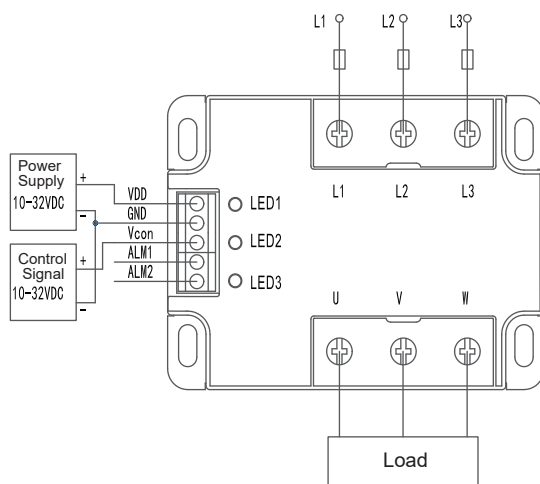
## Applications

Suitable for Motor control, Kiln temperature control system, Large oven, and etc.

## Outline Dimensions



## Wiring Diagram



VDD: External DC power anode (10-32VDC)

GND: External DC power cathode (0V)

V<sub>CON</sub>: Control voltage input (10-32VDC)

ALM1, ALM2: Failure alarm signal output

Open-circuited during normal operation

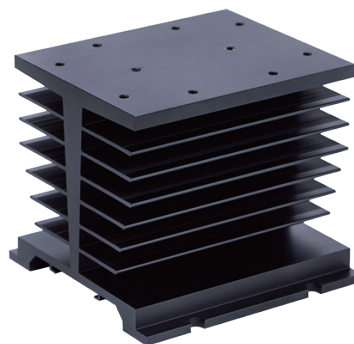
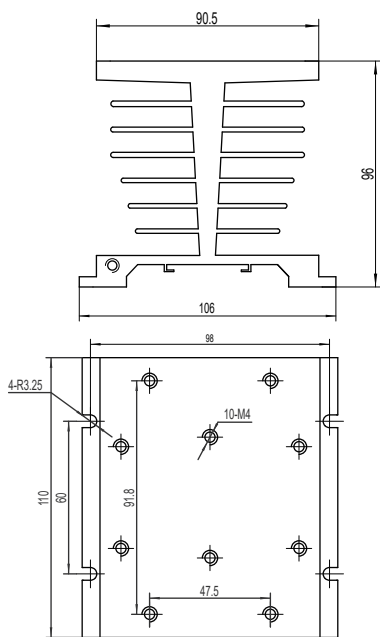
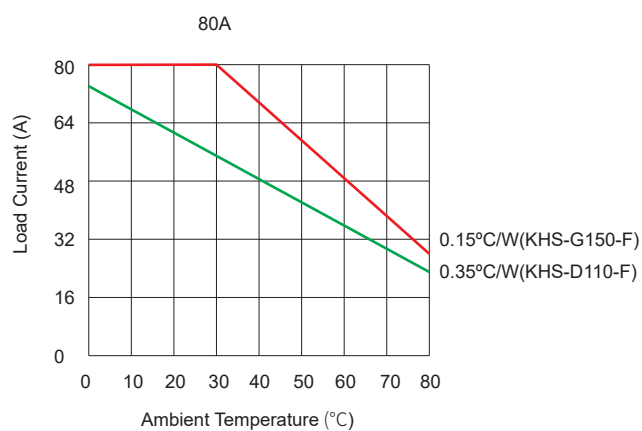
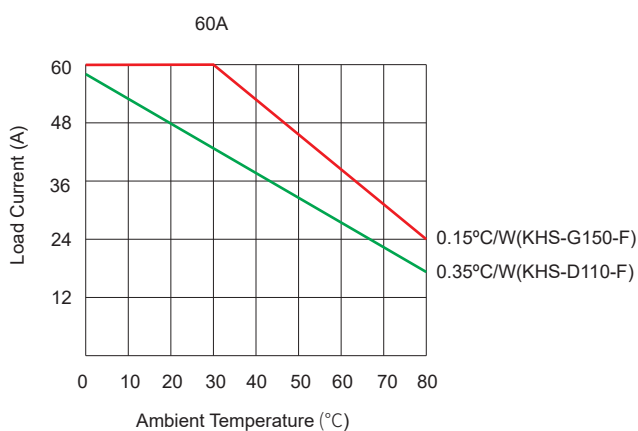
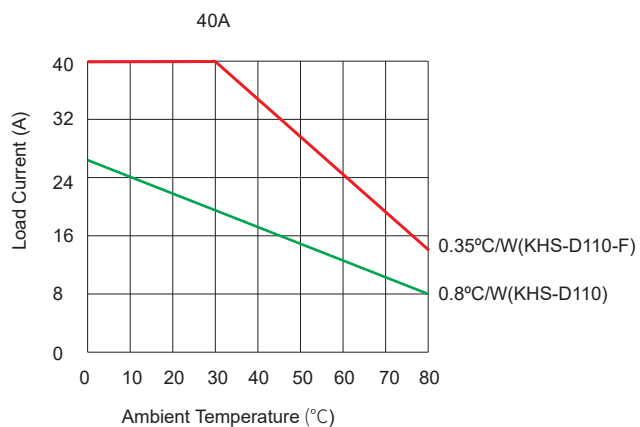
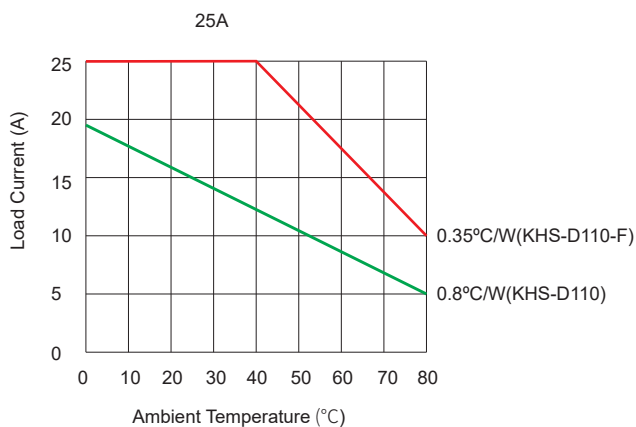
Short-circuited during failure

LED1: Power indication of external power supply

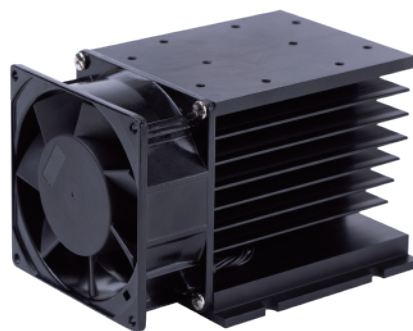
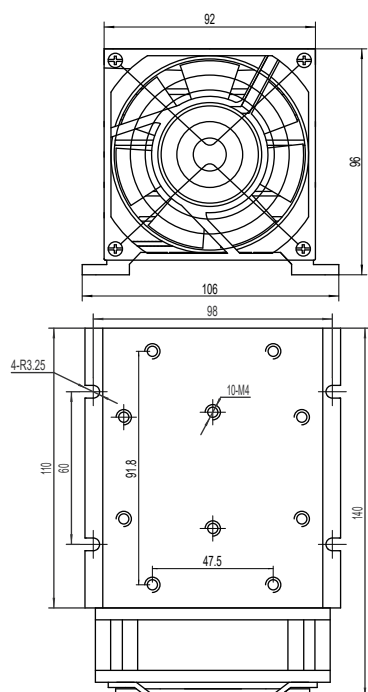
LED2: Control signal indication

LED3: Failure indication

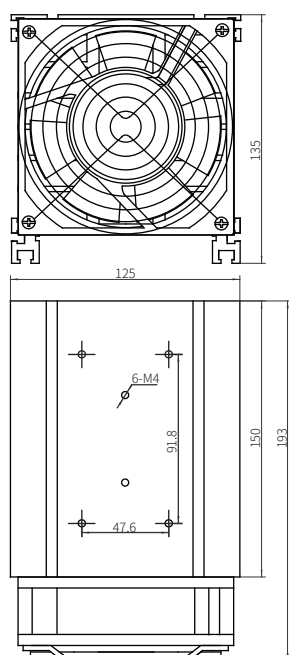
Thermal Derating Curve



KHS-D110



KHS-D110-F



KHS-G150-F

### 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 13-15/1.5-1.7in-lb/Nm, 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.
4. The L1, L2, L3 of the product must be connected to the phase line, and U, V, S must be connected to the load to work normally. The product will not work normally when the phase line side is connected with the load side in reverse.
5. It is necessary to ensure reliable grounding during the product usage.