Product Description

- Zero-crossing Switching
- SCR Inverse Parallel Output
- Load Current: 25A~100A
- Dielectric Strength: 4000Vrms
- Internal RC
- LED Indicator
- RoHS Compliant
- SCR Short Circuit, Open Circuit and Error Self-Inspection Functions

Product Selection

KSIA	480	D	25	P	-L	(XXX)
KSIA Series	Load Voltage 240:240VAC 480:480VAC 600:600VAC	Control Mode D: DC Control	Load Current 25:25Amp 40:40Amp 60:60Amp 80:80Amp 100:100Amp	Trigger Mode P: Positive Trigger Blank: Negative Trigger	L:LED	Customized Code

Available Part Numbers

Trigger Mode	Load Voltage	25A	40A	60A	80A	100A
Negative Trigger	240VAC	KSIA240D25-L	KSIA240D40-L	KSIA240D60-L	KSIA240D80-L	KSIA240D100-L
	480VAC	KSIA480D25-L	KSIA480D40-L	KSIA480D60-L	KSIA480D80-L	KSIA480D100-L
	600VAC	KSIA600D25-L	KSIA600D40-L	KSIA600D60-L	KSIA600D80-L	KSIA600D100-L
Positive Trigger	240VAC	KSIA240D25P-L	KSIA240D40P-L	KSIA240D60P-L	KSIA240D80P-L	KSIA240D100P-L
	480VAC	KSIA480D25P-L	KSIA480D40P-L	KSIA480D60P-L	KSIA480D80P-L	KSIA480D100P-L
	600VAC	KSIA600D25P-L	KSIA600D40P-L	KSIA600D60P-L	KSIA600D80P-L	KSIA600D100P-L

Technical Specifications

Input Specifications (Ta=25°C)		
Power Supply Voltage VCC Range		18VDC ~ 32VDC
Control Voltage Range (@VCC=24VDC)	Negative Trigger	0~12VDC
	Positive Trigger	18~32VDC
Must Turn-on Voltage (@VCC=24VDC)	Negative Trigger	12VDC (max.)
	Positive Trigger	18VDC (min.)
Must Turn-off Voltage (@VCC=24VDC)	Negative Trigger	18VDC (min.)
	Positive Trigger	12VDC (max.)
Maximum Power Current (@VCC=24VDC)		40mA
Maximum Input Current		4mA

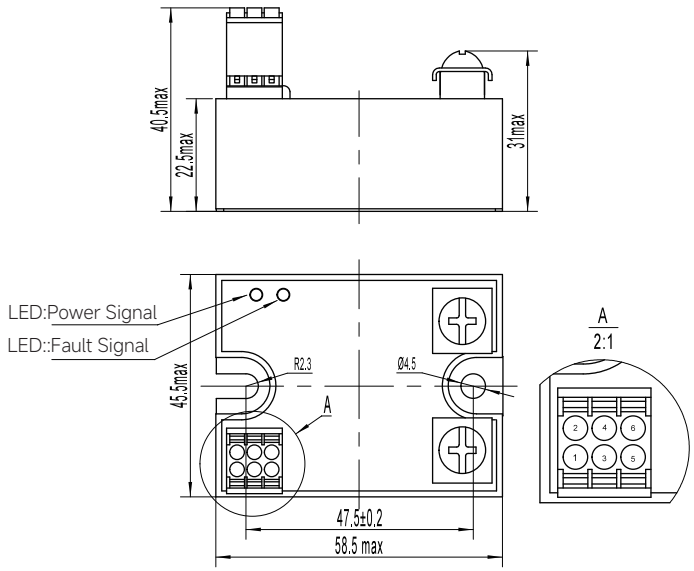
Output Specifications (Ta=25°C)		
Load Voltage Range	240VAC	150~280VAC
	480VAC	150~530VAC
	600VAC	150~660VAC
Maximum Surge Current (@10ms)	25A	250A
	40A	400A
	60A	600A
	80A	800A
	100A	1000A
Maximum Turn-on Time		10ms
Maximum Turn-off Time		10ms
Maximum I^2t for Fusing (@10ms)	25A	312A²s
	40A	800A²s
	60A	1800A²s
	80A	3200A²s
	100A	5000A²s
Transient Overvoltage	240VAC	600Vpk
	480VAC	1200Vpk
	600VAC	1600Vpk
Maximum Off-State Leakage Current (@Rated Voltage)		5mA
Maximum On-State Voltage Drop (@Rated Current)		1.6Vrms
Minimum Off-State (dv/dt)		500V/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℃～+80℃
Storage Temperature Range		-30℃～+100℃
Weight (Typical)	25A / 40A / 60A	100g
	80A / 100A	140g

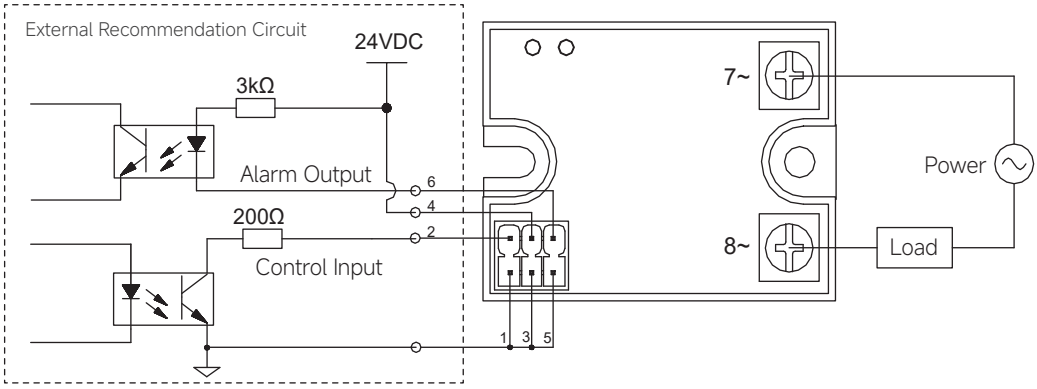
Applications

Suitable for various industrial applications, suitable for resistive, inductive, and capacitive loads.

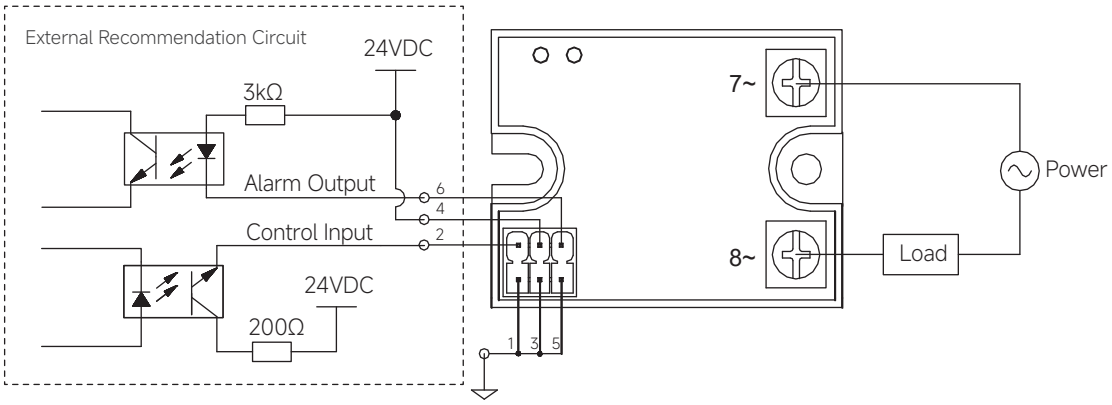
Outline Dimensions



Wiring Diagram

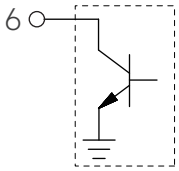


Negative Trigger Products



Positive Trigger Products

Internal Circuit Diagram of 6-Terminal Product



Wiring Instructions:

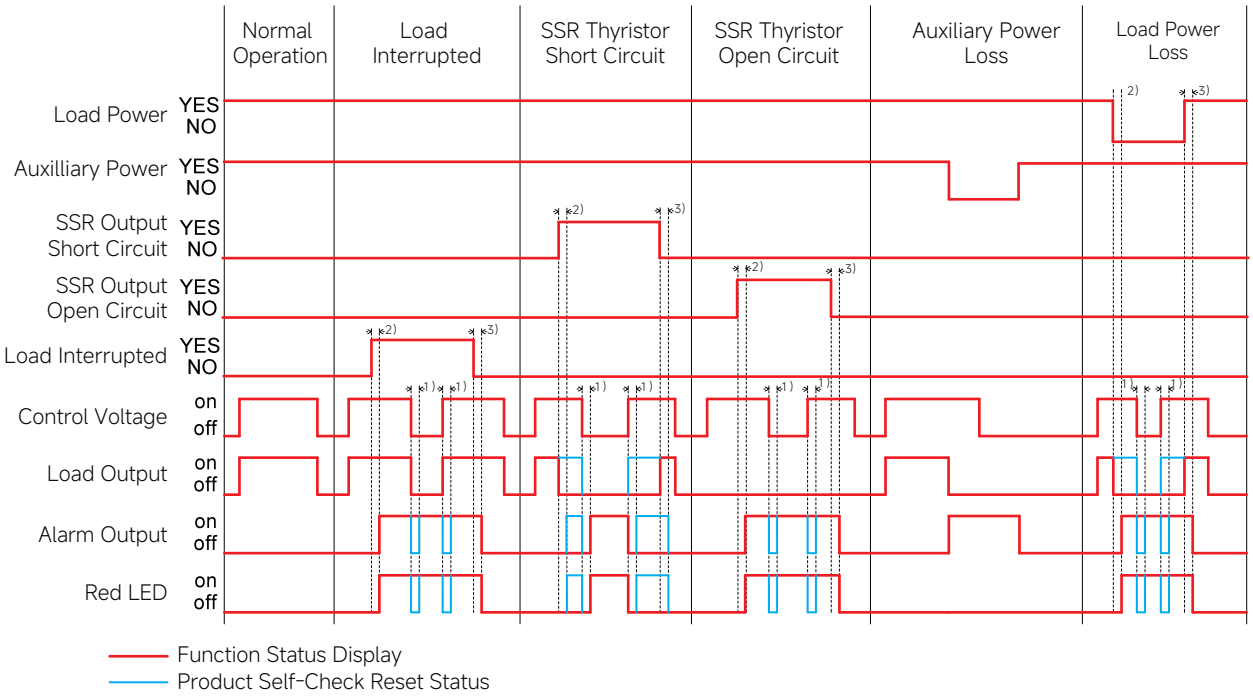
Terminal 2: Connect to the control signal input voltage.

Terminal 4: Connect to the auxiliary power input voltage.

Terminals 1, 3, and 5: Connect to the negative terminals of the auxiliary power supply and control signal input. These three terminals are internally short-circuited within the product.

Terminal 6: Fault alarm output feedback terminal. During normal operation, the internal NPN transistor of this terminal will conduct and pull low. When the SSR detects a fault, this terminal will enter a high-impedance state.

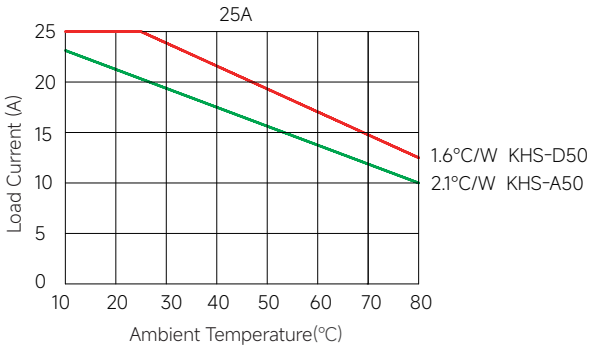
Function Diagram

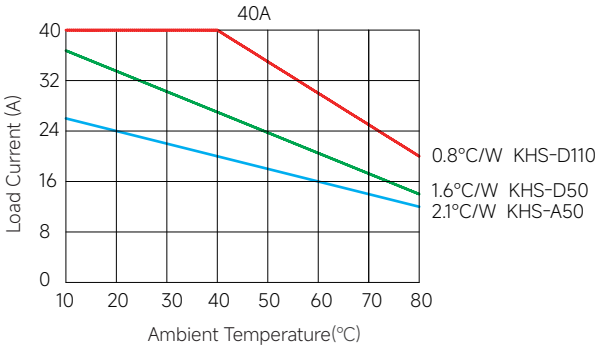


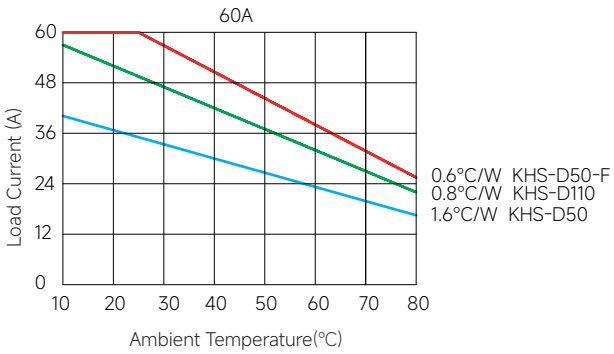
1. After each switching of the control input signal, the alarm status will undergo a self-check reset process. This state lasts between 30~100 ms.
2. There is a delay of 30~100 ms between fault detection and alarm output. If the actual fault duration is shorter than this delay, no alarm output will be triggered
3. There is a delay of 30~100 ms between alarm clearance and alarm output termination. If the normal state duration is shorter than this delay, the product will remain in the alarm output state.

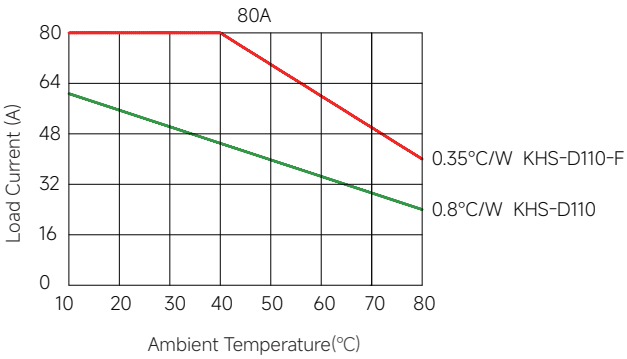
Note: When the control voltage is applied but is insufficient to trigger the product into conduction, the control indicator (green LED) will glow at half brightness. When the applied voltage is sufficient to fully trigger the product into conduction, the control indicator (green LED) will glow at full brightness.

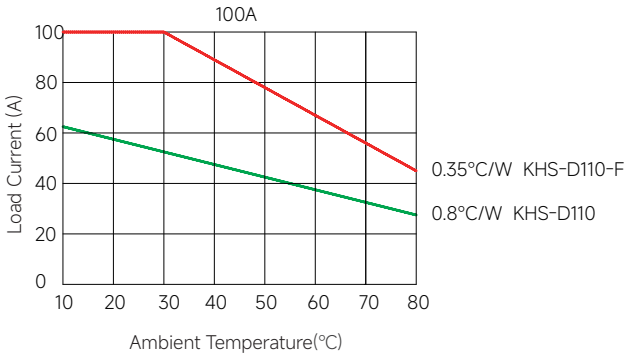
Thermal Derating Curve





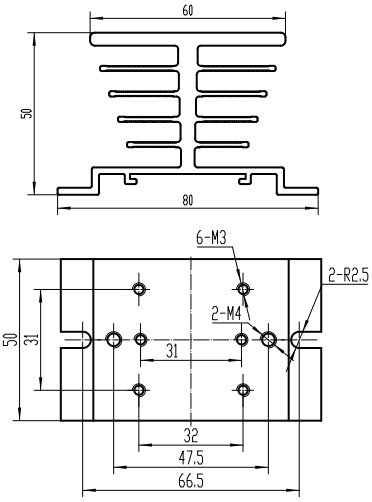




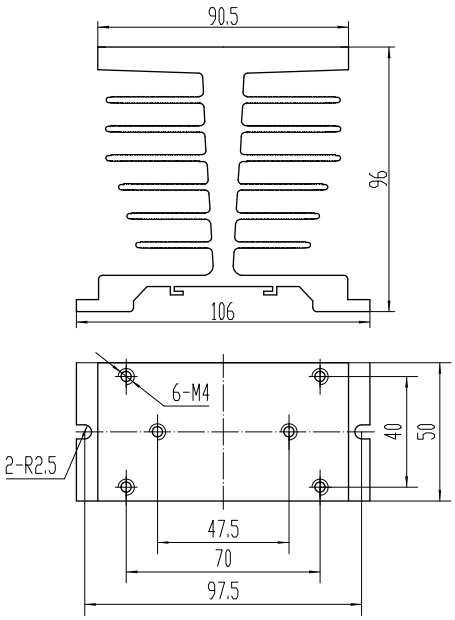


Note: The curve above shows the heatsink capability under the worst case (100% continuous operation) for a solid state relay. If your application involves intermitent operation, please contact us with your actual operating conditions (load current, on/off time, ambient temperature, etc.), and we will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

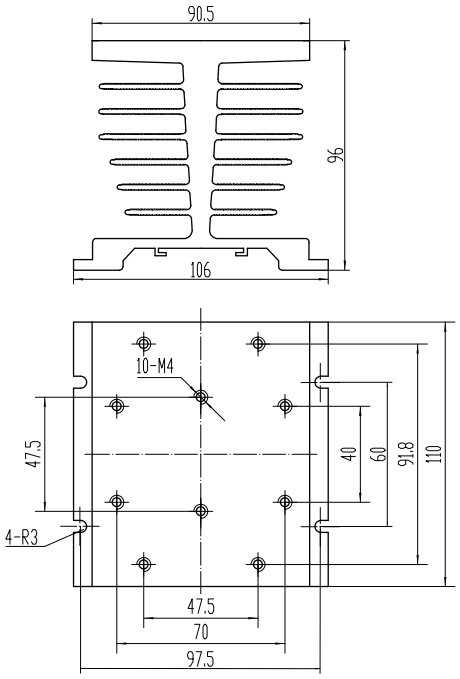
The above temperature curve is configured with radiator models as follows:



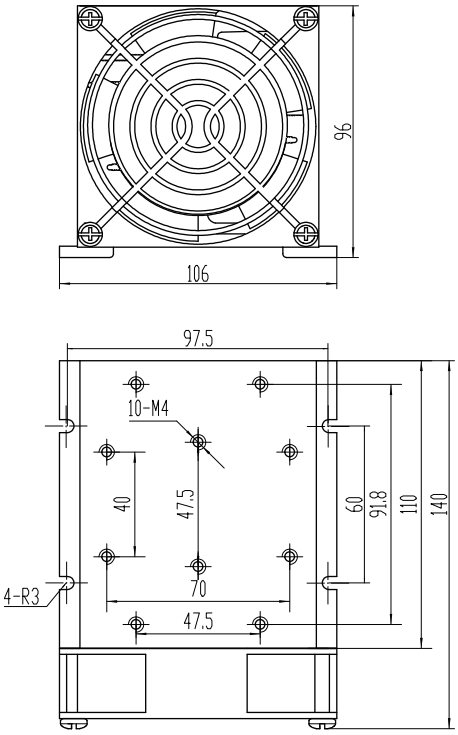
KHS-A50



KHS-D50



KHS-D110



KHS-D110-F

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 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.

! 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.

