

## Product Description

- ◆ Zero Cross or Random-on Switching
- ◆ Load Current: 25A, 50A, 75A
- ◆ Load Voltage: 240VAC, 600VAC
- ◆ Control Voltage Range: 3~32VDC, 4~32VDC, 18~30VAC/15~30VDC
- ◆ SCR Output
- ◆ Internal RC Protection Circuit
- ◆ IP20 Touch-safe Housing
- ◆ Integrated with Heatsink
- ◆ Available with Thermal Protector Option
- ◆ EN50022 35mm DIN Rail Mount



## Product Selection

<b>KSK</b>	<b>240</b>	<b>D</b>	<b>25</b>	<b>R</b>	<b>T</b>	<b>(XXX)</b>
KSK Series	Load Voltage 240: 240VAC 600: 600VAC	Control Mode D: DC Control E: 24VAC Control	Load Current 25: 25Amp 50: 50Amp 75: 75Amp	Switching Mode Blank: Zero Crossing R: Random-on	Protection Type T: TVS Protection Blank: Without Protection	Customized Code
<b>-K</b>	<b>F24DC</b>					
Heatsink <sup>(1)</sup> K:KHS-K90 L:KHS-L90 I:KHS-I93	Fan <sup>(1)</sup> Blank: No Fan F24DC:24VDC Fan (Only for KHS-I93)					

Note: (1)The code for heatsink will not display on the product marking.

### Available Part Numbers

Load Voltage	Blocking Voltage	Control Voltage	Zero Crossing		Random-on	
			-	With TVS	-	With TVS
240:240VAC	800Vpk	D: 3~32VDC	KSK240D#	KSK240D#-T	KSK240D#R	KSK240D#R-T
		E: 24VAC	KSK240E#	KSK240E#-T	KSK240E#R	KSK240E#R-T
600:600VAC	1200Vpk	D: 4~32VDC	KSK600D#	KSK600D#-T	KSK600D#R	KSK600D#R-T
		E: 24VAC	KSK600E#	KSK600E#-T	KSK600E#R	KSK600E#R-T

Note: 1. For products with TVS, the blocking voltage refers to SCR chip and optocoupler.  
2. # Represents the rated load current, which is 25, 50 or 75.

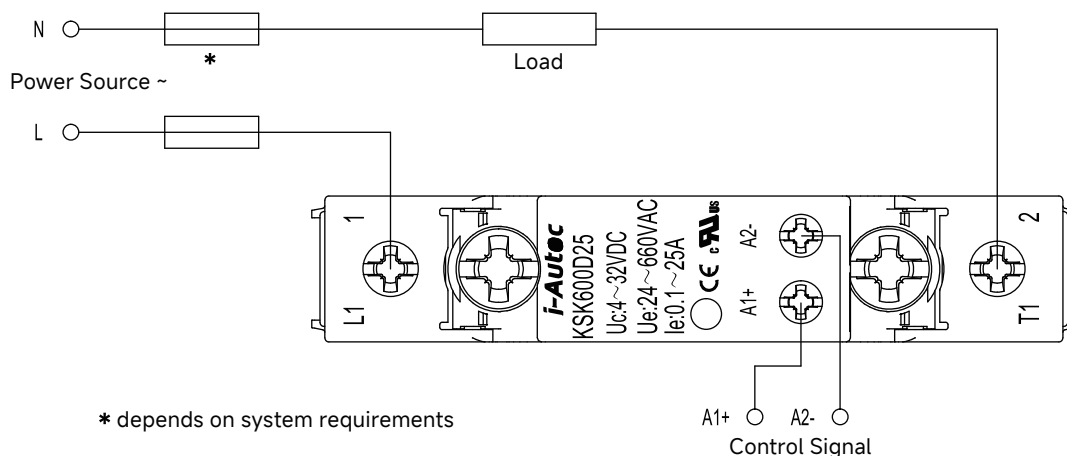
## Technical Specifications

Input Specifications (Ta=25°C)		
Control Voltage Range	KSK240D... Series	3~32VDC
	KSK600D... Series	4~32VDC
	KSK...E... Series	18~30VAC/15~30VDC
Maximum Input Current	KSK...D... Series	20mA (@32VDC)
	KSK...E... Series	20mA (@30VDC/30VAC)
Must Turn-on Voltage	KSK240D... Series	3VDC
	KSK600D... Series	4VDC
	KSK...E... Series	18VAC/15VDC
Must Turn-off Voltage	KSK240D... Series	1VDC
	KSK600D... Series	5VAC/VDC
Maximum Reverse Voltage	KSK...E... Series	-32VDC

Output Specifications (Ta=25°C)			
Load Voltage Range	KSK240... Series	24~280VAC	
	KSK600... Series	24~660VAC	
Blocking Voltage	KSK240... Series	800Vpk	
	KSK600... Series	1200Vpk	
Load Current	KSK...25... Series	25A	
	KSK...50... Series	50A	
	KSK...75... Series	75A	
Maximum Load Current	100mA		
Maximum Surge Current (@10ms)	KSK...25... Series	800A <sub>pk</sub>	
	KSK...50... Series	850A <sub>pk</sub>	
	KSK...75... Series	900A <sub>pk</sub>	
Maximum I <sup>2</sup> t for Fusing (@10ms)	KSK...25... Series	3200A <sup>2</sup> s	
	KSK...50... Series	3612A <sup>2</sup> s	
	KSK...75... Series	4050A <sup>2</sup> s	
Maximum Turn-on Time	KSK...D... Series	Random-on	1ms
		Zero Crossing	1/2cycle+1ms
Maximum Turn-off Time	KSK...E... Series	30ms	
	KSK...D... Series	1/2cycle+1ms	
	KSK...E... Series	30ms	
TVS Breakdown Voltage	KSK240...T... Series	480V	
	KSK600...T... Series	1100V	
Maximum Off-State Leakage Current (@Rated Voltage)		5mA	
Maximum On-State Voltage Drop (@Rated Current)		1.5V <sub>rms</sub>	
Minimum Off-State (dv/dt)		1000V/μs	

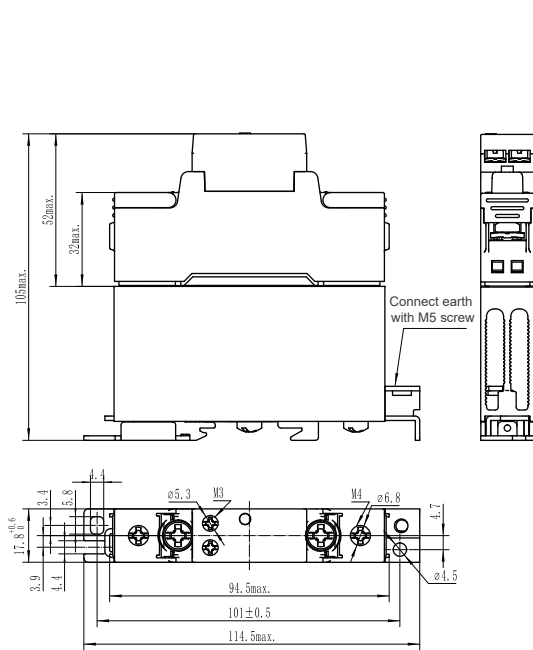
General Specifications (Ta=25°C)		
Dielectric Strength (50/60Hz)	Input/Output	4000V <sub>rms</sub>
	Input,Output/Heatsink	4000V <sub>rms</sub>
Minimum Insulation Resistance (@500VDC)	1000mΩ	
Ambient Temperature Range	-30°C ~ +80°C	
Storage Temperature Range	-30°C ~ +100°C	
Weight (Typical)	KSK...25...-K Series	190g
	KSK...25...-L Series	260g
	KSK...50...-L Series	260g
	KSK...50...-I Series	420g
	KSK...75...-IF24DC Series	470g
Fan Voltage	24VDC	

## Wiring Diagram

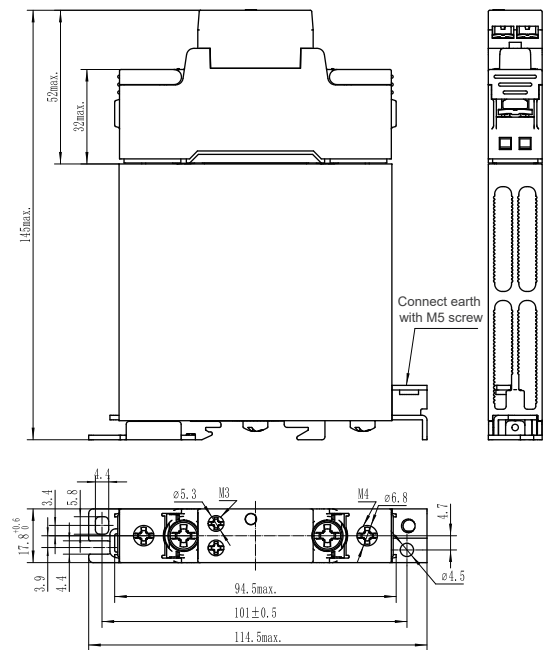


Note: For the KSK...D... series, the control signal is A1+&A2-, and for the KSK...E... series, the control signal is A1&A2.

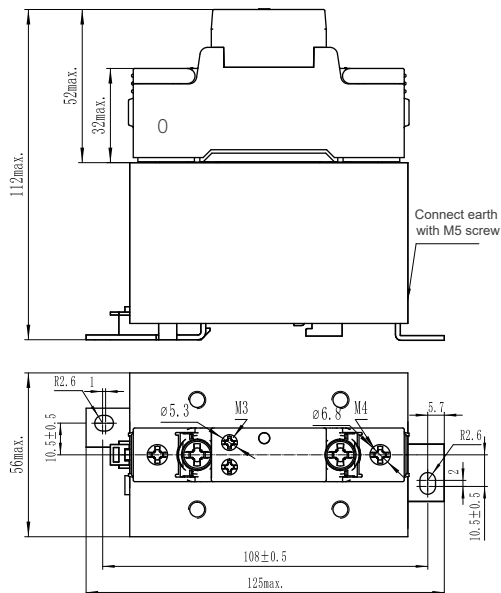
Outline Dimensions



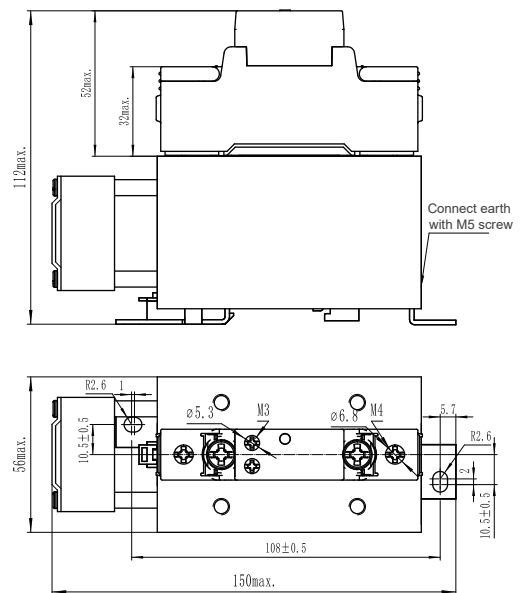
KSK...25...-K Series



KSK...25/50...-L Series

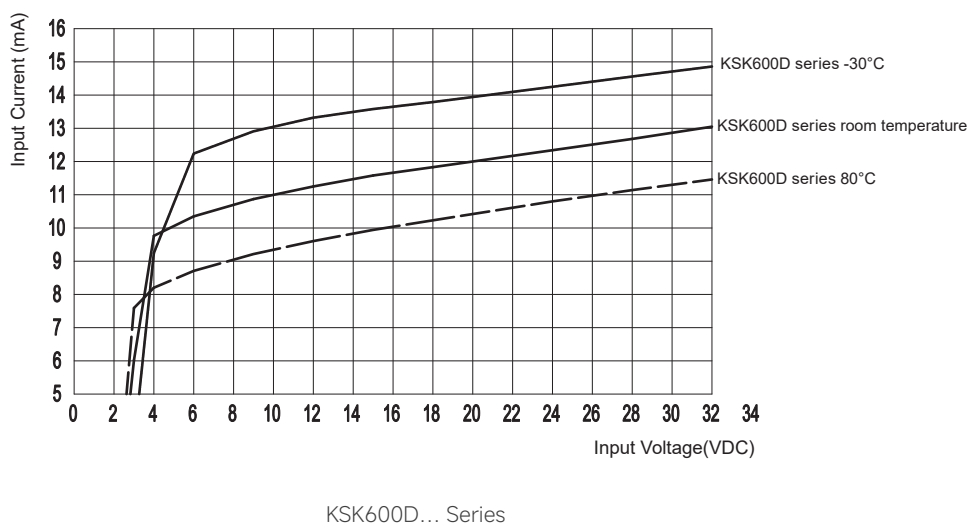
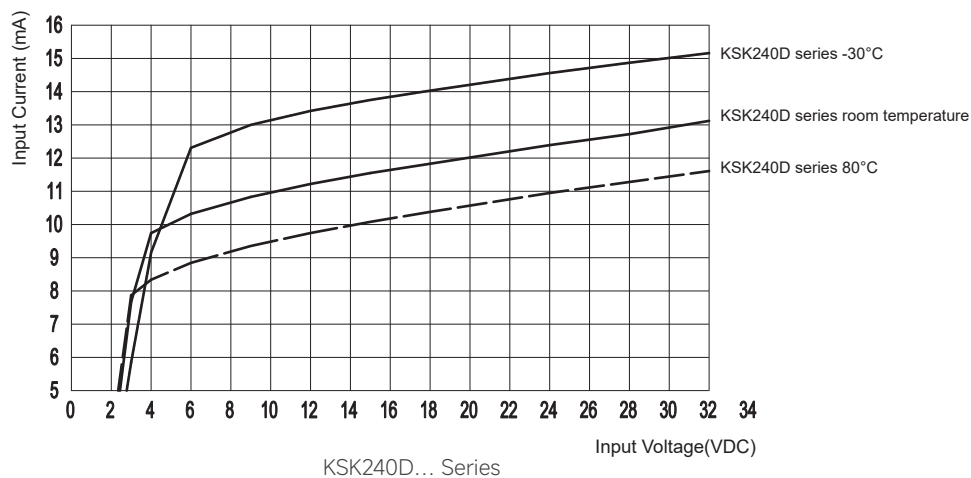


KSK...50...-I Series

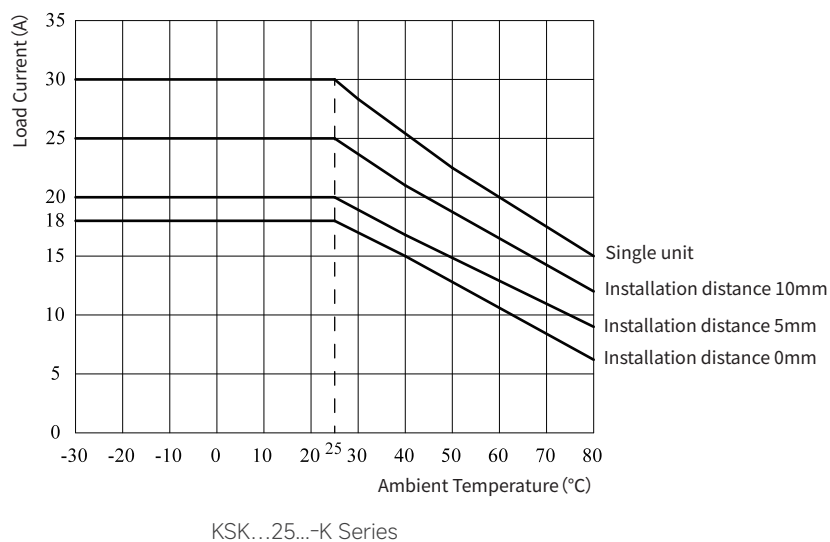


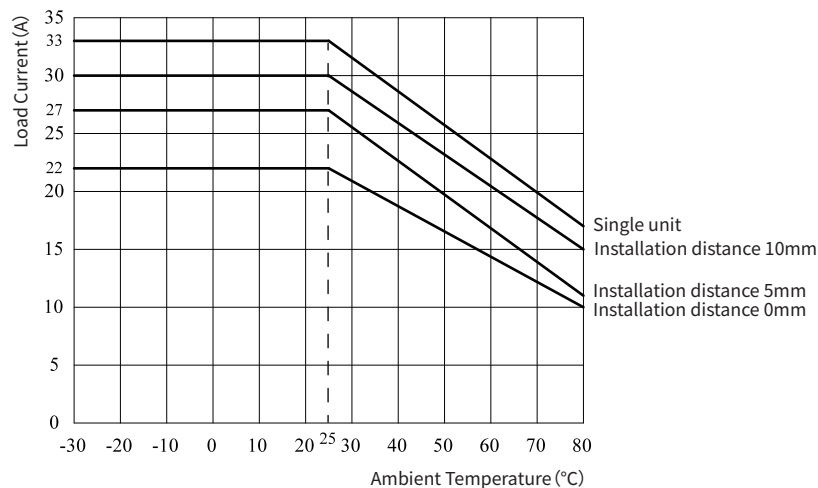
KSK...75...-IF24DC Series

### Input Current vs. Input Voltage

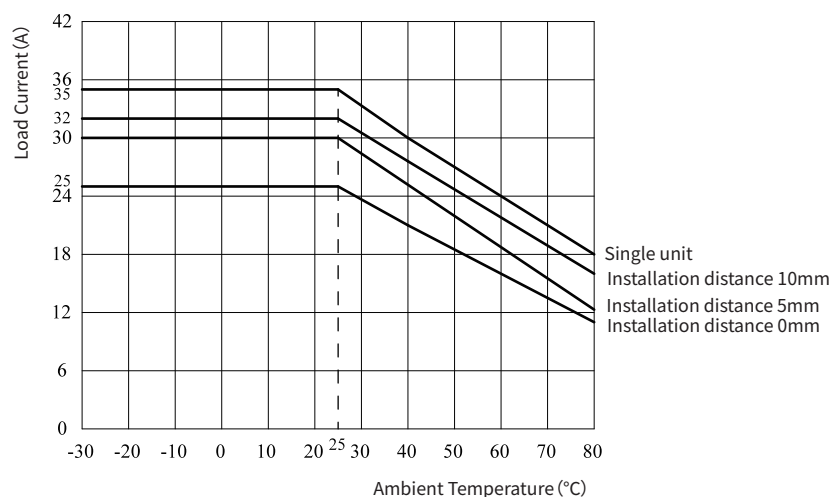


### Thermal Derating Curve

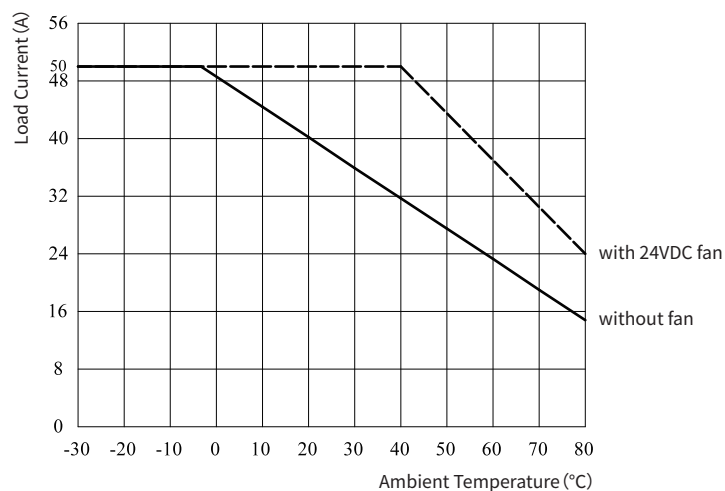




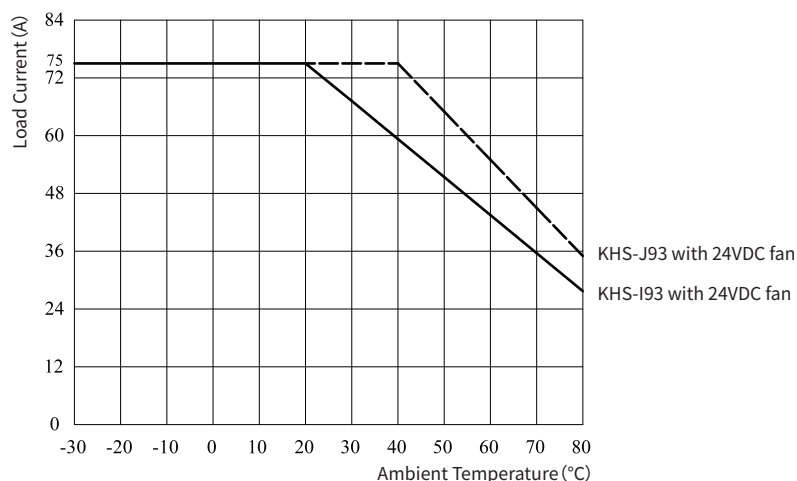
KSK...25...-L Series



KSK...50...-L Series



KSK...50...-I Series



KSK...75... Series

### General Notes

1. When the temperature of the product is high, please refer to the temperature curve.
2. The recommended mounting torque for the input M3 terminal, when using screw driver head of PH2, is (0.35~0.5)N·m or (3.1~4.4) in.-lbs. For the output M4 terminal, when using screw driver heads of PZ2, the recommended torque is (0.98~1.37)N·m or (8.7~12.1)in.-lbs.
3. The relay terminal should ensure a reliable connection, poor connection may lead to the product overheating and damaging it.
4. The cabinet where the product is installed should be equipped with a fan, and the air duct should be optimized to effectively cool the solid-state relay product. Sufficient space should be reserved for product installation to prevent overheating and ensure proper ventilation.
5. If a thermal protector is required, please contact us for technical support.



### Warnings

1. The product may be hot during use, 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.