

## Product Description

- ◆ Zero Cross or Random-on Switching
- ◆ Rated Current: 25A, 50A, 75A
- ◆ Rated 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



## Ordering Information

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

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

SSR Selection						
Rated Load Voltage	Blocking Voltage	Control Voltage	Zero-on		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)

**Technical Specifications**

**Input Specifications(Ta=25°C)**

Must Turn-on Voltage	KSK240D... series	3VDC
	KSK600D... series	4VDC
	KSK...E... series	18VAC/15VDC
Must Turn-off Voltage	KSK...D... series	1VDC
	KSK...E... series	5VAC/VDC
Maximum Reverse Voltage	KSK...D... series	-32VDC

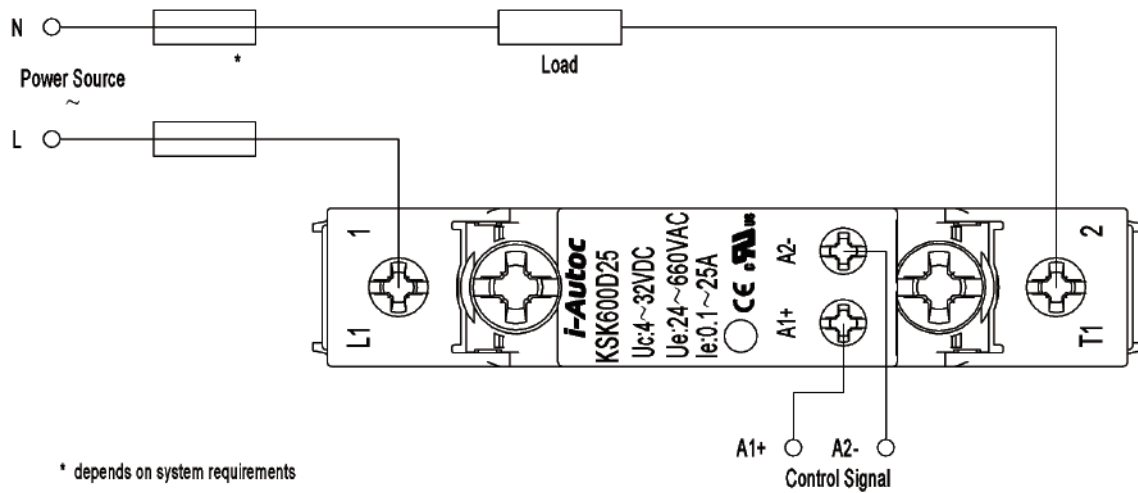
**Output Specifications(Ta=25°C)**

Load Voltage Range (45~65Hz)	KSK240... series	24~280VAC
	KSK600... series	24~660VAC
Blocking Voltage	KSK240... series	800Vpk
	KSK600... series	1200Vpk
Rated Load Current	KSK...25...series	25A
	KSK...50...series	50A
	KSK...75...series	75A
Min. Load Current		100mA
Surge Current (@10ms)	KSK...25...series	800Apk
	KSK...50...series	850Apk
	KSK...75...series	900Apk
Max. 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
Max. Turn-on Time	KSK...D...series	Random-on Zero Crossing
	KSK...E...series	1ms 1/2cycle+1ms
Max. Turn-off Time	KSK...D...series	30ms
	KSK...E...series	1/2cycle+1ms 30ms
Breakdown Voltage of Internal TVS	KSK240...T... series	480V
	KSK600...T... series	1100V
Max. Off-State Leakage Current (@ Rated Voltage)		5mA
Max. On-state Voltage Drop (@ Rated Current)		1.5Vrms
Min. Off-state dv/dt		1000V/μs

**General Specifications(Ta=25°C)**

Dielectric Strength(50/60Hz)	Input/Output	4000Vrms
	Input,Output/Heatsink	4000Vrms
Insulation Resistance(@500V)		1000MΩ
Ambient Operating Temperature Range		-30°C ~ +80°C
Ambient 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

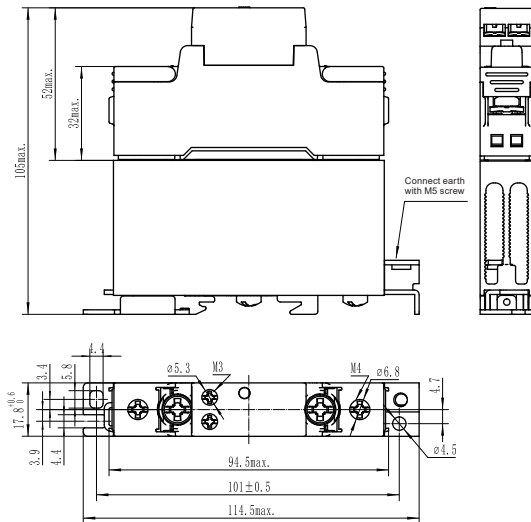
## Wiring Diagram



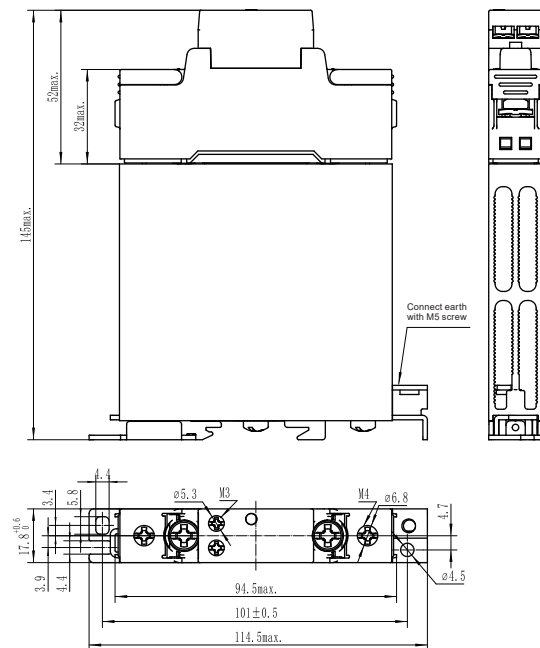
Note: For the KSK...D... series, the control signal is A1+&A2-, and for the KSK...E... series, the control signal is A1&A2.

## Outline Dimensions

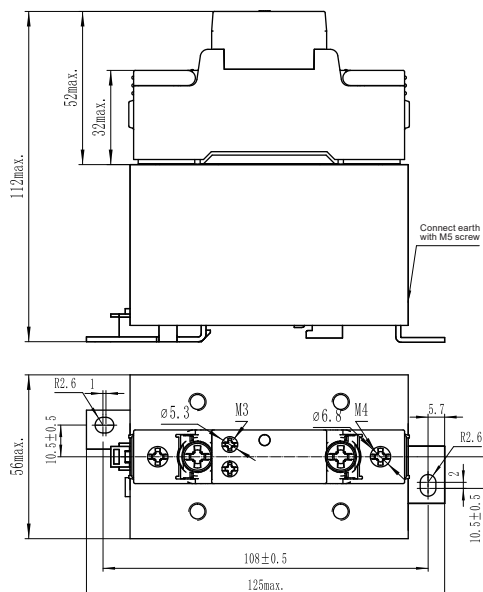
Unit:mm,Tolerances:±0.3mm



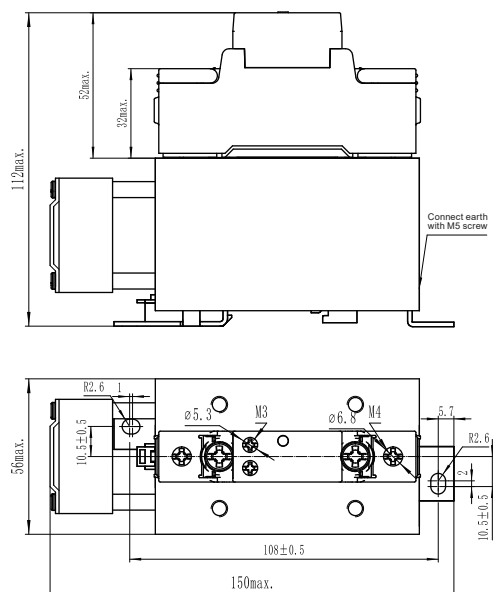
KSK...25...-K series



KSK...25/50...-L series

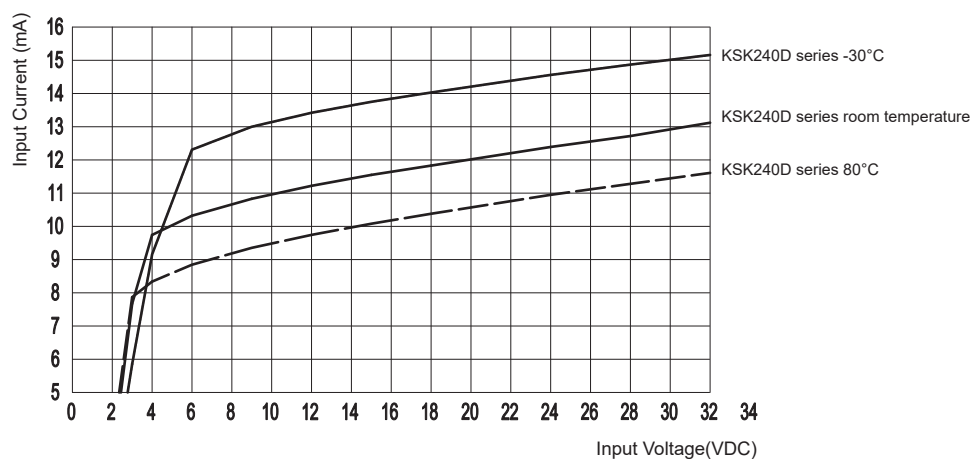


KSK...50...-I series

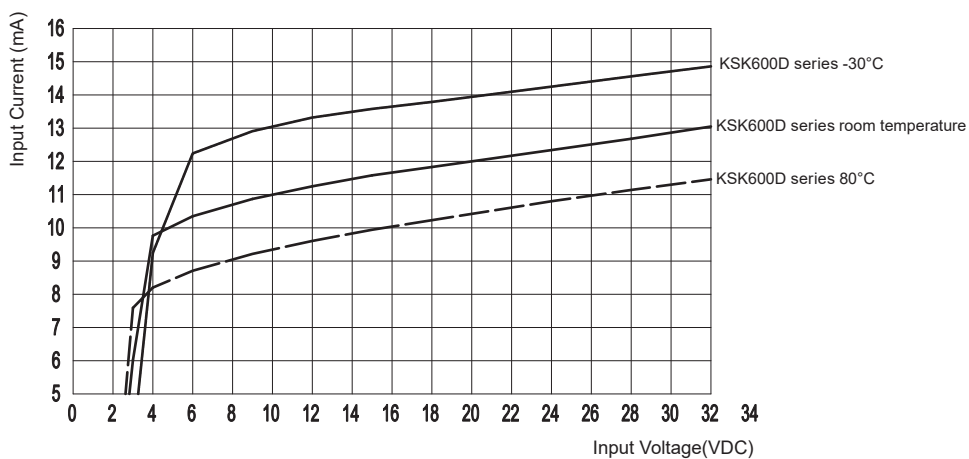


## KSK...75...-IF24DC series

### Input Current vs. Input Voltage

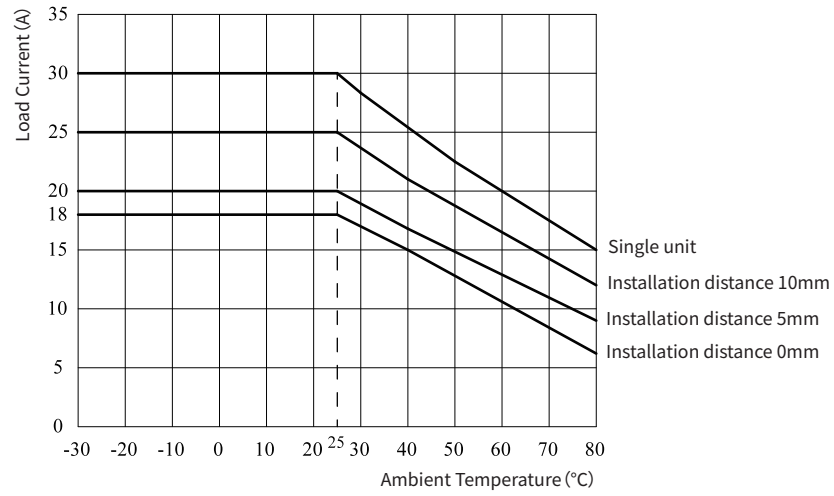


## KSK240D... series

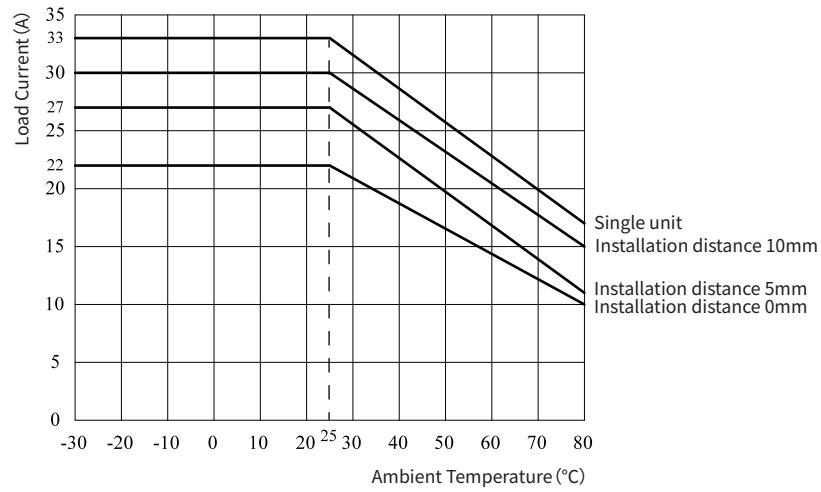


## KSK600D... series

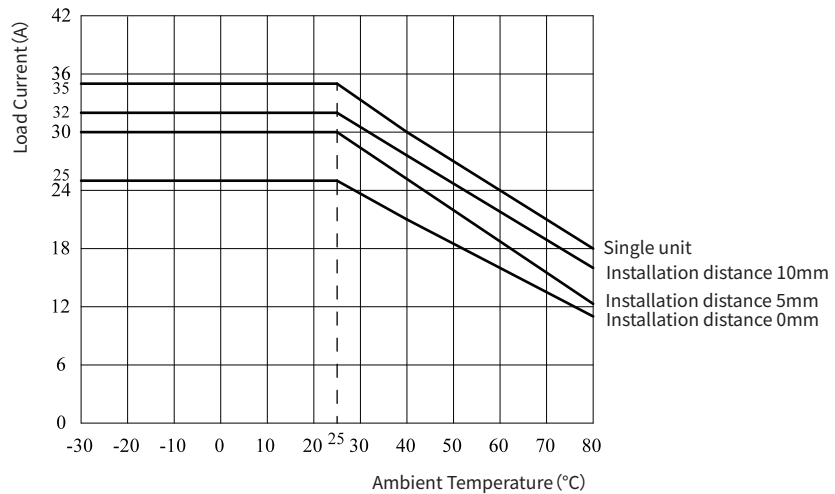
**Thermal Curve**



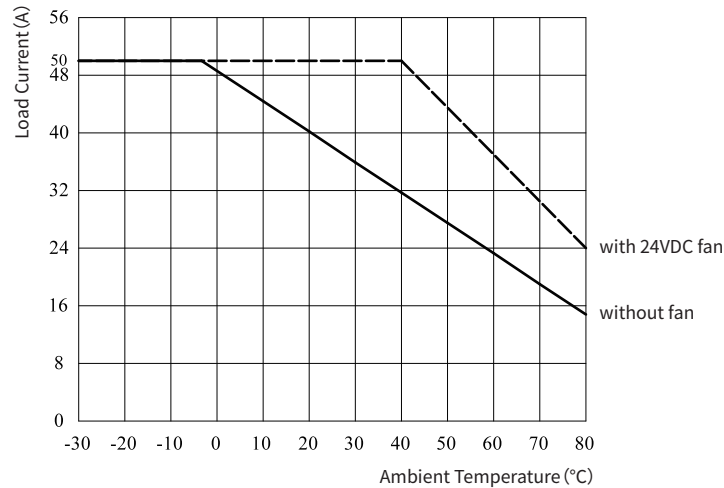
**KSK...25...-K series**



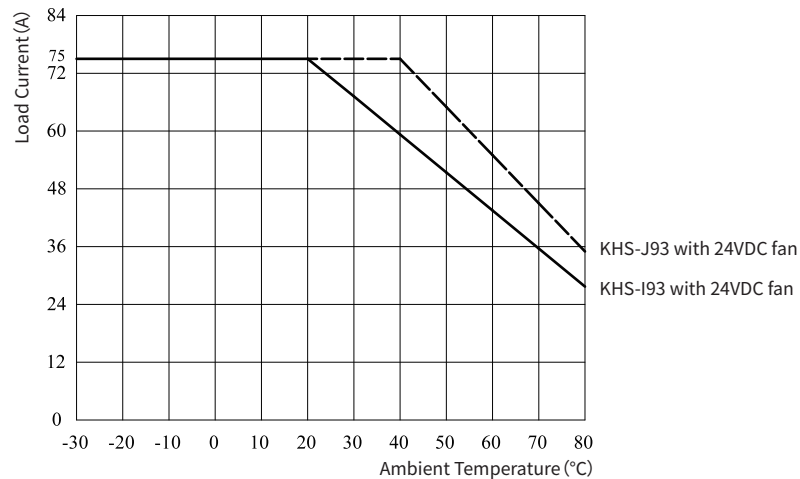
**KSK...25...-L series**



**KSK...50...-L series**



KSK...50...-I series



KSK...75... series

#### Important Notice

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.