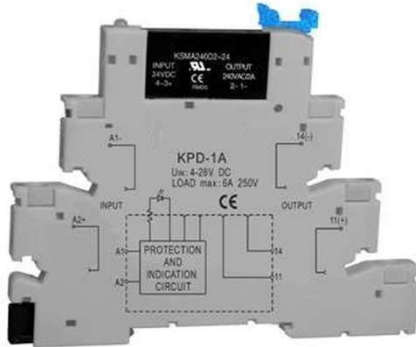


## Solid State Relay

### KSMA\*\*\*D Series Single Phase AC Output



- TTL, COMS drive compatible
- Optoelectronic isolation
- Control voltage: 5VDC, 12VDC, 24VDC, 48VDC, 60VDC
- DIN rail mounted
- Standard footprint package
- Dielectric strength  $\geq 2500\text{VACrms}$
- ROHS compliant

#### Product Description

KSMA series is AC output solid state relay with small size. The control voltage is 5VDC, 12VDC, 24VDC, 48VDC and 60VDC. Output current is 1A and 2A, output voltage is 240VAC. Suitable for high density PCB mounted or PLC control applications.

#### Product Selection

KSM	A	240	D	1	R	-5	D
KSM Series	Load Type A: AC Load	Load Voltage 240: 240VAC	DC Control	Load Current 1: 1Amp 2: 2Amp	Switching Mode None: Zero Crossing R: Random-on	Control Voltage 5: 5VDC 12: 12VDC 24: 24VDC 48: 48VDC 60: 60VDC	None: Without Socket D: With Socket

Description	1A		2A	
5	KSMA240D1-5	KSMA240D1R-5	KSMA240D2-5	KSMA240D2R-5
	KSMA240D1-5D	KSMA240D1R-5D	KSMA240D2-5D	KSMA240D2R-5D
12	KSMA240D1-12	KSMA240D1R-12	KSMA240D2-12	KSMA240D2R-12
	KSMA240D1-12D	KSMA240D1R-12D	KSMA240D2-12D	KSMA240D2R-12D
24	KSMA240D1-24	KSMA240D1R-24	KSMA240D2-24	KSMA240D2R-24
	KSMA240D1-24D	KSMA240D1R-24D	KSMA240D2-24D	KSMA240D2R-24D
48	KSMA240D1-48	KSMA240D1R-48	KSMA240D2-48	KSMA240D2R-48
	KSMA240D1-48D	KSMA240D1R-48D	KSMA240D2-48D	KSMA240D2R-48D
60	KSMA240D1-60	KSMA240D1R-60	KSMA240D2-60	KSMA240D2R-60
	KSMA240D1-60D	KSMA240D1R-60D	KSMA240D2-60D	KSMA240D2R-60D

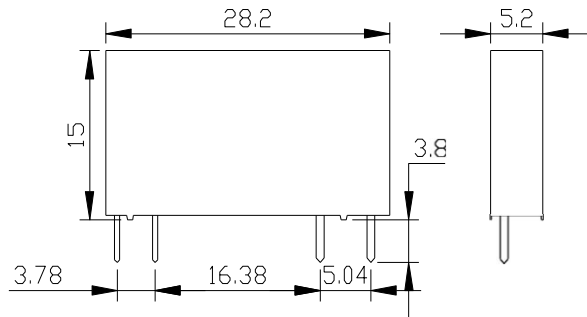
#### Technical Specification

Input Circuit	
Control Voltage Range	5
	12
	24
	48
	60
	4-6VDC
	9.6-14.4VDC
	19.2-28.8VDC
	38.4-57.6VDC
	48-72VDC

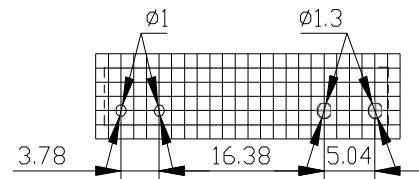
Minimum Turn-On Voltage	5	4VDC
	12	9.6VDC
	24	19.2VDC
	48	38.4VDC
	60	48VDC
Minimum Turn-Off Voltage	5	1VDC
	12	2.4VDC
	24	3.6VDC
	48	7.2VDC
	60	9VDC
Maximum Input Current	5/12/24/48	16mA
	60	14mA
<b>Output Circuit</b>		
Load Voltage Range		48-280VAC
Maximum Transient Voltage		600Vpk
Load Current Range	1	0.1 - 1A
	2	0.1 - 2A
Maximum Turn-On Time	Random-On	1ms
	Zero Crossing	1/2AC Cycle + 1ms
Maximum Turn-Off Time		1/2AC Cycle + 1ms
Maximum Surge Current [@10 ms]	1	30A
	2	80A
Maximum Off-State Leakage Current [@ Rated Voltage]		1.5mA
Maximum On-State Voltage Drop [@ Rated Current]		1.5Vrms
Minimum Off-State dv/dt[ @ Maximum Rated Voltage]		200V/μs
<b>General Information</b>		
Dielectric Strength, Input/Output(50/60Hz)		≥2500Vrms
Insulation Resistance		1000MΩ(@500VDC)
Vibration		10-55Hz 1.5mm double-amplitude
Shock		Acceleration 980m/s <sup>2</sup> pulse duration 6ms
Ambient Operating Temperature Range		-30°C ~ +80°C
Ambient Storage Temperature Range		-30°C ~ +100°C
Weight (typical)	KSMA.....	4g
	KSMA.....D	30g
<b>Application</b>		
Suitable for high density PCB mounted or PLC control applications.		

## Installation

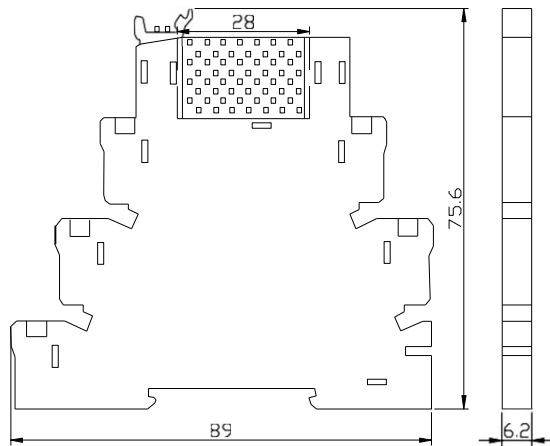
Dimension Figure



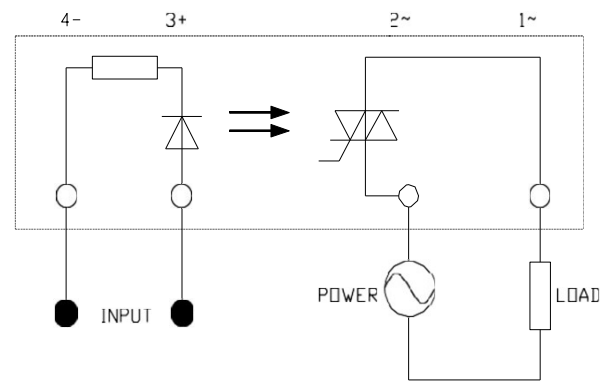
PCB Mounted Figure



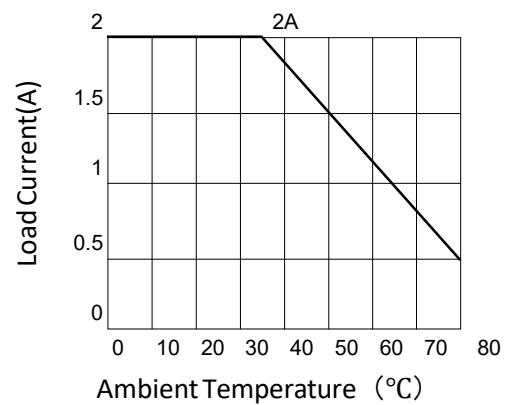
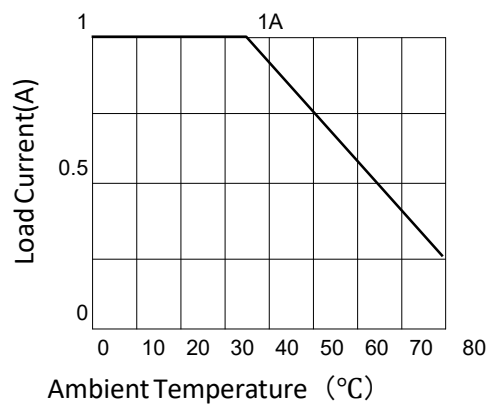
Socket Installation Drawing(Type : KPD-1A)



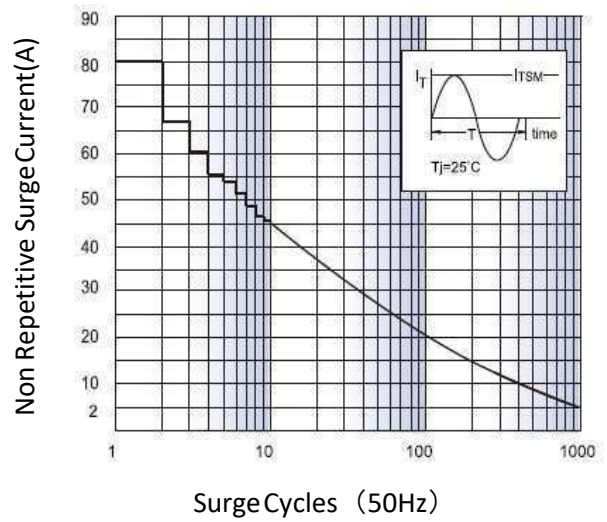
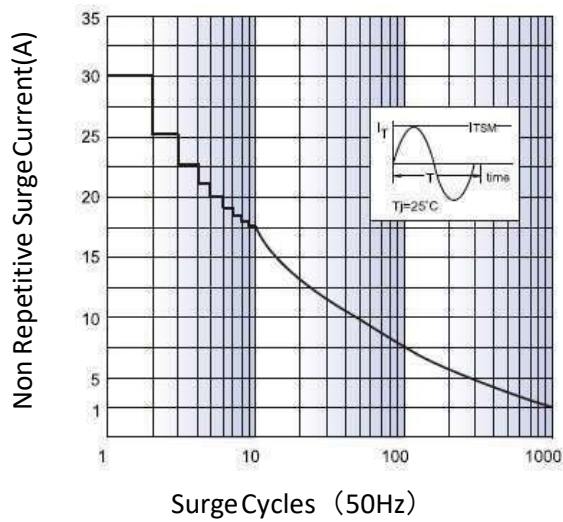
Wiring Method



## Thermal Curve



Non Repetitive Surge Current And Surge Cycle Curve Non Repetitive Surge Current And Surge Cycle Curve  
(1A) (2A)



### Important Notice

1. Consideration of heating dissipation, load current will be decreased without enough ventilation.
2. Terminal polarity to ensure proper control, or may damage the product.
3. The piezoresistor should be in parallel at the output when the relay transient voltage is too high.

### Product Certification

