

FEATURES

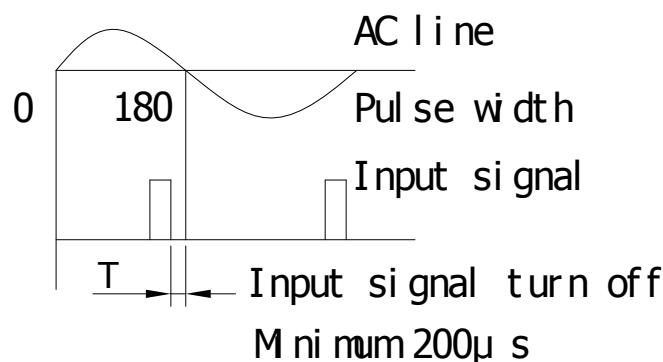
- Dielectric strength 2500Vrms
- Blocking voltage 600V
- Zero cross or random turn-on
- Photo isolation
- Printed circuit board mount
- Environmental friendly product (ROHS compliant)

DESCRIPTION

This SPST-NO printed circuit board mount SIP SSR provides AC output switching in a high density package. The MS5's DC input is compatible with 5V, 12V and 24V logic systems. The relay provides 2500VAC opto-isolation, between input and output. Encapsulation, thermally conductive epoxy.

PRECAUTIONS

1. Soldering must be completed within 10 seconds at 260°C or less or within 5 seconds at 350°C or less.
2. The SSR case serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, the load current must be reduced. Please refer to the curve of Max. Load Current vs. Ambient Temperature.
3. The input circuitry does not incorporate a circuit protecting the SSR from being damaged due to a reversed connection. Make sure that the polarity is correct when connecting the input lines. And make sure that the input and output are correct when connecting.
4. When using the MS5 series for an AC load with a peak voltage of more than 450V, connect the load terminals of the relay to an inrush absorber (varistor). The recommended varistor voltage, 440 to 470V.
5. The MS5 series is not internally connected to a snubber circuit that absorb noise. It is suggested that connecting a snubber circuit to the load terminals of the relay to absorb noise.
6. When using the MS5 series in phase control applications, at a phase control angle close to 180 degrees the relay's input signal turn off at the trailing edge of the AC sine wave must be limited to end 200µs before AC zero cross as shown in below figure. This assures that the relay has time to switch off. Shorter times may cause loss of control at the following half cycle.
7. Please do not sure the relay beyond the descriptions in the data sheet.



INPUT (TA=25°C)

Control voltage range	5	4 to 6VDC
	12	9.6 to 14.4VDC
	24	19.2 to 28.8VDC
Must operate voltage	5	4VDC
	12	9.6VDC
	24	19.2VDC
Must release voltage	1.0VDC min.	
Max. input current	25mA	
Input Resistance	5	270Ω
	12	750Ω
	24	1.64kΩ

GENERAL

Insulation resistance	1000MΩ min (at 500VDC)
Dielectric strength (input to output)	2500VAC , 50Hz/60Hz 1min.
Max. capacitance (input to output)	5pF
Ambient Humidity	45 to 85% RH
Vibration durability	10 to 55Hz D.A. 1.5mm
Shock durability	980m/s ²
Ambient temperature	Operating: - 30°C to +80°C Storage: - 30°C to +100°C

OUTPUT

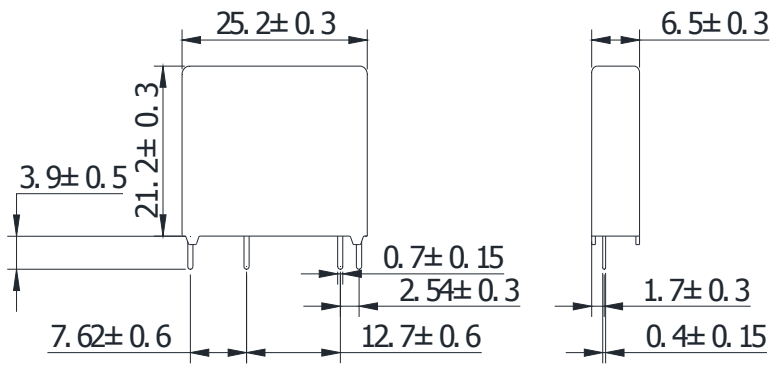
Load voltage range	48 to 280VAC
Load current range	0.1A to 2A
Max. surge current (10ms)	25A _{pk}
Max. I ² t for fusing (10ms, A ² s)	3.1
Max. leakage current	1.5mA
Max. on-state voltage drop	1.5V _{r.m.s.}
Max. turn-on time: Zero cross turn-on Random turn-on	1/2 cycle+1ms
	1ms
Max. turn-off time	1/2 cycle+1ms
Max. Transient overvoltage	600V _{pk}
Min. off-state dv/dt	100V/μs
Max. Zero cross over voltage	±15V
Min. power factor	0.5

ORDERING INFORMATION

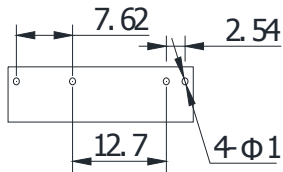
MS5 - 12 - 240 - 1 2 N T

Model No.	Input Voltage	Load voltage	Zero Cross Function	Load Current	RC snubber	Termination
MS5	5,12,24VDC	240: 240VAC	0: Zero cross turn-on 1: Random turn-on	2:2A	N: Without RC snubber	T: T type

Dimensions(unit: mm)



PCB Layout



SCHEMATIC

