

# 2 Amp Solid State Relay

**PCS4**



**US E93379**

## FEATURES

- DC Input / AC Output for 2A Current Load at 25°C
- Printed Circuit Board Mount
- Built in Snubber
- DC Input: 5 V, 12 V or 24 V
- 2,000 VAC Opto-Isolation Between Input and Output
- Encapsulated, Thermally Conductive Epoxy
- RoHS Compliant

## INPUT PARAMETERS (Ta = 25°C)

Control Voltage Range	5	4 - 6 VDC
	12	9.6 - 14.4 VDC
	24	19.2 - 28.8 VDC
Must Operate Voltage	5	4 VDC
	12	9.6 VDC
	24	19.2 VDC
Must Release Voltage	1.0 VDC	
Maximum Input Current	25 mA	
Input Resistance	5	270 Ω
	12	750 Ω
	24	1,640 Ω

## OUTPUT PARAMETERS (Ta = 25°C)

Load Voltage Range	48 VAC to 280 VAC	
Load Current Range	0.1 A to 2 A	
Max. Surge Current (10ms)	25 Apk	
Max. Leakage Current	1.5 mA	
Max. On-State Voltage Drop	1.5 Vrms	
Max. Turn-On Time	Zero Cross	1/2 Cycle + 1 ms
	Random	1 ms
Max. Turn-Off Time	1/2 Cycle + 1 ms	
Max. Transient Overvoltage	600 Vpk	
Off-State dv/dt	100 V/us	
Max Zero-Cross Overvoltage	± 15 V	
Min. Power Factor	0.5	
Max. I <sup>2</sup> t for Fusing (10 ms)	3.1 A <sup>2</sup> s	

## CHARACTERISTICS

Dielectric Strength (Input to Output)	2,500 VAC, 50 Hz/60 Hz, 1 min
Insulation Resistance	1,000 MΩ at 500 VDC
Max. Capacitance (Input to Output)	5 pf
Vibration Resistance	10 Hz to 55 Hz 1.5 mm DA
Shock Resistance	980 m/s <sup>2</sup>

Operating Temperature	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Ambient Humidity	Up to 85% RH
Weight	6 g

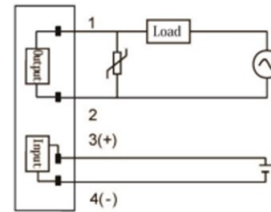
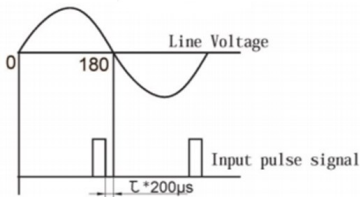
## ORDERING INFORMATION

Example:	PCS4	-12D	-240A	-2	Z	T
Model:	<b>PCS4</b>					
Control Voltage:	<b>5D:</b> 4 - 6 VDC, <b>12D:</b> 9.6 - 14.4 VDC, <b>24D:</b> 19.2 - 28.8 VDC					
Load Voltage:	<b>240A:</b> 240VAC					
Load Current:	<b>1:</b> 1 Amp, <b>2:</b> 2 Amp					
Switching Type:	<b>Z:</b> Zero Crossing, <b>R:</b> Random Turn-On					
Termination:	<b>T:</b> T Type (231mm) <b>M:</b> M Type (341mm) <b>K:</b> K Type (241mm)					

Box Quantity: 1000; Inner Box: 100

**PRECAUTIONS**

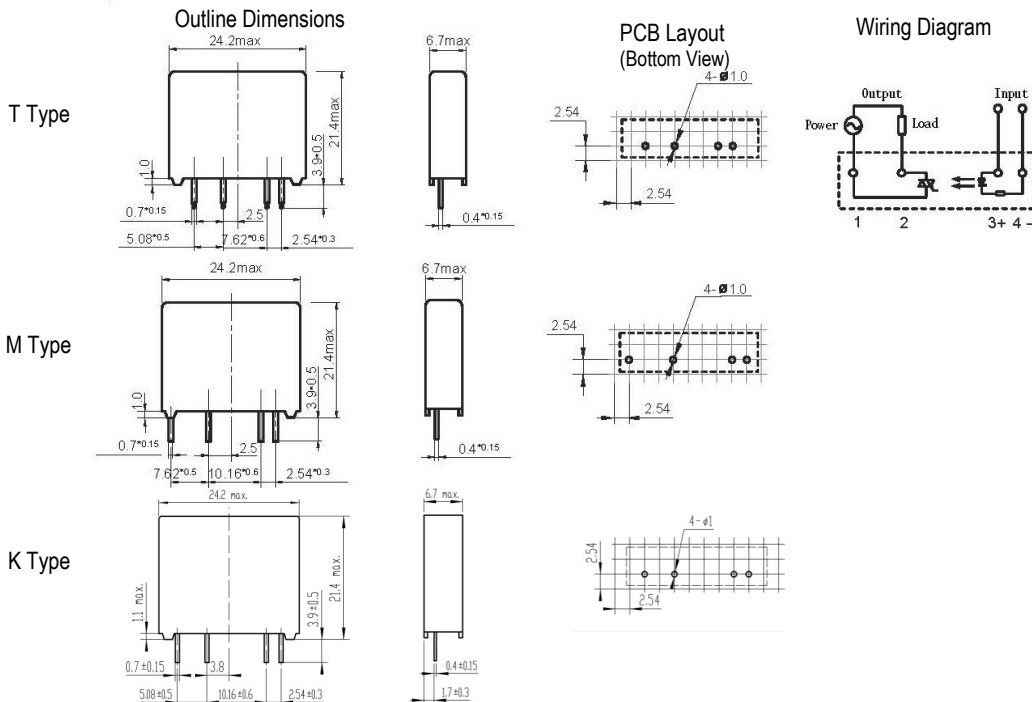
1. Soldering must be completed within 10s at 260°C or less or within 5s at 350°C or less.
2. The SSR case serves to dissipate heat. Install the relays so that they are adequately ventilated. If poor ventilation is unavoidable, the load current must be reduced. Please refer to the curve of "Max. Load Current vs. Ambient Temperature".
3. Make sure that the polarity of the input and output are correct when connecting to the SSR otherwise the SSR will be damaged due to the reversed connection.
4. If the output transient voltage exceeds the nominal value, then a varistor should be mounted on the SSR output terminal in parallel to prevent the relay from being damaged. The recommended varistor voltage is 470V.
5. When using the relay in phase control applications, at a phase control angle close to 180 degrees, the relay's input signal turns off at the trailing edge of the AC sine wave and must be limited to end 200µs before an AC zero cross. This assures that the relay has time to switch off and in fact shorter times may cause loss of control in the next half cycle.



6. Please do not use the relay beyond the descriptions in the Data Sheet.

7. Terminal Arrangement

**DIMENSIONS (mm/inches)**



**CHARACTERISTIC CURVES**

