AC Output Solid State Relay — PCS27 AC Output



c UL us E93397

FEATURES

- 2 A or 3 A Output
- DC Input: 5 VDC; 12 VAC; 24 VAC
- PCB Mount
- Built in Snubber
- Photoelectric Isolation
- 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 Turn-On Voltage	5	4 VAC
	12	9.6 VAC
	24	19.2 VAC
Max. Input Current		25 mA
Input Resistance	5	250 Ω
	12	720 Ω
	24	1.64 kΩ
Must Turn-Off Voltage		1 VDC

OUTPUT PARAMETERS (Ta = 25°C)

Amperage, Voltage	2,240	2, 380	2,240	3,380
Load Voltage Range	48-280 VAC	48-440 VAC	48-280 VAC	48-440 VAC
Max. Transient Voltage	600 Vpk	800 Vpk	600 Vpk	800 Vpk
Load Current Range	0.1 - 2 A		0.1 - 3 A	
Max. Surge Current (10 ms)	60 Apk		80 Apk	
Max. I^2t (10 ms, A^2s)	18		32	
Max. On-State Voltage Drop	1.5 VRMS			
Max. Off-State Leakage Current	5 mA			
Min. Off-State dv/dt	200 V/us			
Max. Turn-On Time	Zero Cross: 1/2 Cycles + 1 ms; Random: 1 ms			
Max. Turn-Off Time	1/2 Cycles + 1 ms			
Frequency Range	47 - 63 Hz			
Min. Power Factor	0.5			

CHARACTERISTICS

Dielectric Strength	4,000 VAC, 50 Hz/60 Hz, 1 min. (Input to Output)
Insulation Resistance	1,000 MΩ at 500 VDC (Input to Output)
Max. Capacitance	8 pF (Input to Output)
Shock Resistance	Acceleration 980 m/s^2, Continuous Surge 6 ms
Vibration Resistance	10 Hz - 55 Hz 1.5 mmm DA

Operating Temperture	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Relative Humidity	45% - 85%
Weight	Approximately 70 g

ORDERING INFORMATION

Example: PCS27 -12D -240A -2 Z

Model: **PCS27 AC Output**

Control Voltage: **5D**: 4-6 VDC
12D: 9.6 - 14.4 VDC,
24D: 19.2 - 28.8 VDC

Load Voltage: **240A**: 240VAC, **380A**: 380 VAC

Load Current: **2**: 2 Amp, **3**: 3 Amp

Switching Type: **Z**: Zero Crossing, **R**: Random Turn-On

Box Quantity: 540; Inner Box 27

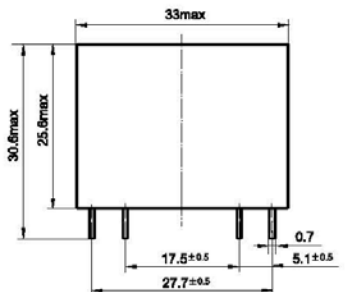
3220 Commander Drive, Suite 102 Carrollton, TX 75006
Sales: (972) 713-6272 (888) 997-3933 Fax: (972)735-0964
www.PickerComponents.com
e-mail: sales@pickercomponents.com

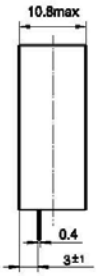
Dimensions are listed for reference purposes only.
Specifications and Availability subject to change without notice.

PRECAUTIONS

1. Maximum Soldering Temperatures: 260°C for a maximum of 10 seconds or 350°C for a maximum of 5 seconds.
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 and the input and output are correct when connecting.
4. If the output transient voltage exceeds the nominal value a varistor should be mounted on the SSR output terminals in parallel to prevent a breakdown of the triac output junction. The result could be a permanent short of the output. The recommended varistor voltage 470V.
5. When using the relay in phase control applications, at a phase control angle close to 180 degrees the relay's input signal will turn off at the trailing edge of the AC sine wave. The phase delay must be limited to end 200us before AC zero cross. This assures that the relay has time to switch off. Shorter times may cause loss of control at the following half cycle.

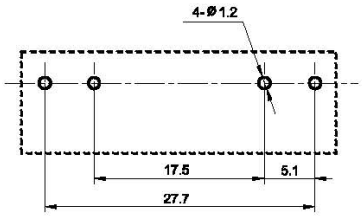
DIMENSIONS (mm)

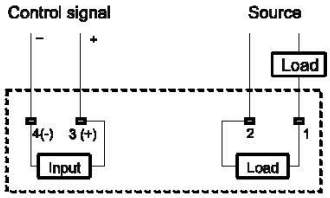




PCB Layout (Bottom view)

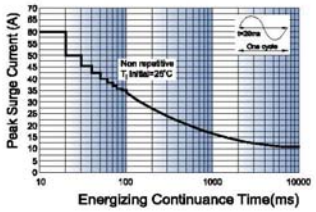
Wiring Diagram



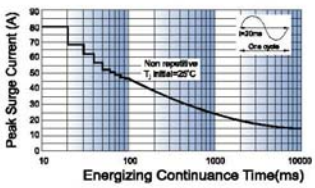


CHARACTERISTIC CURVES

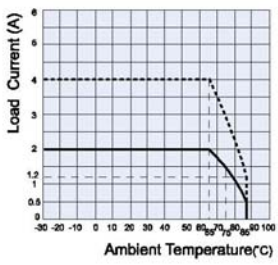
Max. Permissible Non-repetitive Peak Surge Current vs. Continuance Time
□-□□2



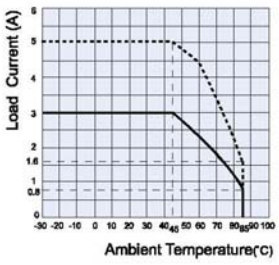
Max. Permissible Non-repetitive Peak Surge Current vs. Continuance Time
□-□□3



Max. Load Current vs. Ambient Temperature
□-□□2



Max. Load Current vs. Ambient Temperature
□-□□3



----- Frequency is 1Hz to 30Hz and duty is 50% —— Duty is 100%.

3220 Commander Drive, Suite 102 Carrollton, TX 75006 www.PickerComponents.com
Sales: (972) 713-6272 (888) 997-3933 Fax: (972)735-0964 e-mail: sales@pickercomponents.com

Dimensions are listed for reference purposes only. Specifications and Availability subject to change without notice.