

# Dual Solid State Relay

**PCS28**



## FEATURES

- Dual Solid State
- Two Separate SCR Output Relays
- Panel Mount
- Built-in Snubber
- Opto-Isolation Between Input and Output
- RoHS Compliant

**CALUS E93379**

## INPUT PARAMETERS (Ta = 25°C)

Control Voltage Range	12D	4 - 15 VDC
	24D	15 - 32 VDC
Must Turn-On Voltage	12D	4 VAC
	24D	15 VAC
Control Current	12D	8 - 50 mA
	24D	6 - 30 mA
Input Resistance	12D	330 Ω
	24D	1.5 kΩ
Must Turn-Off Voltage		1 VDC

## OUTPUT PARAMETERS (Ta = 25°C)

	-24, 25	-38, 25	-24, 40	-38, 40	-24, 50	-38, 50
Load Voltage Range (VAC)	48-280	48-440	48-280	48-440	48-280	48-440
Max. Transient Voltage (Vpk)	600	800	600	800	600	800
Load Current Range	0.1 - 25 A		0.1 - 40 A		0.1 - 50 A	
Max. Surge Current (10 ms)	300		400		500	
Max. I <sup>2</sup> t (10 ms, A <sup>2</sup> s)	450		800		1250	
Max. On-State Voltage	1.5 VRMS					
Max. Off-State Leakage Current	10 mA					
Min. Off-State dv/dt	500 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	4000 VAC, 50 Hz/60 Hz, 1 min. (Input to Output)
	2500 VAC, 50 Hz/60 Hz, 1 min. (Input, Output to Output)
Insulation Resistance	1000 MΩ at 500 VDC
Operating Temperature	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Weight	Approximately 83 g

## ORDERING INFORMATION

Example:	PCS28	-12D	-240A	-25	Z
Model:	<b>PCS28</b>				
Control Voltage:	12D: 4 - 15 VDC; 24D: 15 - 32 VDC				
Load Voltage:	240A: 48 - 280 VAC; 380A: 48 - 440 VAC				
Load Current:	25: 25 A; 40: 40 A; 50: 50 A				
Switching Type:	Z: Zero Crossing; R: Random Turn-On				

Box Quantity: 80; Inner Box 2

For Accessories and Heat Sinks see page 2

**PRECAUTIONS**

- 1) When choosing a Solid State Relay (SSR), note the actual load current and ambient temperature and reference the Characteristic Curves below.
- 2) SSRs require a adequate heat sinking or other effective cooling measures.
- 3) With ambient temperature above 25°C refer to the curve of Max. Load Current vs Ambient Temperature for load current derating.
- 4) Apply heat-conducting silicon grease or a thermal transfer pad on the space between SSR and heatsink and screw the SCR firmly in to the heat sink to avoid damage from overheating.
- 5) Tighten the SSR terminal screws properly. We recommended screw installation torque as follows :  
 M4 screw mounting torque range is (0.98-1.37)N • m,  
 M3 screw mounting torque range is (0.56-0.98)N • m.  
 Lose screws will damage the SSR with heat generated from connections. Also, excessive screw torque may damage relays internal components.
- 6) It is recommended to use a heat sink matched to the Current Load. With any heat sink test that the SSR base temperature does not exceed 65°C.
- 7) When using the PCS15 relay with an inductive load, it is suggested to select random tum-on (i.e., a model with "R" letter).
- 8) The PCS15 is not suitable for capacitive loads; if you must then do not choose products with varistor protection (i.e., a model with "Y" letter).
- 9) Listed parameters are based on resistive loads. Do not use the relay beyond the described current, temperature, load or voltage limits as described in this data sheet.

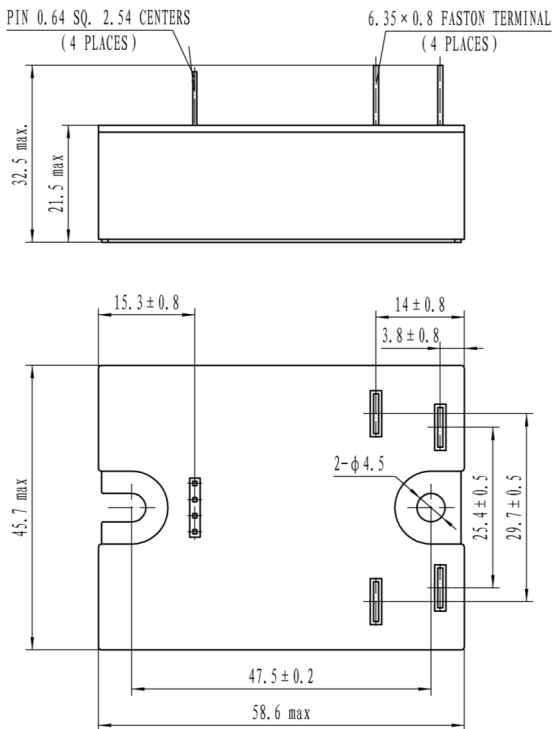
**ACCESSORIES**

Heat Transfer Pad	HTP100
Heat Sinks	PCH-I-50 for applications up to 20 Amps @ 25°C Ambient Temperature
	PCH-H-110 for applications up to 35 Amps @ 25°C Ambient Temperature
	PCH-H-150 for applications up to 50 Amps @ 25°C Ambient Temperature

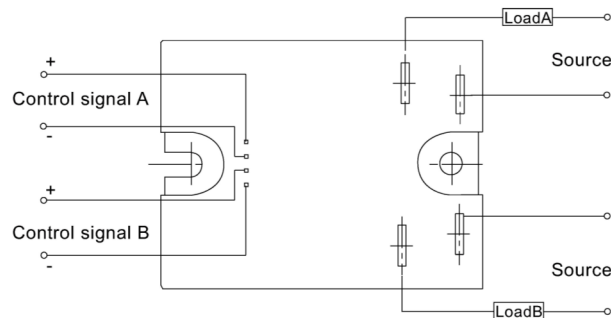
**ACCESSORIES SOLD SEPERATELY**

**DIMENSIONS (mm)**

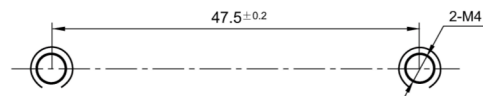
Outline Dimensions



Wiring Diagram

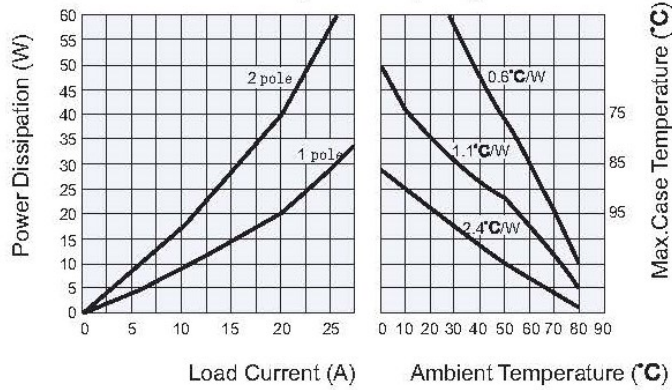


Mounting Holes

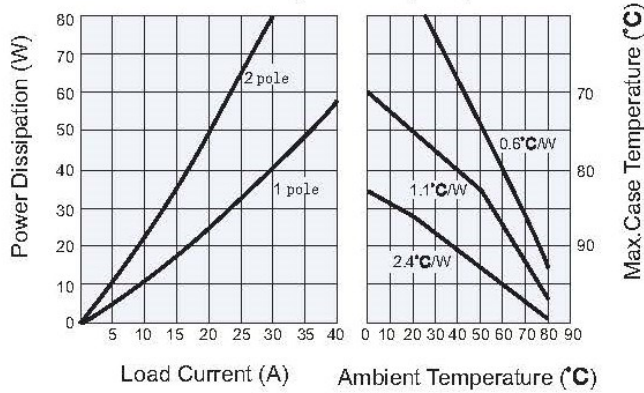


CHARACTERISTIC CURVES

Max. Load Current vs. Ambient Temperature(25A)



Max. Load Current vs. Ambient Temperature(40A)



Max. Load Current vs. Ambient Temperature(50A)

