

30/40/50 AC Output Solid State Relay/Output Module

PCS55



FEATURES

- DC or AC Output
- Back to Back SCR Output Design
- LED Status Indicator
- Photoelectric Isolation
- Built in RC Snubber Circuit
- Heatsink Integrated
- 35 mm DIN Rail or Panel Mounted



INPUT PARAMETERS (Ta = 25°C)

Control Voltage Range	DC Input	4 VDC - 32 VDC
	110 VAC Input	90 VAC - 140 VAC
	220 VAC Input	180 VAC - 280 VAC
	24 V Input	19.2 - 28.8 VDC / VAC
Must Turn-On Voltage	DC Input	4 VDC
	110 VAC Input	90 VAC
	220 VAC Input	180 VAC
	24 V Input	19.2 - 28.8 VDC / VAC
Must Turn-Off Voltage	DC Input	1 VDC
	110 VAC Input	10 VAC
	220 VAC Input	10 VAC
	24 V Input	2 VDC / VAC
Max. Input Current		25 mA
Reverse Protection Voltage	DC Input	-32 VDC

CHARACTERISTICS

Dielectric Strength	4,000 VAC, 1 minute, Input - Output
	4,000 VAC, 1 minute, Input/Output - Base
Insulation Resistance	1,000 MΩ at 500 VDC
Operating Temperature	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Weight	Approximately 15 g

OUTPUT PARAMETERS (Ta = 25°C)

Rated Load Current	10 A	20 A	30 A	40 A
Load Voltage	240 A	48 VAC - 280 VAC		
	380 A	48 VAC - 440 VAC		
	480 A	48 VAC - 530 VAC		
	600 A	48 VAC - 660 VAC		
Max. Transient Overvoltage	240 A	600 Vpk		
	380 A	800 Vpk		
	480 A	1,200 Vpk		
	600 A	1,600 Vpk		
Rated Load Current	10 A	20 A	30 A	40 A
Max. Surge Current (10 ms)	160 Apk	500 Apk	700 Apk	1,000 APK
Max I ² t for Fusing (10ms, A ² s)	128	1,250	2,450	5,000
Min. Load Current	100 mA			
Max. Off-state Leakage Current	10 mA			
Max. On-state Voltage Drop	1.7 Vrms			
Max. Turn-on Time	DC Input (Zero)	1/2 Cycle + 1 ms		
	DC Input (Random)	1 ms		
	110 VAC Input	40 ms		
	220 VAC Input	40 ms		
Max. Turn-off Time	24 V Input	40 ms		
	DC Input	1/2 Cycle + 1 ms		
	110 VAC Input	40 ms		
	220 VAC Input	40 ms		
Frequency Range	47 H - 63 Hz			
	Min. Power Factor 0.5			
Min. Off-state dv/dt	500 V/μs			

ORDERING INFORMATION

Example:	PCS55	-110A	-240A	-20	Z
Model:	PCS55				
Control Voltage:	D: 4 - 32 VDC; 110A: 90 - 140 VAC 220A: 180 - 280 VAC; 24: 19.2 - 28.8 VDC / VAC				
Load Voltage:	240A: 48 - 280 VAC; 380A: 48 - 440 VAC; 480A: 48 - 530 VAC; 600A: 48 - 660 VAC				
Load Current:	10: 10 Amp; 20: 20 Amp; 30: 30 Amp; 40: 40 A				
Switching Type:	Z: Zero Crossing, R: Random Turn-On				
Housing:	Nil: Screw Terminal S: Spring Terminal				

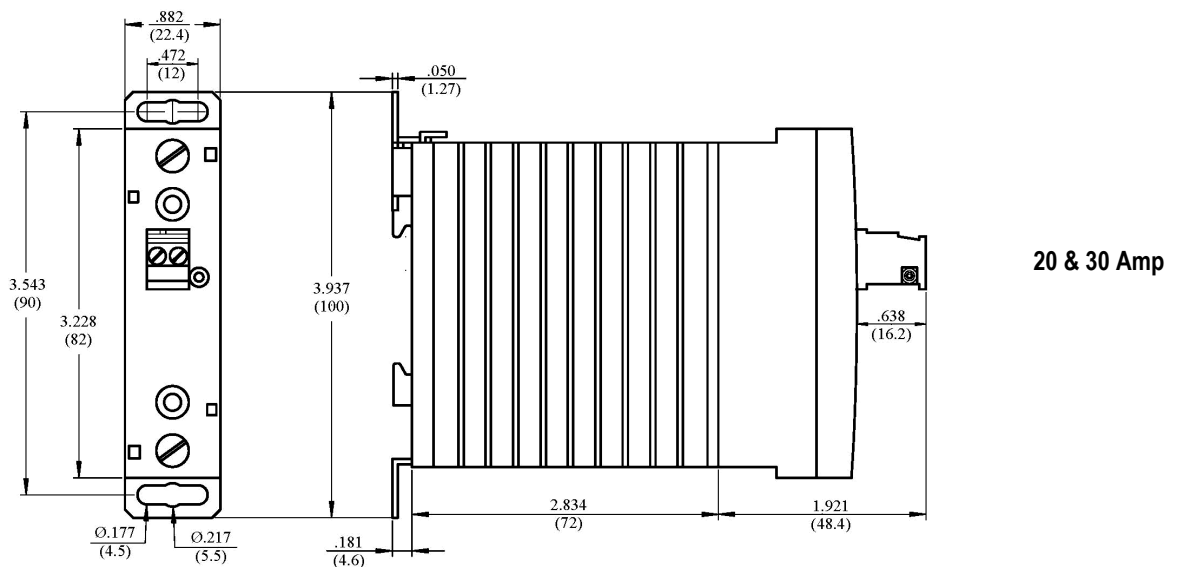
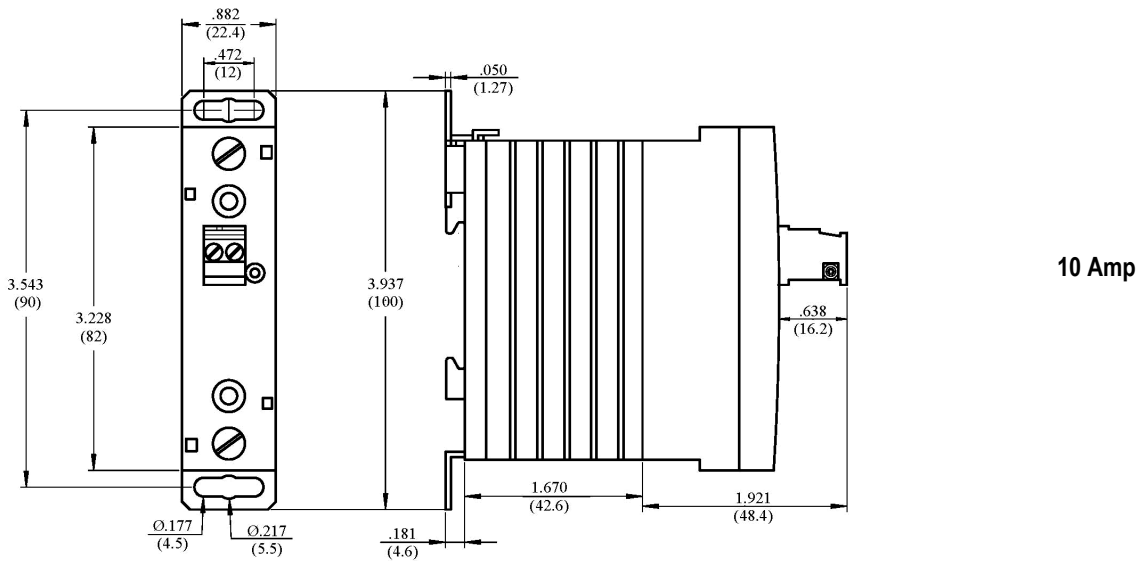
Box Quantity: XXX; Inner Box YYY

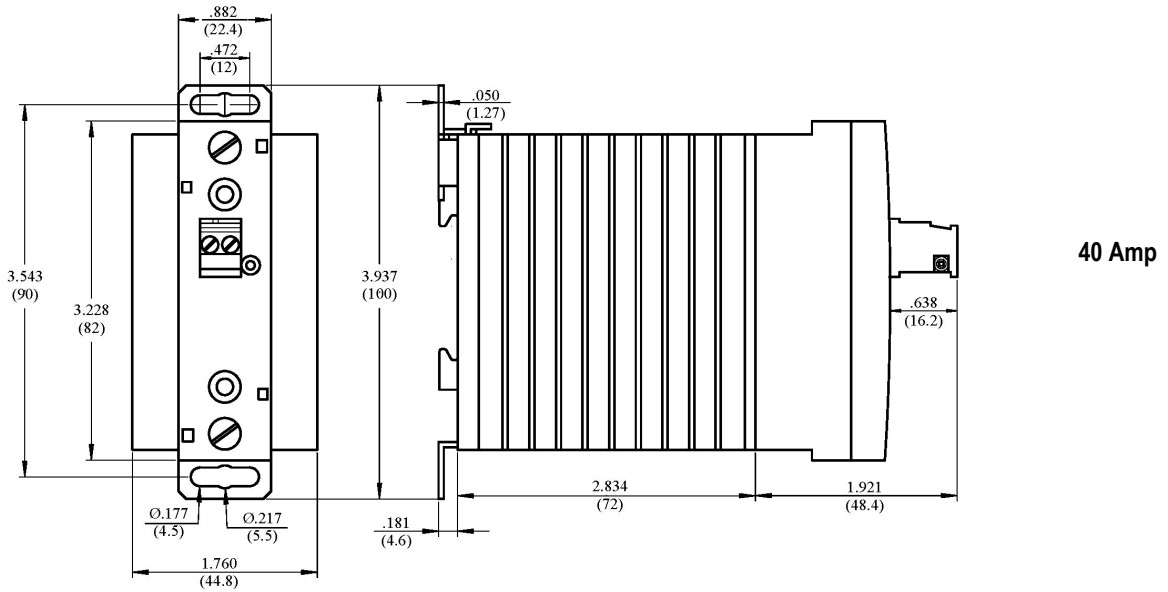
The use of the PCS55 with an AC Voltage Surge load greater than the rated voltage is possible with the use of a varistor for transient voltage suppression.
 For 220VAC applications, a 470 VAC varistor is recommended.
 For 380VAC applications, a 750 VAC varistor is recommended.
 For 480VAC applications, a 1,100 VAC varistor is recommended.

PRECAUTIONS

1. 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".
2. 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.
3. 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.
4. 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 Inches (mm)





CHARACTERISTIC CURVES

