



### FEATURES

- 10A or 25A Output
- Compact Package
- DC Input 4~32VDC
- Built-In RC Snubber Standard



### INPUT PARAMETERS (Ta = 35°C)

Control Voltage Range (DC Input)	4~32 VDC
Must Turn-On Voltage	4 VDC
Must Turn-Off Voltage	1 VDC
Max Input Current	25 mA (DC)
Max Reverse Protection Voltage	-32 VDC

### OUTPUT PARAMETERS (Ta = 35°C)

Load Voltage Range	240A : 48 ~ 280 VAC 380A : 48 ~ 440 VAC	
Max Transient Voltage	240A : 600 Vpk 380A : 800 Vpk	
Load Current	10A	25A
Load Current Range	0.1~10A	0.1~25A
Max I <sup>2</sup> t (10 ms, A <sup>2</sup> s)	72	312
Max Surge Current (10 ms)	100Apk	250Apk
Max Off-State Leakage Current	5 mA	
Max On-State Voltage Drop	1.5 VRMS	
Max Turn-On Time	Zero Cross : 1/2 cycles + 1 ms Random : 1 ms	
Max Turn-Off Time	1/2 cycles + 1 ms	
Min Off-State dv/dt	200 V/us	

### CHARACTERISTICS

Insulation Resistance	1000 MΩ at 500 VDC
Dielectric Strength	2500 VAC, 50/60 Hz, 1 min, Input to Base 2500 VAC, 50/60 Hz, 1 min, Output to Base 4000 VAC, 50/60 Hz, 1 min, Input to Output
Operating Temperature	-30°C to 80°C
Storage Temperature	-30°C to 100°C
Weight	~35g

Values can change due to the switching frequency, desired reliability levels, environmental conditions, and in-rush current levels. It is recommended to test to actual load conditions for the application. It is the users responsibility to determine the performance suitability for their specific application. The use of any coil voltage less than the rated coil voltage may compromise the operation of the relay.

### ORDERING INFORMATION

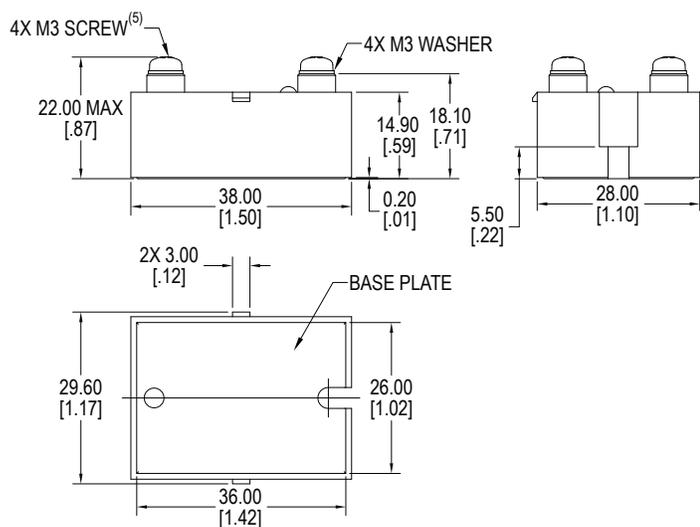
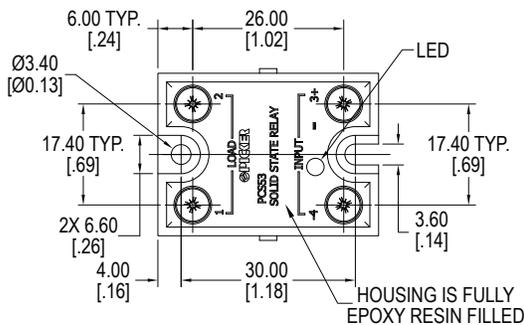
Example	PCS53	-D	-240A	-10	Z	L	Q
Model:	PCS53						
Control Voltage	D = 4~32VDC						
Load Voltage	240A = 48~280VAC 380A = 48~440VAC						
Load Current	10 = 10A 25 = 25A						
Switching Type	Z = Zero Crossing R = Random Turn-On / Instantaneous Turn-On						
RC Snubber	Nil = Built-In Snubber						
Status LED	L = Indicator LED						
Terminal Type	Nil = Screw Terminal Q = Quick Connect (input 0.187" x 0.032"; output 0.250" x 0.032")						

## PRECAUTIONS

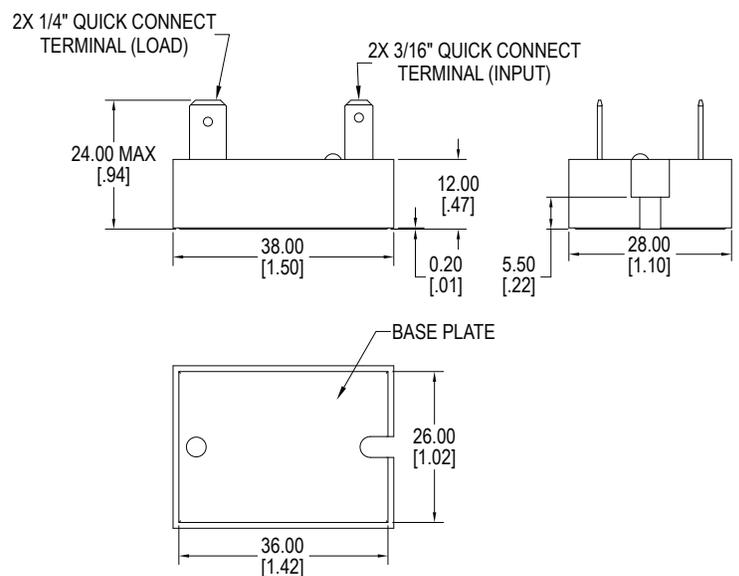
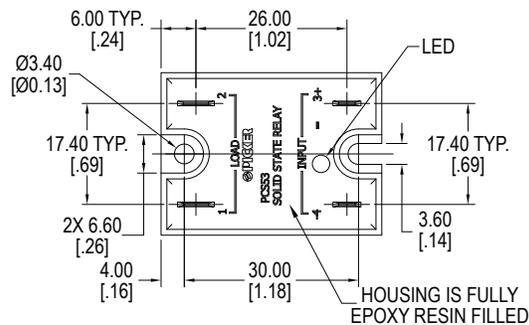
1. When choosing a Solid State Relay (SSR), note the actual load current and ambient temperature and reference the Characteristic Curves.
2. SSRs require adequate heat sinking or other effective cooling measures.
3. With ambient temperature above 25°C, refer to the curve of Max Load Current vs. Ambient Temperature for load current derating.
4. Apply heat-conducting silicon grease or a thermal transfer pad on the space between the SSR and heat sink and screw the SSR firmly to the heat sink to avoid damage from overheating.
5. Tighten the SSR terminal screws properly. We recommend 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  
 Loose screws will damage the SSR with heat generated from connections. Also, excessive screw torque may damage the relay's 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 PCS53 relay with an inductive load, it is suggested to select Random Turn-On. (i.e. a model with "R" Switching Type)
8. The PCS53 is not suitable for capacitive loads.
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 datasheet.

## DIMENSIONS mm (inches)

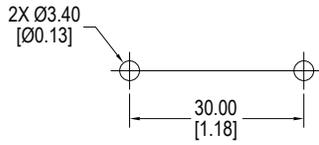
### Screw Terminal



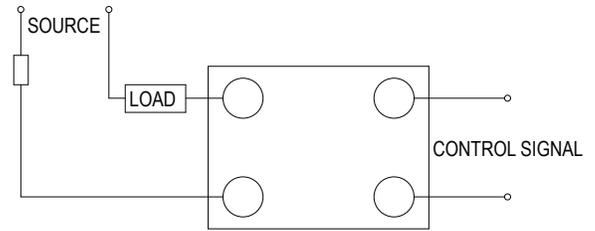
### Quick Connect



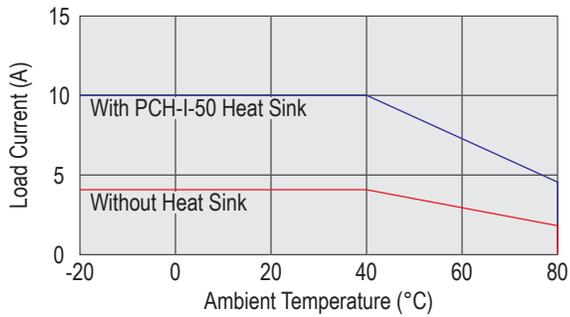
**MOUNTING LAYOUT**



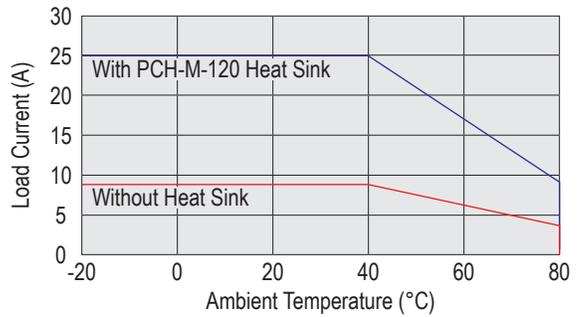
**WIRING DIAGRAM**



**CHARACTERISTIC CURVES**



Max Load Current vs. Ambient Temperature - 10A



Max Load Current vs. Ambient Temperature - 25A

**ACCESSORIES**

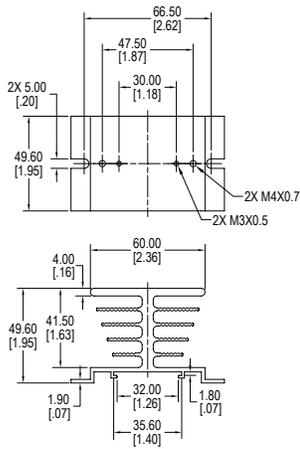
Heat Transfer Pad	HTP50
Protective Cover	SSR50
Heat Sink	PCH-I-50 for 10 Amp applications @ 25°C PCH-M-120 for 15~25 Amp applications @ 25°C

ACCESSORIES

HTP50 — Heat Transfer Pad



PCH-I-50 Heat Sink



PCH-M-120 Heat Sink

