DC Input Compact Solid State Relay — PCS53





FEATURES

- 10 A, 15 A, 20 A or 25 A Output
- Compact Package
  1.520" x 1.126" (38.6mm x 28.6mm) Footprint
- DC Input: 3-32 VDC
- Panel Mount
- Built in RC Snubber Standard
- 4,000 VAC Opto-Isolation Between Input and Output
- Encapsulated, Thermally Conductive Epoxy
- RoHS Compliant

c UL us E93379

INPUT PARAMETERS (Ta = 35°C)

Control Voltage Range	3 - 32 VDC
Must Turn-On Voltage	3 VDC
Must Turn-Off Voltage	1 VDC
Max. Input Current	25 mA (DC)
Max Reverse Protection Voltage	- 32 VDC

CHARACTERISTICS

Dielectric Strength	2,500 VAC, 50 Hz/60 Hz, 1 min, Input to Base
	2,500 VAC, 50 Hz/60 Hz, 1 min, Output to Base
	4,000 VAC, 50 Hz/60 Hz, 1 min, Input to Output
Insulation Resistance	1,000 MΩ at 500 VDC
Operating Temperature	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Weight	35 g

OUTPUT PARAMETERS (Ta = 35°C)

Load Voltage Range	240 A: 48 - 280 VAC			
	380 A: 48—440 VAC			
Max. Transient Voltage	240A: 600 Vpk			
	380 A: 800 Vpk			
Load Current	10	15	20	25
Load Current Range	0.1 - 10	0.1 - 15	0.1 - 20	0.1 - 25
Max. I^2t (10 ms, A^2s)	78	144	312	312
Max. Surge Current (10 ms)	100 Apk	150 Apk	200 Apk	250 Apk
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			

ORDERING INFORMATION

Example:	PCS53	-D	-240A	-10	Z	L		Q

Model: **PCS53**

Control Voltage: **D**: 3-32 VDC

Load Voltage: **240A**: 48-280 VAC; **380A**: 48-440 VAC

Load Current: **10**: 10 A; **15**: 15 A; **20**: 20 A; **25**: 25 A

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

RC Snubber: **Nil**: Built In

Status LED : **Nil**: Not Included; **L**: Indicator LED

Terminal Type: **Nil:** Screw Terminal; **Q**: Quick Connect (1/4" Control, 3/8" Power)

Box Quantity: 100; Inner Box: 2

For Accessories and Heat Sink see page 3

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.

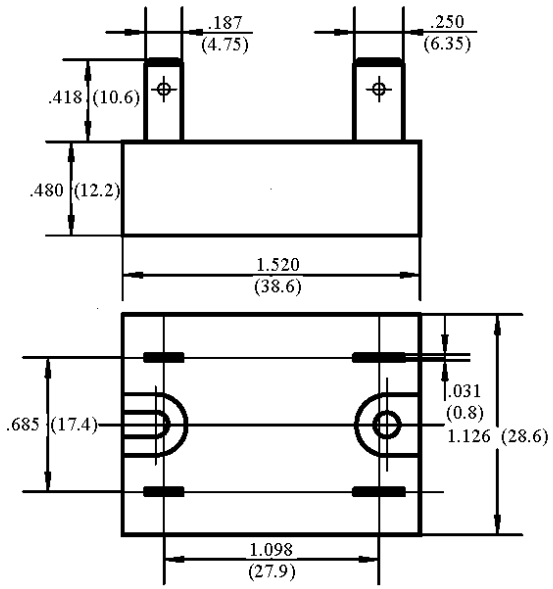
Specifications and Availability subject to change without notice.

PRECAUTIONS

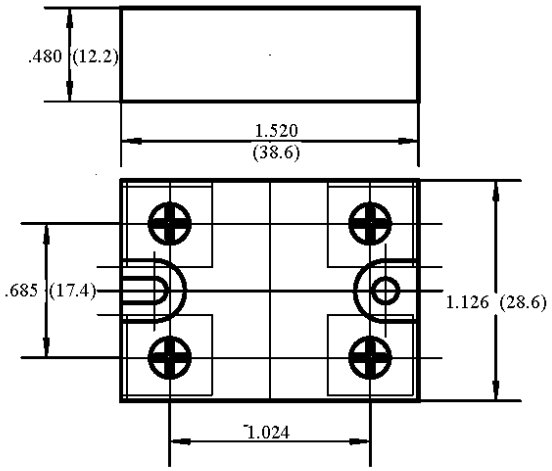
1) When choosing a Solid State Relay (SSR), note the actual load current and ambient temperature and reference the Characteristic Curves below.
2) SSRs require a adequate heat sinking or other effective cooling measures.
3) With ambient temperature above 25°C refer to the curve of Max. Load Current vs Ambient Temperature for load current derating.
4) Apply heat-conducting silicon grease or a thermal transfer pad on the space between SSR and heat sink 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 PCS53 relay with an inductive load, it is suggested to select random tum-on (i.e., a model with "R" letter).
8) The PCS53 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.

DIMENSIONS (mm)

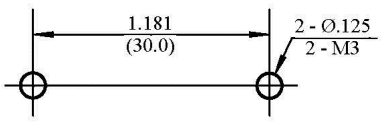
QUICK CONNECT



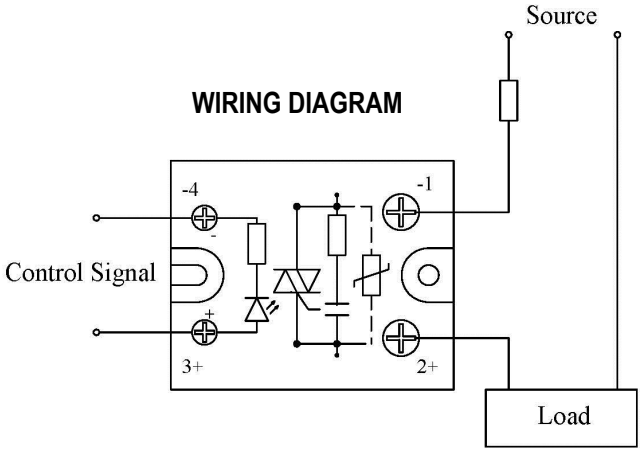
SCREW TERMINAL



MOUNTING LAYOUT



WIRING DIAGRAM



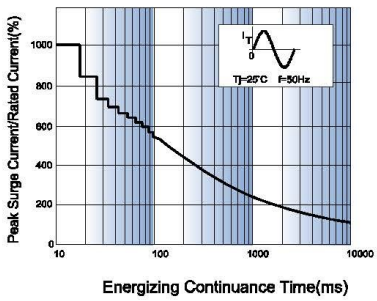
ACCESSORIES

Heat Transfer Pad	HTP50
Protective Cover	SSR50
Heat Sinks	PCH-I-50 for 10 Amp Applications
	PCH-H-110 for 15-25 Amp Application

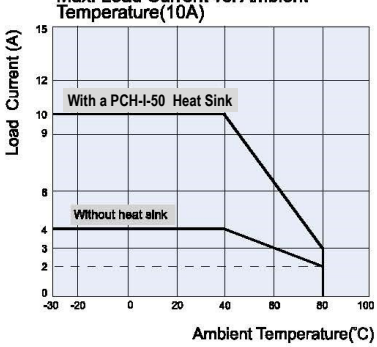
ACCESSORIES SOLD SEPERATELY

CHARACTERISTIC CURVES

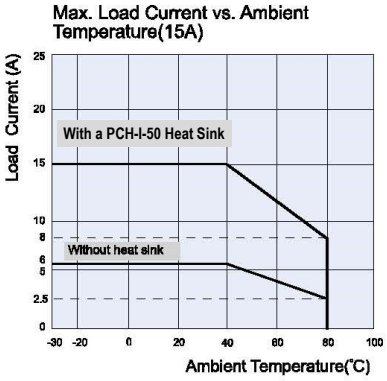
Max. Permissible Non-repetitive Peak Surge Current vs. Continuance Time



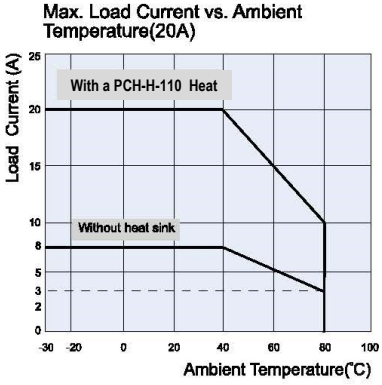
Max. Load Current vs. Ambient Temperature(10A)



Max. Load Current vs. Ambient Temperature(15A)



Max. Load Current vs. Ambient Temperature(20A)



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

