AC Input Solid State Relay

PCS34 AC Input





FEATURES

- High Power, Load Currents from 25 to 80 Amps
- Back to Back SCR Design Output
- Dielectric Strength of 4,000 VAC
- Zero Cross or Random Turn-On
- Panel Mount
- AC Input Control
- Optical Isolation Between Input and Output
- RoHS Compliant

c UL us E93379

INPUT PARAMETERS (Ta = 30°C)

Control Voltage Range	90 VAC to 280 VAC
Must Turn-On Voltage	90 VAC
Must Turn-Off Voltage	10 VAC

UL Life Testing Model: PCS34-A-240A-40-xxx

Load Type	Load Voltage	Output Current
Resistive 100k Cycles	280 VAC 50/60 HZ	50 Amps at 30°C

OUTPUT PARAMETERS (Ta = 30°C)

Load Current Range	10 A	20 A	25 A	40 A	50 A	60 A	70 A	80 A	100 A
Max. Surge Current (10 ms)	100	200	250	400	500	600	700	800	1,000
Max. I^2t(10 ms A^2s	200	400	500	800	1,250	1,800	2,450	3,200	3,200

OUTPUT PARAMETERS Continued

	240A	480A
Load Voltage Range	48 - 280 VAC	48 - 530 VAC
Max. Transient Voltage	600 Vpk	1,200 Vpk
Max. Off-State Leakage	10 mA	
Max. On-State Voltage Drop	1.7 VRMS	
Min. Power Factor	0.5	
Max. Turn-On Time	20 ms	
Max. Turn-Off Time	40 ms	
Frequency Range	47 Hz to 63 Hz	
Min. Off-State dv/dt	500 V/us	

CHARACTERISTICS

Dielectric Strength	4,000 VAC Input to Output
(50/60 Hz, 1 min)	2,500 VAC Input/Output to Base
Insulation Resistance	1000 MΩ at 500 VDC
Max. Capacitance	8pF (Input to Output)
Operating Temperture	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Relative Humidity	45% - 85%
Weight	88g

ORDERING INFORMATION

Example:	PCS34	-A	240A	-25	Z		L

Model: PCS34 (AC Input, AC Output)

Control Voltage: A: 90-280VAC

Load Voltage: 240A: 48-280VAC, 480A: 48-530VAC

Load Current: 10: 10 Amp, 20: 20 Amp; 25: 25 Amp, 40: 40 Amp;
50: 50 Amps; 60: 60 Amp, 70: 70 Amp, 80: 80 Amp

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

Over Voltage Protection: Nil: None, Y: With Varistor

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

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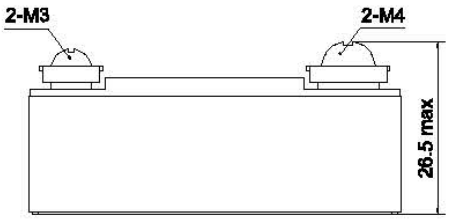
Dimensions are listed for reference purposes only.

Specifications and Availability subject to change without notice.

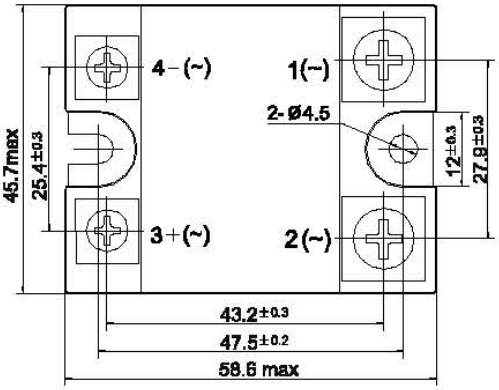
PRECAUTIONS

1) When choosing a SSR, note the actual load current and ambient temperature and reference the Characteristic Curves below.
2) SSR 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's 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 PCS34 relay with an inductive load, it is suggested to select random tum-on (i.e., a model with "R" letter).
8) The PCS34 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)

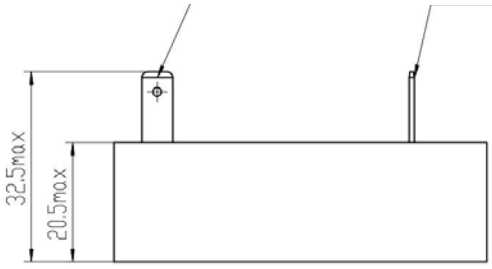


Screw Terminals

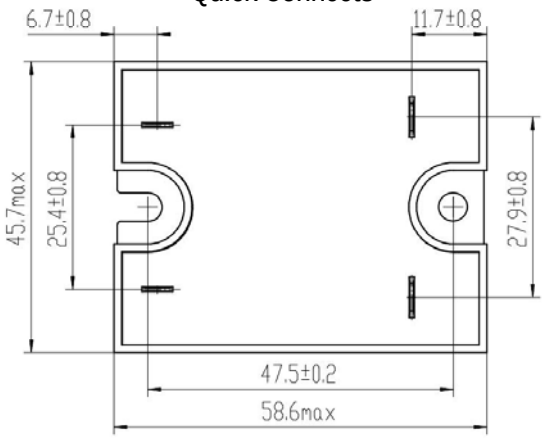


2 - 4.75 mm x 0.8 mm Faston Terminal

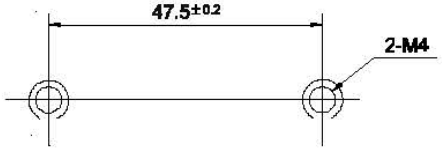
2 - 6.35 mm x 0.8 mm Faston Terminal



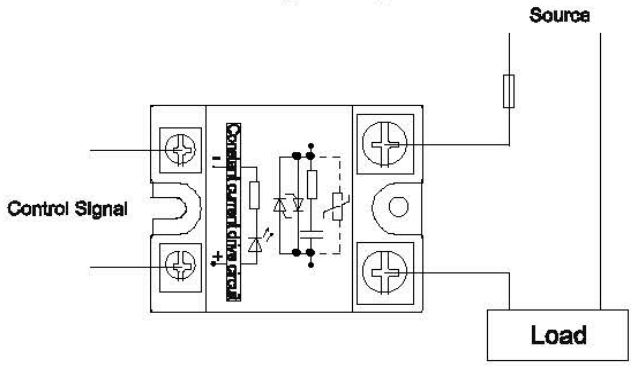
Quick Connects



Mounting Holes



Wiring Diagram



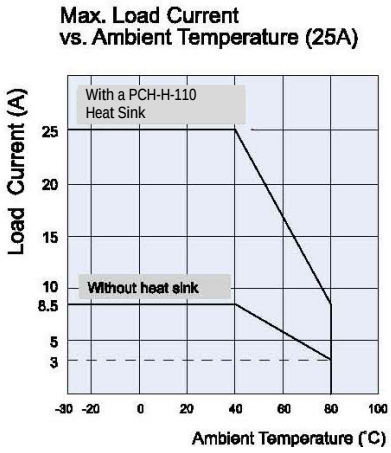
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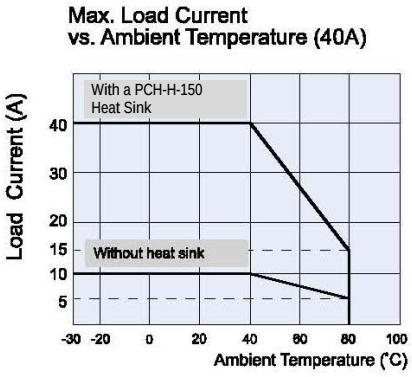
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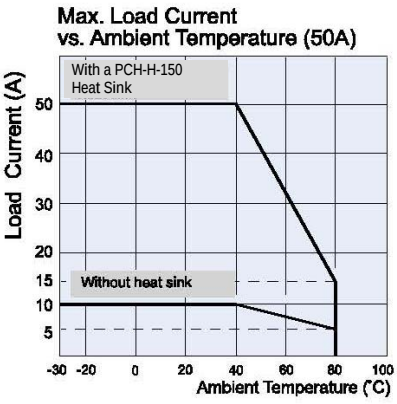
ACCESSORIES

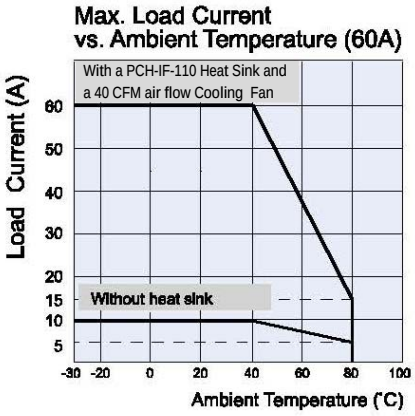
Heat Transfer Pad	- HTP SSR 33x57 or HTP SRR 46x62
Finger Guard / Protective Cover	- SSR100
Heat Sinks	-PCH-I-50 for the 30 VDC/50 Amp and 200 VDC/10 Amp Applications
	-PCH-H-110 for the 400 VDC/10 Amp, 150 VDC/50 Amp, 100 VDC/20 Amp, 50 VDC/40 Amp and 30 VDC/100 Amp Application
	-PCH-H-150 for the 50 VDC/80 Amp, 100 VDC/40 Amp, 200 VDC/40 Amp Application

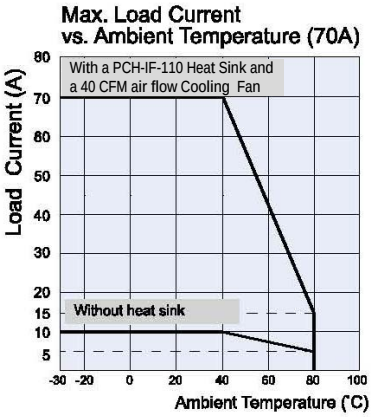
CHARACTERISTIC CURVES

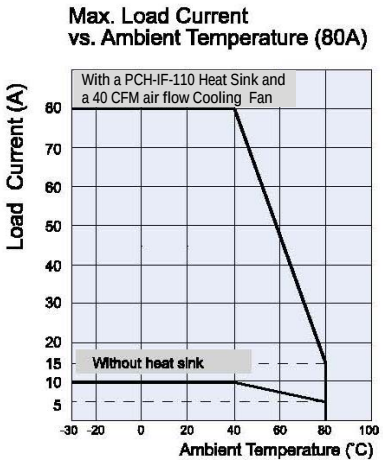


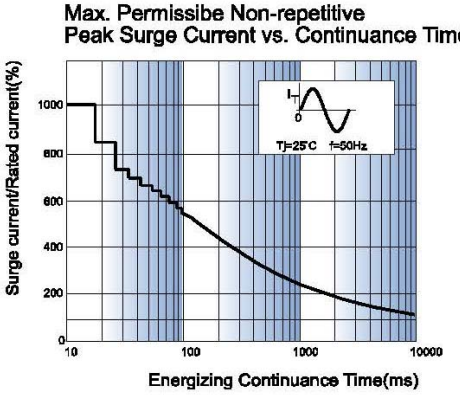












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