

Description

- Single Phase Solid State Relay PS-Series: ON/OFF device for single-phase electrical circuits, 12–400 VAC.
- Supported Loads:
 - ZERO CROSS (Resistive Load): Heater, light bulb.
 - RANDOM (Inductive Load): Motor.
- Input Voltage: 6–30 VDC and 90–240 VAC.
- Current Ratings: 25A, 40A, 50A, 75A, 100A.
- Suitable for applications with frequent ON/OFF operation, since the device has no contacts, preventing sparks on the contact surface and providing long service life.
- Equipped with over-voltage protection circuit on the input side.
- Equipped with thermal protection circuit (cuts off operation when high temperature occurs).

Operation

PS-Series is a solid-state relay of the Single Phase type.

When the device receives an input signal within the specified voltage range, the output will operate.

Inside the device, it consists of semiconductors without contact surfaces, so no arc is generated. This makes the device suitable for frequent ON/OFF operations. It has selectable types for Resistive Load (such as heater, light bulb) and Inductive Load (such as motor). It can be used to replace a magnetic contactor and has a longer service life than other devices.

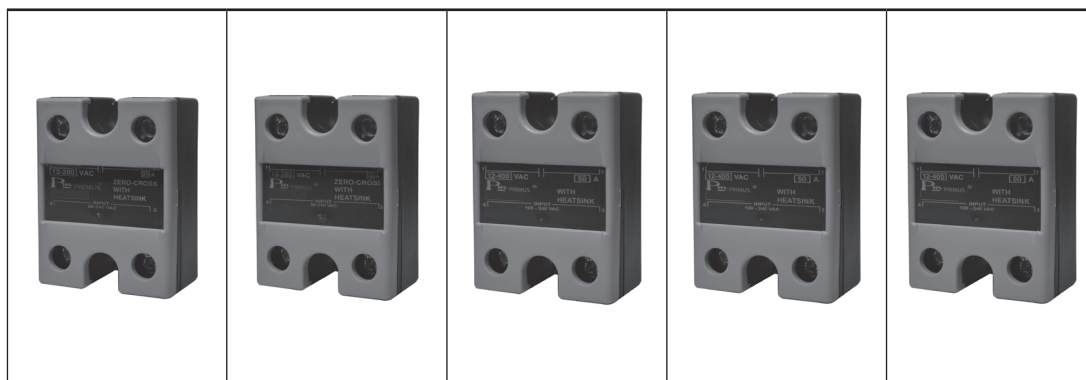
Because of frequent ON-OFF operation and high current, Solid State Relay installation requires a heat sink for cooling.

Specification



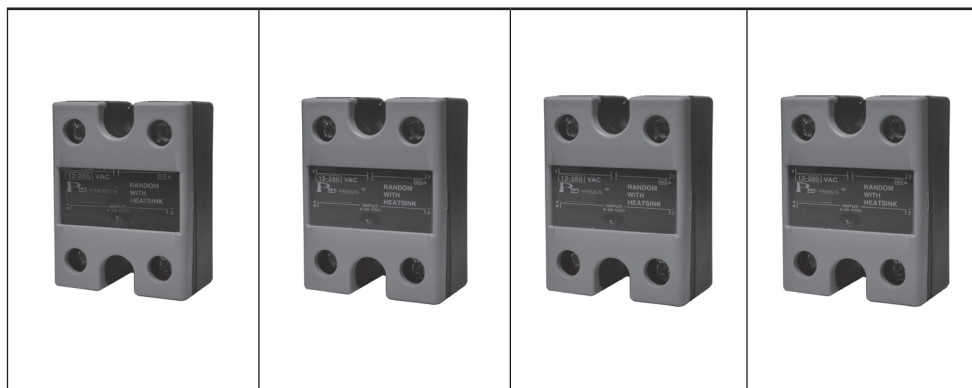
Model		PS-01N1-25	PS-01N1-40	PS-01N1-50	PS-01N1-75	PS-01N1-100
TYPE		Zero Cross (Resistive Load)				
Input		LED (Green : Input OK, Red : Over Temperature Fault)				
		Turn ON Voltage: 6–30VDC / Turn OFF Voltage: <3VDC				
		Input Impedance > 1kΩ				
Output		Switching Voltage 12 to 400VAC (1-Phase)				
		Peak Voltage 400V				
		Switching Current				
		25A	40A	50A	75A	100A
		Max Drop Voltage 1.4Vrms				
		Maximum Leakage Current 15 mA rms				
		Power Factor 0 up to 1				
		Operating Frequency Range 10 up to 440Hz				
		$I^2t = 340A^2s$	$I^2t = 880A^2s$	$I^2t = 680A^2s$	$I^2t = 1760A^2s$	$I^2t = 6400A^2s$
Ambient Operation	Temperature	-10 °C to 60 °C				
	Humidity	85 % RH Non-Condensing				
Ambient Storage	Temperature	-20 °C to 80 °C				
	Humidity	85 % RH Non-Condensing				
Protection Degree		IP40				
Installation		Screw with Heat Sink				
Material		ABS-V0				
Size (mm.)		63 x 43 x 27				
Weight (kg.)		100				

Specification(Continue)



Model		PS-02N1-25	PS-02N1-40	PS-02N1-50	PS-02N1-75	PS-02N1-100
TYPE		Zero Cross (Resistive Load)				
Input		LED (Green : Input OK, Red : Over Temperature Fault)				
		Turn ON Voltage 90-240VAC / Turn OFF Voltage: <30VAC				
		Input Impedance >150kΩ				
Output		Switching Voltage 12 to 400VAC (1-Phase)				
		Peak Voltage 400V				
		Switching Current				
		25A	40A	50A	75A	100A
		Max Drop Voltage 1.4Vrms				
		Maximum Leakage Current 15 mA rms				
		Operating Frequency Range 10 up to 440Hz				
		$I^2t = 340A^2s$	$I^2t = 880A^2s$	$I^2t = 680A^2s$	$I^2t = 1760A^2s$	$I^2t = 6400A^2s$
Ambient Operation	Temperature	-10 °C to 60 °C				
	Humidity	85 % RH Non-Condensing				
Ambient Storage	Temperature	-20 °C to 80 °C				
	Humidity	85 % RH Non-Condensing				
Protection Degree		IP40				
Installation		Screw with Heat Sink				
Material		ABS-V0				
Size (mm.)		63 x 43 x 27				
Weight (kg.)		100				

Specification(Continue)



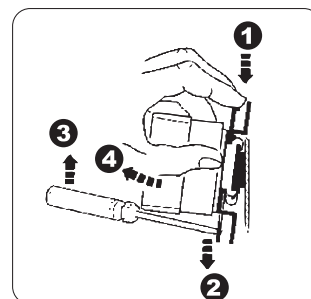
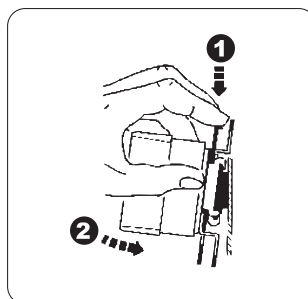
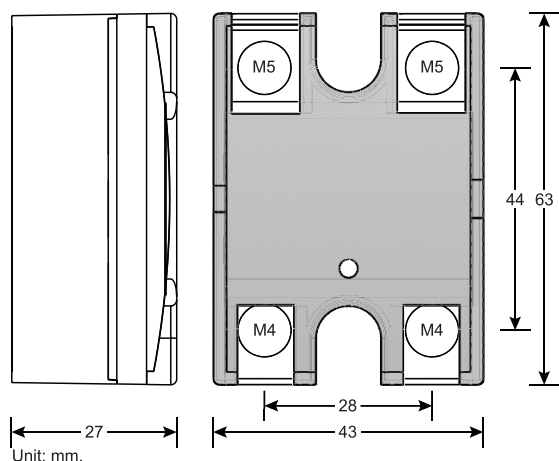
Model		PS-03N1-25	PS-03N1-40	PS-03N1-50	PS-03N1-75
TYPE		RANDOM (Inductive Load)			
Input		LED (Green : Input OK, Red : Over Temperature Fault)			
		Turn ON Voltage: 6-30VDC / Turn OFF Voltage: <3VDC			
		Input Impedance > 1kΩ			
Output		Switching Voltage 12 to 400VAC (1-Phase)			
		Peak Voltage 400V			
		Switching Current			
		25A	40A	50A	75A
		Max Drop Voltage 1.4Vrms			
		Maximum Leakage Current 15mA rms			
		Operating Frequency Range 10 up to 440 Hz			
		$I^2t = 340A^2s$	$I^2t = 880A^2s$	$I^2t = 680A^2s$	$I^2t = 1760A^2s$
Ambient Operation	Temperature	-10 °C to 60 °C			
	Humidity	85 % RH Non-Condensing			
Ambient Storage	Temperature	-20 °C to 80 °C			
	Humidity	85 % RH Non-Condensing			
Protection Degree		IP40			
Installation		Screw with Heat Sink			
Material		ABS-V0			
Size (mm.)		63 x 43 x 27			
Weight (kg.)		100			

Specification(Continue)

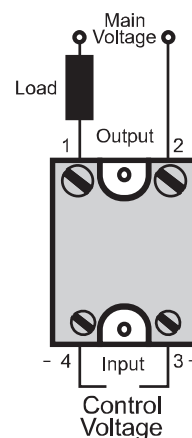
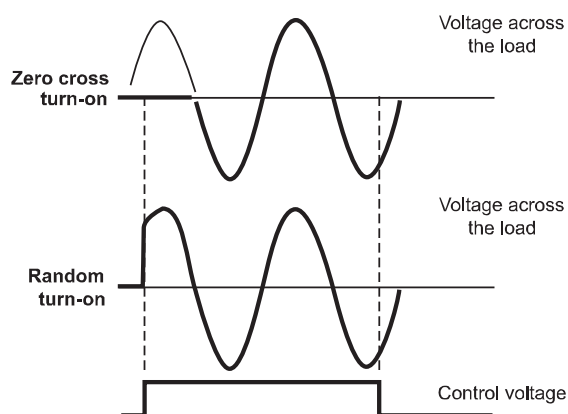


Model		PS-04N1-25	PS-04N1-40	PS-04N1-50	PS-04N1-75
TYPE		RANDOM (Inductive Load)			
Input		LED (Green : Input OK, Red : Over Temperature Fault)			
		Turn ON Voltage 90-240VAC / Turn OFF Voltage: <30VAC			
		Input Impedance > 150kΩ			
Output		Switching Voltage 12 to 400VAC (1-Phase)			
		Peak Voltage 400V			
		Switching Current			
		25A	40A	50A	75A
		Max Drop Voltage 1.4Vrms			
		Maximum Leakage Current 15mA rms			
		Operating Frequency Range 10 up to 440 Hz			
		$I^2t = 340A^2s$	$I^2t = 880A^2s$	$I^2t = 680A^2s$	$I^2t = 1760A^2s$
Ambient Operation	Temperature	-10 °C to 60 °C			
	Humidity	85 % RH Non-Condensing			
Ambient Storage	Temperature	-20 °C to 80 °C			
	Humidity	85 % RH Non-Condensing			
Protection Degree		IP40			
Installation		Screw with Heat Sink			
Material		ABS-V0			
Size (mm.)		63 x 43 x 27			
Weight (kg.)		100			

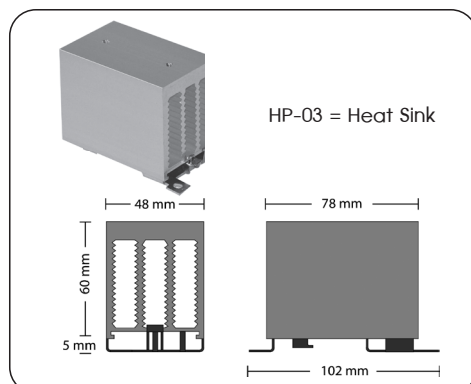
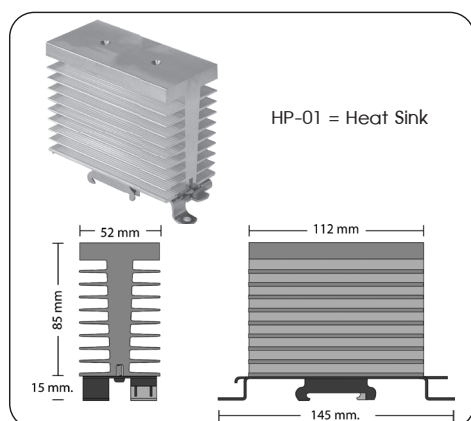
Dimension



Wiring Diagram



Accessory



Model	HP-01	HP-03
Thermal Characteristics	1.95 K/W	2.5 K/W
Type	1Ø SSR	1Ø SSR
Specifications	for DIN RAIL	for DIN RAIL
Fans	None	None
Air Volume	None	None
Weight	0.68 Kg.	0.32 Kg.
Max. Load (@Amb. Temp.)	49 A. @40 °C 40 A. @50 °C	37 A. @40 °C 25 A. @50 °C

Amb. Temp. refers to the temperature in the installation area, which must not exceed the value shown in the table.