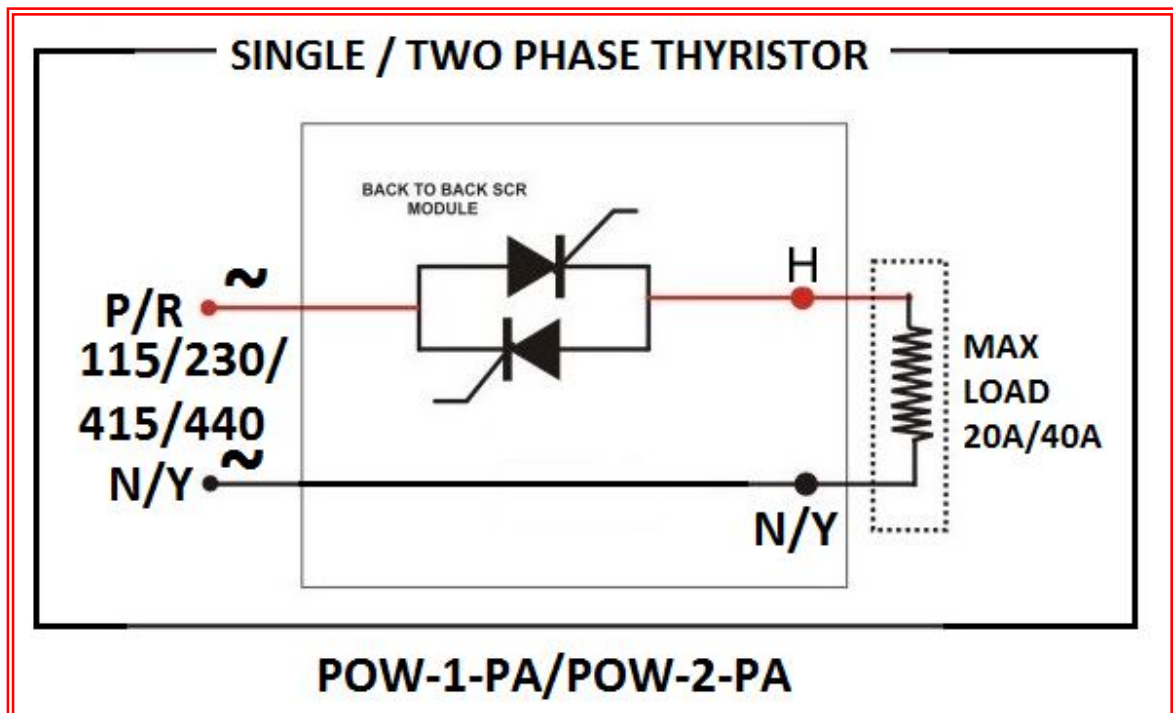
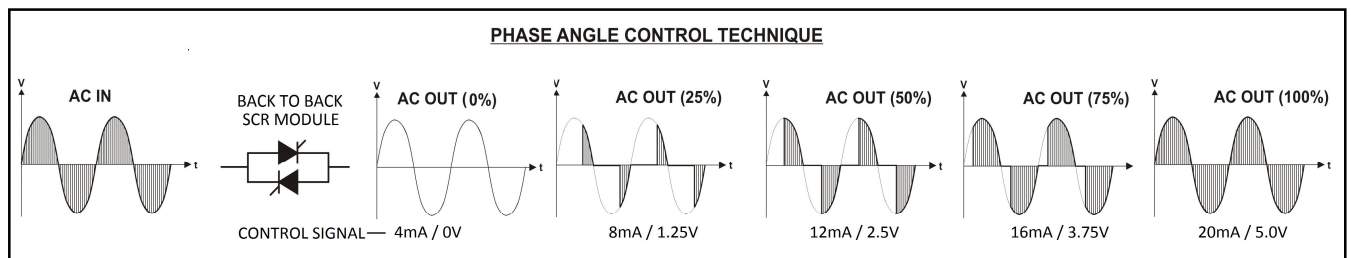


**Single Phase / Two Phase SCR based Heater Power Regulator**



## Model Wise Description:

Model	Product Description	Size (H x W x D) in mm.
<b>POW-1-PA-20A</b>	Single Phase SCR based Heater power regulator for 2 to 4 KW @ 115 / 230VAC load.	190 x 110 x 80
<b>POW-2-PA-20A</b>	Two Phase SCR based Heater power regulator for 4 to 8 KW @ 415 / 440VAC load.	190 x 110 x 80
<b>POW-1-PA-40A</b>	Single Phase SCR based Heater power regulator for 4 to 8 KW @ 115 / 230VAC load.	190 x 130 x 95
<b>POW-2-PA-40A</b>	Two Phase SCR based Heater power regulator for 8 to 16 KW @ 415 / 440VAC load.	190 x 130 x 95

## Features:

- Solid state, field proven, rugged and reliable design.
- User selectable control signal
- Gradual, smooth and step less control of power across the heater

## Description:

Libratherm offers Single phase and Two phase heater power regulator model **POW-1-PA-XX** and **POW-2-PA-XX** for power control of resistive or inductive heating loads. This regulator accepts the user selectable DC control signal of 0-5V, 0-10V and 4-20mA and hence can be easily interfaced with DDC, PID, or PLC. For manual control, external potentiometer can also be used. The output voltage can be gradually varied proportional to the input signal. The built in back to back connected SCR can control single phase or two phase load of 10A to 40A. The phase angle firing control technique ensures smooth and gradual step less voltage control across the load.

Facility is also provided to adjust the soft rise or fall in voltage across the heater load using on card Ramp UP and Ramp Down settings. The maximum and minimum output voltage across heater load can also be adjusted. These regulators can be easily mounted inside the panel or on the base plate using 4 screws. For three phase load in star with neutral or 3 wire delta configurations, 3 independent regulators can be used with a common control signal.

These models finds its application in Plastic (For Pet blow moulding machines infrared heater control), HVAC (For air heater control), Laboratory (For ovens/furnaces/hot plates) and many other applications based on electrical heating control.

### Technical Specifications:

<b>Item</b>	Single Phase / Two Phase SCR based heater power regulator
<b>Model</b>	POW-1-PA-20A and POW-1-PA-40A
<b>Control Signal Input (Linear)</b>	0-5V, 0-10V, 4-20mA (DIP switch selectable) or using external 10K potentiometer.
<b>Control Technique</b>	Phase angle control (Self Synchronized).
<b>Supply Voltage</b>	115VAC or 230VAC +/- 10% @ 50/60Hz (Any one to be specified)
<b>Output Voltage (Single phase Load)</b>	0 to 115 / 0 to 230VAC with respect to neutral and proportional to control signal. (depends on line voltage w.r.t. neutral)
<b>Max. Load Current</b>	10A,20A,30A,40A @ 110VAC/230VAC/415VAC/440VAC (As per the model)
<b>Ramp Up/Down and Max./Min Power</b>	Adjustable using on card single turn presets.
<b>Enable/Disable input</b>	External potential free contact for remote on/off operation.
<b>Mounting</b>	base plate mounting using 4 screws.
<b>Connections</b>	Separate terminals for Auxiliary Supply, Heaters and Control Signal.
<b>Sizes (H x W x D)/ Mounting holes</b>	190 x 110 x 80 mm. (POW-X-PA-20A)/150 x 100 x 4 (M5 holes) 190 x 130 x 95 mm. (POW-X-PA-40A)/150 x 115 x 4 (M5 holes)

Specifications are subject to change due to continuous Product up-gradation.

### Ordering Information:

MODEL	A- INPUT CONTROL SIGNAL	B- CONFIGURATION	C- SUPPLY
POW-1-PA-20A POW-2-PA-40A	A1- (0-5 VDC) fixed A2- (0-10 VDC) fixed A3- (4-20 mA) fixed A4- All but DIP switch selectable	B1- Single Phase with respect to Neutral  B2- Two phase with respect to 2 <sup>nd</sup> phase	C1 - 115 VAC C2 - 230 VAC C3 - 415 VAC C4- 440 VAC

### Examples:

MODEL	A- INPUT CONTROL SIGNAL	B- CONFIGURATION	C- SUPPLY
POW-1-PA-20A	A3	B1	C1
POW-2-PA-40A	A4	B1	C2

Example	Ordering Code	Description
1	POW-1-PA-20A -A3- B1-C1	This is single phase power regulator with 4-20mA control signal for single phase 20A load working on 230VAC
2	POW-2-PA-40A -A4- B1-C4	This is Two phase power regulator with user selectable control signal for two phase 40A load working on 440VAC