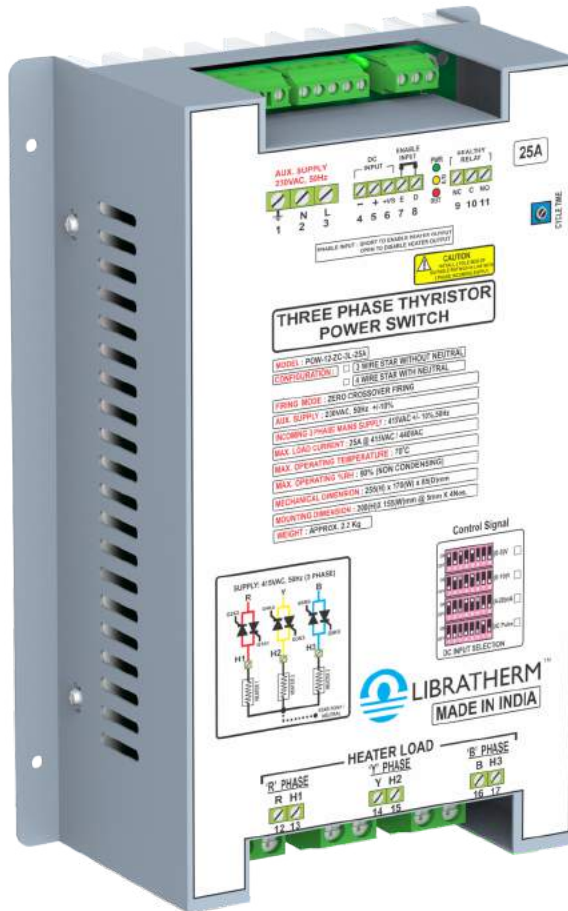


# Three Phase Zero Cross Over Thyristor Power Switch

## Model: POW-12ZC - (2 and 3 Leg control)



**POW-12-ZC**

### MODEL WISE DESCRIPTION

Model	Product Description	Size (w x h x d) mm.
POW-12-ZC-2L	Three Phase SCR Power Switch suitable for 3 phase heaters connected in 3 wire Star or Delta with 2 leg control (3KW to 15KW)	170 x 255 x 85
POW-12S-ZC-3L	Three Phase SCR Power Switch suitable for 3 phase heaters connected 3 wire Star without neutral or 3 wire star-neutral - 3 leg control (3KW to 15KW)	170 x 255 x 85

Note: 3 leg/3 phase control is only available for heater load connected in 3 or 4 wire STAR configuration and not available for Delta connected load.

## FEATURES

- 3 Amps to 30 Amps capacity (1.5KW to 18KW – 3 phase heaters).
- 3 phase versions (2 leg or 3 leg control)
- Auto / Manual operation.
- Accepts (4-20)mA / (0-5)VDC / (0-10)VDC or 8 to 24VDC pulse as the control signal.
- Simple and Modular design for easy servicing of cards and thyristors.
- Suitable for both inductive and resistive heating loads.
- Finds application in 3 phase Air heaters in AHU / HVAC.
- Compatible with DDC/PID/PLC/HMI of any brand.

## Description

Libratherm offers ready to use Zero Cross over SCR power switch model POW-12ZC for electrical heating 3 phase loads ranging from 1.5KW to 15KW @ 3-phase 415/440VAC. This power module comprises of Libratherm make triggering card model LZF-3, which generates pulse width modulated (PWM) zero cross over firing pulses to control suitably rated back to back connected SCRs - duly mounted on the heat sink with heavy duty input and output connectors for heaters and AC power supply. The entire assembly is mounted in MS powder coated enclosure, which in turn can be easily mounted inside the closed control panel as desired. Model POW-12ZC accepts both analog and digital control signal from DDC, PLC or PID controller to switch the AC power. The PWM duty cycle is adjustable by the user using On board preset.

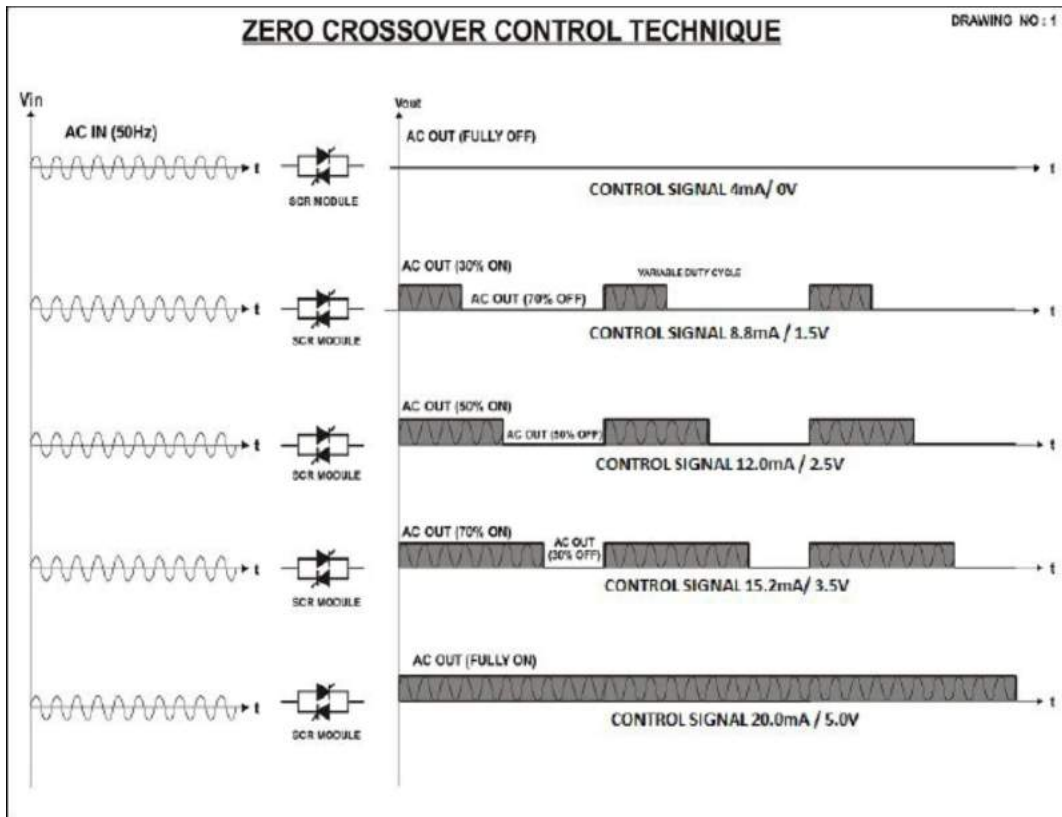
Complete ready to use control panel with suitable PID / Program temperature controller can also be supplied as per the user's specifications and requirement.

## Technical Specifications

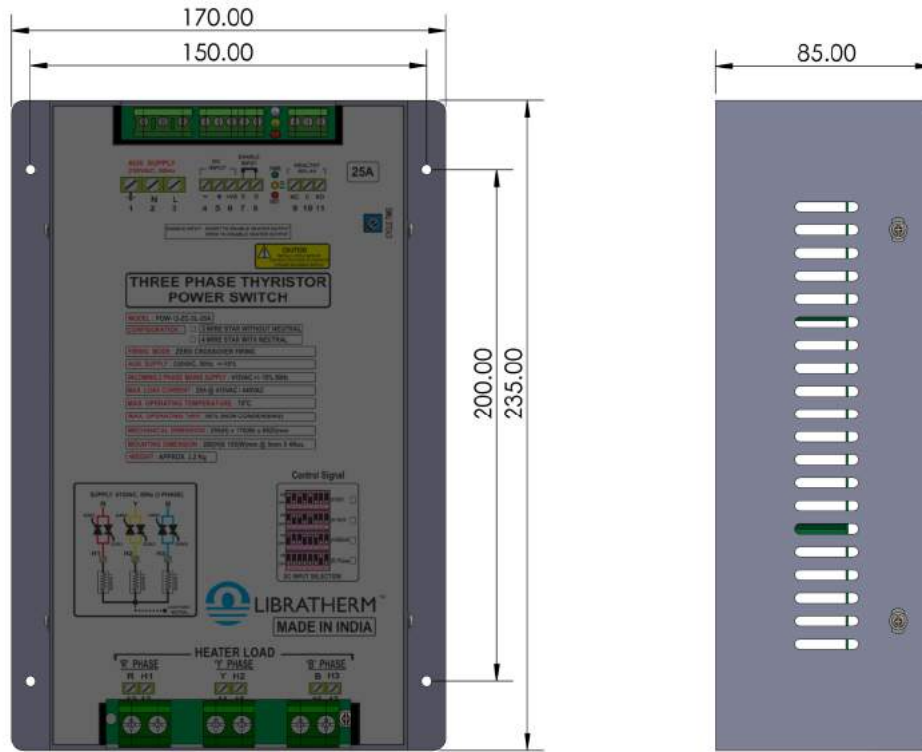
Available Ratings	1.5KW to 18KW @ 415VAC/440VAC, 3 phase.
Available Configuration	Three phase (2 leg and 3 leg control) 3 or 4 wire star or 3 wire delta.
Control Action	Zero cross over Burst firing, time proportional with variable duty cycle.
Control Signal	(4-20) mA / (0-5) VDC / (0-10) VDC / Potentiometer or 5-24VDC pulse or potential free contact.
On/Off PWM Duty cycle	2 to 20 seconds (user adjustable) using on card potentiometer proportional to Linear control signal.
Output	0 to 230VAC or 0 to 415/440 VAC variable on/off duty cycle proportional to input control signal from external controller.
Load Type	Suitable for 3 phase resistive or inductive / transformer load.
Supply Voltage	230 VAC +/- 10%, 50/60 Hz.
Size	170 w x 255 h x 85 d mm. (155 x 235 mm mounting holes M4 x 4)
Mounting	Power switch can be mounted on the base plate of the control panel

## ORDERING CODE

Model	Product Description	Part No.
POW-12-ZC-2L-15A	Three Phase SCR Power Switch suitable for 3 phase heaters connected in 3 wire Star without Neutral or in Close Delta in 2 leg control only (upto max 9KW/15A @ 415VAC)	2901-1
POW-12-ZC-2L-30A	Three Phase SCR Power Switch suitable for 3 phase heaters connected in 3 wire Star without Neutral or in Close Delta in 2 leg control only (upto max 18KW/30A @ 415VAC)	2901-2
POW-12S-ZC-3L-15A	Three Phase SCR Power Switch suitable for 3 phase heaters connected in 3 wire Star without neutral or 3 wire star with neutral in 3 leg control (upto max 9KW/15A @ 415VAC)	2902-1
POW-12S-ZC-3L-30A	Three Phase SCR Power Switch suitable for 3 phase heaters connected in 3 wire Star without neutral or 3 wire star with neutral in 3 leg control (upto max 18KW/30A @ 415VAC)	2902-2



## DIMENSIONAL DRAWING



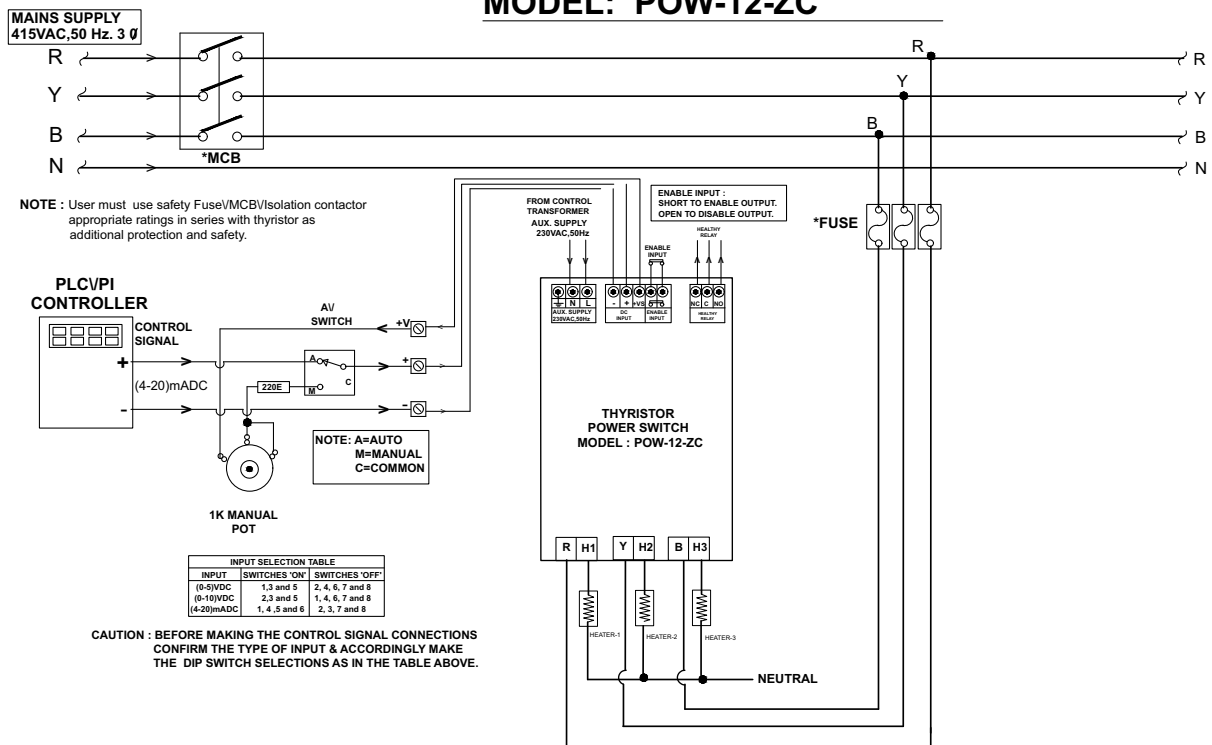
Front view

Side view

**ALL DIMENSIONS IN mm**

## WIRING DIAGRAM

**MODEL: POW-12-ZC**



### VARIOUS POSSIBLE THREE PHASE LOAD CONFIGURATION

