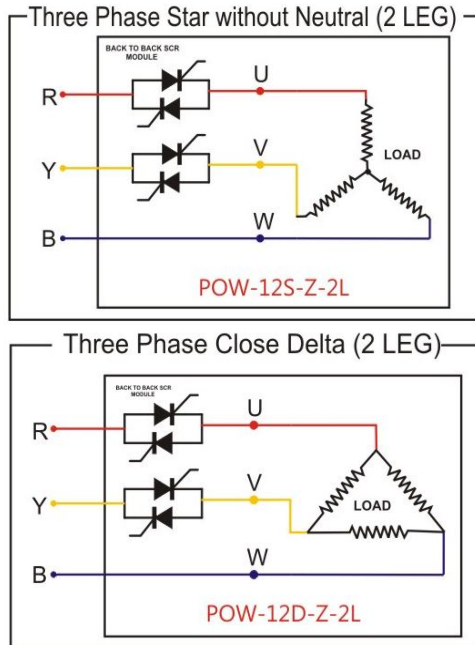


## Three Phase Zero Cross Over Thyristor based Heater Power Controller Model : POW-12Z - (2 Leg control)

### VARIOUS POSSIBLE THREE PHASE LOAD CONFIGURATION



**POW-12Z**

### Model Wise Descriptions:

Model	Product Description
POW-12S-Z-2L	Three Phase SCR Power Controller – suitable for 3 phase heaters connected in <b>3 wire Star with 2 leg control (1.5KW to 15KW)</b>
POW-12D-Z-2L	Three Phase SCR Power Controller – suitable for 3 phase heaters connected in <b>3 wire Delta with 2 leg control (1.5KW to 15KW)</b>

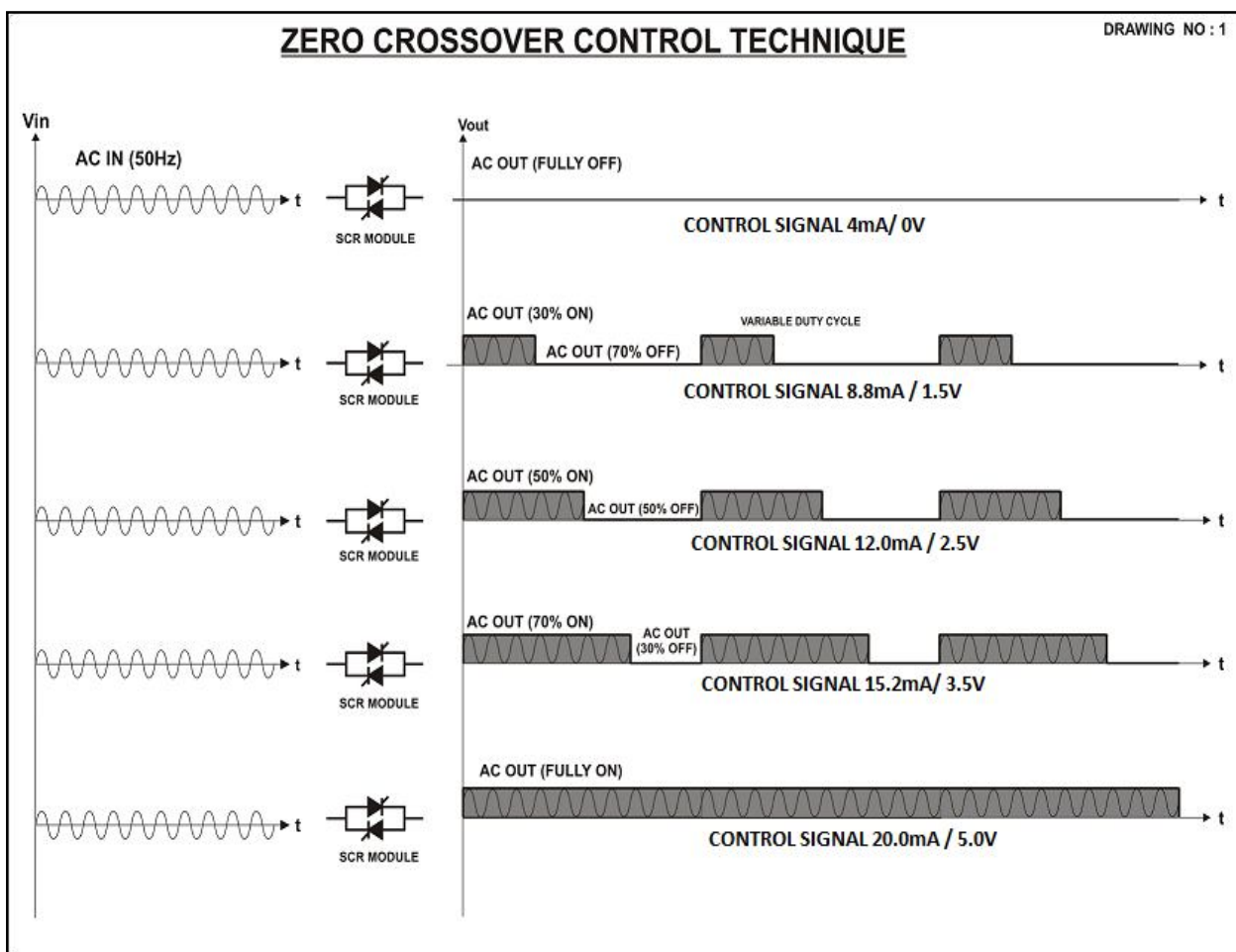
### Features:

- ❖ 5 Amps to 20 Amps capacity (1.5KW to 15KW).
- ❖ 3 phase versions.
- ❖ Auto / Manual operation.
- ❖ Accepts (4-20)mA / (0-5)VDC / (0-10)VDC or DC 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 of any brand.

## Description of Thyristor based heater Power Controller:

Libratherm offers ready to use Zero Cross over SCR power controller model POW-12Z for electrical heating loads ranging from 1.5KW to 15KW/3-phase. This power module comprises of Libratherm make triggering card model LZP-3N, which generates the zero cross over firing pulses to control suitably rated back to back connected SCRs (with electrically isolated base)- duly mounted on the heat sink with input and output clip-on type heavy duty 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-12Z accepts both analog and digital control signal from DDC or PID controller to vary and control the heater power.

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:

<b>Available Ratings</b>	1.5KW to 15KW @ 415VAC, 3 phase.
<b>Available Configuration</b>	Three phase (2 leg control) 3 wire star or delta.
<b>Control Action</b>	Zero cross over Burst firing, time proportional with variable duty cycle.
<b>Control Signal</b>	(4-20) mA / (0-5) VDC / (0-10) VDC / Potentiometer or 5-24VDC pulse.
<b>On/Off Duty cycle</b>	2 to 20 seconds (user adjustable) using on card potentiometer.
<b>Output</b>	0 to 230VAC or 0 to 415/440 VAC variable on/off duty cycle proportional to the control signal.
<b>Load Type</b>	Suitable for resistive and inductive / transformer load
<b>Supply Voltage</b>	415/440 VAC, 50/60 Hz. (User should specify)
<b>Size</b>	235 w x 200 h x 75 d mm. (215 x 170 mm mounting holes M4 x 4)
<b>Mounting</b>	Power pack can be mounted on the base plate of the control panel

## Ordering Information:

MODEL	A- INPUT CONTROL SIGNAL	B- CURRENT (Line current per phase)
POW-12S-Z-2L	A1- (0-5 VDC ) A2- (0-10 VDC)	B1-10A B2-15A
POW-12D-Z-2L	A3- (4-20 mA ) A4 - (0 to 12VDC logic pulse) A5- All above but user selectable using DIP switch selection <i>Variable signal through external potentiometer is available in all models.</i>	B3-20A B4-25A

## Examples:

MODEL	A- INPUT CONTROL SIGNAL	B- CURRENT (Line current per phase)
POW-12S-Z-2L	A3	B2
POW-12D-Z-2L	A5	B8

Example	Ordering Code	Description
1	POW-12S-Z-2L -A3-B2	This is three phase thyristor power controller with (4-20)mA control Signal suitable for maximum 15A per phase and load connected in 3 phase star configuration.
2	POW-12D-Z-2L -A5-B3	This is three phase thyristor power controller with universal input control signal suitable for maximum 20 A per phase connected in 3 phase delta configuration.

**Note: Libratherm also offers phase angle control thyristors, model: POW-12S-3 and POW-12D-3**