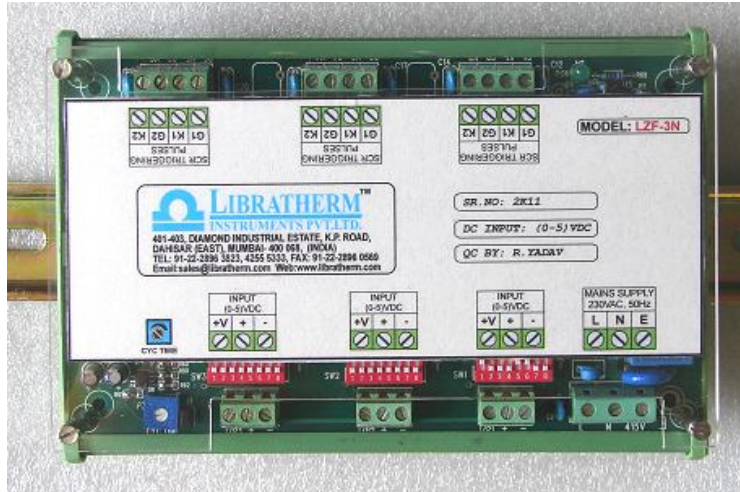


## Zero Cross Over Turn On - SCR Firing Cards Burst Firing Card (Product Code 21.4.1 to 21.4.2)



### Model Wise Description:

Sr.No	Model	Product Description	Size (H X W X D) mm.
21.4.1	SCRF-3N	Single/ 3 phase zero cross over SCR firing card control signal : DC pulse or potential free contact	125 x 185 x 65
21.4.2	LZF-3N	Single/ 3 phase zero cross over SCR firing card control signal : 4-20mA/0-5V/0-10V analogue.	125 x 185 x 65

### Description:

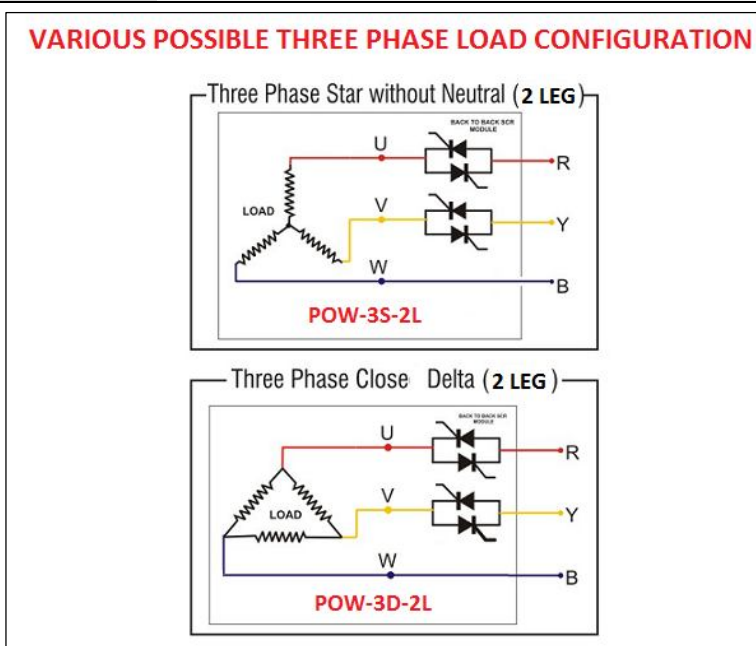
Libratherm offers three channel SCR firing cards model **SCRF-3N** and **LZF-3N** for AC single phase and three phase operated electrical resistive or inductive loads. These cards are basically developed to replace the electro-mechanical contactors with the solid state switch using silicon controlled rectifiers (SCRs). When the electrical load is operated through contactors – the AC cycle is switched ON or OFF at any point of 0 to 180 degree phase angle, this leads to generation of arcing on the contacts and may generate harmonics, which can cause electromagnetic disturbance in the power lines and can also cause malfunctioning of other electronic instruments on the panel. The card featured here eliminates generation of harmonics because of zero cross over switching, as well as no arcing will be observed during switching – since no mechanical contact switching is involved in the solid state device.

**SCRF-3N** accepts 3 independent or common logic pulse of 3 to 36VDC or potential free contact from temperature controller or from PLC and generates 3 independent gate cathode triggering pulses for 3 pairs of back to back connected SCRs. Hence, one can control 3 independent single phase loads or single 3 phase load in star or delta configuration.

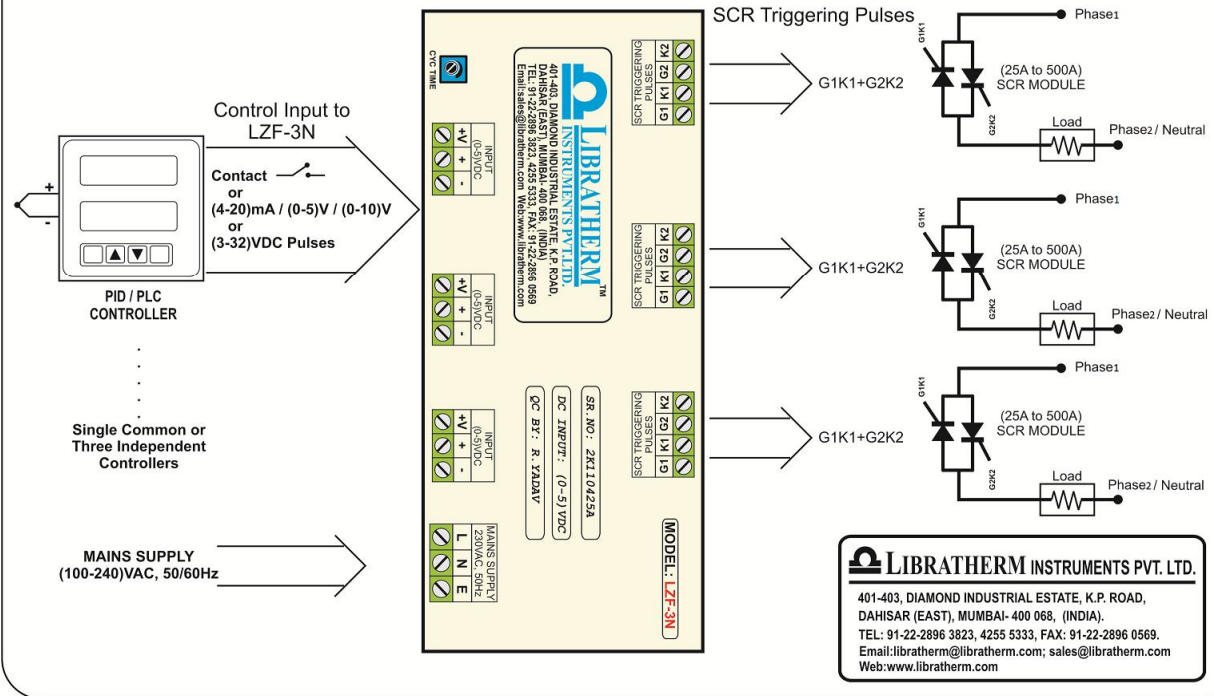
**LZF-3N** accepts 3 independent or common 4-20mA or 0-5V or 0-10V linear input from temperature controller or from PLC or from potentiometer and generates 3 independent gate cathode triggering pulses for 3 pairs of back to back connected SCRs. Hence, one can control 3 independent single phase loads or single 3 phase load in star or delta configuration. The linear signal is pulse width modulated to generate pulsating output with variable on/off duty cycle time of 2 to 30 seconds using on card potentiometer.

### Technical Specification:

Item	SCR Firing Card with ZERO Cross over turn ON for single phase or 3 phase load
Models	SCRF-3N and LZF-3N
Control Input	3 to 32VDC or potential free contact for SCRF-3N 4-20mA/0-5V/0-10V for LZF-3N – user selectable using DIP switch.
No. of Inputs	Common for all 3 outputs or individual for each output. Each analog input can be selected for 4-20mA/0-5V/0-10V using on card DIP switches.
Triggering Pulses	Gate/ Cathode pulses - Optically isolated from the Input – suitable to fire 25A to 500A back to back connected SCRs. G1K1+G2K2 X 3 = 12 pulses.
No. Of Outputs	3 independent Back to Back SCR can be triggered.
Load Configuration	1) 3 independent single phase AC load w.r.t. neutral 2) 3 independent two phase AC load w.r.t. second phase. 3) Single 3 phase star or delta load. (Detail wiring diagram is available)
Supply Voltage	100-250VAC, single phase, 50/60Hz.
Output Line Voltage	110VAC/230VAC/415VAC Or any other lower line voltage from step down transformer.
Mounting	35 mm. DIN rail or can be screw mounted on the panel surface.
Size (H x W x D)	125 x 185 x 65 mm.



## ZERO CROSS OVER LOGIC / PWM CARD (MODEL: LZF-3N)



For any further information on any other load configuration, please contact us.