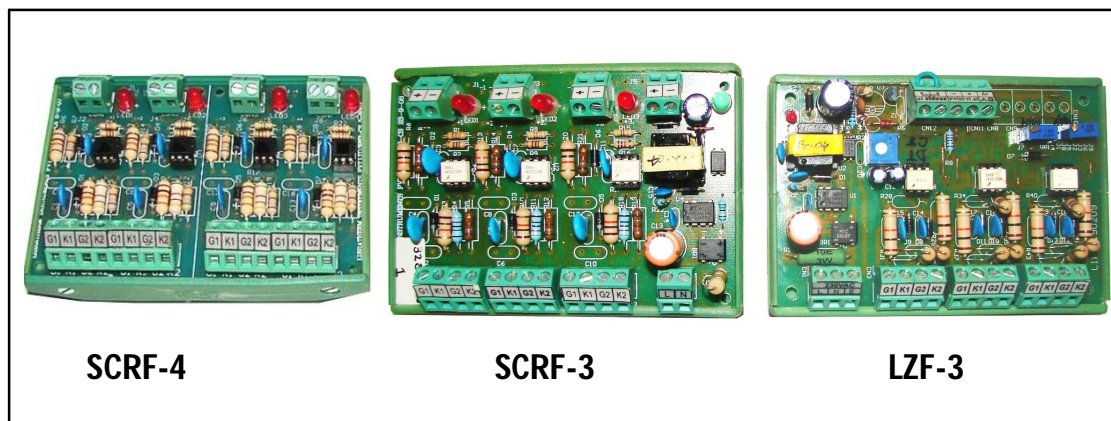


Zero Cross Over Turn On - SCR Firing Cards

Burst Firing Card

(Product Code 21.4.1 to 21.4.3)



Model Wise Description:

Sr.No	Model	Product Description	Size (mm.)
21.4.1	SCRF-4	4 channel zero cross over SCR firing card using DC pulse input.	100 x 75 x 45
21.4.2	SCRF-3	3 channel zero cross over SCR firing card using DC pulse or potential free contact input.	100 x 75 x 45
21.4.3	LZF-3	3 channel zero cross over SCR firing card using linear analogue input.	100 x 75 x 45

Description:

Libratherm offers three and four channel SCR firing cards model **SCRF-4**, **SCRF-3** and **LZF-3** for AC single phase and three phase operated electrical resistive or inductive Heating 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 can also cause malfunctioning of other electronic instruments on the panel. The card featured here eliminates generation of harmonics as well as arcing effect – since no mechanical switching is involved in the solid state device. These cards can control the firing of 25A to 500A SCRs. **SCRF-4** accepts logic pulse of 3 to 36VDC from temperature controller or from PLC and generates 4 independent gate cathode triggering pulses for 4 pairs of back to back connected SCRs. Hence, one can control 4 independent single phase heaters.

SCRF-3 accepts 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 heaters in 3 phase star or delta configuration.

LZF-3 accepts 4-20mA or 0-5V 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 heaters in 3 phase star or delta configuration. The linear signal is pulse width modulated to generate the switching output with variable on/off cycle time of 2 to 10 seconds using on card potentiometer.

Technical Specification:

Item	SCR Firing Card with ZERO Cross over turn ON.
Models	SCRF-4, SCRF-3 and LZF-3
Control Input	3 to 32 VDC for SCRF-4 3 to 32VDC or potential free contact for SCRF-3 4-20mA/0-5V for LZF-3
Triggering Pulses	Gate/ Cathode pulse - Optically isolated from the Input – suitable to fire 25A to 500A back to back connected SCRs. G1K1+G2K2 X 4 for SCRF-4 and G1K1+G2K2 X 3 for SCRF-3 and LZF-3.
No. Of Outputs	3 or 4 independent Back to Back SCR can be triggered.
Configuration	SCRs connected in single phase, two phase or 3 phase star or delta load configuration. (Detail wiring diagram is available)
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	110 x 75 x 45 mm.