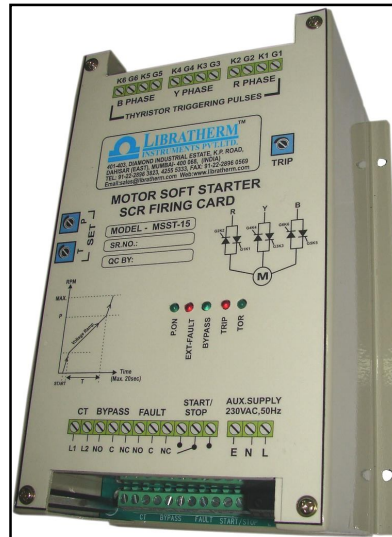


Thyristor firing card for three phase Induction Motor Soft Starter



Features:

- ❖ Designed to Trigger 25 Amps to 1000 Amps SCR-SCR modules.
- ❖ Suitable for 3 phase AC Induction motor up to 300HP (225KW)
- ❖ User selectable configuration for 3 wire close delta and 6 wire open delta
- ❖ User settable jump start and soft start / ramp time
- ❖ Accepts start and stop command from external potential free contact
- ❖ Current Limit and Over load trip facility
- ❖ Contactor bypass output and Fault output

Description:

To gradually accelerate the speed of AC 3 phase induction motor it is required to feed increasing voltage to the motor and such behavior is only possible by connecting SCRs in series with the motor. The SCRs are controlled by MSST-15 card to generate the firing pulses giving the effect of soft start. Libratherm offers SCR triggering card model MSST-15, which is specially designed for motor soft starter application. This card accepts the start command from a switch contact and generates gate cathode pulses for 3 pairs of back to back connected SCRs. User has access to set the starting voltage to create the torque and to set the soft start time. The card takes the feedback from 5A CT to monitor the load current and to generate the trip contact in case of over load condition. Once the motor achieves full RPM, it is not required to pass the current through the SCRs and hence these SCRs can be by passed using external contactor. The bypass command is generated by MSST-15, once the full speed is achieved as indicated by TOR LED.

The MSST-15 card works on Auxiliary supply of 230VAC and three phase line synchronization is done through the load lines. User can build motor soft starter just by using MSST-15 card and suitable ratings of external thyristors, based on the motor capacity.

Technical Specifications:

Configuration	Three phase close delta (In Line) or open delta (Inside Delta)
Control Action	Phase angle control (self synchronized)
Start Command(DI)	Potential free contact (close to start and open to stop)
Output	Suitable Triggering Gate – Cathode pulses to fire back-to-back connected SCRs. 3 X (G1K1+G2K2), 12 pulses.
Smooth Control	Adjustable Ramp Up Time for soft Increase of output voltage.
Current Control	Current Limit and Current Trip settings using on card presets. Feedback is taken from external CT
Settings	For adjusting ramp time and jump start voltage level.
LED Indications	For Power ON, External Fault, Bypass, Over load Trip, Top of Ramp.
Relay Outputs (DO)	For Bypass relay, Fault Relay (Change over contacts)
Load type	Suitable for both 3 phase squirrel cage Induction motor and Slip ring motor
Aux. Supply Voltage	230 VAC +/- 10%, 50/60 Hz. Max – 10VA
Size in mm/ Mounting	200 x 137 x 90 mm (HWD) – Flat plate mountable using 4 screws.

