



This unit generates 8 line synchronized Isolated trigger pulses to trigger SCR's connected in center tap transformer and bridge type cyclo converter power circuit. This unit can also be used as 1-phase converter firing unit to conduct different single phase converter experiments.

This firing circuit is based on Ramp – Comparator and counter scheme using microcontroller 89C2051. Pulse Transformer Isolation is provided for trigger outputs. The signals at various points of the firing circuit is provided as test points on the front panel for study purpose.

Specification

- Works directly on 230V AC mains.
- Gate drive current of 200mA to trigger wide range of devices.
- Firing variation from 1800 to 00 on a graduated scale.
- Frequency division – 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10.
- Soft start and stop feature.
- Tests points to study the logic circuits.

Front Panel Details

- **Power:** Power ON/OFF switch to the unit with built in Inductor.
- **OFF / ON:** Switch for trigger outputs with soft start and soft stop feature.
- **Frequency Division:** Division of line frequency (50Hz) by 1,2,3,4,5,6,7,8,9 & 10 using thumbwheel switch. Frequency division is 10 when thumb wheel switch is at 0.
- **Firing angle:** Potentiometer to vary the firing angle from 180° to 0°.
- **Test Points:** 1 to 9 with respect to ground (GND) to study the firing circuit.
- **Trigger O/P's:** G – Gate K – Cathode.
- **T1, T2, T3 & T4:** For center tap transformer type cyclo converter.
- **T1 & T1', T2 & T2', T3 & T3' and T4 & T4':** For Bridge type cycloconverter.

NOTE:

- T1 and T1' are identical but Isolated from two secondaries of same Pulse transformer.
- Same way T2 & T2', T3 & T3' and T4 & T4'.

Note: Specifications are subject to change.