## FAIL SAFE ELECTRONIC TIME DELAY DEVICE

As per IRS : S-61/2000 TYPE 1012-M

## **SALIENT FEATURES**

- Fully solid state-Relay less design resulting in a very long life.
- Time base generated through Quartz Crystal resulting in high repeat accuracy besides being highly stable.
- Delay chain having two Micro Controllers
- Working and completion time cycle indicated through LEDs visible from top in 'Q' Series Relay housing.

The device is meant to control Railway Signaling circuits where a fixed time delay of 60 or 120 seconds fixed is required. It works on 24V DC. Design of the Unit is Relayless which is based on DC-DC conversion, resulting in a very long life, several times than that of Relay based

FAIL SAFE TIMER
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design. Timer is micro controller based and housed in standard 'Q'-Series Relay housing.

Working of the device is indicated through red blinking LEDs on the PCB which are easily visible from outside. Another green LED is provided which indicates completion of time delay cycle.

As soon as the 24V DC supply is connected, the timer starts counting, & after the set time delay the output appears at the output connector.

Time-base is generated from a QUARTZ CRYSTAL, which results in very stable time pulses. The time delay is derived from time dividing chains consisting of CMOS ICs. There are two dividing chains actuating multi vibrator which is fed to a single ended, output transistor stage which is coupled to rectifiers through a ferrite-core transformer as the final output.

## TECHNICAL SPECIFICATIONS

DC Input: 24V +20%, -10% works satisfactory on raw DC.

DC Output : 24V +20%, -10%

Delay Time :  $60 \& 120 \, \text{Sec}$  within  $+10\% \, (63 \pm 1 \, \text{Sec}, 127 \pm 1 \, \text{Sec})$ 

**DATA SHEET 61/0606** 



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