



# Electromagnetic Industries LLP

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E300189

## CAPACITOR TRIP DEVICE

### Model CTD-3

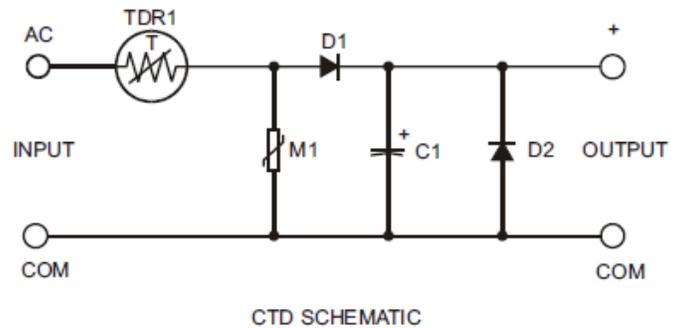
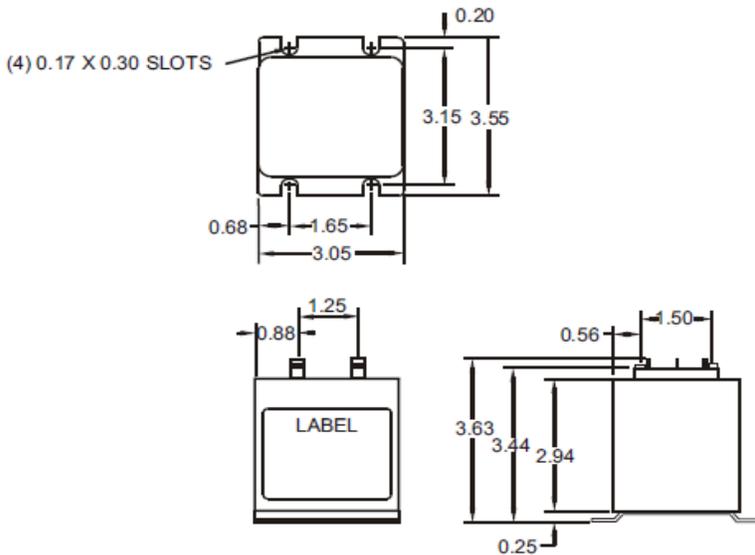
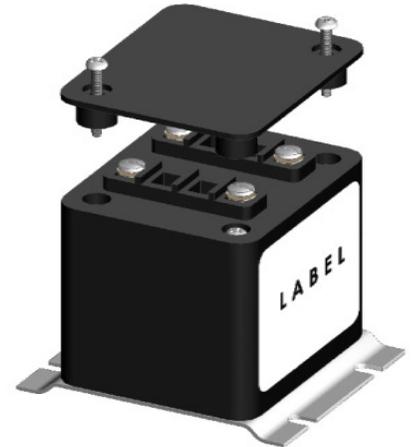
**Application:** This device provides a source of energy for circuit breakers and switch trip coil operation during a loss of AC control Voltage.

**Nominal Input Voltage:** 240 Volts AC

**Frequency:** 0-400 Hz

#### SPECIFICATIONS- CTD-3

|                              |  |
|------------------------------|--|
| Normal Input Voltage         | 240 VAC  |
| Max. Input Voltage           | 280 VAC  |
| Capacitance                  | 330uF, +/- 20% @25 Deg. C  |
| Available Energy             | 19 joules, +/- 20% @25 Deg. C (Trip capacitor fully charged at Normal input voltage) |
| Temp. influence on Capacitor | (-10% at -30 Deg. C., +5% at 60 Deg. C.)   |
| Short Circuit Protection     | Continuous   |
| Normal Output Voltage        | 338 VDC  |
| Normal Charge Time           | Approximate charge time to 90% at 60Hz/25C (350ms)                                   |
| Operating Temperature        | -30 Deg. C. to 60 Deg. C.  |
| Storage Temp Range           | -50 Deg. C. to 80 Deg. C.  |
| Mounting                     | Vertical or Horizontal   |
| Input Surge Protection       | Mov Protection to 65 joules single pulse surge transient                             |



These devices are protected against inadvertent short circuits, input from line surges and inductive kickback from trip coils.

Nominal 240Volts AC is applied between "AC" and "COM" terminals. This voltage is half wave rectified and applied across the trip capacitor to give the output trip voltage. The charge stored in the capacitor is available between "+" and "COM" terminals for the trip coil operation. The half wave rectification circuitry provides the advantage of maintaining a common neutral connection from the input and output while still maintaining the charge in the capacitor after a loss of control power.

The capacitor is continuously charged when control power is applied. This provides energy for normal trip coil operation. Because mechanical relays are not used, energy from the trip coil is immediately available with the loss of control power. When the control power returns, the capacitor will recharge and will be able to supply energy for the next trip coil operation.

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