Grid Solutions

MODEL CTD-4

Capacitor Trip Device

REGULATORY AGENCY APPROVALS

UL 103039 Canadian C UL 103039

Application

Provides a source of energy for circuit breaker and switch trip coil operation during a loss of AC control voltage.

Normal Input

120 VAC or 240 VAC

Frequency

25 to 400 Hz.

Specifications

Normal Input Voltage:

CTD-4-120: 120 VAC
CTD-4-240: 240 VAC

Max. Input Voltage:

CTD-4-120: 140 VAC,
CTD-4-240: 280 VAC

Available energy trip capacitor fully charged at normal input voltage:

CTD-4-120: 64 joules ± 20% @ 25°C
CTD-4-240: 57 joules ± 20% @ 25°C

Normal Output Voltage:

CTD-4-120: 169 Volts DC,
CTD-4-240: 338 Volts DC
Approx charge time to 90% at 25°C
CTD-4-120: 1.4S, CTD-4-240: 570 mS

Capacitance:

CTD-4-120: 4500 uF +20 % @ 25°C
CTD-4-240: 990 uF+ 20 % @ 25°C

Temp. Influence on cap.:

-10% @ -30°C/ ±5% @ +60°C

Operating temperature range:

-30°C to 60°C

Storage temp range:

-50°C to 80°C

Short Circuit Protection:

Continuous

Mounting:

Vertical or horizontal

Input Surge Protection:

MOV protected to 65 joules pulse surge

• These devices are protected against inadvertent output short circuit, inductive kickback from the trip coil, and input line voltage surges. Nominal AC Voltage is applied between the 'AC' and ' COM ' terminals.

This voltage is half wave rectified and applied across the trip capacitor, giving an output trip voltage. The charge stored in this capacitor (990 uF or 4500 uF) is available between the '+' and 'COM ' terminals for breaker trip coil operation. The half wave rectification circuitry provides the advantage of maintaining a common neutral connection from input while still maintaining the charge in the the trip capacitor after control power is lost.

The capacitor is continuously charged when control power is available, providing energy for normal trip coil operation. Because mechanical relays are not involved, energy for the trip coil operation is immediately available with the loss of control power. When the control power returns, the capacitor automatically charges to supply energy for the next trip coil.

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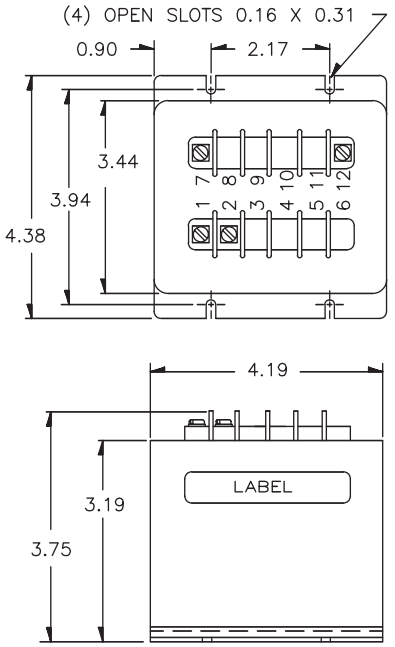
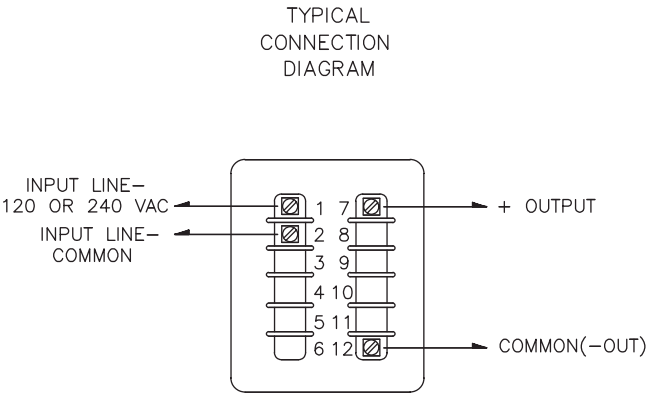
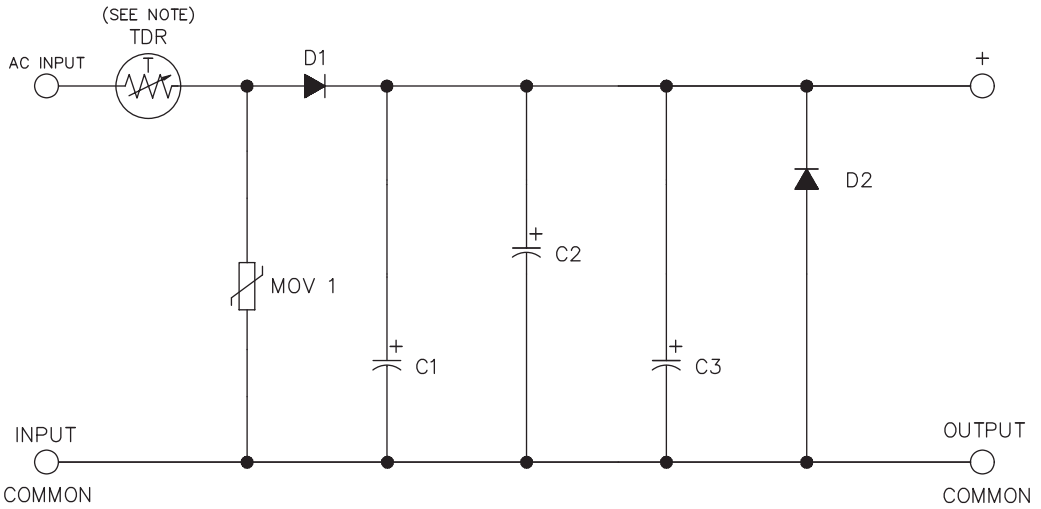
Dimensions





Schematic



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