

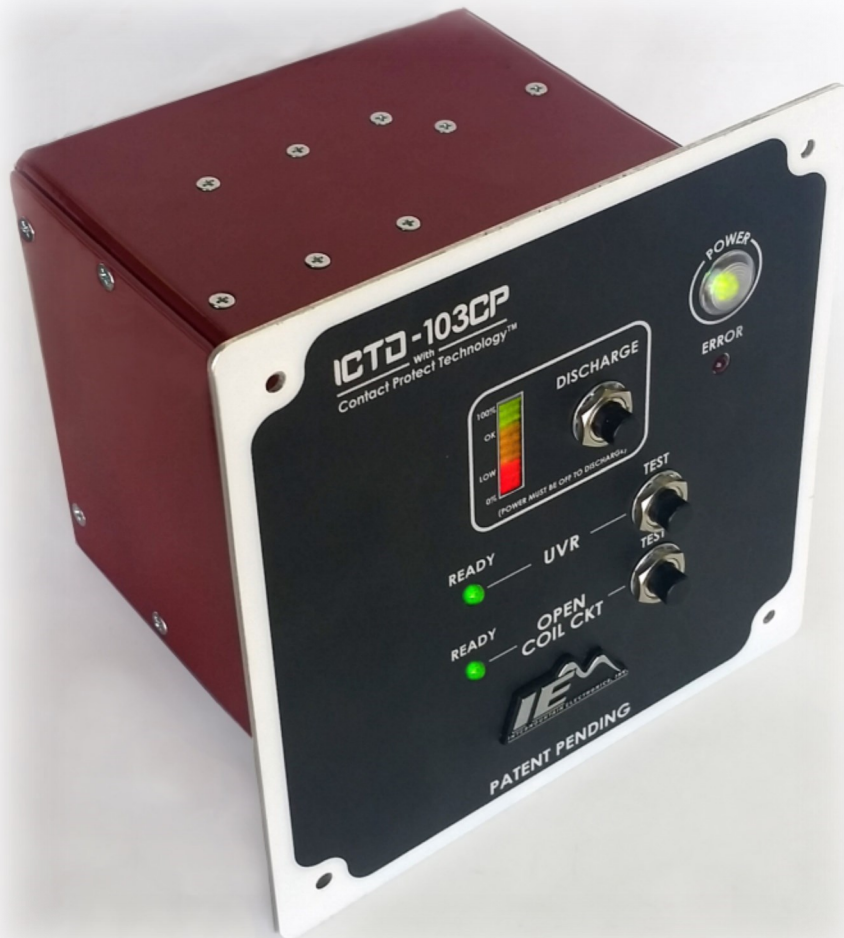
PATENT PENDING



www.intermountainelectronics.com
Email: iecomponents@ie-corp.com
Phone: (877) 544-2291 / (435) 637 7160

ICTD-100CP / ICTD-101CP
ICTD-102CP / ICTD-103CP

**Capacitor Trip Devices
with Contact Protect Technology™**



ICTD-10xCP Capacitor Trip Devices

The patent-pending ICTD-10xCP family of Capacitor Trip Devices (CTDs) are the most advanced products of their kind. Every model is microprocessor based, and each features revolutionary innovations, including **Contact Protect Technology™**. These innovations improve performance, reliability, and safety, setting the ICTD-10xCP CTDs apart from other similar products.

Features:

- Contact Protect Technology™ eliminates the common problem of arcing damage to auxiliary (AUX) switch contacts.
- Easy-to-read three color level indicator allows instant verification of the capacitor reservoir charge level.
- Unique DISCHARGE button allows the reservoir to be quickly discharged for safety--no need to "arc" the trip circuit to do maintenance.
- Large 5000uF (66 joules) capacitor bank.
- Open Coil Circuit indicator verifies when a trip circuit is in place. Specially designed sensing circuitry detects both traditional trip coils and modern trip circuits.
- Open Circuit Test button (ICTD-101CP, -103CP) allows open coil circuit to be tested.
- UVR interlock function (ICTD-102CP, -103CP) with test button improves safety by preventing the circuit breaker from being closed until the capacitor reservoir is charged.
- Microprocessor and exclusive "watchdog" circuitry constantly monitor operation to ensure reliability and safety.
- Expansion module port allows the addition of exclusive IE expansion modules for extra connectivity options, such as external monitoring, control, and diagnostics.
- Fully enclosed chassis to improve reliability and product life-time.
- Standard pin-out allows direct replacement of many existing units, including the ICTD-1. Note: ICTD-10xCPs must not be wired with the same pin out as the ICTD-2.



Specifications:

- Input voltage: 120 VAC
- Charge Time: < 1 Second
- Storage Capacity: 5000uF/66 Joules
- Typ. storage time: 40 S (varies w/ different breakers)
- Output voltage (fully charged): 160-170V (Chopped DC)
- Req. Trip Contact rating: 10A/240VAC (Resistive)
- UVR Relay Contact rating: 8A/250VAC (Resistive)
- Error Jumper:
 - Position 1: Breaker trips if error detected.
 - Position 2 (Fact. Default): No trip on error
- Weight: 3 lbs / 1.3 kg

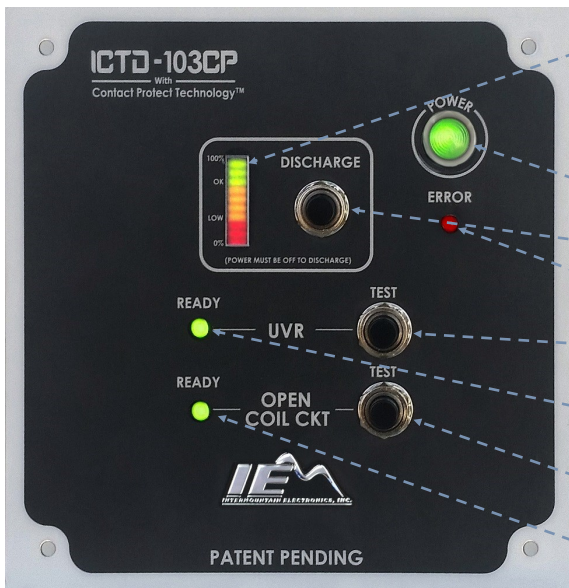
Contact Protect Technology™ (Patent Pending)

In a typical circuit breaker installation, the breaker is tripped by energizing its trip circuit using energy stored in a CTD. As soon as the breaker is tripped, a breaker auxiliary contact is used to disconnect the CTD to prevent damage caused by continuously powering the breaker's trip circuit.

Unfortunately, auxiliary contacts in most breakers are only AC rated, and traditional CTDs only provide DC current. As a result, auxiliary contacts are commonly damaged, and this damage often extends to the breaker's trip circuit.

Contact Protect Technology™ eliminates this problem by converting the DC energy stored in the CTD to an alternating current before delivering it to the trip circuit.

Front and Rear Panels



● **Reservoir Level Indicator:** Indicates the charge level of the energy storage capacitor reservoir:

	Fully charged
	Adequate charge to trip breaker
	Low charge - may not be able to trip breaker

● **Power Indicator:** Lit when control power is on

● **Discharge button:** Hold to quickly discharge the capacitor reservoir for safety when doing maintenance

● **Error Indicator:** Lit in the event of that an error is detected

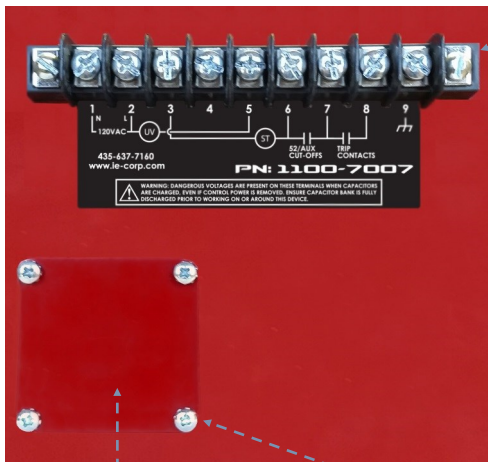
● **UVR Test Button (if equipped):** Allows UVR function to be tested by deactivating the UVR output, causing the circuit breaker to trip

● **UVR Indicator (if equipped):** Lit when the capacitor reservoir has sufficient charge to cause a trip if needed, and the Under-Voltage Relay (UVR) interlock output is active

● **Open Coil Circuit Test Button (if equipped):** Allows the trip circuit to be tested by forcing the circuit breaker to trip

● **Open Coil Circuit Indicator:** Lit when a trip circuit is detected

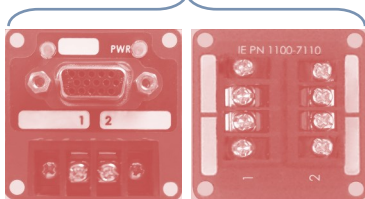
● **I/O Connector:** Includes necessary connections for normal operation:



Pin	Purpose
1	120V (Neutral)
2	120V (Line)
3	Trip Circuit Connection
4	Unused
5	Under-Voltage Relay (UVR) Interlock Output
6	To trip circuit and breaker AUX switch
7	To trip contacts and breaker AUX switch
8	To trip contacts
9	Chassis ground

NOTE: Pin 6 must connect between the trip circuit/shunt and any AUX switch(es). No AUX switch may exist between pins 6 and 3.

● **Expansion Port:** Installation location for optional IE expansion modules.



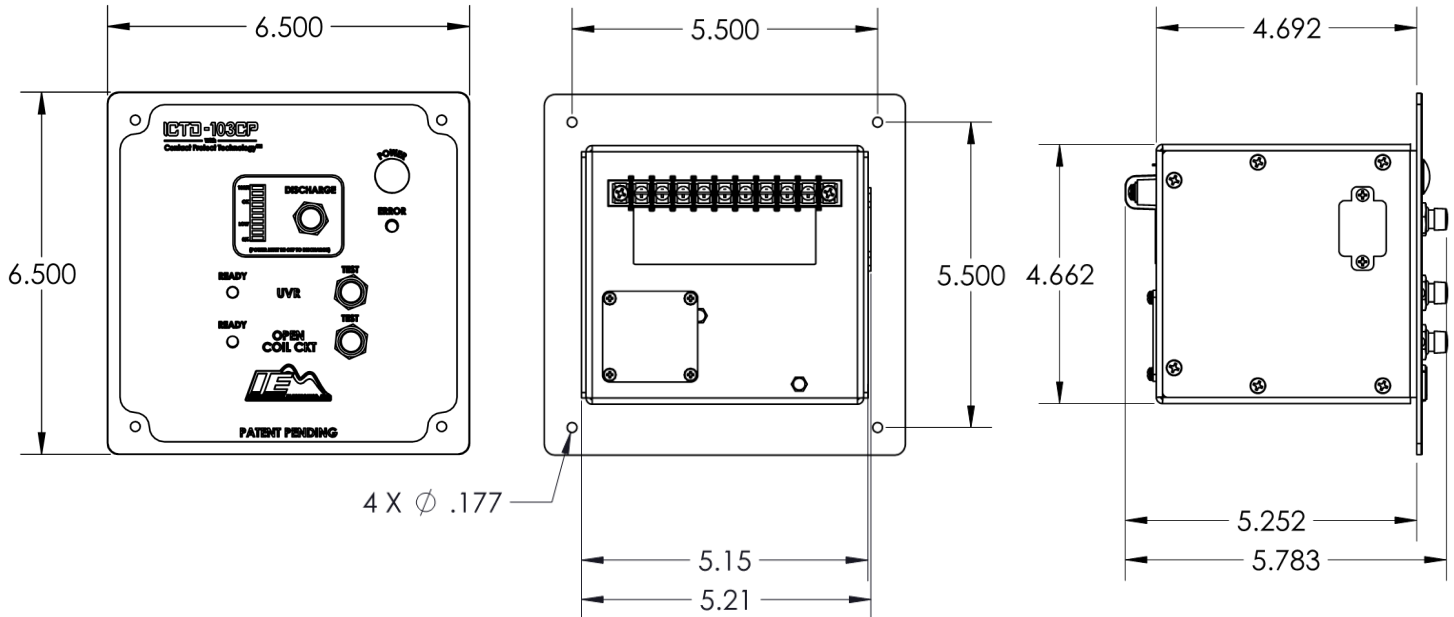
Optional IE Expansion Modules



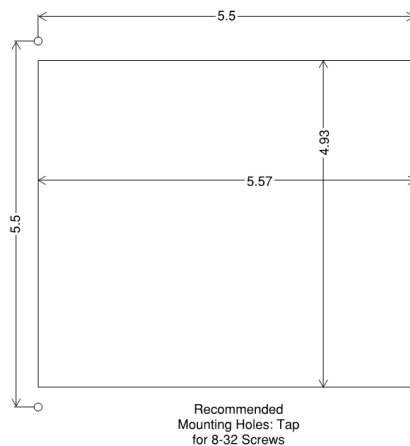
Models and Part Numbers

Model	Part number	Description
ICTD-100CP	1100-7004	Capacitor Trip Device featuring Contact Protect Technology™, cap bank level indicator, OPEN COIL CKT READY indicator
ICTD-101CP	1100-7005	Same as ICTD-100CP, plus OPEN COIL CKT TEST button
ICTD-102CP	1100-7006	Same as ICTD-100CP, plus UVR Indicator and UVR TEST button
ICTD-103CP	1100-7007	Same as ICTD-100CP, plus UVR Indicator, UVR TEST button, and OPEN COIL CKT TEST button.

Mechanical Dimensions



Panel Cutout



Important Notice

This document contains information intended to aid in the proper installation and operation of the product described. Although this information will prove useful to the properly trained and qualified user, it is not practical to cover every possible situation, installation contingency, or other detail.

It is imperative that proper engineering and techniques are adhered to in the installation, operation, and maintenance of this product. It is the responsibility of the user to ensure that any system utilizing this product is safe, and that all personnel involved with the selection, installation, maintenance, and use of this product are properly qualified. This product must not be used in situations where its ratings are exceeded.

While every effort has been made to make sure the information in this document is accurate, IE cannot guarantee that there are no errors. Users of this product should verify any aspects of the product's design or performance that are critical to their application, and in particular, any aspects that may affect the safety of the overall system or installation.

Product design and specifications may change without notice.