# **URC** Utility Relay Company **AC-PRO-II**® MICRO-CONTROLLER BASED TRIP UNIT

The AC-PRO-II® is 55% smaller & includes more features than its predecessor. In addition to standard functions of Long-Time, Short-Time, Instantaneous and Ground Fault

The AC-PRO-II<sup>®</sup> includes:

- Neutral overload
- Under-voltage alarm/trip
- Over-voltage alarm/trip
- Time stamping of events
- Patented Sluggish Breaker<sup>®</sup> detection
- Wave form capture
- Configurable alarm relay

#### **Completely Backwards Compatible**

The CTs, actuators, and wiring harness from the original AC-PRO<sup>®</sup> can be used with the AC-PRO-II<sup>®</sup>.

#### Communications

RS485 Modbus RTU communications is standard.

#### Programming

Settings are programmed using the OLED multi-line display and "smart" buttons that change their function according to the information displayed. All of the settings are entered using simple parameters (no percentages or multipliers required).

#### **OLED Multi-Line Display**

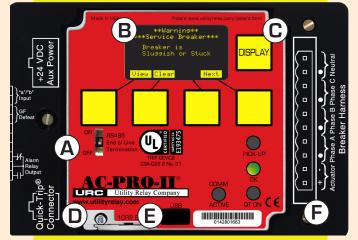
The easy to read multi-line display provides real time monitoring of 3-phase, neutral, and ground fault currents. The display portion can be rotated to allow the trip unit to fit in a variety of different breaker configurations.

#### Last Trip Data

The trip units retain all of the trip data for the last 8 trip events. This data includes the time and date, trip type, currents & waveforms of each event.

## USB Port

The electrically isolated front mounted USB port allows for easy access of trip data and protection settings. It can be used to upload/download the trip unit settings, making commissioning the trip unit much faster.



- A RS485 MODBUS RTU COMMUNICATIONS IS STANDARD
- **B** EASY TO READ OLED MULTI-LINE DISPLAY
- C DISPLAY CAN BE ROTATED FOR VARIOUS INSTALLATION OPTIONS
- D QUICK-TRIP® ARC FLASH REDUCTION READY
- E ELECTRICALLY ISOLATED USB CONNECTOR
  - BACKWARDS COMPATIBLE WITH
- F THE ORIGINAL AC-PRO® ACTUATOR & HARNESS CONNECTION

# Self-Test OK Feature

The green LED indicates that the trip unit is operating properly. This feature:

- Continuously monitors the trip unit
- Verifies that the actuator is connected
- Monitors the software routines
- Monitors the micro-controller

#### 50 Hz or 60 Hz Operation

The AC-PRO-II<sup>®</sup> is user selectable for 50 Hz or 60 Hz applications.

#### Construction

- Conformal coated circuit boards
- Contamination resistant membrane keypad
- All metal, nickel-plated enclosure

#### Warranty

All AC-PRO-II®'s come with a 2-year limited warranty.

REV 3.6.17

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## Voltage, Power, and Energy Data

Whenever voltage and power data is necessary, a Voltage Divider Module (VDM) can be attached to the back of the AC-PRO-II<sup>®</sup> trip unit. The following VDM data is available on the display and through RS485 Modbus RTU communications.

## Voltages

- 🛛 кw
- KVA
- KWHr & KVAHr
- Power Factor

#### **Sluggish Breaker® Detection**

The patented Sluggish Breaker<sup>®</sup> detection captures the mechanism time of every trip including the "first trip" and determines if a breaker mechanism is in need of service. Capturing the mechanism time of the first operation is crucial since later operations are faster because the breaker mechanism was exercised. If a mechanism's operating time is excessive, the AC-PRO-II<sup>®</sup> will alarm, indicating maintenance is required.



#### **QUICK-TRIP®**

The AC-PRO-II® is a manually controlled QUICK-TRIP® arc flash reduction system. When turned on it can reduce trip times, and when turned off allows selective coordination between circuit breakers.

A QT2-Switch or QT-Display-II™ is required to control the QUICK-TRIP<sup>®</sup> operation.

# SAFE-T-TRIP®

The handheld SAFE-T-TRIP<sup>®</sup> device allows an operator to safely trip a breaker without standing directly in front of the switchgear. When needed, the SAFE-T-TRIP<sup>®</sup> plugs into the USB port on the front of the AC-PRO-II<sup>®</sup>, or QT-Display-II<sup>™</sup>.

SAFE-T-TRIP<sup>®</sup> helps capture the "first trip" for Sluggish Breaker<sup>®</sup> detection by tripping the breaker prior to removing the breaker from the cubicle.

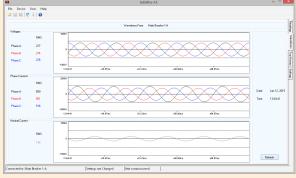


The InfoPro-AC is a graphical user interface application available free of charge for easy interface between a computer and the AC-PRO-II<sup>®</sup>.

The computer connects to the USB connector on the front of the AC-PRO-II.

InfoPro-AC includes the following features:

- AC-PRO-II<sup>®</sup> Settings (Upload & Download)
- Waveforms on demand
- Current, voltage, & power readings on demand
- Data on the last 8 trips including the waveforms
- Save Trip data, settings, and waveforms for later use



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