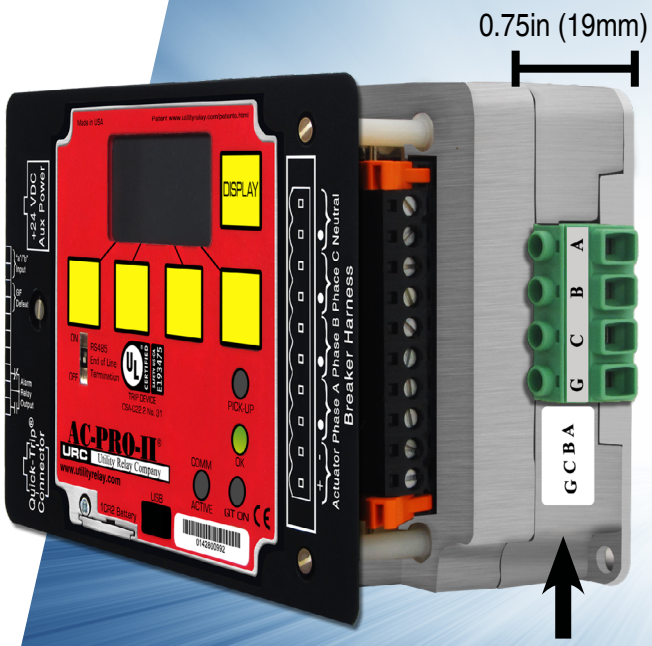
Power Precision

AC-PRO-II® with VDM

(Voltage Divider Module)

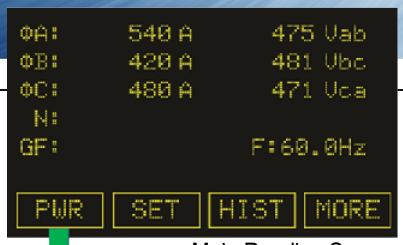


The AC-PRO-II® with VDM is available for applications where voltage and power information and/or voltage-based protection is desired.

In addition to all standard AC-PRO-II® features, the AC-PRO-II® with VDM features include:

- ❑ Voltage Metering
- ❑ Power Metering:
  - KW, KVA, KWHr, KVAHr, Power Factor
- ❑ Voltage-Based Protective Features
  (all can be turned ON or OFF in the field)
  - Under-Voltage Trip & Alarm
  - Over-Voltage Trip & Alarm
  - Phase Loss/Reverse Trip and Alarm
- ❑ Continuous Trip Unit Power

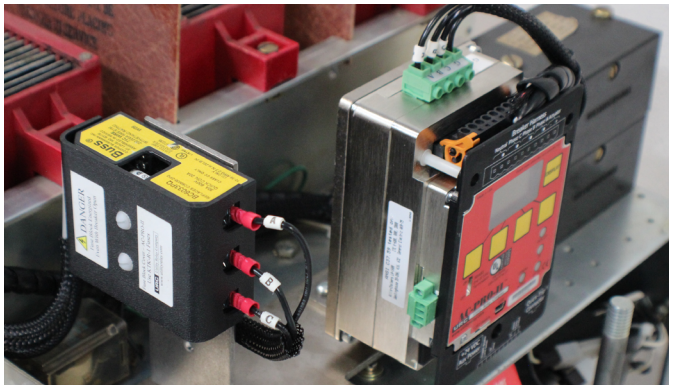
The VDM is rated for up to 600V three-phase power systems. In addition, the VDM provides continual power to the AC-PRO-II® when the breaker line side is energized, allowing the trip unit to communicate breaker status even if the breaker is open or not carrying sufficient current. For that reason, the VDM option is recommended if the trip unit will be incorporated into a communications system in order to avoid the possibility of intermittent communications.



Main Reading Screen

Power Metering Screen

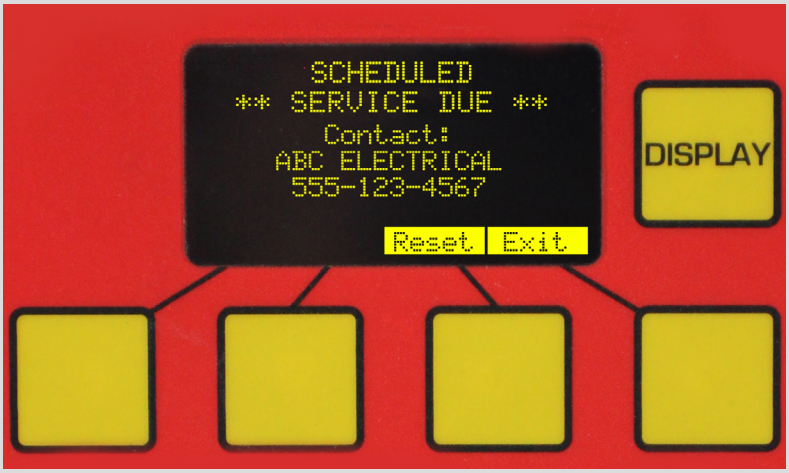
Line-side voltage connections on DS Breaker (Fingers Removed)



AC-PRO-II® with VDM and Fuse Block with cover on DS Breaker

Scheduled Service Reminder

Regular inspection and maintenance are critical for the proper function and longevity of circuit breakers. With AC-PRO-II®'s Scheduled Service Reminder, you can program a reminder date for breaker service. You can even enter company name and contact information so that on the reminder date, a "Service Reminder" screen will appear, and the service company can be called in to perform the preventative maintenance.
In addition, the Scheduled Service Reminder can trigger an alarm relay operation and/or a communications alarm.



AC-PRO-II® screen with Scheduled Service Reminder message

QT2-Switch for QUICK-TRIP® operation

QUICK-TRIP® Maintenance Switch

The QUICK-TRIP® system is a manually controlled arc flash reduction system. It can reduce trip times when turned on and allows selective coordination between breakers when turned off. Additional components are required. Options include a basic cubicle door QT2-Switch with a pad-lockable switch and LED indicator, and/or cubicle door QT-Display*

**Interface module required*

Energy and Power Data

Monitoring energy and power usage at the LV circuit breaker level can allow for better management of resources.
AC-PRO-II® equipped with a Voltage Divider Module (VDM) measures the following data and makes it available on the OLED display as well as through RS485 Modbus RTU communications for use with Smart 1-Line® or other third party HMI package.

- ❑ Real and Apparent Power (KW, KVA)
- ❑ Power Factor (PF)
- ❑ Real and Apparent Energy (KWHr, KVAHr)
- ❑ Real and Apparent Power Demand (KWD, KVAD)

SLUGGISH BREAKER®

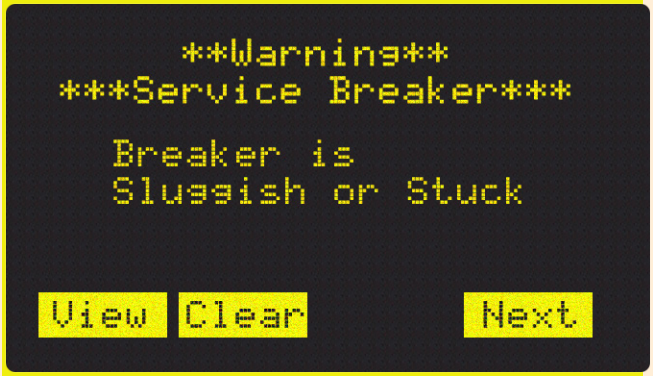
PATENTED METHOD FOR DOCUMENTING THE CONDITION OF THE BREAKER MECHANISM

The patented Sluggish Breaker® detection feature captures the breaker mechanism time when a trip occurs that was initiated by the trip unit. If the breaker mechanism time is in excess of the Sluggish Breaker® mechanism time setting, an alarm message will appear, and if programmed, the alarm relay will operate.

When the trip unit sends a trip pulse to the breaker actuator, the Sluggish Breaker® timer starts. *The trip unit determines the breaker mechanism time by one of two methods:*

Limit Switch:
For many breakers, a limit switch is provided that operates when the mechanism is fully open. The trip unit will record the breaker mechanism time based on the change in state of the mechanism limit switch that is wired to the trip unit. This allows the mechanism time to be recorded even if current was not flowing at the time of the trip. The Sluggish Breaker® timer stops when the limit switch contact changes state.

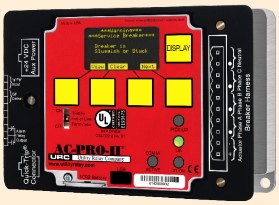
For breakers where limit switches are not yet included in the retrofit kit design, the AC-PRO-II® can use the "Zero Current" method to determine breaker mechanism time.



- ❑ **Patented Sluggish Breaker® detection is included as part of the firmware of the newer trip units from URC**
- ❑ **Measures the breakers mechanism time on every trip operation including the critical first operation**
- ❑ **Provides before and after values for the breaker service test report**
- ❑ **For AC-PRO-II®, the Sluggish Breaker® threshold is user programmable from 20-80 milliseconds**
- ❑ **For AC-PRO-MP®, the Sluggish Breaker® threshold is fixed at 33 milliseconds**

Compatible URC Products with the Sluggish Breaker® detection

AC-PRO-II®



The AC-PRO-II® is a state of the art, micro-controller based trip unit for use on 3-phase, 600 volt class, AC circuit breakers on 50 Hz or 60 Hz systems.

AC-PRO-MP & AC-PRO-MP-II®

The AC-PRO-MP® and AC-PRO-MP-II® are plug-in, direct replacement trip units for Merlin Gerin & Schneider Electric Masterpact MP, IEC, or UL rated breakers.

SAFE-T-TRIP®

The hand-held SAFE-T-TRIP® device provides a means for an operator to safely trip a breaker without having to stand directly in front of the breaker.

REV 7.24.18

ISO 9001 2015 CERTIFIED

NETA CORPORATE ALLIANCE PARTNER

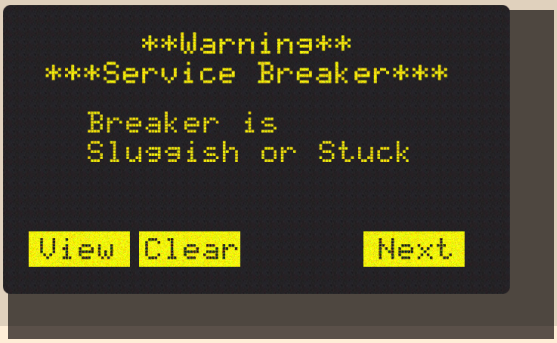
Voltage, Power, and Energy Data

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

- ❑ Voltages
- ❑ KW
- ❑ KVA
- ❑ KWHr & KVAHr
- ❑ Power Factor

Sluggish Breaker® Detection

The patented Sluggish Breaker® 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® 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® operation.

SAFE-T-TRIP®

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

SAFE-T-TRIP® helps capture the “first trip” for Sluggish Breaker® detection by tripping the breaker prior to removing the breaker from the cubicle.

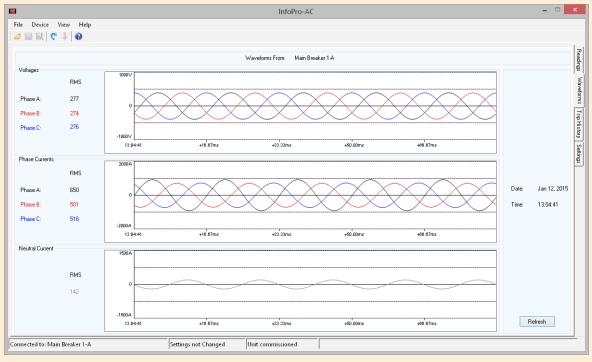
InfoPro-AC Software

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

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

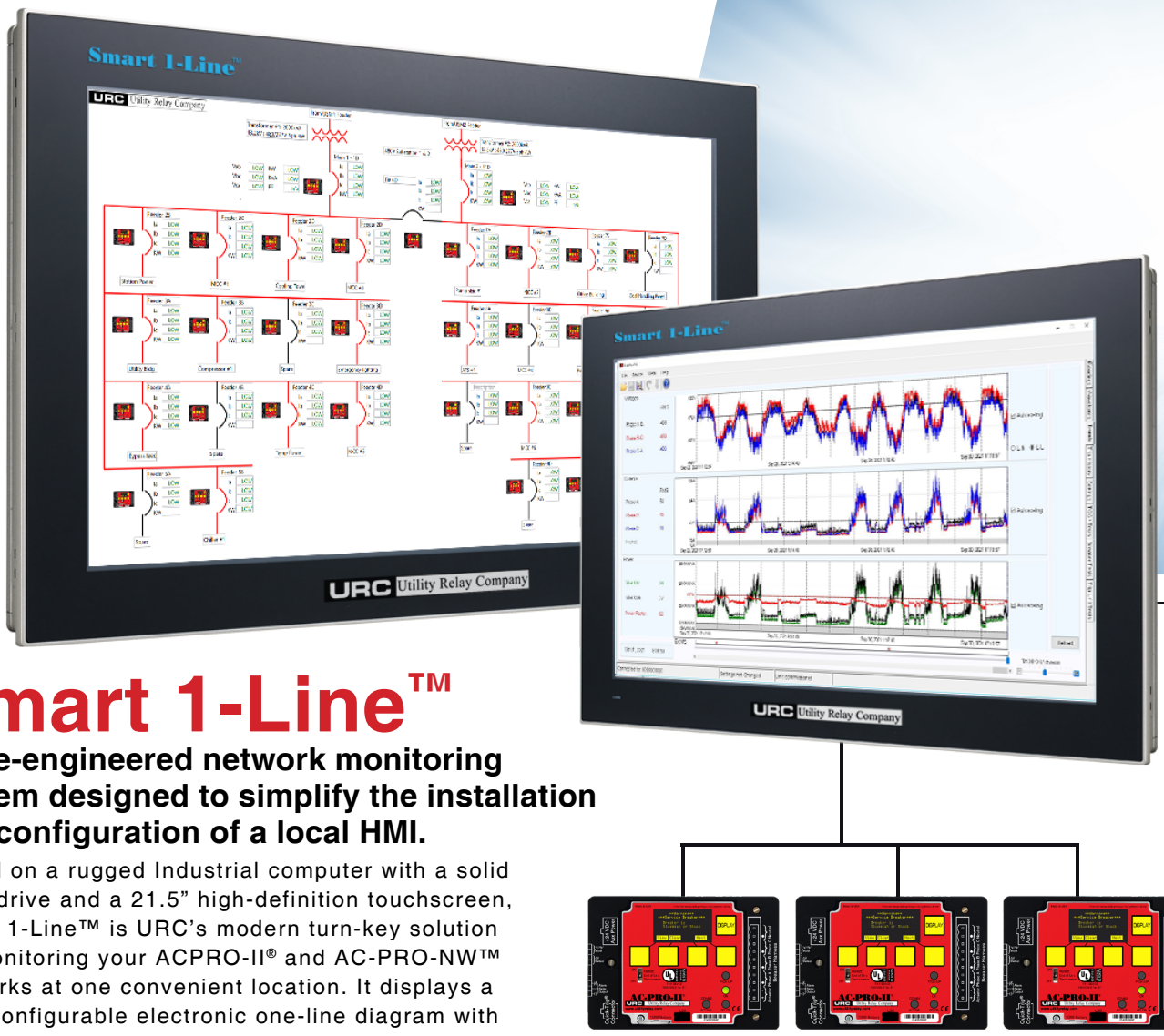
InfoPro-AC includes the following features:

- ❑ AC-PRO-II® 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



ISO 9001 2015 CERTIFIED

NETA CORPORATE ALLIANCE PARTNER



Smart 1-Line™

A pre-engineered network monitoring system designed to simplify the installation and configuration of a local HMI.

Based on a rugged Industrial computer with a solid state drive and a 21.5" high-definition touchscreen, Smart 1-Line™ is URC's modern turn-key solution for monitoring your ACPRO-II® and AC-PRO-NW™ networks at one convenient location. It displays a field configurable electronic one-line diagram with breaker readings, status, trending, remote breaker control, and more. Improve safety and increase productivity with Smart 1-Line™.

The Smart 1-Line™ features include*:

- ❑ Turn-key solution for monitoring URC products via Modbus communications
- ❑ Designed for switchgear or control room
- ❑ Real-time monitoring of current, voltage, power, energy, breaker status, waveforms, alarms, and more
- ❑ Field configurable to match one-line drawing
- ❑ Remote breaker trip, close, and QUICK-TRIP® control
- ❑ Trending of historical data

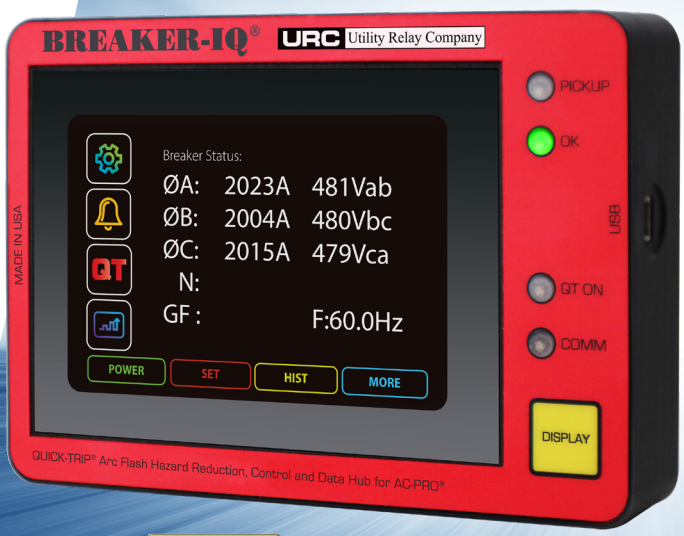
** Features may vary depending on type of URC trip units installed*

Power Precision

BREAKER-IQ™

QUICK-TRIP® ARC FLASH REDUCTION, BREAKER CONTROL AND DATA HUB FOR AC-PRO®

Safely view breaker status, engage and disengage the QUICK-TRIP® arc flash reduction system, trip and close breakers, and analyze data with the new BREAKER-IQ™ - all without having to open the cubicle door.

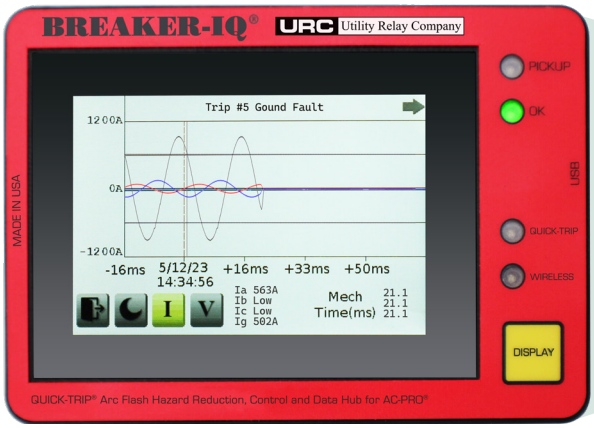


- ❑ Touchscreen for QUICK-TRIP® control or use with external QT switch (existing URC product)
- ❑ Delayed Trip and Close via included terminals for easy wiring (on door) into Close circuit
- ❑ User interface matches AC-PRO-II®
- ❑ Wireless communications
- ❑ USB ports
- ❑ 3.5” color touch screen
- ❑ Display is always ON
- ❑ Indication LEDs
- ❑ Cable Connection to AC-PRO-II®
- ❑ Backwards compatible with legacy AC-PRO®*

**Features limited to mimic AC-PRO® screen*

External QT-Switch with pad-lock cover

BREAKER-IQ™ improves operator safety, reduces arc flash hazards, and enhances operational efficiency. By minimizing the need to physically access the circuit breaker, this innovative product contributes to a safer and more efficient operating environment.



BREAKER-IQ™ on cubicle door.

AVAILABLE Q4 2023

REV 10.10.2023