

## POWER DIRECTION DETERMINATION OF NETWORK CABLES USING THE MODEL 820001 POWER DIRECTION CLAMP

### I. SCOPE

This specification describes the operation of the Power Direction Clamp Model 820001, and the testing of network cables in the field to determine power flow.

### II. GENERAL

The Power Direction Clamp is designed to indicate the direction of power flow in single conductor cables. It will operate on 125/216 and 277/480, 60 Hertz, secondary network cables with at least 10 amps of current flowing. Forward power flow is defined as flow from the back of the device towards the front of the device. The unit uses a capacitive voltage sensor and a hall effect current sensor. Although no damage will occur to the unit, for operator safety, direct contact with live conductors should be avoided with the copper capacitive pick up. Operators should use all normal protective equipment for the work environment.



### III. INDICATORS

**BATT** – Indicates valid battery condition

**VOLT** – Indicates valid voltage sensed

**CURR** – Indicates valid current sensed

**FWD** – Indicates forward power flow (back to front)

**REV** – Indicates reverse power flow (front to back)

### IV. TEST PROCEDURE

- A. Place the clamp around the cable under test with the back of the device towards the network transformer. To ensure proper operation of the device, the jaws of the clamp must be fully closed and the operators hand kept away from the capacitive voltage pickup (copper spring clip).
- B. Press the <PUSH TO TEST> button.
- C. Observe the indicators
  1. **BATT** - LED on
  2. **VOLT** - LED on
  3. **CURR** - LED on
- D. The **FWD** or **REV** LED will light to indicate the direction of power flow.
  1. **FWD** – power flow towards network
  2. **REV** – power flow towards transformer (backfeed)