

# EN1501 Pulse Meter Transmitter and EN1501-XL Pulse Meter Transmitter with Extended Life

## Installation and Operation Manual

### 1 Overview

Connected to pulse-output meters being used for multi-family submetering, the EN1501 pulse meter transmitter and EN1501-XL pulse meter transmitter with extended life will transmit data to an RF receiver that is connected to a Data Concentrator and Communicator (DCC-5800). The EN1501 includes a replaceable battery; the EN1501-XL includes a long-life battery that is not replaceable.

#### 1.1 Inovonics Wireless Contact Information

If you have any problems with this procedure, contact Inovonics Wireless technical services:

- E-mail: support@inovonics.com
- Phone: (800) 782-2709; (303) 939-9336

#### 1.2 EN1501/EN1501-XL Components

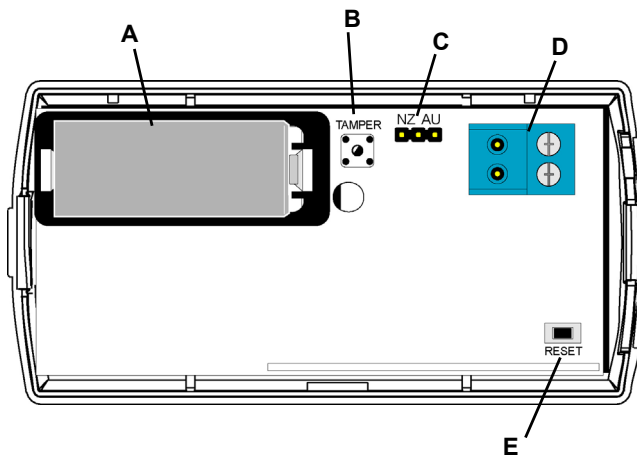


Figure 1 EN1501/EN1501-XL Components

- A Battery (EN1501-style battery shown)    B Tamper switch    C Frequency band selection pins  
 D Removable header terminal    E Reset button

#### 1.3 What's In The Carton

- Fifty drywall anchors.
- Fifty mounting screws.
- Fifty pieces of mounting tape.

### 2 Installation and Startup

#### 2.1 Installation Notes

- These products are designed to be maintained by professional security technicians.
- Products are tested for indoor use.
- All products should be manually tested weekly.

#### 2.2 Input Requirements

The EN1501 and EN1501-XL require the following input specifications for compatibility:

- A dry contact such as a reed switch is required.
- The pulse width of a switch output when it is activated must be greater than or equal to 10ms.
- The fastest pulse rate must be one pulse every four seconds.
- Closed impedance of the pulser mechanism must be smaller than 1k ohm.

- Open impedance of the pulser mechanism must be greater than five megohms.

#### 2.3 Connect Transmitter to Meter

Connect the transmitter to the meter as follows:

1. Open the housing by pressing down on the base tab near the wiring through-hole while lifting away the cover.
2. Fully insert stripped wires into the removable header terminal.
3. Use a small Phillips screwdriver to tighten the screws that secure wires to the removable header terminal.
4. Attach removable header terminal (if removed) to the transmitter board as shown.

**Note:** If connecting to a meter that has polarity to its pulse output, the negative (-) should be connected to the outside terminal, closest to the corner of the board.

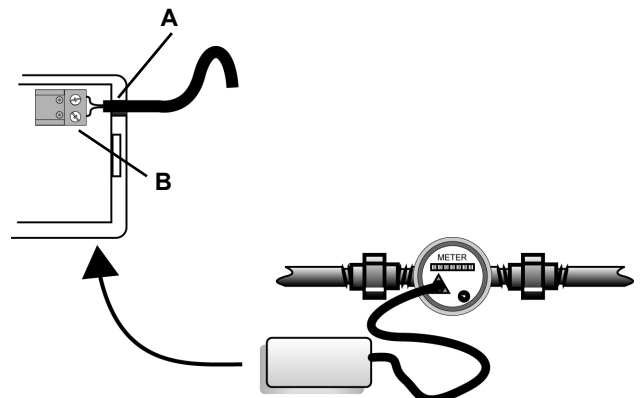


Figure 2 Connect the Transmitter to the Meter

- A Cabling through-hole    B Removable header terminal

#### 2.4 Mount the Transmitter

5. Use the double-sided tape to mount the transmitter to a clean wall.
6. As desired, secure the transmitter to the wall with the mounting screw and anchor.

**Note:** To secure the EN1501, you will need to remove the battery to access the mounting screw hole. Make sure to press the reset button after replacing the battery to initialize the transmitter.

**Note:** Ensure cabling enters the housing through the access wiring through-hole, and replace the housing (Figure 2).

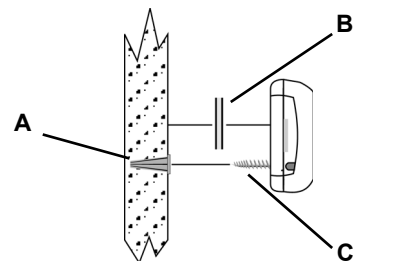


Figure 3 Mount the Transmitter

- A Anchor installed in wall    B Double-sided tape  
 C Mounting screw

#### 2.5 Register the Transmitter

**Note:** See "Programming the PMT-Meter Pair" in TapWatch User Manual for more information.

7. Confirm that transmitter is connected to the meter.
8. Confirm that the battery is installed.
9. Go to the "Registered Meters" tab of the Site Information editor.

10. Click "Add" on the "Registered Meters" page; confirm selected building.
11. Complete the "Add New Meter To..." form when it appears.
12. Click the "Register" button.
13. When prompted, press the reset button on the transmitter; wait for confirmation.

### 3 Replace the Battery (EN1501 Only)

When the low battery message is received, you will need to replace the EN1501 battery.

1. Open the housing by pressing down on the base tab near the wiring through-hole while lifting away the cover.
2. Remove the old battery, taking note of the battery orientation.
3. Insert the new battery, making sure it is aligned correctly.
4. Press the reset button.

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**Note:** EN1501 transmitters retain programming data in non-volatile memory. They do not require reprogramming after loss of power. Install new battery and press the transmitter reset button to initialize the transmitter and restore programming. Its count will go to zero and the initial Meter Read count will be updated in the DCC.

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### 4 Specifications

Dimensions: 3.57" x 1.70" x 0.85"

Operating environment: -20°- 60°C (-4°- 140°F), 90% relative humidity, non-condensing

Typical battery life: EN1501: 10 year battery life in a climate controlled environment with the specified Panasonic CR123A battery; EN1501-XL: calculated battery life of 20 years at 70 to 90°F (20 to 30°C). Higher temperatures reduce battery life.

EN1501 Battery (BAT604): 3.0V lithium (DL123A) The battery is always supervised.

### 5 Television and Radio Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### 6 FCC Part 15 and Industry Canada Compliance

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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**Caution:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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### 7 US Patent Numbers

- 7,154,866.
- 7,554,932.
- 7,746,804.
- Other patents pending.