EN1702 Current/Voltage Data Transmitter
Installation Instructions

1 Overview

The Inovonics EN1702 current/voltage data transmitter offers the flexibility of an Inovonics universal transmitter, with out-of-the-box compatibility for both voltage and current analog sensors, to support a variety of data logging applications. The EN1702 current/voltage data transmitter can be used to wirelessly monitor and measure conditions including differential pressure, tank level, gas and volatile compound levels, extremely high and low temperatures, current consumption, and more.

The EN1702 current/voltage data transmitter must be used with the Inovonics EN4000 serial receiver or EN6040 network coordinator, and requires an application designed to support advanced functionality.

1.1 Inovonics Contact Information

For product and installation videos visit us at www.inovonics.com/videos or use the QR code below.

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

- E-mail: support@inovonics.com.
- Phone: (800) 782-2709.

1.2 EN1702 Internal Components

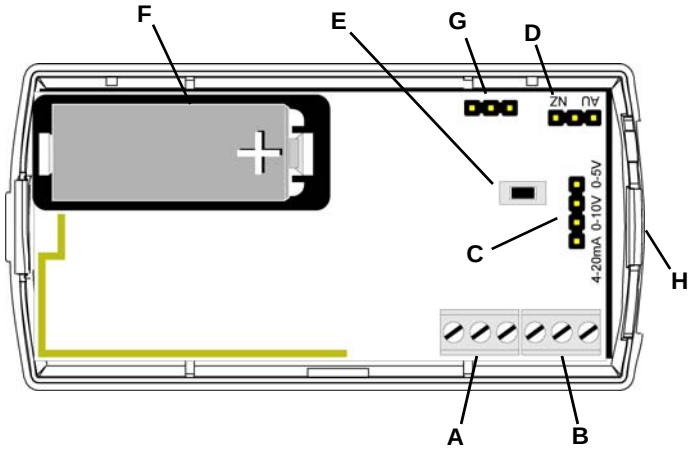

Figure 1 EN1702 internal components

A First external sensor terminal block
B Second external sensor terminal block
C Sensor input selection pins
D Frequency band selection pins
E Reset button
F Battery
G Programming header
H Housing release tab

1.3 What's In The Carton

- Three wall mount screws.
- Three wall mount anchors.
- Two selection jumpers.
- One piece of mounting tape.
- One 3.0V lithium battery.

2 Installation and Startup

2.1 Installation Notes

- These products are designed to be installed and maintained by professional technicians.
- Products are intended for indoor use.
- Manually test all products weekly.

2.2 Install the Battery

1. Pry the top lip of the mounting bracket up, and lift the bracket off of the transmitter.
2. Use your thumb to depress the housing release tab; separate the housing.
3. Install the new battery.
4. Press the reset button to initialize the transmitter. If replacing a battery, the transmitter's most recent programming will be restored upon initialization.

2.3 Select the Frequency Band

EchoStream products are able to use a range of radio frequencies, and must be configured for your geographic area. This product ships with a default frequency range of 902-928 MHz for use in North America. If you are using the product in North America, skip to section 2.4, "Attach the Analog Sensor(s) and Select Input"; if you are using the product in Australia or New Zealand, you will need to configure the transmitter.

5. Place a selection jumper on the appropriate frequency band selection pins.
   - Place the jumper on the left two pins, marked NZ, to set the frequency range to 921-928 MHz for New Zealand.
   - Place the jumper on the right two pins, marked AU, to set the frequency range to 915-928 MHz for Australia.
6. Press the reset button to complete configuration.

Caution: When pressing the reset button, make sure you don't also touch the frequency band selection pins. Touching the frequency band selection pins while pressing the reset button can inadvertently set the current/voltage data transmitter to the wrong frequency band.

2.4 Attach the Analog Sensor(s) and Select Input

The EN1702 current/voltage data transmitter is compatible with the EN4000 serial receiver and EN6040 network coordinator, and requires an application designed to support advanced functionality.

Inovonics has tested the following analog sensors for compatibility.

- Carbon dioxide (CO): Kele® Model CD-A carbon dioxide sensor; Omega Engineering® TXCO-50 series carbon monoxide transmitters.
- Relative humidity: Omega Engineering HX71 series relative humidity sensor/transmitter.
- Temperature: AutomationDirect® ProSense® head mount RTD temperature transmitters; Omega Engineering TX-M12-RTD series RTD transmitters.
- Thermocouples: Jumo® mineral-insulated thermocouple with bare connection wires to DIN 43710 and DIN EN 60584 (901210); RS Pro® thermocouple and extension wire type N 2 Core PVC sheath 100m.
- Differential pressure: Omega Engineering PX274 or PX277 series differential pressure transmitters.
- Pressure transducer: Omega Engineering PXM309 series industrial pressure transducers.
- Volatile organic compounds (VOC): Rae Systems® RAEGuard 2 PID detector.

To confirm compatibility with other analog sensors not listed, please contact Inovonics technical support.

2.5 Select Input Type and Attach the Analog Sensor(s)

To use the EN1702 current/voltage data transmitter, you must select the input type and connect the analog sensor(s) to one or both of the terminal blocks.

7. Place a selection jumper on the appropriate sensor input selection pins.

Note: If you are using dual inputs, the selection you make here will apply to both of them.

- Place the jumper on the bottom two pins to select a sensor input of 4-20mA.

Figure 2 Select 4-20 mA

- Place the jumper on the middle two pins to select a sensor range of 0-10V.

Figure 3 Select 0-10V

- Place the jumper on the top two pins to select a sensor range of 0-5V.

Figure 4 Select 0-5V

8. Referring to figure 5, use a small screwdriver to attach the external sensor(s) wiring leads to the appropriate terminal blocks. If you are using a single input, wire to the first external sensor terminal block; if you are using dual inputs, use the first and second external sensor terminal blocks.

Note: The analog sensor cable length must not exceed three feet.

Note: If you are using dual inputs, both of them must be wired per your jumper selection.

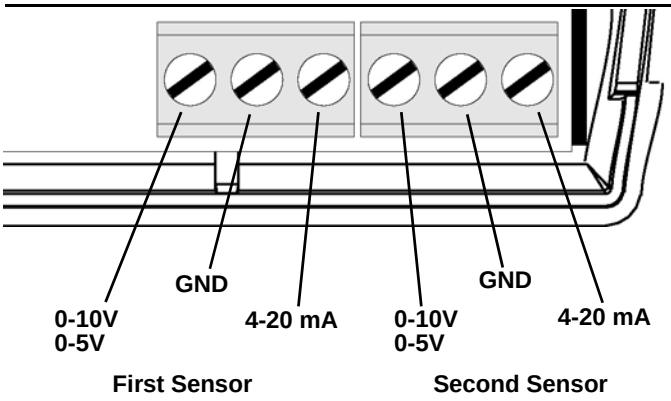

Figure 5 External sensor wiring

9. Press the reset button to complete the procedure.

2.6 Program the Transmitter

EN1702 transmitters are programmed at the factory. It is not usually necessary to reprogram EN1702 series transmitters. If you want to reprogram the transmitter, parameters can be changed using the programming header.

2.7 Mount the Transmitter

10. Attach the mounting bracket to the desired location, using the included screws or double-sided tape.

Note: There are two mounting holes for standard installation. An optional third mounting hole is located under the battery. Use the third mounting hole to secure the housing to the bracket.

11. Hook the bottom of the transmitter into the bracket's bottom catch, and press the transmitter into the bracket so that the bracket's top lip snaps into place.

3 Specifications

Distance, external contact to transmitter: Three feet maximum.

Typical battery life: Eight years at a five minute transmission interval.

Battery type: 3.0V lithium, 1.4Ah (BAT604).

Power requirement: 3VDC, 60 mA.

Operating environment: -4°F to 140°F, up to 90% (non-condensing).

4 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.

5 Compliance Information

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.

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

6 US Patent Numbers

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