

# (((ECHOMETER)))

## Wireless Sensor User Guide

### Scope:

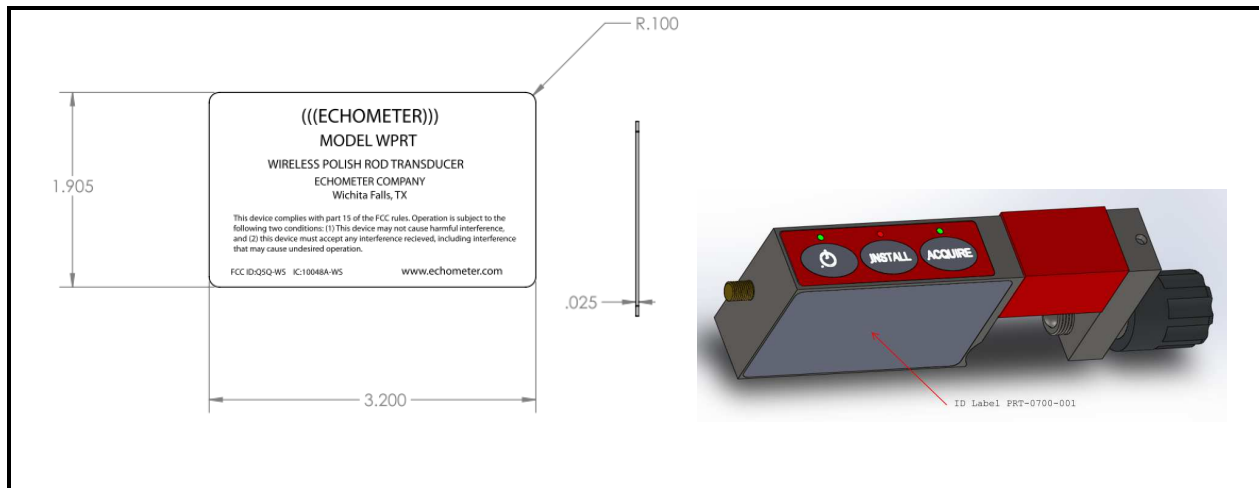
This manual pertains to the products listed in Table 1 below. Associated FCC and IC identification numbers are listed, as well as page number for the specific sensor's installation instructions. Table 2 includes the FCC Label design and intended installation location.

Sensor Model # : Description	FCC ID	IC ID
<b>WPRT:</b> Wireless Polished Rod Transducer	<b>Q5Q-WS</b>	<b>10048A-WS</b>
<b>WHT:</b> Wireless Horseshoe Transducer		
<b>WHT50K:</b> Wireless Horseshoe Transducer - 50,000 pounds		
<b>WPT:</b> Wireless Pressure Transducer		
<b>WGDA:</b> Wireless General Data Acquisition		

*Table 1*

All of the above utilize the same electronic PCB, Antenna, Battery, and run the same Firmware. The PCB in each case is packaged in a fully enclosed stainless steel enclosure. Each model includes a different transducer element wired to the PCB (such as a strain gauge, or thermistor).

The instructions and pictures below depict the **WPRT** model. All other models will be similar except for differences in the physical form factor.



*Table 2*

The Wireless Sensors are components of the **Echometer Well Analyzer** and designed to be used with the **Echometer WB100 Wireless Base**, providing a wireless option for obtaining data, (such as dynamometer, power and pressure/temperature). The data is analyzed by the Echometer Company  
 5001 Ditto Lane  
 Wichita Falls, TX 76302

# (((ECHOMETER)))

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Echometer TAM software which runs on a PC/Notebook and utilized to provide analysis of well performance. Please refer to the **Echometer TAM Software User Manual** for instructions specific to software operation and to the **Echometer WB100 Wireless Base User Manual** for instructions specific to that device.

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- **WARNING:** *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*
  - **NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's expense.
  - This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the antenna and your body.
  - This Class A digital apparatus complies with Canadian ICES-003. (Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada)
  - This device has been designed to operate with the antennas listed below. The specific models listed or substitutes as specified below may be used.
    - Pulse W1030
    - Linx Tech ANT-2.4-CW-RAH-RPS: 2.4GHz
    - Substitutes may be used, as long as they meet the 2.4GHz, 50Ω, <=2dBi gain, RPSMA Male requirements.
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### WPRT Installation:

1. Clamp the **Wireless Polished Rod Transducer (WPRT)** to the polished rod on the oil well below the carrier bar.
2. Install the antenna as shown. It is desirable that the antenna be pointed upwards during operation.



3. Press the *Power* button on the **WPRT** as indicated below:



- a. The LED above the *Power* button will proceed with the LED test, (illuminating three green, and then three red LEDs).
  - b. Following the LED test, the *Power* button LED will flash a maximum of ten times in rapid succession to indicate battery power. A fully charged battery will flash ten times, with fewer flashes as the battery charge drops. Recharge the battery when the flashes reduce to two.
  - c. Following the battery test, the *Power* LED will flash once per second to indicate the **WPRT** is ready to proceed.
4. Press the *Install* button as shown below:



- a. The *Install* LED will flash **RED** if the WPRT is too tight or flash **GREEN** if it is too loose. Tighten or loosen the knob as needed until the LED illuminates solid green.

# (((ECHOMETER)))

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5. Press the *Acquire* button as shown below to initiate data acquisition. Use the TAM software and instructions to complete the test.



Pressing ACQUIRE again will stop acquisition.

6. To turn off the **WPRT**, simply press the *Power* button for two seconds.