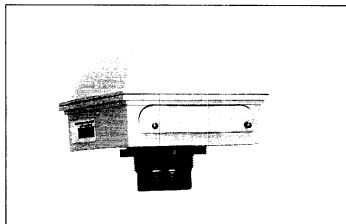


# Barton®



## TankScan™ T-Series TU10 Ultrasonic Level Monitor

### Installation Manual

Version 00G05c

ID#11687

8/2000

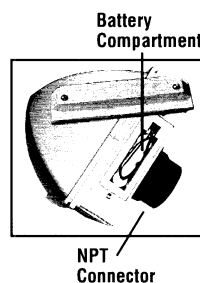
The **TankScan Wireless Level System** has four main components: Monitor, Controller, Fill Indicator, and PC Host Software. The **TU Monitor** consists of an electronics housing and an ultrasonic sensor for measuring tank fluid level. The **Controller** includes a Radio/Modem enclosure, an antenna, and an AC power adapter. The **Software** features, operation, and installation are covered in the software user manual.

### System Installation Steps

- A. Install controller (distance & line-of-sight location predetermined).
- B. Install monitor(s) on the tank(s)
- C. Install fill indicator(s) at an accessible location near the fill point.
- D. Install software on host PC
- E. Power up and configure the controller
- F. Power up the monitor(s) and fill unit(s).

### Monitor Installation

1. Unpack Monitor assembly.
2. Install Monitor — screw bottom of monitor into a 2 inch female NPT connection — **hand tighten only**.
3. After installing and configuring the TankScan Controller, install Monitor's Battery Pack (included).



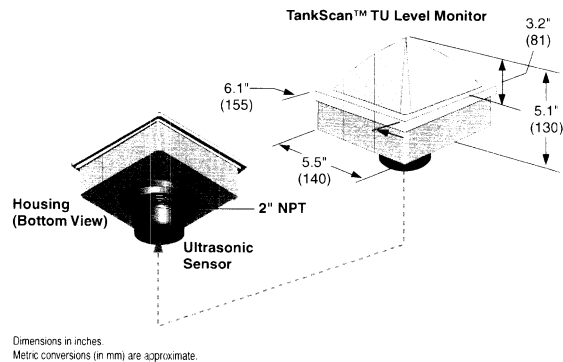
Remove the Monitor's compartment cover by unscrewing the (2) screws (w/ small bladed screwdriver). Insert battery pack into compartment and plug keyed connector into the socket (on right). Finally, position the wires to prevent damage, then reattach the cover.

Specifications

TU10 Ultrasonic Level Monitor

Measurement Method	50 kHz Ultrasonic
Measured Value	Level
Measurement Range	0.5 to 18 feet (0.15 to 5.4 m)
Accuracy	±0.25% of span in air (6 inch/15 cm deadband at sensor)
Output	Transmits ID, level data, battery voltage, radio signal strength, and internal status on demand from controller
Radio Communications	Transmits up to 500' (150 m), line-of-sight, in 902-928 MHz band (North America)
Operating Temperature	-40°F/°C to +140°F (+60°C)
Power Requirements	Battery Pack [4-AA Alkaline]
Construction	Weatherproof, non-corrosive, NEMA-4/IP65, PBT (Polybutylene Terephthalate) enclosure; PVDF transducer assembly
Pressure Rating	15 PSI (1 bar) maximum
Ultrasonic Beam Width	8° conical
Approvals	Intrinsically Safe; North America: Class I, Div. 1, Groups C & D (See approval statements on page 3).
Mounting	2 inch NPT male (standard)

Dimensions



Replacement Parts List

Part Description	Part Number
Monitor	
Battery Pack	0130-1044T

## **COMPLIANCE STATEMENTS**

### **FCC COMPLIANCE STATEMENTS FOR TU10**

#### **FCC PART 15 NOTICE**

This equipment has been tested and found to comply with the limits for Class B 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 residential 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 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: re-orient 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, and/or consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that changes and modifications made to this equipment without approval of the manufacturer could void the user's authority to operate this equipment.

#### **WARRANTY AND REPAIR SERVICE IN THE USA:**

Barton Instrument Systems  
900 South Turnbull Canyon Road  
City of Industry, CA 91745  
1-800-291-3550, ext. 269 or (626) 961-2547

### **CANADIAN COMPLIANCE STATEMENTS FOR TU10**

The Industry Canada (IC) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The department does not guarantee the equipment will operate to the user's satisfaction.

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.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier.

#### **CAUTION**

Do not attempt to make electrical ground connections yourself, contact the appropriate electrical inspection authority or an electrician.

#### **EMISSION REQUIREMENT**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

#### **WARRANTY AND REPAIR SERVICE IN CANADA:**

Barton Instrument Systems  
3840 - 11A Street N.E.  
Calgary, Alberta T2E 6M6  
(403) 291-4814

## Order Code

TankScan T-Series TU10 Ultrasonic LEVEL MONITOR CONFIGURATION		ORDER CODE									
		TU10	#	-	X	#	X	##	X	#	X
<b>RADIO</b>											
North American Battery Powered, 916.5 MHz RF, Plastic Case			4								
<b>MEASUREMENT RANGE</b>											
Medium (50 kHz) to 18 feet (approx. 5 m)					B						
<b>MOUNTING</b>											
2-inch NPT Male Thread						3					
2-inch G Thread with Viton Gasket						4					
<b>POWER OPTIONS</b>											
Battery Pack (4 AA-Alkaline)							A				
<b>RF COMMUNICATIONS CHANNEL (To Controller)</b>								01			
<b>FIRMWARE</b>											
Standard									A		
<b>MEASUREMENT INTERVAL</b>											
2 hours										1	
4 hours										2	
8 hours										3	
16 hours										4	
<b>APPROVAL RATING</b>											
Non-hazardous (general purpose)											A

## Barton Instrument Systems, LLC

900 S. Turnbull Canyon Rd.  
City of Industry, CA 91745 USA  
(626) 961-2547

On the Web at [www.barton-instruments.com](http://www.barton-instruments.com)

©Copyright 2000, Barton Instrument Systems, LLC. All rights reserved.