



# Tellog MTU-41



## LORA WIRELESS, BATTERY-POWERED METER TELEMETRY UNIT

### WATER METER TOTALIZER AND FLOW MONITORING/ALARMING

Water and wastewater utilities are facing significant challenges due to water shortages, storm events and flooding, expanding customer service expectations and increasing environmental regulations. Budget constraints mean that utilities must do “more with less” and operate their networks more effectively and efficiently.

For utilities to meet these requirements they need visibility in near real time, of how their network is performing and responding to the demands placed upon it. In the past, the cost was prohibitive to deploy monitoring equipment to the scale required to give operations staff the required insight. But that is now possible with the Telog 41-Series.

As part of a smart water infrastructure, the Telog 41 Series sensors are designed to enable utilities to monitor real-time operations, assess the condition of assets, repair leaks to reduce non-revenue water (NRW) and manage critical infrastructure. The sensors provide a cost effective solution to address the information deficit in water distribution and wastewater collection systems.

Tellog MTU-41 establishes a new standard in low power, wireless sensors for monitoring water meter totalizer registers and interval flow history. It allows utilities to deploy on new flow meters or retrofit existing flow meters with a cost effective sensor to monitor flow rates in the field, providing an up to date view of flow and driving efficiencies in operations by removing the need for manual meter reads.

By deploying Tellog MTU-41s for bulk flow meters and custody transfer meters in their network, utilities can dramatically improve their insight into network behavior while achieving significant savings in operational costs.

Powered by a single user replaceable ‘C’ cell lithium battery, the Tellog MTU-41 collects the absolute totalizer value from a meter register at periodic intervals defined by the user; (e.g. every 5 minutes). The interval flow volume is then obtained by computing the difference between register reads. The interval flow (gallons or other units) and the interval register values are automatically transferred to a central host computer on a user defined schedule over a LoRaWAN™ network.

The Tellog MTU-41 automatically recognizes 6, 7, 8, or 9 digit water meter registers that satisfies a 3-wire AMR/AMI serial protocol e.g. Sensus Protocol and compatibles.

The Tellog MTU-41 uses a low power, long range LoRaWAN communication protocol which is an industry standard for the emerging Internet of Things (IoT). The modem, antenna, pressure signal conditioning, data recorder and battery are integrated into a small, environmentally rugged package making the MTU-41 easy to install and put into service.

Making data calls every 15 minutes, the recorder can operate an average of 5 years on one user replaceable ‘C’ cell Lithium battery. This significantly reduces the cost of ownership as the need to visit remote sites for frequent battery changes is removed.

The Tellog MTU-41 is compatible with all Tellog software applications, including Trimble Unity, Telog Enterprise and Telogers for Windows application software. This ensures that utilities have a complete solution addressing all their remote monitoring needs across their operations, delivered in a manner that suits each individual utility’s operations and IT needs.

### Applications

- ▶ Remote monitoring of Custody Transfer points in Water/Wastewater
- ▶ Remote monitoring of bulk flow meters in Water/Wastewater networks

### Features

- ▶ Transmit meter register values at user defined intervals
- ▶ Wireless communication
- ▶ Time stamped events
- ▶ LoRaWAN communication protocol
- ▶ Integral antenna
- ▶ 5 year battery life with 15 minute transmits
- ▶ User replaceable ‘C’ cell Lithium battery



#### TELOG 41 SERIES

- Tellog PR-41 - Pressure Recorder
- Tellog WL-41 - Level Recorder
- Tellog RG-41 - Rain Gauge Sensor
- Tellog MTU-41 - Meter Telemetry Unit**
- Tellog PE-41 - Pulse / Event Recorder

# Telog MTU-41 LoRa WIRELESS BATTERY POWERED METER TELEMETRY UNIT

## SENSOR MODEL: Telog MTU-41

Type	Single input meter telemetry unit
Meter register inputs	Reads absolute encoded register values; 6 thru 9 digits in length; 3-wire synchronous interface, ASCII coded, E.g. Sensus ECR, Neptune ProRead (3-wire), Badger ADE & HR-E, etc.
Memory	
Size	128 Kbytes
Storage method	Wrap around (first-in; first-out)
Data capacity	28,000 historic interval register values
Communication:	
Local RS-232	4 pin circular connector rated IP-67; Auto-selected baud rate to 19.2K
Wireless	
Technology	LoRaWAN bi-directional class A protocol
Security	AES128 keys for encryption and authorization
Output Power	18.5 dbm maximum
Frequency	915 MHz (North America LoRa band)
Antenna	Integrated Antenna   External antenna optional
Battery	Factory installed single 3.6V Lithium 'C' cell Saft LSH 14 or equal
Battery Life	5 years nominal @ 15 minute transmits @ medium to excellent signal strength
Enclosure	
Size	4.70"L x 3.2"W x 2.2"H
Weight	1 lb (includes 3' cable)
Material	Polycarbonate
Environmental	
Temperature	-40 °F to 160 °F
Rating	NEMA 4x (IP67)



## REQUIRED SOFTWARE & OPTIONS

S-3PC	Telogers for Windows®
S-3EP	Telog® Enterprise
TW-UNITY	Trimble Unity



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