



Tellog Ru-32mA



WIRELESS MULTI-CHANNEL RECORDING TELEMETRY UNIT FOR UNDERGROUND MONITORING



UNDERGROUND MONITORING IN HARSH ENVIRONMENTS

The Tellog Ru-32mA provides real-time monitoring and alarming of pressure, flow sensors, valves, and meters found in harsh environments typical of water distribution and wastewater collection systems such as underground water vaults. When you combine the Tellog Ru-32mA RTU with a Trimble Telog software option, you have a powerful system of wireless water infrastructure monitoring that is consistently delivering real-time data from the field straight to your desktop. Imagine...all your data on one platform straight to your computer screen.

Sensor Support

The Ru-32mA is a versatile eight channel RTU that can be supplied with one or two pressure sensors and can interface up to two digital inputs (pulse and/or event), one 4-20 mA current loop from a process instrument, one analog voltage or potentiometer input, and two additional inputs to capture the encoded register reading of single or dual water meters such as master meters and compound meters.

Wireless Communication

Using cellular technology enables unmanned monitoring of remote sites as well as instant updates and alarm notifications. The Ru-32mA uses a low power, LTE/Cat 1 cellular communication modem certified on multiple cellular systems. This ensures maximum coverage, reliability of service and alignment with cellular carriers technology roadmaps. Additional communication options are also available on request.

Collecting Data

The Tellog Ru-32mA may be configured to call it's server application on a schedule (e.g. once per day; every four hours, etc.) and/or in response to site alarm conditions (e.g. high or low pressure or level exceedance). The recorder can sample the sensor up to four times/second and store the data statistics (minimum, average, maximum or totals) at user defined intervals.

Packaging

The cellular modem, data recorder and battery are integrated into an IP67 rated, environmentally rugged enclosure weighing three pounds and measuring 8 x 8 x 4 inches (L x W x H). The unit is provided with a panel mount TNC coax connector and will support a variety of certified antennas. All connectors and fittings are watertight and the product is environmentally rated IP67 to 9.8 feet (three meters) of depth.

Battery Powered

The Tellog Ru-32mA are battery powered and use a single, user replaceable battery pack, Tellog BP-4, providing an operating life of up to five years depending on the user-defined call schedule. A five year battery life example would be sampling two pressure sensors every 10 seconds and water meter registers hourly and transferring data to a host server on a daily schedule. The recorder can also be connected to optional, customer supplied DC or solar power.

Software Support

Trimble Tellog wireless recorders are compatible with all Trimble software applications, including Trimble Unity, Tellog Online (cloud), Tellog Enterprise and Tellogers for Windows application software. This ensures that utilities have a complete solution addressing all their remote monitoring requirements delivered in a manner that suits each individual utility's operations and IT needs.

Applications

- ▶ Water system pressure monitoring
- ▶ Underground water level monitoring
- ▶ Mag meter monitoring
- ▶ Pressure reducing valve (flow and pressure) monitoring
- ▶ Pressure relief valves
- ▶ Single or dual water meter monitoring
- ▶ Meter register input monitoring

Benefits

- ▶ Insight into consumption for Non Revenue Water.
- ▶ Optimized water and site operations and compliance
- ▶ Real-time situational awareness on Pressure or Bursts

Features

- ▶ Wireless communication via cellular (LTE)
- ▶ Alarm notification
- ▶ Time stamped events
- ▶ User programmable
- ▶ IP67 Rating

Telog Ru-32mA SPECIFICATIONS

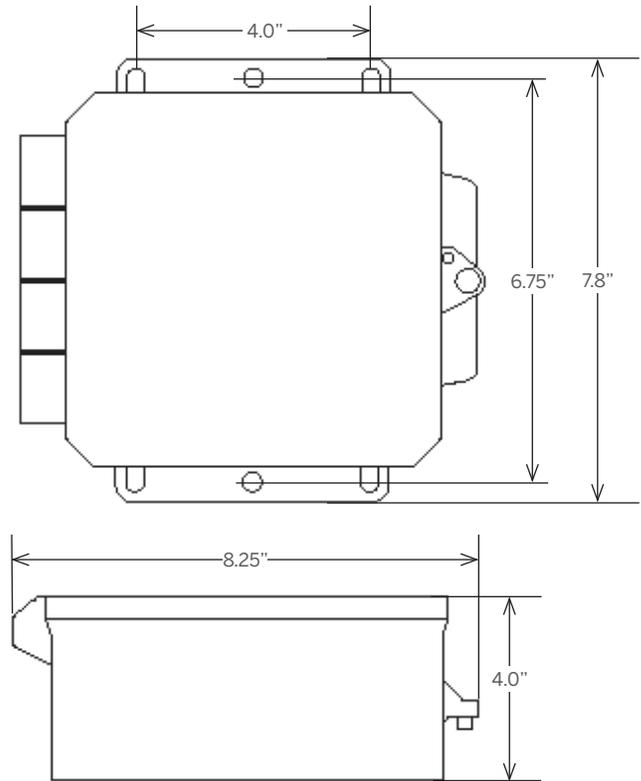
RECORDER MODEL: Telog Ru-32mA

Type	Eight channel, underground RTU with embedded cellular modem		
(4 samples per second max - 250 ms, 1 second interval max):			
I2C Pressure Sensors	Channels 1 & 2		
Resolution	12 bits (0.025%)		
Accuracy	±0.075% of full scale at 73 °F [23 °C] ±40 ppm/°F		
Temperature range:	40 °F to 149 °F [4 °C to 65 °C]		
For applications below this operating range please contact your Trimble Telog support team.			
Current Loop (Channel 3)	(4-20 mA) Input		
Resolution	12 bits (0.025%)		
Accuracy	±0.075% of full scale at 70 °F [21 °C] ±40 ppm/°F		
Analog Input (Channel 4)	0-5 VDC		
Resolution	12 bits (0.025%)		
Accuracy	±0.075% of full scale at 70 °F [21 °C] ±40 ppm/°F		
Digital Input	2 channels (5 and 6)		
Type	Selectable pulse counter or event recorder		
Input	Contact closure or logic driven		
Excitation	3 volts at 20 µAmps maximum		
Pulse Width	10 mSec minimum		
Meter Register Inputs	Reads absolute encoded register values; 4 thru 9 digits in length 3-wire synchronous interface, ASCII coded E.g. Sensus ECR, Neptune ProRead (3-wire), Badger ADE & HR-E, etc.		
Recording			
Sample rate	4 per second to 1 per 8 hours; programmable		
Clock accuracy	0.01%		
Memory size	128 kbytes; 80,000 data values		
Storage method	Wrap around (first-in; first-out)		
Communication			
Local RS-232	5 pin circular connector rated IP67		
Cellular	Auto-selected baud rate to 19.2K IWM2/L1 cellular modem LTE Category 1 certified Verizon Wireless FirstNet available in the USA.		
Bluetooth	Local Bluetooth BLE 4.1		
Power			
Battery	Factory installed, field replaceable Telog BP-4 lithium battery pack		
Battery Life	Up to 2800 data calls to host computer		
Examples:	Call Frequency	Sampling Frequency	Battery Life
	1/day	5/second	5 years
	2/day	1/second	3 years
	(@ medium to excellent signal strength)		
External Power	9-30VDC @ 1A optional via customer supplied DC or solar. Battery becomes back-up if power is lost.		
Enclosure			
Size	8" L x 8" W x 4" H [204 mm x 102 mm x 204 mm]		
Weight	3 lbs. [1.4 kg]		
Material	Polycarbonate		
Environmental			
Temperature	-40 °F to 158 °F [-40 °C to 70 °C]		
Rating	NEMA 6 (IP67)		
Support Software			
S-3PC	Telogers for Windows®6.5 or later		
S-3EP	Telog® Enterprise 6.5 or later		
DHS-Service	Telog Online		
TW-UNITY	Trimble Unity		

SENSOR MODEL: TELOG PT-DS SERIES

Type	Strain gauge pressure sensor
Range	Selectable 5, 10, 30, 100, 300, 1000 PSIG
Accuracy over the calibrated temperature range including zero and span setting and the effects of non-linearity, hysteresis and repeatability:	0.25% FS
Cable	Vented Polyurethane 0.225" diameter [5.715 mm]
Pressure Over Range	2x full scale with negligible calibration change 4x containment pressure up to 2900 psi max
Physical	
Pressure fitting	1/4" NPT female
Environmental	Submersible to NEMA 6P (IP68)
Sensor Length	4.5" [114 mm]
Sensor Diameter (max)	1.0" [25.5 mm]
Sensor Body Material	316 stainless steel
Cable Weight	0.027 lbs./ft

ENCLOSURE DIMENSIONS



Specifications within this brochure are subject to change without notification.

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NEW YORK OFFICE
Victor, New York, USA

CALIFORNIA OFFICE
Irvine, California, USA

IRELAND OFFICE
Mahon, Cork, Ireland

TrimbleWater_ContactUs@trimble.com
www.trimblewater.com
888-835-6437