Telog PR-41

LoRa WIRELESS, BATTERY-POWERED PRESSURE RECORDER

WATER PRESSURE MONITORING/ALARMING

Water 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, Telog's 41 Series is 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.

The Telog PR-41 Pressure Recorder establishes a new standard in low power, IoT communication sensors for monitoring and alarming remote water system pressures. It is available with a choice of pressure sensor ranges, from 1 to 500 PSI. The Telog PR-41 enables water utilities to cost effectively monitor their network, identify potential pressure and leakage issues and respond to them in a timely manner. In doing so, it aids them to comply with NRW, Customer Service and other regulatory targets.

Connected to Telog Cloud or on premise software applications, the Telog PR-41 may be configured to report its data on a schedule (5 or 15 minutes, hourly, etc.) and/or on alarm (e.g. in response to a high or low pressure or level exceedance condition). The recorder can be programmed to sample the pressure sensor up to once per second and transmit the data statistics as per the schedule.

The Telog PR-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 Telog PR-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.

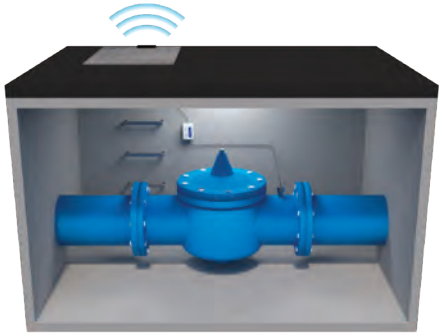
The Telog PR-41 is compatible with all Telog software applications, including Telog DHS cloud hosted service, Telog Enterprise and Telogers for Windows application software. This ensures that utilities have a complete solution addressing all their remote monitoring needs across their operations, delivered in a manner that suits each individual utility's operations and IT needs.

Applications

- Water line pressure monitoring
- Pressure alarms

Features

- Wireless communication
- Alarm notification
- Time stamped events
- Records pressure and duration of events
- Supports pressure ranges of 1 to 500 PSI
- LoRaWAN communication protocol
- Integral antenna
- 5 year battery life with 15 minute transmits
- User replaceable 'C' cell Lithium battery



Line Pressure Monitoring

TELOG 41 SERIES

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

Telog PR-41 LoRa PROTOCOL PRESSURE RECORDER

RECORDER MODEL: Telog PR-41

Type	Single channel pressure recorder with external sensor
Recording	
Sample rate	1 per second to 1 per 8 hours; user programmable
Clock accuracy	0.01%
Memory size	128 kbytes; 28,000 data values
Storage method	Wrap around (first-in; first-out)
Communication:	
Sensor Interface	I²C serial protocol
Wireless	
Technology	LoRaWAN bi-directional class A protocol
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, user replaceable
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	1.5 lbs. (includes sensor + 15' cable)
Material	Polycarbonate
Environmental	
Temperature	-40 to 160°F
Rating	NEMA 4x (IP67)

SENSOR MODEL: Telog PT-DS1

Type	Strain gauge pressure sensor
Interface	I²C serial protocol
Range	Selectable 1, 2.5, 5, 10, 15, 30, 50, 100, 200, 300, 500 PSI (gauge or absolute)
Accuracy	0.1% of full scale Includes effects of non-linearity, temperature and repeatability
Temperature Range	-40°F to 185°F (freezing water will damage sensor)
Temperature Effect	±0.01%/°F (32 to 90°F)
Pressure Over Range	2x full scale with negligible calibration change
Proof pressure	4x full scale
Physical	
Pressure fitting	1/4" NPT male with depth nose cone
Environmental	Submersible to NEMA 6P (IP-68)
Sensor length	5"
Sensor diameter	1.0"
Sensor body	316 stainless steel
Cable	Vented Polyurethane 0.275" diameter
Cable weight	0.027 lbs./ft

REQUIRED SOFTWARE & OPTIONS

S-3PC	Telogers for Windows®
S-3EP	Telog® Enterprise
DHS	Telog DHS Cloud Hosted Solution

A TRIMBLE COMPANY

830 Canning Parkway
Victor, NY 14564 USA
Phone: 585.742.3000
Fax: 585.742.3006
TelogSales@telog.com
www.telog.com