Telog PR-32A/32iA

WIRELESS BATTERY-POWERED PRESSURE RTU WITH IMPULSE MONITORING OPTION

WATER SYSTEM PRESSURE AND LEVEL MONITORING WITH OPTIONAL TRANSIENT CAPTURE WAVEFORM

The Telog PR-32A and Telog PR-32iA are versatile instruments intended to monitor water system pressures or water levels (e.g. underground aquifers, surface reservoirs or water tower levels). When you combine the Telog PR-32A series with a Trimble 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.

In addition to performing the measurement and recording functions of the Telog PR-32A, the impulse recording option feature of the Telog PR-32iA units stores the waveform of captured pressure transient waves detected on the monitored network. The Telog PR-32iA can store up to 125 events of variable duration that may occur over many months of on-site monitoring, recording up to a maximum of 2.5 minutes of transient data at 256 samples/second.

Wireless Communication

The power of every Telog 32 series recorder from Trimble Telog is wireless data transfer capability. Using cellular technology enables unmanned monitoring of remote sites as well as instant updates and alarm notifications. The Telog PR-32A/32iA series uses a low power, LTE/Cat 1 cellular communication modem certified on Verizon Wireless. Additional communication options are also available on request.

Collecting Data

The Telog PR-32A/32iA series may be configured to call its host application on a schedule (e.g. once per day; every four hours, etc.) and/or in response to site alarm conditions (e.g. in response to a high level event). The recorder can sample the pressure sensor up to four times/second (Telog PR-32A) or up to 256 times/second (Telog PR-32iA). Data may be stored in the recorder at user defined intervals (e.g. five minutes, one minute, etc.) without concern for data loss because the recorder will store up to 82,000 values, depending on input type, before overwriting the oldest data.

Packaging

The cellular modem, antenna, process signal conditioning, data recorder and battery are in a small IP68 rated Nema 6P enclosure for a combined weight of 2.5 pounds and measuring 4"L x 4"W x 3"H [102 mm L x 102 mm W x 76 mm H].

Battery Powered

The Telog PR-32A and Telog PR-32iA recorders use a user replaceable Telog BP-4 lithium battery pack. At one call per day the battery pack will last up to five years on a PR-32A RTU. The battery life with a PR-32iA depends on the sampling resolution chosen in addition to the call schedule (see table below for examples). With user configurable call and sampling rates, you get to choose the best configuration for your application.

Software Support

Trimble Telog wireless recorders are compatible with all Trimble software applications, including Trimble Unity, Telog Online (cloud), Telog Enterprise and Telogers 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
- Water level monitoring
- Tank level monitoring
- High speed sampling to 256 samples/second

Benefits

- Improve asset performance, reduce leakage and pipeline failures
- Monitor and optimize water and site operations and compliance
- Real-time situational awareness of overflows and high/low level events
- Battery operated

Features

- Wireless communication via cellular (LTE)
- Alarm notification
- Time stamped events
- Sensor installs in 2" wells
- Automatic barometric pressure correction
- Integral antenna
- User programmable
- IP68 Rating

DATASHEET

Telog PR-32A/32iA SPECIFICATIONS

RECORDER MODEL: Telog PR-32A and Telog PR-32iA

Type Single channel pressure recorder

Measurement

Resolution	12 bits (0.025%)
Accuracy	±0.075% of full scale at 73 °F ±40 ppm/°F

Temperature range 40 °F to +149 °F [4 °C to 65 °C]

NOTE: For applications below this operating range please contact your Trimble Telog support team.

Recording with PR-32 (no impulse option included)

Sample Rate	4 per second to 1 per 8 hours; programmable
Clock Accuracy	0.01%
Memory Size	31,000 data values
Storage Method	Wrap around (first-in; first-out)

Recording with PR-32i (with impulse option included and on)

Note: When using PR-32i which includes the impulse option, the normal mode specified above will operate whether the impulse mode is on or off.

Data Recorded	Normal mode interval data plus transient event waveforms
Transient Trigger	Pressure rate-of-change; either positive or negative; user configurable
Impulse Memory	Up to 100 transient events to a maximum of 37,000 samples after which new data will overwrite oldest data.

Communication

Local RS-232	4 pin circular connector rated IP-67 Auto-selected baud rate to 19.2K
Cellular	Internal Telog WM2/L1 cellular modem LTE Category 1 certified Verizon Wireless FirstNet available in the USA.

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
PR-32A	1/day	1/second	5 years
PR-32iA	1/day	4/second	5 years
PR-32iA	1/day	128/second	2 years
PR-32iA	1/day	256/second	1 year

(@ medium to excellent signal strength)

Enclosure

Size	4"L x 4"W x 3"H [102 mm L x 102 mm W x 76 mm H]
Weight	2.5 lbs. [1.2 kg]
Weight	2 lbs [0.9 kg]
Material	Polycarbonate

Environmental

Temperature	40 °F to 158 °F [4 °C to 70 °C]

Note: For applications below this operating range please contact your Trimble Telog support team.

Rating	NEMA 6P (IP68)

Support Software

S-3PC	Telogers for Windows® 6.51 or later
S-3EP	Telog® Enterprise 6.51 or later
DHS-Service	Telog Online
TW-UNITY	Trimble Unity

SENSOR SPECIFICATIONS

PR-32A Sensor

Model	PT-DS
Type	Strain gauge pressure sensor
Range	Selectable 5,10,30,100,300 PSIG and 1000 PSI
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

Temperature

Range	25 °F to 140 °F [-3.8 °C to 60 °C]
Temperature Effect	±0.01%/°F (32 °F to 90 °F)

PR-32iA Sensor

Model	PT-30b
Type	Strain gauge pressure sensor
Range	Selectable 200, 300, 500 PSIG
Accuracy	
Non-linearity	±0.15% of span; BFSL
Repeatability	±0.03% of span; BFSL
Hysterisis	±0.03% of span; BFSL
Cable	Vented Polyurethane 0.310" diameter [7.87mm]
Pressure Over Range	4x full scale with negligible calibration change 6x containment pressure up to 2900psi max

Temperature

Range	25 °F to 140 °F [-3.8 °C to 60 °C]
Temperature Effect	±0.01%/°F (32 °F to 90 °F)

Physical

Pressure Fitting	1/4" NPT female
Environmental	Submersible to NEMA 6P (IP-68)
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

Specifications within this brochure are subject to change without notification.
The PR-32iA is covered by U.S. Pat. No. 7,219,553 and 7,357,034.

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