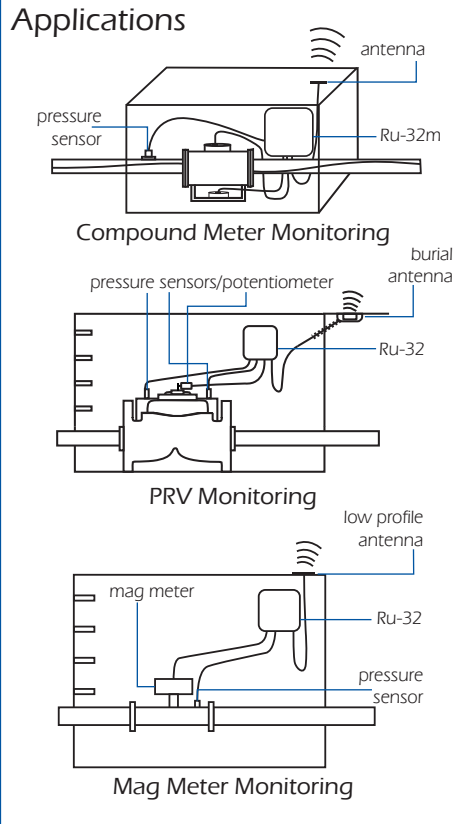


Ru-32 & Ru-32m Recording Telemetry Units

Multi-Channel Wireless RTUs for Underground Monitoring



Telog's Ru-32 & 32m RTUs (**R**ecording **T**elemetry **U**nits) provide real-time monitoring and alarming of pressure, flow sensors and meters in harsh underground environments typical of water distribution systems.

The Ru-32 is a versatile, five channel RTU that can be supplied with one or two pressure sensors and can interface up to two digital inputs (pulse and/or event), and one analog voltage or potentiometer input. Applications include water system pressures, underground water level, mag meters, pressure reducing valves (flow and pressure) and pressure relief valves.

The Ru-32m includes all the functions of the Ru-32 and adds two additional inputs for capturing the encoded register reading of single or dual water meters such as master meters and compound meters.

The Ru-32/32m is provided with the Telog WM/C cellular m2m modem which is certified on the Sprint and Verizon Wireless networks in the US and the Bell Mobility network in Canada. Internationally, the unit may be provided with the Telog WM/G modem for operation on GSM networks.

The RTU consumes very little power when sampling and recording data and energizes its modem only when transmitting data to its host computer. Powered by a user replaceable D cell

lithium battery, the Ru-32 can operate up to five years when sampling two pressure sensors every 10 seconds and water meter registers hourly and transferring data to its host server on average twice per day.

The unit is provided with a panel mount TNC coax connector and will support a variety of certified antennas; see Choosing an Antenna application note at telog.com/Solutions/ApplicationSolutions. All connectors and fittings are watertight and the product is environmentally rated IP67 to 3 meters of depth.

You can configure the Ru-32/32m to call its host application on a schedule (e.g. once per day; every four hours, etc.) and/or on alarm (e.g. in response to a high or low pressure or level exceedance condition). The recorder can sample the pressure sensor up to four times/second and store the data statistics (min, average, maximum or totals) at user defined intervals (e.g. five minutes, one minute, etc.). Data loss is not a concern because the recorder stores over 80,000 interval statistics before overwriting the oldest data with new.

Telog Enterprise and Telogers for Windows host application software support the RTUs. Telog also offers a Data Hosting Service for users who prefer to outsource the computer data collection and management tasks providing end-use information on a secure website.

For more information on this product or other Telog data recording products, call us at **585.742.3000**, email TelogSales@telog.com, or visit us at www.telog.com.

Water System Monitoring

- Water Meter Encoded Registers
- Compound Water Meters
- Pressure
- Flow
- PRVs
- Water Vault Level

Communicate Via:

- Cellular m2m
- Local Connection

IP67 Submersible Enclosure

Burial Antenna Option

Alarm Notification

5 Year Battery Life at 2 Calls/Day

User Replaceable 'D' cell Lithium Battery

Supported by Telog Enterprise Telogers for Windows & Telog's Data Hosting Service



Ru-32 & Ru-32m Specifications

Recorder

| | |
|--|--|
| Model | Telog Ru-32 & Ru-32m |
| Type | 5 & 7 channel, underground RTU with embedded m2m modem |
| Analog Input | 2 pressure sensors |
| Resolution | 1 potentiometric |
| Accuracy | 12 bits (0.025%) ±0.075% of full scale at 70°F ±40 ppm/°F |
| Digital Input | 2 channels |
| 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 |
| Potentiometric Input | |
| Type | 3-wire resistor potentiometer |
| Resistor Range | 1k to 20k ohms |
| Excitation | 3 VDC |
| Meter Register Inputs (Ru-32m only) | 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 | 1 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 IP-67 Auto-selected baud rate to 19.2K |
| Cellular | Internal Telog WM/C embedded 1xRTT modem certified on Sprint & Verizon in USA WM/H HSPA modem certified on Bell in Canada Dual band internal antenna |
| Battery | Factory installed single 3.6V Lithium D cell |
| Battery Life | Saft LSH 20 or equal, user replaceable 3800 data calls to host computer Examples: 5 years @ 2 calls/day 1 year @ 10 calls/day |
| Enclosure | |
| Size | 8 L x 8W x 4H" |
| Weight | 3 lbs. |
| Material | Polycarbonate |
| Environmental | |
| Temperature | -40 to 158°F |
| Rating | NEMA 6 (IP67) |

Sensor

| | |
|----------------------------|------------------------------------|
| Model | Telog PT-3R |
| Type | Strain gauge pressure sensor |
| Range | Selectable 100, 200, 300, 500 PSIA |
| Accuracy | |
| Non-linearity | ±0.15% of span; BFSL |
| Temperature Effect | ±0.005%/°F (32 to 175°F) |
| Temperature Range | 0° to 220°F (non-freezing) |
| Pressure Over Range | 3x pressure range |
| Physical | |
| Pressure fitting | 1/4" NPT male |
| Environmental | Submersible to NEMA 6 (IP-67) |
| Sensor body material | 316 stainless steel |
| Cable | Polyurethane 0.275" diameter |

Required Software & Options

| | |
|-------------------------|---|
| Support Software | |
| S-3PC | Telogers for Windows |
| S-3EP | Telog Enterprise |
| Data transfer unit | IP-67 rated PDA running Palm OS and Telog |



Telog Instruments, Inc.

830 Canning Parkway, Victor, NY 14564-8940, USA
 Phone: 585.742.3000 • Fax: 585.742.3006
 E-mail: TelogSales@telog.com • www.telog.com

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Ordering Information

Product Model Ru32c or Ru32mc

Where c = Cellular Carrier: V=Verizon
 S=Sprint
 B=Bell Canada

Pressure Sensor Option PT-3R-ppp-010

Where ppp is pressure range; 100, 150, 300 or 500 PSIA

Standard cable length is 10 feet; contact factory for special length.

Enclosure Dimensions

