

PRESSURE RANGER

LTE-M/NB-IoT Cellular Pressure Transmitter



CLASS 1 DIVISION 2 CERTIFIED

PLUG-&-PLAY, INSTANT CONNECTIVITY OF PRESSURE SENSOR TO THE CLOUD OVER CELLULAR NETWORKS

OPTIMIZED FOR BATTERY LIFE USING LATEST CELL MODEM TECHNOLOGY LTE CAT M1/NB-IOT

UTILIZES MQTT/SPARKPLUG-B COMMUNICATION FOR EASY INTEGRATION INTO THIRD-PARTY HOSTS

FEATURES

- LTE CAT M1/NB-IoT connectivity to cloud services
- Integrated pressure sensor
- Data location from built-in GPS
- SignalFire cloud monitoring/alarming service
- Integrated sensor allows rapid data collection and report on exception
- Reports max, min, average and instantaneous pressure

PRESSURE SENSOR

PERFORMANCE AT 77°F / 25°C

Accuracy: $\pm 0.25\%$ BFSL

$\leq \pm 0.5\%$ BFSL (>10,000 PSI)

Stability (1 year): $\pm 0.25\%$ FS, typical

Over Range Protection: 2X Rated Pressure, Minimum

Burst Pressure: 5X or 40,000 PSI (whichever is less)

Pressure Cycles: >100 Million

Process Connection: 1/2" NPTM 316L Stainless Steel

Standard, F250C Autoclave for pressure >10,000 psi

Other process connections/material available

Standard Pressure Ranges: 0-100 psi, 0-500 psi, 0-1000 psi, 0-3000 psi, 0-5000 psi, 0-10,000 psi, 0-15,000 psi, 20,000 psi

Low Pressure Ranges: 0-2 psi, 0-20 psi

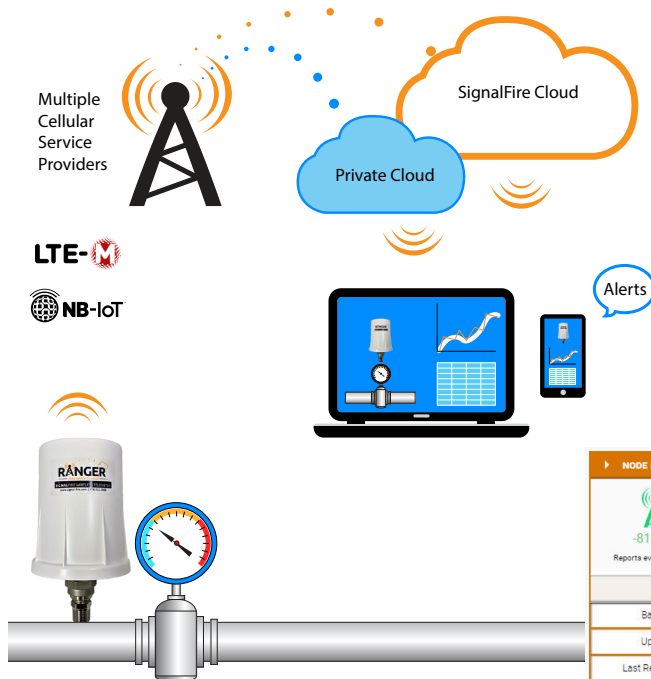
THERMAL LIMITS

Operating Range: -40 to +176°F (-40 to +80°C)

Compensated Range: 5°F to 150°F (-15°C to +65°C)

TC Zero: $< \pm 1\%$ of FS

TC Span: $< \pm 1\%$ of FS



| NODE STATUS | | CONFIGURE |
|-----------------|---------------------------|-------------------------------|
| | ONLINE | FORCE REPORT |
| -81 dBm | Reports every 5 minutes | |
| Pressure Ranger | | |
| Battery | 3.62 V | Temp: 79 °F |
| Uptime | 1 hour 1 minute 8 seconds | |
| Last Report | 2020-09-17 04:02:33 PM | |
| Online Since | 2020-09-17 03:04:44 PM | |
| Carrier Info | VzW (3B02) | SW Ver: v0.1.9-25-gd781be6-3v |
| Expiration | 2021-08-05 (321 days) | |

| PRESSURE SENSOR 1 (PRES01) | | CONFIGURE |
|----------------------------|---------------------|-----------------------|
| | Reading: -19.41 psi | Sample Interval: 5 ms |
| Avg: -19.88 psi | Max: -18.83 psi | Min: -20.92 psi |
| Scale Units: psi | Scale: 0-1,000 psi | |
| Low Alarm | < 0 psi (Disabled) | |
| High Alarm | > 15 psi (Disabled) | |

| GPS | | CONFIGURE |
|---------------------------------|-----------------------------|-----------|
| Location at 2020-09-17 16:03:26 | | |
| | | |
| Coordinates | 42° 20' 58" N 71° 34' 53" W | |
| Auto Trigger | Manual | |

PRESSURE RANGER

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TECHNICAL SPECIFICATIONS

Operating Temp:

-40 to +176°F (-40°C to 80°C)

Humidity: 0% - 100% condensing

Power: Four D Cell Lithium battery pack. Field replaceable.

Battery Life: 5+ years with a 5 minute report interval

Data Interface: LTE CAT M1/NB-IoT MQTT with SparkPlug B

Data Transmission:

- Report interval 1 min to 12 hrs (min, max, avg, actual)

- Configurable report on exception threshold.
- Configurable sampling as fast as every 5 seconds.

Cellular Radio Power: 23dBm

Antenna Type: LTE w/ Internal GPS

Enclosure: Industrial polycarbonate UV Rated; IP67

Safety Rating: Class 1 Division 2 Certified, Groups A, B, C, D. Temperature Code T5. Certified to CSA C22.2 No. 213:2017, Conforms to UL 121201:2017, CE Approved

Local Micro-USB Configuration Port

Weight: 2 lbs (910 g)

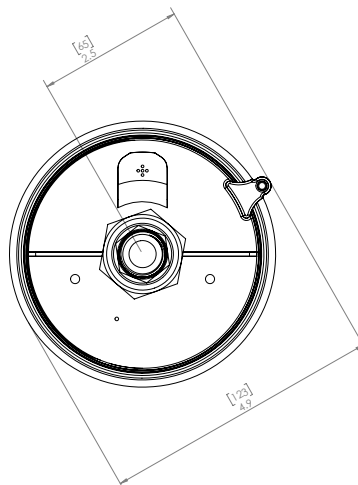
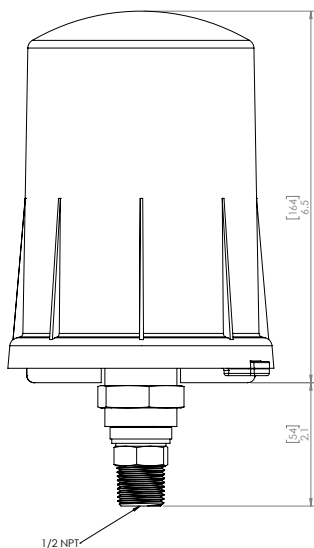
Estimated Monthly Data Usage:

Check-in interval dependent

- 30 sec = 54 MB
- 1 min = 27 MB
- 5 min = 5.4 MB
- 15 min = 1.08 MB
- 60 min = 0.27 MB



DIMENSIONS



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HOW TO ORDER

