Ranger ComKit
CELLULAR TELEMETRY

Seametrics

Features

- LTE CAT M1 / NB-IoT connectivity to cloud services
- Integrated inputs/output for multi-sensors
- Data location from built-in GPS
- SignalFire cloud monitoring/alarming service
- Powers sensors from battery or external solar

The **Ranger** is an IoT (internet of things) cellular transmitter utilizing LTE-M/NB-IoT technology to bring sensor data directly to the cloud. Data is transmitted over cellular networks using the MQTT/Sparkplug protocol directly to the SignalFire Cloud for a complete monitoring and alarming service or can easily be integrated into a customer's existing system.
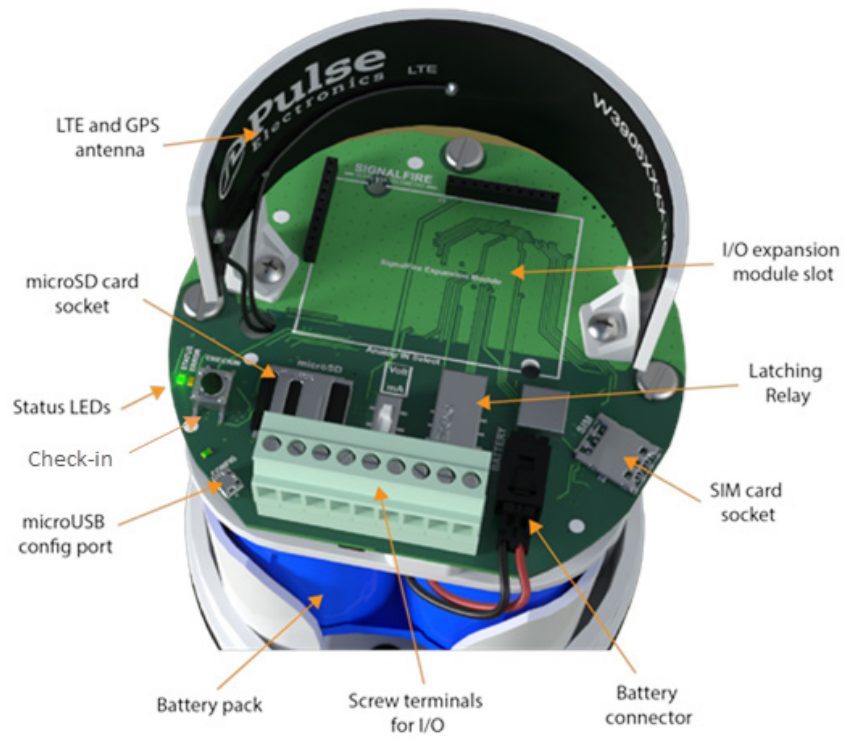
The built-in Ranger I/O consists of two (2) digital inputs, one (1) analog input and one (1) relay output. The digital inputs can detect on/off status or frequencies up to 2kHz for pulse counting and totalizing applications. The analog input supports a 1-5Vdc or 4-20mA device and provides power to the sensor from the built-in battery pack. The relay output is a latching single pole single to provide on/off control to a local device.

The Ranger comes complete with the mobile device ready SignalFire cloud interface to monitor, trend and receive alarms either by text or email message. In addition, the cloud platform provides for remote configuration and troubleshooting of the Ranger node and its attached sensor(s) and the relay output may be controlled from the cloud interface to remotely control pumps, motors, and valves.

Contact Your Supplier

Features

LTE and GPS antenna

microSD card socket

Status LEDs

Check-in

microUSB config port

I/O expansion module slot

Latching Relay

SIM card socket

Battery pack

Screw terminals for I/O

Battery connector

Dimensions

7.1"
(180 mm)

0.9"
(22.8 mm)

1/2 NPT(F)

Ø 4.6" (116.8 mm)
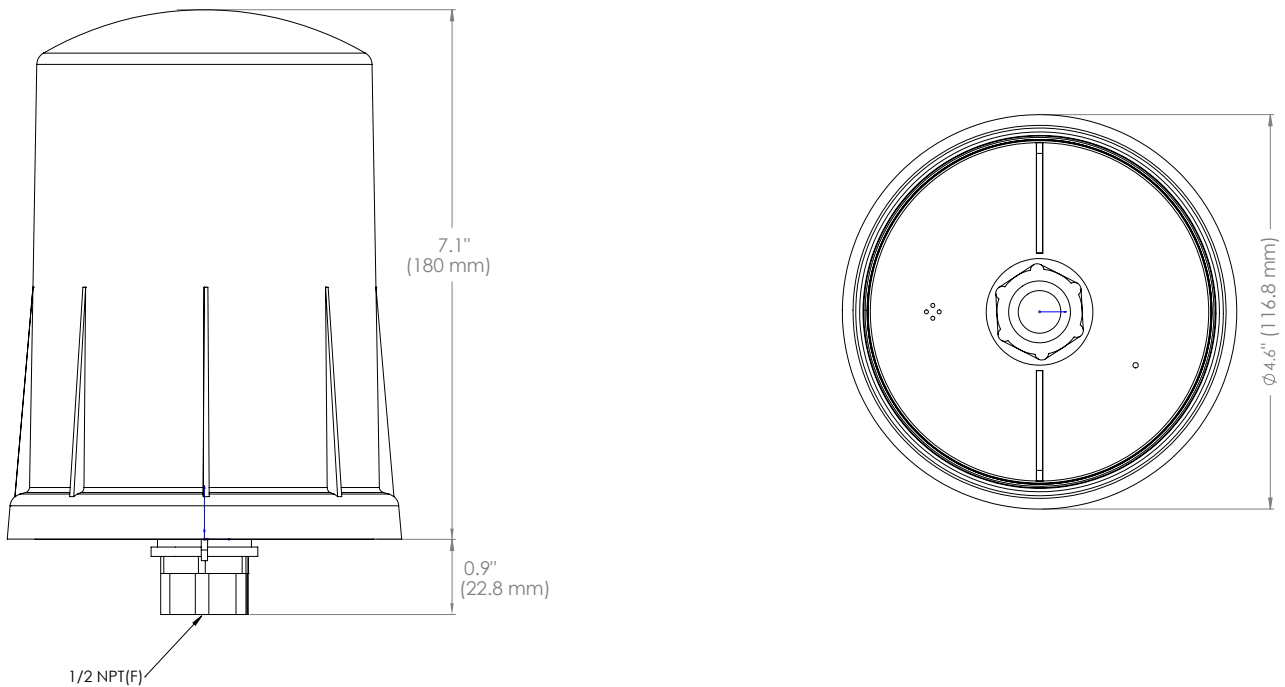
Specifications*

Operating Temp:
-40 to +185°F (-40 to 85°C)

Humidity: 0% - 100% condensing

Input Power:
- Battery Pack: Four D-cell Lithium Thionyl Chloride, 76AHr

Input/Output:

Standard
- 1 Latching Relay Output (2A @ 30Vdc; 0.3A @ 110Vac; 0.5A @ 125Vac). Failsafe & local automation configurable
- 2 Digital Inputs report state, total counts, frequency (2kHz max), volume total with K Factor
- Analog Input (1-5Vdc or 4-20mA). Configurable for flow totalizing mode
- Provides a configurable 13V or 18V to attached sensor(s). Maximum current of 60mA.

Battery Life: Up to 8 years

Data Interface:
- LTE CAT M1 / NB-IoT, auto-selectable
- SparkPlug B messaging

Cellular Radio Power: 23dBm

Antenna Type: LTE w/ Internal GPS

Enclosure: Industrial polycarbonate UV Rated; IP64

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

Electrical Connection: Pluggable terminal block, 16-30AWG screw terminals

Local Micro-USB Configuration Port

Weight: 1 lbs (0.6kg)

Estimated Monthly Data Usage:
Check-in interval dependent
- 1 min = 27 MB
- 5 min = 5.4 MB
- 15 min = 1.08 MB
- 60 min = 0.27 MB

Cellular Specifications:
- LTE band support:
  Cat-M1 / NB-IoT: B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B20, B25, B26, B28, B66
- Supports 4FF SIM type
- Power saving features: eDRX
- Secure socket using TLS
- PTCRB Certified

NOTE: When using a Ranger with a battery powered AG3000, iMAG4700, AG90 or EX90 you will not be able to power the meter externally.

How to Order

Pulse Ranger ComKit-01	Description	Model
	iMAG/AG3000, 4-12 Inch, Pulse	**104181-01**

Pulse Ranger ComKit-02	Description	Model
	iMAG/AG3000, 2-3 Inch, Pulse	**104181-02**

Pulse Ranger ComKit-03	Description	Model
	AG90/EX90, 4-12 Inch, Pulse	**104181-03**

Modbus Ranger ComKit-01	Description	Model
	iMAG/AG3000, 4-12 Inch, Modbus	**104282-01**

Modbus Ranger ComKit-02	Description	Model
	iMAG/AG3000, 2-3 Inch, Modbus	**104282-02**

Modbus Ranger ComKit-03	Description	Model
	AG90/EX90, 4-12 Inch, Modbus	**104282-03**

NOTE: Above Kits include Ranger and mounting hardware.

User is responsible for reviewing end use application with their supplier for product suitability.

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LT-14721r1.1-202408141
8/14/2024