The PULSA PG201 wireless differential pressure transducer is an industrial grade, high accuracy sensor that monitors liquid levels in a tank with high and low ports in all environments, including HazLoc Class I Div 2 Gr ABCD. The transducer measurement values are broadcast wirelessly to the Pulsa gateway. Sensor data and setup is available through Pulsa iOS, Android, and web apps.

Applications:
- Bulk and microbulk liquid tank levels up to 35 ft
- Liquid cylinders or dewars with high and low ports

Performance Details

Item	Min	Max	Units
Liquid level measurement[1]	0	420	inches H2O
Differential pressure range[1]	0	15	PSI
Proof differential pressure		30	PSI
Max static pressure	2900		PSI
Pressure accuracy	±0.25		%FS
Linearity	±0.20	±0.25	%FS
Repeatability	±0.05	±0.075	%FS
Hysteresis	±0.05	±0.075	%FS
Thermal error	±0.50	±0.75	%FS
Stability	±0.3	±0.5	%FS/year
Compensated temp. range[2]	-20 to 70		°C
Operating temperature	-40 to 125		°C
Operating temp. (HazLoc)	-20 to 60		°C
Input voltage	3	3.3	VDC
Battery life[3]	5		Years
Measurement frequency	3 minutes		
Battery	Replaceable 3.6V 1/2AA		
Low battery warning	Yes, app notification		
Dimensions	4in (H) x 3in (W) x 1.5in (D)		
Weight	0.8lbs		
Wetted materials	316 stainless steel		
Enclosure	Stainless steel & glass reinforced nylon		
HazLoc	Class I Div 2 Gr ABCD certification available		
Oxygen cleaned[4]	Yes, available		
Signal transmission dist.	0	350	feet
Mobile device relay	iOS or Android		
Gateway connectivity	WiFi or Cellular		

Notes:
1. Additional pressure ranges available: DP15 accommodates liquid levels up to 35ft, DP30 up to 70ft
2. Unless otherwise noted, values are at 25°C
3. Battery life is based on measurements every 3 minutes
4. Complies with CGA G-4.1: Cleaning Equipment for Oxygen Service

1/4" Female NPT Port Standard

Use Instructions

1. Plug Pulsa Gateway into power source and position within 350 feet of pressure sensor
2. Plumb to high and low ports on tank
3. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
4. Follow sensor and cylinder set up in app

Additional support available at help.pulsasensors.com

Certifications

FC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	HazLoc Class I Div 2 Gr ABCD certification available
IC	IC	Granted

RoHS

Last update: 9/25/23

The PULSA PG001 wireless pressure transducer is an industrial grade, high accuracy sensor that monitors gas and liquid pressures in all environments, including HazLoc Class I Div 2 Gr ABCD. The transducer measurement values are broadcast wirelessly to the Pulsa gateway. Sensor data and setup is available through Pulsa iOS, Android, and web applications.

Applications:
- Gas cylinders: Monitor levels of gas cylinders, receive notifications when to change, automate reorders
- Bulk liquid tanks: Monitor headspace by installing at top of bulk tank
- Near Real-Time Pressure Sensor

Performance Details

Item	Typical	Max	Units
Pressure range[1]	0	2900	PSI
Pressure accuracy	±0.25		%FS
Linearity	±0.15	±0.25	%FS
Repeatability	±0.05	±0.075	%FS
Hysteresis	±0.05	±0.075	%FS
Thermal error	±0.75	±1.0	%FS
Stability	±0.2	±0.3	%FS/year
Shock	100g, 11ms		
Compensated temp. range[2]	-30 to 70		°C
Operating temperature	-40 to 125		°C
Operating temp. (HazLoc)	-20 to 60		°C
Proof pressure	2.0X		
Input voltage	3	3.3	VDC
Measurement frequency	3 minutes		
Battery life[3]		5	Years
Battery	Replaceable 3.6V 1/2AA		
Low battery warning	Yes, app notification		
Dimensions	3.6in (H) x 1.2in (W) x 1.2in (D)		
Weight	0.7lbs		
Wetted materials	316 stainless steel & viton		
Enclosure	Stainless steel & glass reinforced nylon		
HazLoc	Class I Div 2 Gr ABCD certification available		
Oxygen cleaned[4]	Yes, available		
Signal transmission dist.	150	350	feet
Mobile device relay	iOS or Android		
Gateway connectivity	WiFi or Cellular		

Notes:
1. Up to 6000 PSI available
2. Unless otherwise noted, values are at 25°C
3. Battery life is based on measurements every 3 minutes
4. Complies with CGA G-4.1: Cleaning Equipment for Oxygen Service

1/4" Male NPT Port Standard

Use Instructions

1. Plug Pulsa Gateway into power source and position within 350 feet of pressure sensor
2. Install pressure sensor in port
3. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
4. Follow sensor and cylinder set up in app

Additional support available at help.pulsasensors.com

Certifications

FC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	HazLoc Class I Div 2 Gr ABCD certification available
IC	IC	Granted

RoHS

The PULSA PI001 Wireless Industrial Weight Sensor is a heavy duty, high accuracy sensor built to measure heavy consumable inventory in harsh environments, including HazLoc Class I Div 2 Gr ABCD. With a standard measurement range of 1500lbs, a safe overload rating of 4000lbs and an optional loading ramp, the PI001 can accommodate many uses. The sensor hardware is suitable for outdoor use and includes a water proof electronics enclosure and a durable powder coated finish on the steel. The sensor measurement values are broadcast wirelessly to the Pulsa gateway. Sensor data and setup is available through Pulsa iOS, Android, and web apps.

Applications:
- Liquid tanks: monitor liquid tank levels by installing under tank
- Other heavy consumables: pallets, IBC totes, welding wire, food & beverage bins, chemical drums, bulk materials, etc.
- Near real-time weight sensor

Performance Details

PI001 Wireless Weight Sensor Specifications	
Measurement range[1]	0 to 1500lbs
Safe overload	4000 lbs
Weight accuracy	±1.00% FS
Non-linearity	±0.03% FS
Hysteresis	±0.03% FS
Repeatability	±0.03% FS
Creep	±0.02% FS / 30 Min
Operating temperature[2]	-20 to 60°C (-4 to 140°F)
Operating temp. (HazLoc)	-20 to 60°C (-4 to 140°F)
Dimensions	2'x2': 24 (L) x 24 (W) inch 3'x3': 36 (L) x 36 (W) inch
Height (adjustable)	3.75 to 5.75 inches
Platform weight	2'x2': 65lbs 3'x3': 95lbs
Loading ramp	Optional
Measurement frequency	3 minutes
Battery life[3]	5 yrs
Battery	Replaceable 3.6V
Low battery warning	Yes, app notification
Platform material	Powder coated steel
HazLoc	Class I Div 2 Gr ABCD certification available
Signal transmission range	0 to 350ft (0 to 100m)

Notes:
1. Up to 3000lb available
2. Unless otherwise noted, values are at 25°C
3. Battery life is based on measurements every 3 minutes

General: Scale drift is inherent. Pulsa scale drift may occur with a potential variation of up to +/- 2% under specific conditions

Industrial Weight Sensor

Industrial Weight Sensor with Optional Ramp

Use Instructions

1. Plug Pulsa gateway into power source and position within 350 feet of weight sensor
2. Ensure that the Pulsa gateway has direct line of sight with the weight sensor electronics module.
3. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
4. Follow sensor and consumable set up in app

Additional support available at help.pulsasensors.com

Certifications

FCC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	HazLoc Class I Div 2 Gr ABCD certification available
IC	IC	Granted
RoHS		

The PULSA PW001 wireless weight sensor is an industrial grade, high accuracy sensor that monitors weight, including in HazLoc Class I Div 2 Gr ABCD environments. The sensor measurement values are broadcast wirelessly to the Pulsa gateway. Multiple weight sensor platforms (up to 16) can be linked together to support inventory items that require a larger footprint (including pallets). Sensor data and setup is available through Pulsa iOS, Android, and web apps.

Applications:

- Liquid tanks: Monitor liquid tank levels by installing under tank
- Consumables: Measure any consumable supply (incl. welding, medical, food & beverage)
- Near real-time weight sensor

Performance Details

PW001 Wireless Weight Sensor Specifications	
Weight range	0 to 350lbs Steel options available for more weight ±1.00% FS
Weight accuracy	
Non-linearity	±0.05% FS
Hysteresis	±0.05% FS
Repeatability	±0.05% FS
Creep	±0.05% FS / 10 Min
Max connected platforms	16
Operating temperature[1]	-20 to 60°C (-4 to 140°F)
Operating temp. (HazLoc)	-20 to 60°C (-4 to 140°F)
Dimensions	12 (L) x 12 (W) x 1.75 (H) inches
Weight	2.3 lbs per platform 2.5 lbs per platform w/ transmitting sensor
Measurement frequency	3 minutes
Battery life[2]	5 yrs
Battery	Replaceable 3.6V
Low battery warning	Yes, app notification
Platform material	Glass reinforced polycarbonate
HazLoc	Class I Div 2 Gr ABCD certification available
Signal transmission range	0 to 350ft (0 to 100m)

Notes:
1. Unless otherwise noted, values are at 25°C
2. Battery life is based on measurements every 3 minutes
General: Scale drift is inherent. Pulsa scale drift may occur with a potential variation of up to +/- 2% under specific conditions

Light Scale Sensor

Use Instructions

1. Plug Pulsa gateway into power source and position within 350 feet of weight sensor
2. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
3. Follow sensor and cylinder set up in app
Additional support available at help.pulsasensors.com

Certifications

FCC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	HazLoc Class I Div 2 Gr ABCD certification available
IC	IC	Granted

RoHS

The PULSA Link instantly and wirelessly connects off the shelf sensors to the Pulsa platform, where you can view sensor data on any connected device and set alerts. The Link can read analog output signals from third party sensors and transmit the readings wirelessly to the Pulsa cellular gateway. There are four versions of the Pulsa Link, which vary by the power requirements of the third party sensor. All Links come standard with a 4 wire pigtail and additional, custom connectors are available for C-Stic, Cyl-Tec Level-Eye and Chart's Wika DP Gauge with Telemetry. The device is weatherproof, battery operated and takes readings every 3 minutes. Sensor data and setup is available through Pulsa iOS, Android, and web apps.

Four Link Versions - How to Choose?

All third party devices should have a label or a data sheet that describes the measurement output signal and the power requirements of the device. Row one in the table below corresponds to the measurement output signal of the third party device and row two describes the power provided by the each Link version. If you have questions, give us a call.

Pulsa Link

Four Link Versions	Passive	15V20	15V5	5V5
Analog signals accepted	4-20mA, 0-10V, Relay	4-20mA	0-5V	0-5V
Power provided	None	15 Volts	15 Volts	Regulated 5 Volts
Common sensor types	Gas monitor Flowmeter Optical Temperature	Cyl-Tec Level-Eye[1] C-Stic Legacy Differential Pressure Pressure	Differential Pressure Pressure	C-Stic SGB-2[1] Chart (Wika) DP Gauge[1] Propane R3D
Custom connectors	Custom connectors available for Cyl-Tec Level-eye, C-Stic SGB2 and Chart (Wika) DP			
Battery life[2]	5 years	5 years	5 Years	5 Years
Operating temperature[3]	-20 to 130 °F (-30 to 55 °C)			
Measurement frequency	3 minutes			
Battery	Replaceable 3.6V LiSoCI2 battery - Size D			
Low battery warning	Yes, app notification			
Dimensions	3.5in (L) x 2.9in (W) x 1.7in (H)			
Weight	0.8lbs			
Connections	M12 waterproof threaded connector with 4 wire pigtail standard			
Enclosure material	Polycarbonate			
Signal transmission distance	0 to 350 feet			
Gateway connectivity	Cellular or WiFi			

Notes:
1. Custom connectors available for C-Stic, Chart (Wika) DP & Cyl-Tec Leveleye
2. Battery life is based on measurements every 3 minutes
3. Unless otherwise noted, values are at 25°C

Use Instructions

1. Plug Pulsa gateway into power source and position within 350 feet of pressure sensor
2. Connect Link to your third party sensor
3. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
4. Follow sensor set up in app.

   Additional support available at help.pulsasensors.com

Certifications

FCC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	Pending
IC	IC	Granted

RoHS

Pulsa

The PULSA GW001 Cellular Gateway is an industrial grade device that receives and sends Pulsa measurements to the Pulsa service in all environments, including HazLoc Class I Div 2 Gr ABCD. The gateway works out of the box in any global location that is serviced by one of 400+ cellular network partners. There are no buttons, configuration steps, or ongoing maintenance steps required. Once the gateway is powered, it searches for cellular networks and connects to the strongest one. A solid green light indicates that a cellular connection is established and a sensor reading was sent to the Pulsa service. A weather resistant enclosure enables outdoor use.

Performance Details

GW001 Cellular Gateway Specifications	
US Carriers	10+ carriers (incl. Verizon, AT&T, T-Mobile, Sprint)
International Carriers	400+ carriers in 150+ countries across all continents
LTE Connectivity	5G/4G LTE Cat M1, 5G/4G NB-IoT LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39/B20/B26/B28
GSM Connectivity	EGPRS 850/900/1800/1900 MHz
SIM Card	International Roaming SIM pre-installed
BLE Rx Distance	300+ feet
Input Power	5 VDC (via supplied 110/240 AC power adapter)
AC/DC Power Adapter	Industrial threaded connector Input: 110-240V, 50/60Hz Output: 5 VDC, 2A Cable length: 2.4 meters CE, UL, RoHS
Enclosure Material	Polycarbonate
HazLoc	Class I Div 2 Gr ABCD certification available
Antennas	Cellular Wide Band (700-2700 MHz) internal BLE (2.4 GHz) internal
Operating temperature[1]	-35 to 75°C (-31 to 167°F)
Operating temp. (HazLoc)	-20 to 60°C (-4 to 140°F)
Dimensions	4.1 (L) x 4.1 (W) x 1.4 (D) inches
Weight	0.6 lbs
LEDs	
Green (solid)	Connected to cell, functional
Green (slow blink)	Connected to cell, awaiting first sensor reading
Green (fast blink)	Connecting to cell network
Green (slow blink) & Red (fast blink)	Connected to cell network, not relaying sensor readings (no sensors in range of the gateway)
Red (solid)	Error

Notes:
1. Unless otherwise noted, values are at 25°C

Cellular Gateway

Use Instructions

1. Attach power adapter to gateway
2. Plug power adapter into AC power source
3. Position the gateway within 350 feet of Pulsa sensors
4. Confirm a solid green light[1]
5. Confirm sensor readings in Pulsa dashboard[2]
6. (optional) To enable location tracking by gateway, configure gateway in Pulsa dashboard

Additional support available at help.pulsasensors.com

Notes:
1. If a solid green light is not achieved within 15 minutes, try multiple locations until a cellular connection is established in range of a Pulsa sensor.
2. First sensor readings may take up to 10 minutes to register on Pulsa dashboard.

Certifications

FCC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	HazLoc Class I Div 2 Gr ABCD certification available
IC	IC	Granted

RoHS

The Pulsa Frontier Link is an industrial grade, battery operated, remote monitoring device that periodically takes sensor measurements and uploads those measurements via cellular networks to the Pulsa Dashboard. The Frontier Link can power two sensors and provide GPS location. Easily configure sensor types, data collection intervals, cellular upload frequencies, and GPS settings in the Pulsa Dashboard. An integrated battery current consumption monitor provides precise battery level and remaining life. The Frontier Link works out of the box in any global location that is serviced by one of our 400+ cellular network partners. There are no buttons or ongoing maintenance required and the battery is user replaceable. Its weatherproof enclosure allows for reliable performance in even the harshest outdoor conditions.

Performance Details

Frontier Link Specifications	
Number of sensors supported	Two sensors Configurable in Pulsa Dashboard
Sensors types supported (both ports)	1. 4-20 mA output signal, 15V input power 2. 0-5 V ratiometric output signal, 5V input power 3. 0-5 V output signal, 15v input power 4. 4-20 mA output signal, no input power 5. 0-10 V output signal, no input power
Cellular Connectivity	2G/3G/4G/5G US - (AT&T, T-Mobile, Verizon + 4 more), MX (AT&T, TelCel, Telefonica) CA (Bell, Rogers, Telus, Videotron), 400+ networks in 150+ countries
Sensor measure frequency	Every 10 minutes[1] (for 1 sensor and 10 year avg battery life) Configurable in Pulsa dashboard
Cellular upload frequency	Multiple times per day (configurable)[1] Configurable in Pulsa dashboard
GPS	Standard Configurable in Pulsa dashboard
Memory	Stores 1000+ sensor measurements
Battery life	10 years with default settings Measurement and upload frequency configurable in Pulsa dashboard
Power	User Replaceable Battery 3.6V 38AH + Capacitor
Battery monitor	Current consumption monitor Reliable battery level and life remaining
Hazardous Certification	Class I Div 2 Pending
Enclosure Material	Polycarbonate
Operating temperature	-35 to 75°C (-31 to 167°F)
Operating temp. (HazLoc)	-20 to 60°C (-4 to 140°F)
Dimensions	6.0 (L) x 3.75 (W) x 3.25 (D) inches
Weight	1.6 lbs

Pulsa
pulsa.io/frontier

Main Port   2nd Port

Use Instructions

1. Configure sensor type for each port in Pulsa dashboard
2. Connect sensor to primary port to turn device on
3. Confirm sensor readings in Pulsa dashboard[2]

Additional support available at help.pulsasensors.com

Certifications

FCC	FCC	Granted
CE	CE	Granted
ETL Intertek	ETL	Pending
IC	IC	Granted

RoHS

Notes:
1. Up to 20 year battery life with power saver settings.

SK001 Cellular Gateway Solar Kit Data Sheet

The PULSA SK001 Solar Power Kit is an industrial grade device that receives and sends Pulsa sensor measurements from both Pulsa Weight and Pulsa Gas sensors to the Pulsa service. The gateway works out of the box in any global location that is serviced by one of 400+ cellular network partners. There are no buttons, configuration steps or ongoing maintenance procedures required. Once the gateway is powered on, it will search for available cellular networks and connect to the strongest one. A solid green light indicates that a cellular connection has been established. A weather resistant enclosure enables outdoor installation.

Performance Details

SK001 Solar Kit Specifications	
Battery	12V 10Ah LifePO4
Solar Panel	20 Watt
Autonomous days (no sun) battery life[1]	25 days
Sun hours to full charge	6 hours
BLE Rx Distance	300+ feet
Enclosure Material	Polycarbonate
Sheet Metal Bracket	5052 Aluminum, 0.081" thickness
Operating temperature[2]	-35 to 60°C
Dimensions	19.5 (L) x 13.5 (W) x 8.25 (D) inches
Weight	15lbs
LEDs	
Green (solid)	Connected to cell, functional
Green (slow blink)	Connected to cell, awaiting first sensor reading
Green (fast blink)	Connecting to cell network
Green (slow blink) & Red (fast blink)	Connected to cell network, not relaying sensor readings (no sensors in range of the gateway)
Red (solid)	Error

Notes:
1. Assumes no charging from solar panel
2. Unless otherwise noted, values are at 25°C

Solar Kit with Cell Gateway

Use Instructions

1. Connect battery to charge controller, confirm a solid green light[1]
2. Connect solar panel to charge controller
3. Mount solar kit assembly, preferably facing true south, at head level or higher, with direct line of sight with the sensor. Avoid masonry or thick metal walls between the gateway and sensor
4. Confirm sensor readings in Pulsa dashboard[2]
5. (optional) To enable location tracking by gateway, configure gateway in Pulsa dashboard

Additional support available at help.pulsasensors.com

Notes:
1. If a solid green light is not achieved within 15 minutes, try multiple locations until a cellular connection is established in range of a Pulsa sensor.
2. First sensor readings may take up to 10 minutes to register on Pulsa dashboard.

Certifications

|		
FCC	FCC	Granted
CE	CE	Granted
IC	IC	Granted

RoHS

Pulsa

The PULSA TP150 Temperature Probe is an industrial grade device for temperature monitoring (refrigerator/ freezer) and cold chain management (refrigerator truck/ container) that sends precise measurements to the Pulsa Dashboard for easy access and management. The Pulsa Temperature Probe works out of the box in any global location that is serviced by one of 400+ cellular network partners. There are no buttons, configuration steps or ongoing maintenance procedures required. The Pulsa Temperature Probe is low power (5 year battery life), waterproof, and easy to install. Install it in cool lines between a jacket and tube or place the Pulsa Temperature Probe in a freezer with the base out of the freezer to ensure seamless transmission to the Pulsa Gateway.

Performance Details

TP150 Wireless Temperature Probe Specifications	
Probe Measurement Range	-50°C to 150°C
Main Unit Operation Range	-20°C to 75°C
Battery Life	5 years
Battery	Replaceable CR2450 x 1
Low battery warning	Yes, app notification
Measurement frequency	1 minute
Signal transmission range	0 to 350ft (0 to 100m)
Waterproof rating	IP67
Dimensions	1.18" (probe), 7.18 (wire),1.69x 1.69x.58" (beacon)
Weight	1.52oz
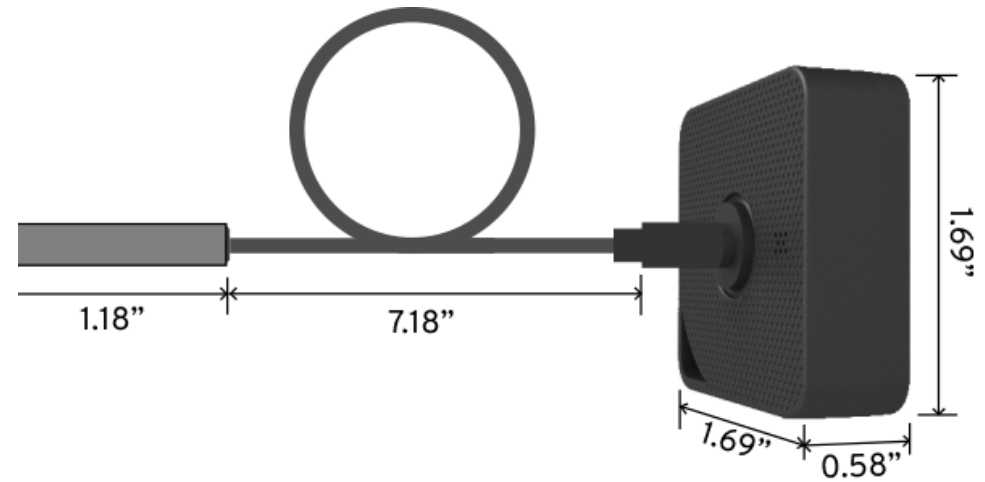
Pulsa Temperature Probe

Use Instructions

1. Remove unit from the box
2. Position the device within range of the Pulsa Gateway
3. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
4. Follow sensor set up in app
5. Confirm sensor readings in Pulsa Dashboard
6. To enable location tracking by Pulsa Gateway, configure Pulsa Gateway in Pulsa Dashboard

Additional support available at help.pulsasensors.com

Certifications

FCC	FCC	Granted
CE	CE	Granted
TELEC	TELEC	Granted
IC	IC	Granted

The PULSA TT75 Temperature Sensor is an industrial grade device for monitoring environment temperature in a refrigerator/ freezer or elsewhere. The device sends temperature data to the Pulsa Dashboard for easy access and management. The Pulsa Temperature Sensor works out of the box in any global location that is serviced by one of 400+ cellular network partners. There are no buttons, configuration steps or ongoing maintenance procedures required. The Pulsa Temperature Sensor is low power (5 year battery life), waterproof, and easy to install. Install it and start seeing data immediately.

Performance Details

TT75 Wireless Temperature Sensor Specifications	
Main Unit Operation Range	-20°C to 75°C
Battery Life	5 years
Battery	Replaceable CR2450 x 1
Low battery warning	Yes, app notification
Measurement frequency	1 minute
Signal transmission range	0 to 350ft (0 to 100m)
Waterproof rating	IP67
Dimensions L x W x H	1.69"x1.69"x.58"
Weight	.85oz

Pulsa Temperature Sensor

Use Instructions

1. Remove unit from the box
2. Position the device within range of the Pulsa Gateway
3. Download Pulsa mobile app (iOS & Android) or log into web app at dashboard.pulsasensors.com
4. Follow sensor set up in app
5. Confirm sensor readings in Pulsa Dashboard
6. To enable location tracking by Pulsa Gateway, configure Pulsa Gateway in Pulsa Dashboard

Additional support available at help.pulsasensors.com

Certifications

FCC	FCC	Granted
CE	CE	Granted
TELEC	TELEC	Granted
IC	IC	Granted
NCC	NCC	Granted