Duct Temperature Sensor
Wireless System

Features & Options

● User adjustable settings

● Onboard memory

● Transmits to a digital Gateway or a wireless-to-analog Receiver

BAPI's Duct Wireless Sensor measures the temperature and transmits the data via Bluetooth Low Energy to a receiver or gateway. This unit features a rugged IP66-rated BAPI-Box enclosure and ¼" (6.4mm) stainless steel probe with standard probe lengths from 4" to 18" (102 to 457mm).

Wireless Duct Temperature Sensor

5 YEAR WARRANTY

Specifications

Battery Power: Two included 3.6V 14505, 14500 or equivalent lithium batteries (Note: Standard AA batteries are not compatible)

Wire Power: 9 to 30 VDC or 24 VAC, halfwave rectified

Temperature Sensor Accuracy:
±1.0°F (0.55°C) from 32 to 158°F (0 to 70°C)

Temperature Range: -4 to 221°F (-20 to 105°C)

Transmission Distance: Varies by application*

Environmental Operation Range:
Temp: -4 to 149°F (-20 to 65°C)
Humidity: 10 to 90%RH, non-condensing

Enclosure Rating, Material & Material Rating:
IP66, UV-Resistant Polycarbonate, UL94 V-0

Frequency: 2.4 GHz (Bluetooth Low Energy)

Receiver Sensitivity: -97 dBm

User Adjustable Settings:
Delta T (Temp): 0.1°F/C to 5.0°F/C
Transmit Interval: 30 sec to 12 hour***
Sample Interval: 30 sec to 5 min***
Temp Offset: ±0.1°F/C to ±5.0°F/C

Onboard Memory:
Sensor retains up to 16,000 readings should the communication become interrupted. If using a Gateway, the data is re-transmitted once communication is re-established.

Agency: RoHS / FCC: T4FSM220809 / IC: 9067A-SM220809

*In-building range is dependent on obstructions such as furniture and walls and the density of those materials. In wide open spaces, the distance may be greater; in dense spaces, the distance may be less.

**Actual battery life is dependent on the sensor's adjustable settings and environmental conditions.

***The available transmit intervals and sample intervals are different depending on whether the system is using a gateway or a receiver.

Diagram labels:
5.00in [127mm], 1/2" Drillable Port, 1/2" NPSM Typ, 2.50in [63.5mm], 4.11in [104.4mm], Per Order See Ordering Grid, ∅.25in [6.4mm], Closed Cell Foam
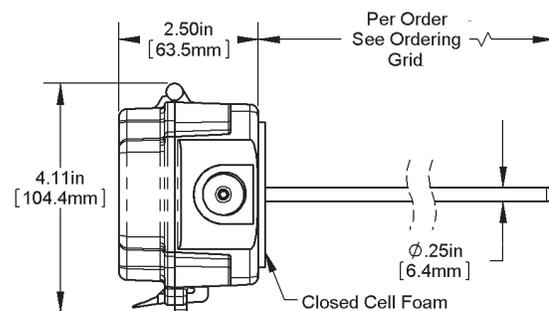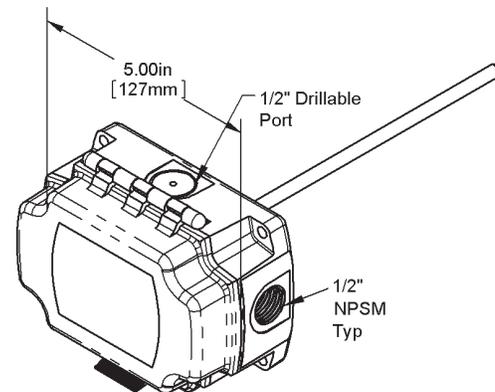
BAPI-Box Units Calculated Battery Life**		
Transmit Interval	Sample Rate	Estimated Life (years)
30 sec	30 sec	1.04
1 min	1 min	1.95
3 min	1 min	3.46
5 min	5 min	4.63
10 min	5 min	7.02

Ordering Information

BATTERY POWER UNITS

BA/WT-BLE-D-4-BB-BAT
Wireless Duct Temp Sensor, 4" (102mm) Probe Length, Battery Power

BA/WT-BLE-D-8-BB-BAT
Wireless Duct Temp Sensor, 8" (203mm) Probe Length, Battery Power

BA/WT-BLE-D-12-BB-BAT
Wireless Duct Temp Sensor, 12" (305mm) Probe Length, Battery Power

BA/WT-BLE-D-18-BB-BAT
Wireless Duct Temp Sensor, 18" (457mm) Probe Length, Battery Power

BA/LI14505: 3.6V Lithium Battery

WIRE POWER UNITS

BA/WT-BLE-D-4-BB-PWR
Wireless Duct Temp Sensor, 4" (102mm) Probe Length, Wire Power

BA/WT-BLE-D-8-BB-PWR
Wireless Duct Temp Sensor, 8" (203mm) Probe Length, Wire Power

BA/WT-BLE-D-12-BB-PWR
Wireless Duct Temp Sensor, 12" (305mm) Probe Length, Wire Power

BA/WT-BLE-D-18-BB-PWR
Wireless Duct Temp Sensor, 18" (457mm) Probe Length, Wire Power

Custom probe lengths available.

Wireless Receiver and Gateway

RECEIVER (Wireless-to-Analog)

The Wireless Receiver from BAPI receives the data from one or more wireless sensors. The data is then transferred to the Analog Output Modules and converted to an analog voltage or resistance. The receiver supports up to 32 sensors and up to 127 different Analog Output Modules.
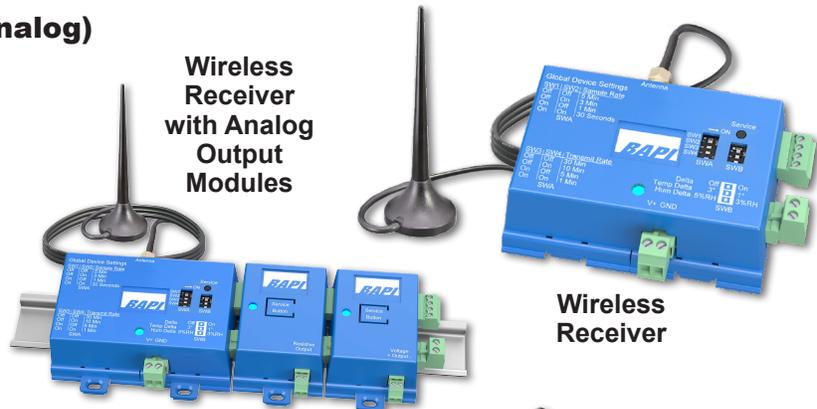
Wireless Receiver with Analog Output Modules

Wireless Receiver

GATEWAY

The Wireless Gateway from BAPI receives the data from one or more wireless sensors. The Gateway then provides the data to the cloud via MQTT. The Gateway also sends a confirmation signal to each sensor upon a successful reception of data. If the sensor doesn't receive this confirmation, it will retry its transmission to the Gateway. The Gateway supports up to 32 sensors.

Wireless Gateway