

WIRELESS

BAPI WIRELESS DUCT TEMPERATURE & HUMIDITY TRANSMITTERS

BA/WT(H)-D

DESCRIPTION

The BAPI BA/WT(H)-D wireless duct temperature and humidity transmitters sense in-duct conditions with a battery operated 418 MHz RF transmitter. The sensor/transmitter is mounted in a NEMA 4, (IP66) enclosure with 4" or 8", stainless steel temperature duct probe or 6" temperature/RH probe and has an open air range of 100' (30.5m). The battery has an estimated eight-year life with transmission updates approximately every 10 seconds. Other duct insertion probe lengths are available.

OPERATION/APPLICATION

Temperature and humidity data is transmitted via 418 MHz RF to a receiver. Open air range is 100 feet and battery life is estimated to be eight years with high-capacity 3.6V lithium batteries (at a 10-second transmit interval). Each transmitter has a unique address and includes built-in error detection. Each variable sent by the transmitter is converted by a BAPI Analog Output Module to a voltage, current, or resistance signal for input to a controller or monitor. The unit can also be set up to include low-battery information to the controller.

FEATURES

- **Wireless temperature and humidity sensing**
- **Eight-year battery life**
- **Built-in error detection**
- **Repeater available for 1000-foot range**
- **Available receiver with signal outputs of voltage, current, or resistance**
- **NEMA 4 (IP66) enclosure**
- **Stainless steel temperature probe**
- **Sintered filter humidity probe**
- **Two-year warranty**



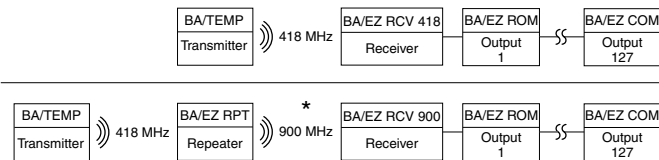
BA/WT-D-4



BA/WTH-D



SYSTEM LAYOUT



* The transmission range from repeater to receiver is 1000 feet.

SPECIFICATIONS

DEVICE OPERATION

Supply Voltage	3.6 VDC, Battery power only
Batteries	Two AA 3.6V lithium batteries (Included)
Battery Life	8 years @20 second intervals
Sensor Type	Temperature, 10K-2 thermistor
Optional	Humidity, Capacitive
Transmitted Range Value	
Temperature	Overall Range, -40° to 185°F (-40° to 85°C)
Opt. Humidity	Overall Range 0-100% RH
Accuracy	Transmitted Accuracy
Temperature	Thermistor, 10K type 2, ±0.5°F (±0.32°C)
RH	2% Capacitive, 10-90% @77°F
Indication	LED on Transmit
A/D resolution	10 bit (1024 counts)
Mounting	Four screws direct to duct, probe per order
RH probe	5.9" Lx .95" diameter
Temp Probe	1/4" dia x length per order
Wiring	None
Operating Temperature	32° to 140°F (0° to 60°C)
Operating Humidity	5% to 95% RH non-condensing
Construction	UV-Resistant Polycarbonate, UL94 V-0
Enclosure Rating	IP-66
Dimensions	4.1"H x 5.0"W x 2.5"D (10.4 x 12.7 x 6.4 cm)
Weight	1.0 lb (0.45 Kg)
Warranty	2 year

RADIO TRANSMITTER

Protocol	Proprietary (Point Six)
Frequency	418 MHz
Modulation	Frequency Modulation
Transmit Power	1mW (0 dBm)
Receiver Sensitivity	N/A
Open Air Range	100 ft (30m)
Low Battery Indication	None
Transmission time	20ms
Transmission Interval	Can be factory programmed
Temp.	Only 20 seconds standarD (Can be factory programmed 10-300 s)
RH and Temp.	40 seconds standarD (Can be factory programmed 20-300 s)
Antenna	Internal
Channels	One
Device Addresses	100 transmitters within 100'
Programming	Push button in field
Repeater Capable	Yes, (can increase open air range x10)
Compliance	RoHS
Temp. Only	FCC ID# T4F060811TEMP
RH and Temp.	FCC ID# T4F060811RH

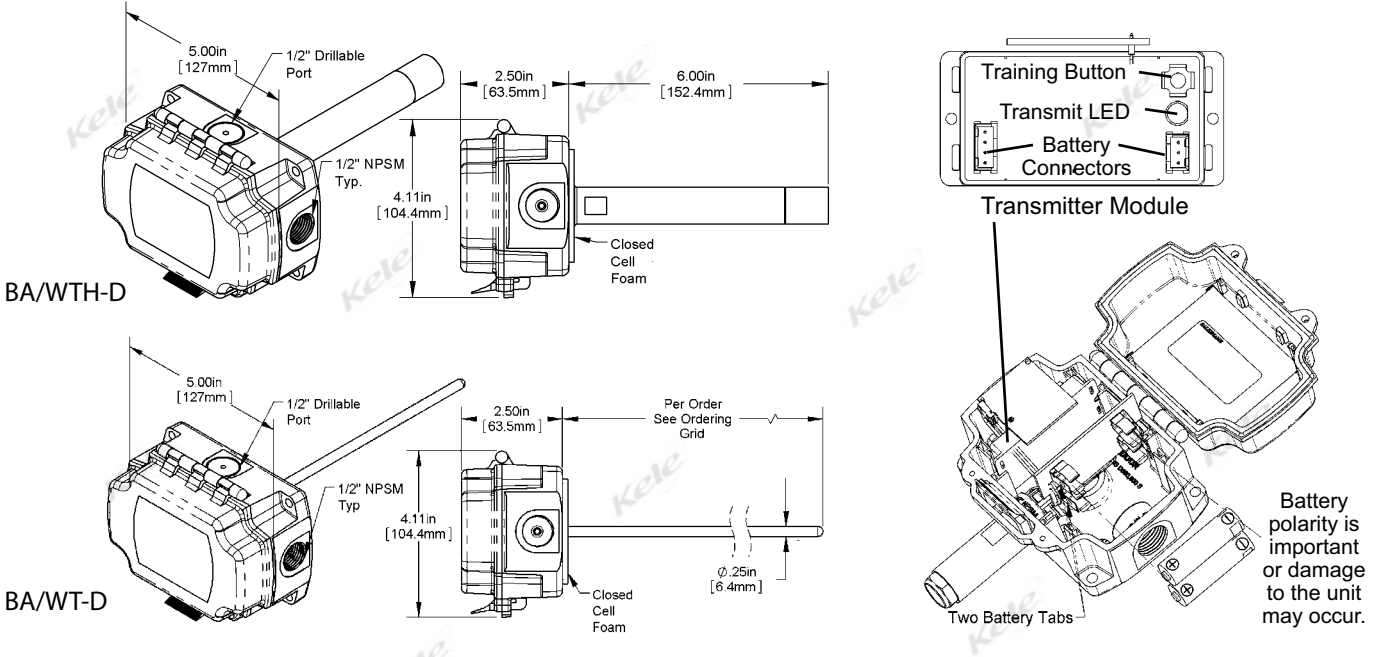
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DIMENSIONS AND WIRING

Note: Batteries included



INSTALLATION / MOUNTING

Install the probe horizontally on the duct. The enclosure should not be installed inside a metal duct. Installing the batteries starts the wireless transmission immediately. Pushing the button on the transmitter and the button on the associated output module simultaneously will confirm that the address link between the units is correct. This should be done one at a time to avoid cross-addressing.

ORDERING INFORMATION

MODEL	DESCRIPTION
BA/WT-D-4	Duct temperature probe, 418 MHz transmitter, 4" insertion probe, batteries included
BA/WT-D-8	Duct temperature probe, 418 MHz transmitter, 8" insertion probe, batteries included
BA/WTH-D	Duct temperature and humidity probe, 418 MHz transmitter, 6" insertion probe, batteries included

RELATED PRODUCTS	
BA/LI3620	AA lithium 3.6V battery, two required for each transmitter
BA/RCV418-EZ	BAPI receiver for 418 MHz transmitter signals to RS485
BA/RCV900-EZ	BAPI receiver for RPT repeater 900 MHz signals to RS485
BA/RPT49-EZ	9-15 VDC power BAPI repeater for 418 MHz signals with repeat at 900 MHz