

GAS & SPECIALTY SENSORS

VOC/INDOOR AIR QUALITY SENSORS BA/BS3XXV SERIES



DESCRIPTION

Humans exhale Volatile Organic Compounds (VOCs) as well as CO₂. The **BAPI BA/Bs3xxV Indoor Air Quality Sensors** measure these VOCs and serve as an indicator of space occupancy with same reliability of CO₂ transmitters.

The BAPI sensor is different from other VOC sensors. Using a calibration algorithm, the sensor value is converted to an output with a high correlation to a CO₂ level.

The sensor also picks up VOCS from other sources such as building materials, perfumes, colognes, and furniture off gassing. Using this sensor to ventilate helps to achieve true indoor air quality and not just CO₂ dilution. All units have no override, no LED, and no legend.

FEATURES

- Measures human sourced and environmental VOCs
- Calibration algorithm for CO₂ correlation
- Output corresponds to 0 to 2000 ppm of CO₂
- Optional display on wall unit only
- Available with optional temperature and humidity outputs



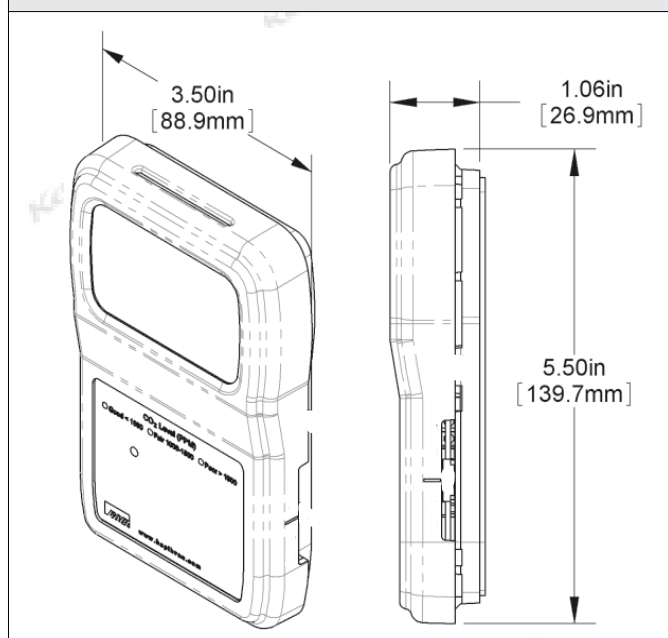
BABS3



BS3F with LED VOC Level Indication

SPECIFICATIONS	
Supply Voltage	0 to 5 VDC Output units: 9-35 VDC @ 50 mA Max 0 to 10 VDC Output Units: 15- 35 VDC @ 50 mA Max
Accuracy	RH: ±2%
Measurement Range	VOC: 0-100% (0 to 2,000 CO ₂ PPM)
Output	
Duct	0-5 VDC, 0-10 VDC (model specific)
Wall	0-5 VDC, 0-10 VDC, 2-10 VDC (model specific)
Sensing Technology	Humidity: Capacitive Polymer VOC: Micro-machined Metal Oxide
Display	Main Display: 0.76" 4-digit numeric (Numeric Values) Minor Display: 0.34" 3-digit Alpha-Numeric (PPM, %RH)
Operating Temperature	32° to 122°F (0° to 50°C)
Operating Humidity	0-95% RH non-condensing
Enclosure Rating	
Duct	NEMA 4x
Wall	NEMA 1
Mounting	
Duct	Directly to duct
Wall	2" x 4" J-Box or drywall mount (screws provided)
Dimensions	
Duct	5" H x 3.2" W x 7.6" D (12.7 x 8.2 x 19.3 cm)
Wall	5.5" H x 3.5" W x 1.1" D (13.9 x 8.9 x 2.7 cm)
Approvals	RoHS
Weight	
Duct	0.25 lb (0.11 Kg)
Wall	1.0 lb (0.45 Kg)
Warranty	2 years

DIMENSIONS



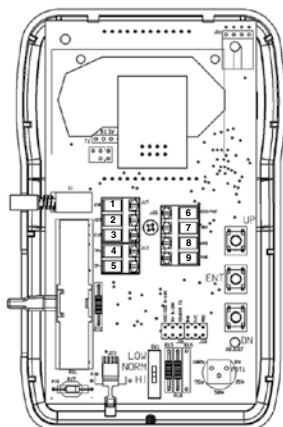


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WIRING



BA/VOC Wiring Diagram

1 (OVR)	Override Output (Dry Contact Switch). When Override switch is pushed this terminal is connected to GND.
2 (SET)	Setpoint output. Referenced to ground.
3 (EXT)	External occupied LCD indicator is activated by logic LOW or ground at this
4-5 (TP+ & TP-)	Temperature Sensor Output (Resistive Output). When a jumper is on J16, TP- is connected to the GND terminal. When the jumper is off of J16, the temperature sensor is floating. (Semiconductor TP+ = +, TP- = -)
6 (CO2)	Voltage output VOC Signal (0 to 2,000 ppm) referenced to GND
7 (HUM)	Voltage output Humidity Signal referenced to the GND terminal
8 (GND)	To controller Ground [GND or Common]
9 (PWR)	Power, referenced to GND

ORDERING INFORMATION

BS	VOC Room Sensor in the BAPI-Stat 3 Style Enclosure
Temperature Display Mode (Must select one)	
-	Duct Option
BS3F	Temperatures displayed in °F (toggle on or off)
BS3C	Temperatures displayed in °C (toggle on or off) (special order)
BS3X	No LCD display
VOC Output (Must select one)	
VOC05	VOCs transmitted as 0 to 2,000 ppm CO2 equivalent, 0 to 5 VDC output
VOC10	VOCs transmitted as 0 to 2,000 ppm CO2 equivalent, 0 to 10 VDC output
Humidity Output	
-	No Humidity Transmitter
H205	-H205 ±2% humidity transmitter, 0 to 5 VDC output
H210	-H210 ±2% humidity transmitter, 0 to 10 VDC output
H212	-H212 ±2% humidity transmitter, 2 to 10 VDC output (special order)
Passive Temperature Output	
-	No temperature output option
0	100 Platinum RTD, 100Ω @ 0°C, 0.385Ω/°C temp coefficient (special order)
1375	1K Platinum RTD, 1,000Ω @ 0°C, 3.75Ω/°C temp coefficient (special order)
1	1K Platinum RTD, 1,000Ω @ 0°C, 3.85Ω/°C temp coefficient (special order)
102	10K-2 Thermistor, 10,000Ω @ 25°C (special order)
103	10K-3 Thermistor, 10,000Ω @ 25°C (special order)
20	20K Thermistor, 20,000Ω @ 25°C (special order)
Override Configuration	
J	Override as a separate output (special order)
N	Override in parallel (//) with sensor (special order)
P	Override in parallel (//) with setpoint: NOT available on voltage setpoint models (special order)
Z	No override (needed if no override is required) (standard)
VOC Level Indication	
-	No level indication
LED	Green/orange/red LED legend for good, fair and poor (special order)
ARW	Black arrow on display with legend to indicate good, fair and poor (special order)
BNK	No LED, arrow indicators, legend (standard)

RELATED PRODUCTS

DCPA-1.2
DCP-1.5-W

Power supply, 120 VAC IN to 24 VAC/24 VDC OUT
Power supply, 24 VAC IN to 24 VDC OUT