

# Ventostat<sup>™</sup> T8100 NS and NSP Series CO<sub>2</sub> Sensor



### **Features**

- Patented, Absorption Infrared Gas sensing engine provides high accuracy in a compact low cost package.
- Local temperature adjustments with slide pot and night set override control
- Patented ABC Logic<sup>™</sup> self-calibration system eliminates the need for manual calibration in most applications.
- Lifetime CO<sub>2</sub> calibration guarantee when using ABC Logic™.
- Mounting plate with two-piece terminal blocks provide quick, easy wiring.
- Gas permeable, water resistant CO<sub>2</sub> diffusion filter prevents particulate and water contamination of the sensor.

- Locking screw secures cover and sensor to the mounting bracket for tamper resistance.
- Dual simultaneous analog outputs (V & mA) available for CO<sub>2</sub>.
- Sensors are shipped factory calibrated.
- Temperature sensor on all models.
- Modern enclosure with customized branding available.

**Amphenol**Advanced Sensors

# **Ventostat Specifications**

### **Sensing Method**

Non-dispersive infrared (NDIR) absorption Gold-plated optics Patented ABC Logic self calibration algorithm

### CO<sub>2</sub> Measurement Range

T8100

0 to 2000 ppm (0 ppm = 0 V, 4 mA; 2000 ppm = 10/5V, 20 mA)

### CO<sub>2</sub> Accuracy

±30 ppm or 3% of the reading shown, whichever is higher \*

### **Power Supply Requirements**

18-30 VAC RMS, 50/60 Hz, or 18 to 42 VDC, polarity protected

### **Power Consumption**

Typical 0.7 W at nominal voltage of 24V AC RMS

### **Temperature Dependence**

0.2% FS per °C (±0.11% per °F)

### **Stability**

<2% of FS over life of sensor (15 years)

### **Pressure Dependence**

0.135% of reading per mm Hg

### **Certifications**

CE and RoHS compliant

### Signal Update

Every 5 seconds

### CO<sub>2</sub> Warm-up Time

< 2 minutes (operational) 10 minutes (maximum accuracy)

\*CO<sub>2</sub> accuracy statement excludes standard gas used for calibration that has an accuracy of 2%. In addition, there is a potential digital to analog error of up to 1%.

### **Operating Conditions**

32°F to 122°F (0°C to 50°C) 0 to 95% RH, non-condensing

### **Storage Conditions**

-40°F to 158°F (-40°C to 70°C)

### Flammability Classification

UL94 5VA

### **Thermistor Type**

NTC 10  $k\Omega$  thermistor

### **Thermistor Accuracy**

±1°C (15° to 35°C)

### Night Setback Override Button (NS and NSP)

Shorts the thermistor output when depressed

### Slide Potentiometer (NSP Only)

Left (stop) 0k Ohms ( $\pm$ 5k  $\Omega$ ) Center 50k Ohms ( $\pm$ 7.5k  $\Omega$ ) Right (stop) 100k Ohms ( $\pm$ 10%)

### ABC Logic™ Self Calibration System

ABC Logic<sup>™</sup> (Automatic Background Calibration) self calibration allows the sensor to continually recalibrate itself when the indoor concentrations drop to outside levels while the building is unoccupied. Generally a building must be regularly unoccupied for 4 hours or more for this self-calibration system to operate properly. Under these conditions, ABC Logic<sup>™</sup> should maintain sensor calibration over the lifetime of the sensor. The ABC Logic<sup>™</sup> should be turned OFF where a building is continuously occupied 24 hours per day, or where there could be significant sources of nonoccupant related CO₂ such as greenhouses, breweries and other industrial and food processing applications.

### Output

Analog

0 to 5 V, (100  $\Omega$  output impedance) 0 to 10 V (100  $\Omega$  output impedance) and 4 to 20mA (RL maximum 500  $\Omega$ ) available simultaneously for CO $_2$  output



## www.amphenol-sensors.com

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