

# BACNET SENSOR RANGE

## CO<sub>2</sub>, TEMP & RH (24V AC/DC)



### | OVERVIEW |

The Flamefast BACnet sensor range can be supplied with any combination of Carbon Dioxide (CO<sub>2</sub>), Temperature & Relative Humidity, and the BACnet MS/TP interface allows for the sensors to be integrated with much larger systems over a simple two wire network.

With the optional signature Flamefast traffic light display, the sensor can provide a clear, bold indication of the air quality in the monitored space.

As default the three 0-10V outputs will provide a full scale linear output for the CO<sub>2</sub>, Temp & RH levels, however these analogue outputs can be rescaled or configured to be controlled over the network, negating the requirement for separate local controllers.

There is also the option to assign each of the analogue outputs to any of the sensor values, and the on board relay can be configured to activate based on CO<sub>2</sub>, Temperature or RH levels, or all can be controlled over the network.

This cost effective and versatile sensor is ideal for any application, including natural and demand controlled ventilation as well as for integrating with our range of gas safety systems.

### | KEY FEATURES |

- 24V AC/DC Power Supply
- Pluggable terminal block for ease of installation
- Optional traffic light readout
- Automatic object configuration
- 3x 0-10V outputs (Network writeable)
- Selectable Temperature output (0-10V or 10K3)
- Volt free contact output (Network writeable)
- Typical 10+ year life expectancy
- Self-calibrating CO<sub>2</sub> sensor
- Mounts onto any standard single gang junction box or conduit box
- **UK MANUFACTURED**

### Dimensions

Height 125mm | Width 86mm | Depth 36mm

### Technical Specification

Power Supply	24V AC/DC ±10%
Power Consumption	50Ma Max
BACnet	MS/TP over RS485 Baud: 9k6, 19k2, 38k4 or 76k8 127 Address (1/10 <sup>th</sup> Load) <i>Full specification available on request</i>
Analogue Outputs	3x 0-10V
Thermistor Output	10K3A1
VFC Output	SPST - 100mA @ 24V Max
CO <sub>2</sub> Range	0 - 10,000 ppm
CO <sub>2</sub> Output Scaling	0 - 2,000 / 5,000 ppm
CO <sub>2</sub> Accuracy	±40 ppm +3% @ NTP
CO <sub>2</sub> Display Resolution	1 ppm
CO <sub>2</sub> Sensing Method	Non Dispersive Infra-red (NDIR)
CO <sub>2</sub> Typical Sensor Life	10+ Years
Temp Range	0 - 50°C
Temp Accuracy	±0.3°C @ 25°C
Temp Display Resolution	0.1°C
RH Range	0 - 100%
RH Accuracy	±2% @ 20 - 80%
RH Display Resolution	0.1%
Operating Conditions	Temp 0 - 50°C Humidity 0 - 95% (NC)
Sampling Method	Diffusion
Warm-up Time	30 seconds
IP Rating	IP40
Housing Material	Flame Retardant ABS
Colour	Pure White (RAL9010)
Approval	CE

### Installer Selectable Options

- Backlight (Enable/Disable)
- Replaces PPM reading with 'CO<sub>2</sub>' on display
- 0-10V or Thermistor Temp output (only one used at any time)
- CO<sub>2</sub> Analogue output (2,000 / 5,000 ppm)
- Traffic light and relay set points (see below)

The unit has two user selectable programmes to control the traffic light and volt free contact set points depending on the application. These are as follows:

Programme	Ventilation	Gas Safety
Green - Yellow	1,000 ppm	1,500 ppm
Yellow - Red	1,500 ppm	2,800 ppm
Relay Position	Normally Open	Normally Closed
Relay Set Point	1,000 ppm	4,500 ppm

### Part Numbers & Options/Accessories

Part No	Description
BAC-CO2T	BACnet Sensor - CO <sub>2</sub> & Temp
BAC-CO2TH	BACnet Sensor - CO <sub>2</sub> , Temp & RH
BAC-TH	BACnet Sensor - Temp & RH
BAC-T	BACnet Sensor - Temp
BAC-CO2TL	BACnet Sensor - CO <sub>2</sub> & Temp c/w LCD
BAC-CO2THL	BACnet Sensor - CO <sub>2</sub> , Temp & RH c/w LCD
BAC-THL	BACnet Sensor - Temp & RH c/w LCD
BAC-TL	BACnet Sensor - Temp c/w LCD