SMART CO2, TEMP & HUMIDITY DUCT SENSOR

TP-DS-CO2RHT-BMS FEATURES

- Accurate measurement of temperature, humidity & CO2
- BACnet MS/TP & Modbus RTU communications
- Robust housing designed to be mounted in ductwork
- Quick and simple installation

Featuring a robust housing for duct applications, the TP-DS-CO2RHT-BMS uses NDIR technology for CO2 measuring and the sensor exposes the CO2, relative humidity and temperature environmental measurements directly onto a BACnet MS/TP or Modbus RTU RS485 network.

The sensors also incorporate in-built, networkable I/O with 1 x Digital Output (DO) and 1 x Digital Input (DI) allowing flexible on/off environmental and non-environmental control loops to be set up via the BACnet communications.

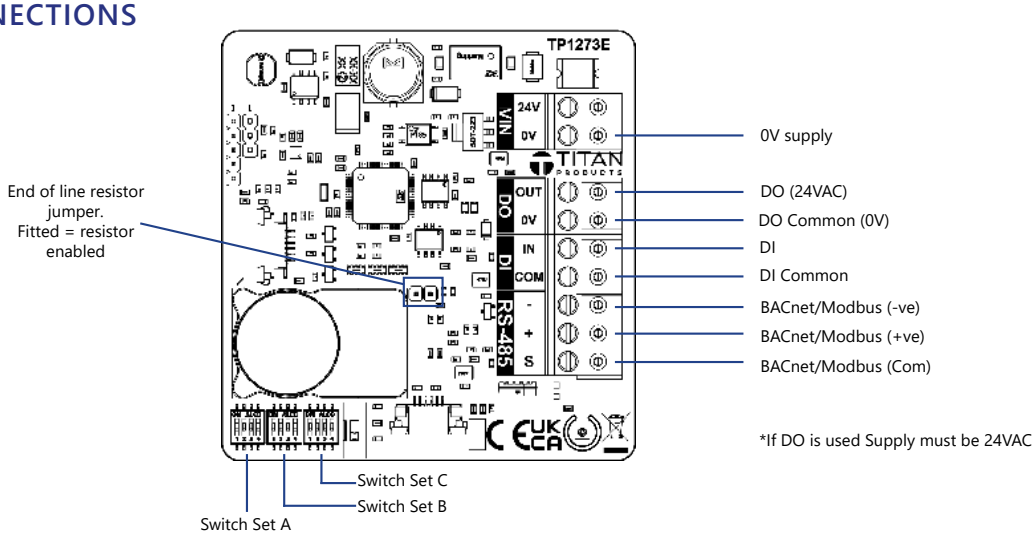
The CO2 sensor employs Automatic Calibration Technology to continuously adjust the calibration base to correct for changes in the background concentration levels and sensor drift. The CO2 sensor calibration algorithm starts after the first 24 hours of operation and continuously monitors and automatically adjusts the sensor calibration over the lifetime of the product.

Easily addressed via the on-board DIP switches, the sensors are ideal for a wide range of applications.

SPECIFICATION

Material:	Flame Retardant Polycarbonate
Supply:	24VAC/DC +/- 10% (AC supply required if using DO)
Power Consumption:	30mA (Does not include DO load if used)
Outputs:	BACnet MS/TP or Modbus RTU 1 x DO rated at 80mA
Inputs:	1 x DI
Accuracy:	CO2: 50ppm +/- 2% of reading Humidity: +/- 2%RH Temperature: +/- 0.2°C
CO2 Sensing:	NDIR
IP Protection:	IP65
Environmental Conditions:	-10 to +60˚C 0-95% RH Non-Condensing
Connections:	Pluggable screw terminals for 0.3 to 1.5mm cable
Recommended Cable:	Screened, twin twisted pair 0.75mm to 1mm. Screen earthed at controller end only.
BACnet Baud Rates:	9600, 19200, 38400, 76800
Modbus Baud Rates:	9600, 19200, 38400, 57600
Country of Origin:	UK
Product Codes:	TP-DS-CO2RHT-BMS

CONNECTIONS

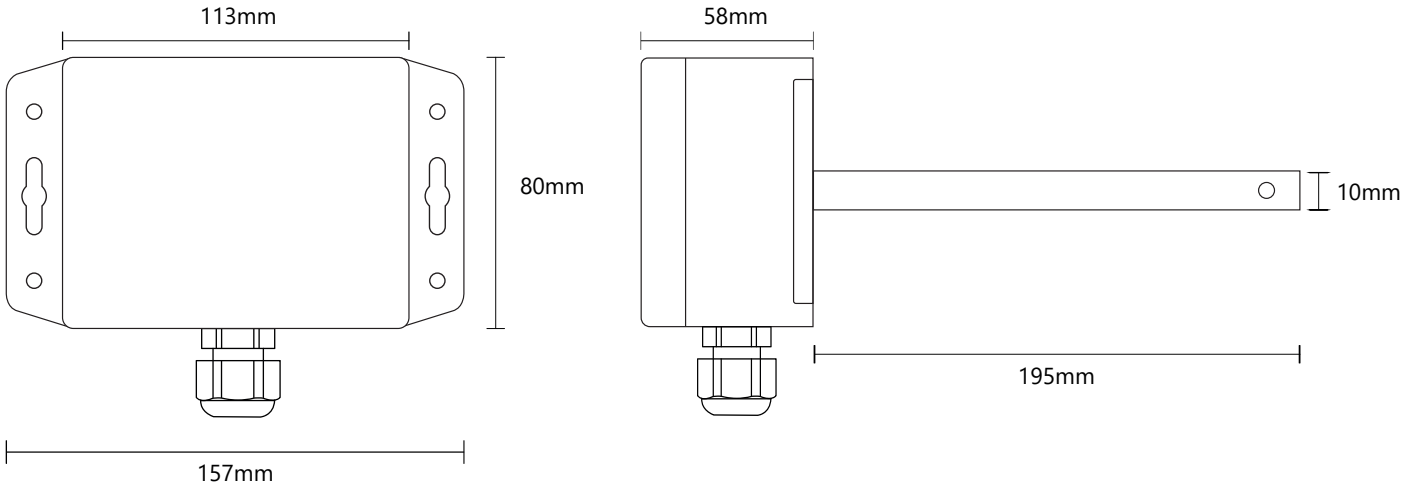


CO2

Automatic Background Calibration (ABC):

Titan CO2 sensors are supplied pre-calibrated and will auto calibrate every 7 days thereafter using automatic background calibration. To maintain calibration and long-term accuracy stability, the sensor should be exposed to low, unoccupied CO2 levels (typically 400ppm) at least once every 7 days.

DIMENSIONS



INSTALLATION AND MAINTENANCE

- The sensor must be installed by a competent and suitably qualified person and maintained within its stated operating environment
- Sensor cables should be segregated from any mains carrying conductors and electrical noise emitting equipment such as fluorescent lighting.
- Ensure correct screw sizes are used.
- Do not spray any liquid or cleaning products directly onto the ventilated housing.
- **Do not** blow directly on to the CO2 cell within the sensor, this can damage the cell membrane and could cause incorrect readings.

For further install and setup information please contact technical@titanproducts.com