
# 0-10V CO2, TEMP & HUMIDITY DUCT SENSOR

## TP-DS-CO2RHT FEATURES

- Accurate measurement of temperature, humidity & CO2
- Robust housing designed to be mounted in ductwork
- Quick and simple installation

Featuring a robust housing for duct applications, the TP-DS-CO2RHT uses NDIR technology for CO2 measuring and provides 0-10V signals for CO2, relative humidity and temperature conditions in the measured space and incorporates a second resistive 10K3A1 temperature output with other thermistor types available on request.

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.

## SPECIFICATION

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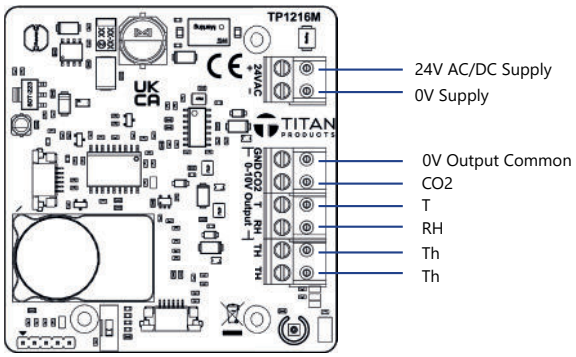
|---|---|
| Material: | Flame Retardant Polycarbonate |
| Supply: | 24VAC/DC +/-10% |
| Power Consumption: | 45mA |
| Outputs: | 0-10V (0-2000ppm)<br>0-10V (0-100%RH)<br>0-10V (0-50°C)<br>10K3A1 Resistive |
| Accuracy: | CO2: 50ppm +/- 2% of reading<br>Humidity: +/- 2%RH<br>Temperature: +/- 0.2°C |
| CO2 Sensing: | NDIR |
| IP Protection: | IP65 |
| Environmental Conditions: | -10 to +60°C<br>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.<br>Screen earthed at controller end only. |
| Country of Origin: | UK |
| Product Codes: | TP-DS-CO2RHT-V-10K3 |

## CONNECTIONS

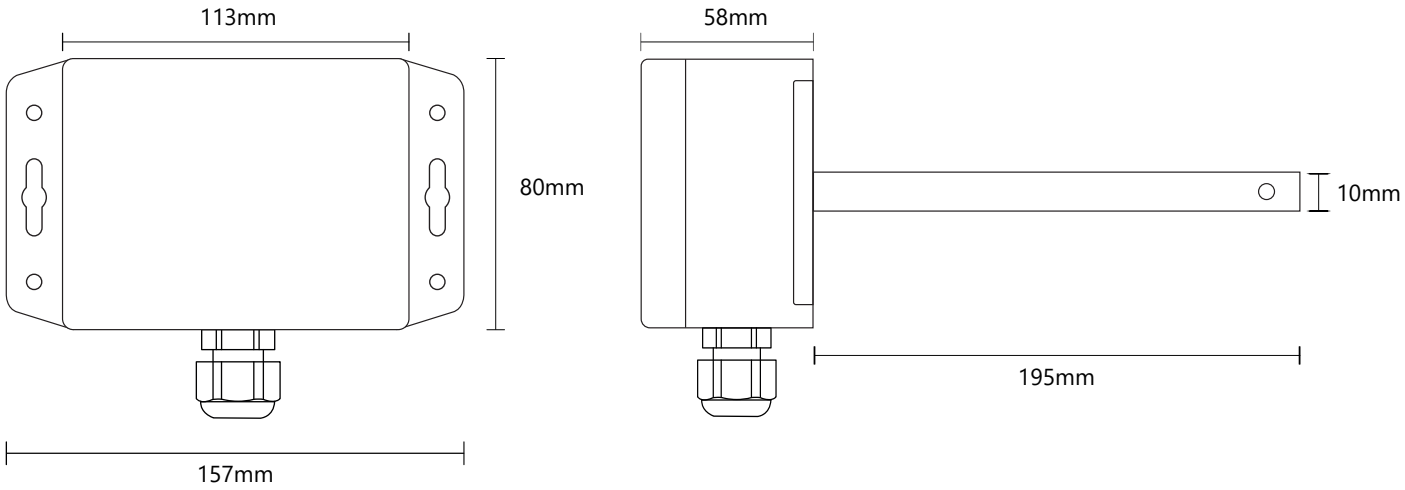



## CO2

**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*