

CO2, Temp & Humidity Combined Sensors

Automatic Calibration Technology

New modern enclosure



The Titan TPVRCO2 range of room sensors provide CO2 measurement using NDIR technology and can be supplied with optional temperature and relative humidity outputs.

Optional LED's can be added to provide indication of the measured CO2 concentration levels.

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 24hrs of operation and continuously monitors and automatically adjusts the sensor calibration over the life time of the product.

The automatic self-calibration takes place over a 24 hour period of operation when the space being monitored is subjected to an unoccupied period and the background CO2 concentration is subjected to the prevailing external level.

Specification

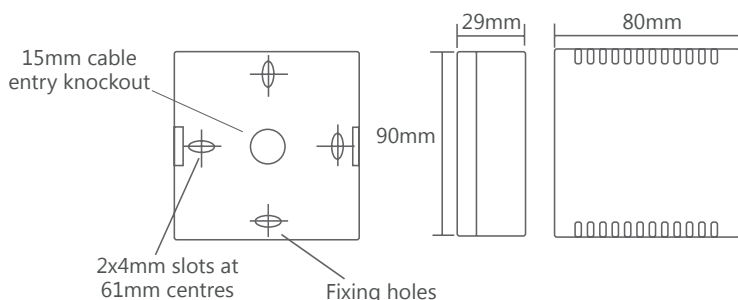
Material:	Flame retardant polycarbonate
Sensor:	NDIR technology
Outputs:	CO2: 0-10V for 0-2000ppm
	Temp: 0-10V for 0-50°C
	All thermistors, PT100 and PT1000
	0-10V for 0-100%
Accuracy @ 25°C and 50% RH:	
CO2:	+/- 40ppm +2% of reading
Temp (voltage):	+/- 0.5°C
Temp (resistive):	+/- 0.5°C
Humidity (optional):	+/- 3% RH
Power Supply:	24V AC/DC (+/- 15%)
Power Consumption:	100mA
Operating Conditions:	0-50°C
	10-80% RH non-condensing
Warm up time:	2 mins (operational)
	10 mins (peak accuracy)
3x LED Indication (optional):	Green - on below 800ppm
	Yellow - on at 800 to 1500ppm
	Red - on above 1500ppm
Terminals:	Max cable size 1.0mm
Dimensions:	80mm x 90mm x 29mm
Country of Origin:	UK
Product codes:	See table

Award Winning Technology

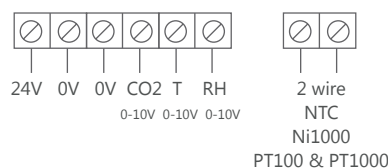
Product Codes

Product Code	Sensor Type
Non LED Indication	
TPVRCO2	Room CO2 only 0-10V output
TPVRCO2T	Room CO2 and Temp 0-10V outputs
TPVRCO2-RT	Room CO2 0-10V with thermistor temperature output
TPVRCO2HT	Room CO2 with Humidity and Temperature all 0-10V outputs
TPVRCO2H-RT	Room CO2 with Humidity 0-10V and thermistor temperature sensor.
c/w LED Indication	
TPVRCO2/L	Room CO2 only with LED 0-10V output
TPVRCO2T/L	Room CO2 and Temperature 0-10V outputs plus LED's
TPVRCO2-RT/L	Room CO2 0-10V with thermistor temperature output plus LED's
TPVRCO2HT/L	Room CO2 with Humidity and Temperature all 0-10V outputs plus LED's
TPVRCO2H-RT/L	Room CO2 with Humidity 0-10V and thermistor temperature sensor plus LED's

Dimensions



Wiring



Features

- 24V AC or DC supply
- 0-10V outputs
- LED CO2 concentration indication
- Temperature and Humidity output options
- Resistive output option for temperature
- NDIR sensor for accuracy and stability
- Automatic Calibration Technology
- Lifetime accuracy (typical life 15 years)

Applications

The Titan TPVRCO2T range of sensors are ideal for applications that require ventilation on demand such as Schools, Universities, Sports Halls, Theatres & lecture halls, Offices and Leisure centres.

Operation

Automatic calibration requires the background CO2 levels to drop to 40ppm at least once during the first 24 hours of power up and to at least once every 7 days thereafter. This will become the base rate the sensor will calibrate to preventing long term drift.

Installation and Maintenance

Solvents in the air derived from sources such as paints, cleaning products and adhesives can have a detrimental impact on the sensor cell. All sensors should therefore be installed after the space has been decorated and any flooring fitted. The sensors should also be kept away from adhesives and should the housing require cleaning a dry non-solvent based product must be used. Do not spray any liquid or cleaning products directly onto the ventilated housing. Exposing the sensor to such solvents or moisture will invalidate the product warranty.

The CO2 sensors are designed to be used with Titan BACnet controllers.