

# Zigbee CO2, Temperature & Humidity Sensor

(with LED indication)



The Titan Products Wireless Room CO2 & Temperature Sensor with LED indication is designed to wirelessly monitor the CO2 and temperature levels of a space and transmit the data over a Zigbee wireless network back to the Titan Products Co-ordinator. There is also an option to add a humidity sensing point to the sensor.

The sensor incorporates LED indication. When CO2 levels are below 800ppm the green LED will flash every 10 seconds. When levels rise above 800ppm the yellow or red LEDs will flash every second dependant on the CO2 levels in the space to draw attention to the occupant that the levels are rising.

Using a frequency of 2.4GHz the transmission between the TPZRCO2T/L room sensor and co-ordinator is carried out after a timing schedule or a specific change in measurement which is set during commissioning (see below table).

The TPZRCO2T/L uses a 3.6V, 2600mAh lithium thionyl chloride battery. This eradicates the need for wiring to the unit making it extremely easy and cost effective to install.

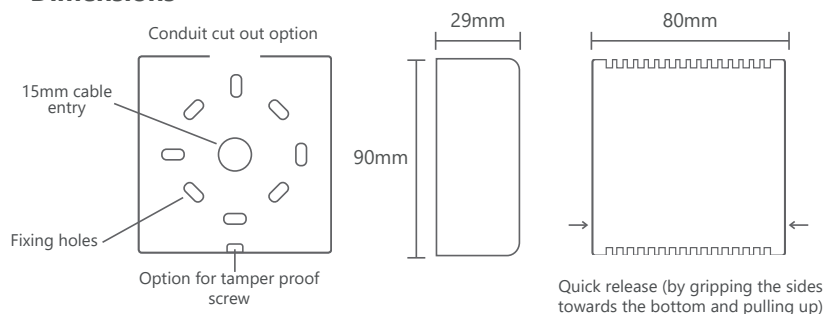
Self-healing, mesh networking can be achieved through adding TPZ-Net Repeaters to the network.

## Specification

Power Supply:	3.6V, 2600mAh lithium thionyl chloride battery
Battery Life:	Up to 3 years (depending on transmission intervals)
Network Technology:	Zigbee
Transmission Frequency:	2.4GHz
Transmission Power:	8dBm
Transmission Range:	30m-60m indoor (depending on building type) 200m outdoor (line of sight)
Measurement Accuracy:	+/- 0.5°C (temp) +/- 50ppm + 2% of reading (CO2) +/- 3% (humidity)
Operating Range:	0 - 50°C 0 to 2000ppm 0 to 95% non-condensing
LED indication levels:	Green <800ppm Yellow 800 - 1000ppm Red >1000ppm
Material:	IP20 flame retardant polycarbonate
Dimensions:	80mm x 90mm x 29mm
Country of Origin:	UK
Product Codes:	TPZRCO2T/L (temp & CO2) TPZRCO2HT/L (temp, CO2 & hum)

Note: It is strongly recommended a site survey is carried out prior to installing any wireless sensors

## Dimensions



## Editable Values

Transmission Interval (minutes)	Change of value (CO2)	Change of value (temp °C)
10	25 ppm	0.5
15	50 ppm	1.0
20	75 ppm	2.0
30	100 ppm	3.0
60	150 ppm	4.0
	200 ppm	5.0
	250 ppm	

Titan Products are proud members of the Zigbee Alliance.



For information on Titan Products Zigbee sensors please contact the sales team on +44 (0)161 406 6480

## Note

The TPZRCO2T/L sensors require 24 hours on a commissioned network for self calibration to take place.

## Operation

Automatic calibration will take place 24 hours after power up and every 24 hours thereafter. The sensor will calibrate to lowest measured point during these 24 hours with this value becoming the sensors base rate. It is required that the sensor is exposed to an unoccupied CO2 level within the measured space during each 24 hour cycle.

## 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.