Zigbee CO2, Temperature & Humidity Sensor

TPZNET

The Titan Products Wireless Room CO2 & Temperature Sensor 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.

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

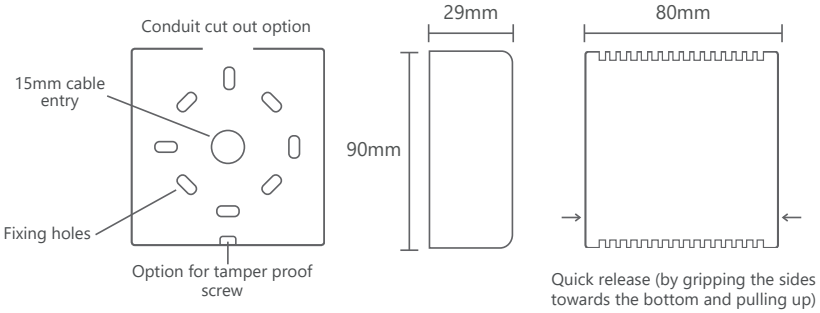
Using a frequency of 2.4GHz the transmission between the TPZRCO2T is carried out after a timing schedule or a specific change in measurement which is set during commissioning (see below table).

The TPZRCO2T 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.

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
Material:	IP20 flame retardant polycarbonate
Dimensions:	80mm x 90mm x 29mm
Country of Origin:	UK
Product Codes:	TPZRCO2T (temp & CO2) TPZRCO2HT (temp, CO2 & hum)

Dimensions



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

Titan Products are proud members of the Zigbee Alliance.

ZigBee® Alliance

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

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	

Features

Zigbee wireless technology
Combined CO2, temperature and humidity
Adjustable transmission timings and values
Self healing, mesh network technology
Easy to set up
Up to 99 sensor points from 30 devices per co-ordinator

Note
The TPZRCO2T 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.

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