RT Reachtec

Indoor Air Quality Transmitter

PM2.5/PM10/Temp/RH/CO_2 VC2500 series

Product Descriptions

VC2500 is an Indoor Air Quality monitoring device. It measures carbon dioxide (CO_2) concentrations, particulate matter (PM2.5), temperature and relative humidity simultaneously. It is ideal for where measurement of these parameters are required and most optimize for indoor ventilation strategy as well as indoor environment monitoring.

VC2500 provides RS485 modbus communication protocol and can be linked to most building management system. The installation of VC2500 IAQ sensor/transmitter is simple and straight-forward, easy to operate and cost effective. It is an excellent choice for indoor environment monitoring and control.

Specification

General Performance

Compliance with	EMC directive 2014/30/EU
Operating range	0 – 50℃/0 – 95%RH(non-condensing)
Storage temperature range	-40℃ ~ 70℃
Display status	Four-digit display
Warm up time	≦1 minute (@ full spec ≦15 minutes)
Signal output	RS485 Modbus RTU
Relay output	Preset starting point@1000 ppm
	Delayed closing range 200 ppm
Relay load	2A,30V up to 0.5A,125V ac/dc

Electrical

Power supply input	24V ac/dc ±20% , 50 Hz
Ppwer consumption	< 1.7 watt
Terminal connections	Use 1.5 mm^2 control wires for power supply input (G+,G0)
	for RS485 modbus connection.(CR+ , CR-)

Three-stage LED status indicator

Green light (Good)	PM2.5 : 0 –15 and CO_2 : 0 – 800
Yellow light (Normal)	PM2.5 : 15 – 35 or CO_2 : 800 – 1200
Red light (Poor)	PM2.5 : 35 up or CO_2 : 1200 up
	Unit : PM2.5 (ug/m^3) ; CO_2 (ppm)

Reachtec Aire Ltd. 瑞嘉國際有限公司 Tel : +886-2-26017562 E-mail : sales@reachtec-aire.com

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Specification

Relative humidity (RH) measurement

Sensing technology	CMOS
Working range	0 – 95% RH
Repeatability	± 0.1% RH
Accuracy	± 3% RH
Delay response	± 1% RH
Long term drift	< 0.5% RH

Temperature measurement

Sensing technology	CMOS
Working range	0 – 80℃
Repeatability	± 0.1℃
Accuracy	± 0.3℃
Long term drift	< 0.04℃

CO_2 measurement

Measuring principle	Infrared (NDIR) wave-guide technology with Automatic Background Calibration (ABC) ,and passive gas diffusion
Measuring Range	0 – 6,000ppm (extended range 6,000 – 10,000ppm)
Repeatability	± 1 % of reaging ± 20 ppm
Accuracy	± 3 % of reading ± 50 ppm
Annual drift	< ±10ppm(with ABC function activated)
Pressure dependence	+ 1.6 % of reading per kPa
Calibration function	Background calibration function(400 ppm)

PM2.5/PM10 measurement

Sensing technology	laser scattering
Working range	0 – 500 ug/m^3 (extended range 500 – 1000 ug/m^3)
Accuracy	± 10 ug/m^3 for measuring range from 0 – 100 ug/m^3
	± 10% of reading for measuring range above 100 ug/m^3
Reaction time	≦ 10s
Counting efficiency	98@≧0.5um

Remarks :
1.not suitable for use in environment with high SO_2.
2.in normal IAQ application (@ NTP), accuracy is defined after 3 weeks of continuous operation.
The tolerance of the calibration gas (+/-2%) and test gas adds to the total uncertainty in accuracy.

Models

VC2500 — □ — □

Measurement Items

PM2.5/PM10	—
PM2.5/PM10/Temp/RH	**TR**
PM2.5/PM10/Temp/RH/CO_2	**TR2**

LC Display

No LC Display	—
with LC Display	**D**

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housing options

Wall IP30 housing
size：113 × 80 × 25 mm (L×W×H)

Wall with LC Display IP30 housing
size：113 × 80 × 25 mm (L×W×H)

Accessories

US base-plate
size：128 × 80 mm (L×W)

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