

Carbon Dioxide Transmitter/Alarm



Product No: TS21-CO2

- Real time monitor and transmitter of air carbon dioxide and optional temperature and humidity
- NDIR infrared CO2 sensor with patented self calibration
- Up to 15 years lifetime of CO2 sensor and T&RH sensor
- One or two 0~10VDC/4~20mA linear outputs for CO2 or CO2 &Temp. or CO2&RH
- LCD display with 3-color backlight for three CO2 measured ranges
- Buzzle alarm is optopnal
- Modbus RS485 communication interface
- 24 VAC/VDC power supply
- High quality with low cost



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Specifications

General Data	
Power supply	12~28VDC, 18~26VAC
Consumption	Average 1.8W (24V)
Analog outputs	0~10VDC or 4~20mA for CO ₂ measurement or CO ₂ /Temp measurements Or CO ₂ /RH measurements
RS485 interface	Modbus protocol, 4800/9600(default)/19200/38400bps; 15KV antistatic protection, independent base address.
3-color LCD backlight	Green: ≤1000ppm(default) three CO ₂ ranges selectable Orange: 1000~1400ppm (default) three CO ₂ ranges selectable Red: >1400ppm(default) three CO ₂ ranges selectable
LCD Display	Display CO ₂ or CO ₂ /temp. or CO ₂ /Temp./ RH measurements
Buzzle alarm (optional)	Three CO ₂ setpoints selectable for buzze alarm 1200ppm 1500ppm 1800ppm Turn off buzze alarm (default)
Operation condition	0~50°C; 0~95%RH, non condensing
Storage condition	-10~50°C, 0~70%RH
Net Weight / Dimensions	170g /116.5mm(H)×94mm(W)×34.5mm(D)
Installation	wall mounting with 65mm×65mm or 2"×4"wire box
Housing and IP class	PC/ABS fireproof plastic material, protection class: IP30
Standard	CE approval
Carbon Dioxide	
Sensing element	Non-Dispersive Infrared (NDIR)
CO ₂ measuring range	0~2,000ppm (default) 0~5,000ppm (selected in purchasing)
CO ₂ Accuracy	±40ppm+ 3% of reading
Stability	<2% of FS over life of sensor (15 year typical)
Pressure dependence	0.13% of reading per mm Hg
Calibration	ABC Logic Self Calibration Algorithm
Response time	<2 minutes for 90% step change typical
Signal update	Every 2 seconds
Warm-up time	2 hours (first time) / 2 minutes (operation)
Temperature and RH (option)	
Temperature and humidity sensor	NTC thermistor for only temperature detection Digital integrated temperature and humidity sensor for Temp. &RH

Measuring range	-20~60°C/-4~140F (default)	0~100%RH
Accuracy	Temp.: $\pm 0.5^{\circ}\text{C}$@25°C	RH: $\pm 3.0\%$RH (20%~80%RH)

Models Guide

TS21 - X Y 0/1 Z - V/A -02/05

X: sensor

- A-CO2
- B-CO2+Temp.
- C-CO2+Humi
- D-CO2+Temp.&RH

Y: analog output

- 0- no analog output
- 1- 1x analog output (for CO2)
- 2- 2x analog output (for CO2 & Temp.)
- 4- 2x analog output (for CO2 & Humi.)

0: means no buzze alarm

1: buzze alarm (can be turned off when it sounds)

Z: communication interface

- 0- no communication interface
- 1-RS485 interface (Modbus RTU)

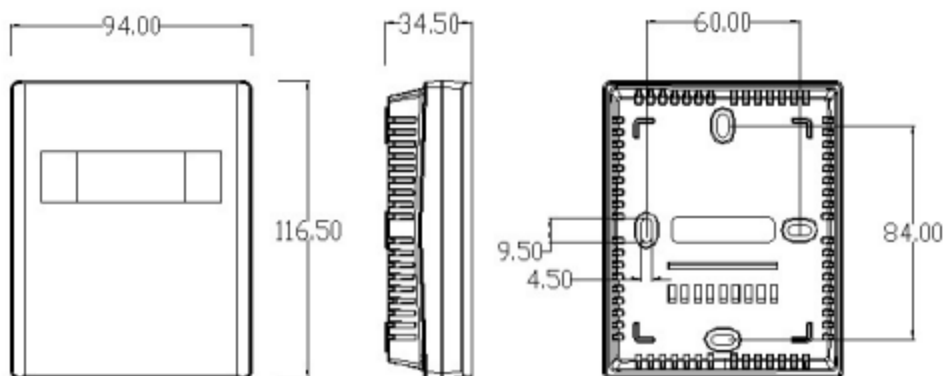
V/A: type of analog output

- V- 0~10VDC output (default)
- A- 4~20mA output

02/05: CO2 range

- 02: 0~2000ppm (default)
- 05: 0~5000ppm

Mounting and Dimensions



Wiring Diagram

