Carbon Dioxide Monitor and Controller

Model: F2000IAQ-CO2

CE Approval

□ Features

- Multiple functions and high performance with low prices
- Wall mounting type and duct type selectable
- LCD display detecting both CO_2 level and temperature, also relative humidity (optional)
- NDIR infrared CO_2 module inside with special ABC Logic Self Calibration System. It makes the CO2 measurement more accurate and more reliable in use.
- 15 years lifetime of CO_2 sensor
- Microprocessor control, quick response, high precision
- Provide up to three 0~10VDC outputs or relay dry contact outputs, or up to three mix outputs.
- The analog output with two alternatives: linearized over full range output or PID control output
- Different control mode for delays can be selected by user's application, for example for ventilation or for greenhouse or other applications.
- CO2 range:0~5,000ppm or 0~20,000ppm;
- Modbus RS-485 communication interface optional, 15KV antistatic protection, independent base address setting
- CE-Approval

□ Application

F2000IAQ-CO_2 monitor/controller is used to monitoring and control room CO_2 level, as well as room temperature and humidity, provide one or two or three 0~10VDC analog outputs and up to three dry contact outputs . F2000IAQ-CO_2 can be as a programmable logical controller to control CO_2 level, temperature or humidity, and also as a transmitter DDC/PLC controller or other automation systems. It provides a RS485 communication interface with an independent address to PC or other control systems.

- Hotel, exhibition hall, hospital, shop, restaurant, air port, train station, theater and other public places
- House, villa, office, meeting room, classroom and other places
- Greenhouse, mushroom, grown room and other agricultural applications
- All ventilation systems

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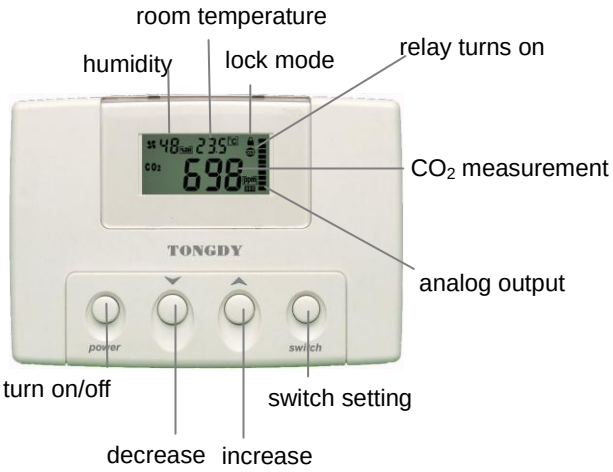
□ Buttons and LCD



□ Specifications

Gas detected	Carbon Dioxide (CO_2)
CO2 Sensor	Non-Dispersive Infrared Detector (NDIR) with more than 10 years lifetime
Temperature sensor	NTC
Humidity sensor	HS series capacitive sensor
Temperature dependence	0.2% FS/℃
Temperature correction	Self compensation
Power supply	24VAC/VDC, or 100~240VAC, 60HZ, selectable with the order
Consumption	3.5 W max. ; 2.5 W avg.
Accuracy@25℃(77℉)	±40ppm + 3% of reading (0~5000ppm) ±75ppm or 10% reading whichever is greater (0~20,000ppm or 0~50,000ppm)
Stability	<2% of FS over life of sensor (15 yr typical)
Calibration interval	ABC Logic Self Calibration Algorithm
Non linearity	<1% of FS
Pressure dependence	0.13% of reading per mm Hg
Altitude calibration	Programmable from 0-9,900m in 100m increments
Response Time	<2 minutes for 90% step change
Signal update	Every 2 seconds
Warm up time	2 hours (first time) 2 minutes (operation)

CO_2 measuring range	0～5,000ppm 0～20,000ppm or 0~50,000ppm optional
CO_2 setting & Display resolution	1ppm
Temperature measuring/ setting range	0～50℃(32～122℉)/ 5～45℃(41～113℉)
Humidity measuring/setting range	0～99%RH/ 5～95%RH non condensation
Analog output	0～10VDC linearized output or PID control output, selectable by end users
Output resolution	10Bit
Relay output	One or two dry contact outputs with programmable selection to control CO_2, temperature, humidity Rated switching current: 2A(220VAC/30VDC), resistance load
Communication interface	Modbus RS-485, 9600/14400/19200(default)/28800 or 38400bps (programmable selection), 15KV antistatic protection, 3 independent base address
Operation conditions	0~50℃(32~122℉); 0~95%RH,
Storage conditions	0~50℃(32~122℉); 5~90%RH non condensing
Weight	360g
Dimensions	130mm×90mm×40mm
Installment standard	65mm×65mm or 2”×4”wire box
Interface connections	Maxi. 9 terminals
Wiring standard	wire section area<1.5mm^2
Approval Standard	CE-Approval
Programming and selection	Via internal jumpers and push-buttons on the panel

□ Models Guide

F2000IAQ-CO2- X_1 X_2 Y_1 Y_2- RH- Z

X_1 (the product type)

3- CO_2 and temperature detection

5- CO_2 and temperature detection with Modbus RS-485 communication

X_2 (display type)

0-LCD display

2-Backlit LCD display

Y_1 (Analog output)

0-no analog output

1- 1 X 0 – 10 VDC output

2- 2 X 0 – 10 VDC outputs

3- 3 X 0 – 10 VDC outputs

Y_2 (Dry contact output)

0- no dry contact output

1- 1 relay dry contact output

2- 2 relay dry contact outputs

3- 3 relay dry contact outputs

RH (Humidity detection and display)

No RH option indicates no humidity detection and display

Z (power supply)

C- 24VAC/VDC

D- 100~240VAC (just for IAQ-CO2-300Y_2/500Y_2)

Example: F2000IAQ-CO_2-3011 indicates that it can detect CO_2 and temperature with one analog output and one relay dry contact output. F2000AQ-CO_2-5002-RH indicates that it can detect CO_2 and temperature and humidity with two relays dry contact outputs, and Modbus RS485 communication

□ Mounting and Wiring Diagram