

CARBON DIOXIDE CONTROLLER

Model: F2000TSM-CO2-PID

CE Approval



□ Features

- ◆ Real-time CO2 detection
- ◆ NDIR infrared CO2 module with self-calibration and more than 10 years lifetime
- ◆ Optional 6 LED lights indicating CO₂ ranges
- ◆ One 0~10VDC or 2~10VDC output
- ◆ PID output for a VAV terminal with the setpoint of the minimum opening
- ◆ Linear output available for CO2 measurements
- ◆ Optional Modbus RS485 interface
- ◆ Four CO2 setpoints selectable via jumpers for PID output
- ◆ The minimum opening can be set via RS485
- ◆ Application for ventilation systems, BAS and single fan control etc.
- ◆ Smart structure and easy mounting
- ◆ CE-Approval

□ Specifications

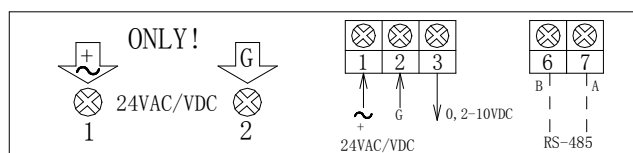
Gas detected	Carbon Dioxide (CO ₂)
Sensing element	Non-Dispersive Infrared Detector (NDIR)
Accuracy@25°C (77°F),2000ppm	±40ppm + 3% reading
Stability	<2% of FS over life of sensor (15 yr typical)
Calibration interval	ABC Logic Self Calibration System
Response time	<2 minutes for 90% step change
Warm up time	2 hours (first time) 2 minutes (operation)
CO ₂ measuring range	0~2,000ppm (default) 0~5,000ppm available
CO2 Sensor life	More than 10 years
Power supply	24VAC/24VDC
Consumption	1.5 W max. ; 0.8 W avg.
Analog output	0~10VDC or 2~10VDC selectable by the jumper
Output select	PID control output or Linear output for CO2 measurement selectable via jumpers
Minimum opening	2V default and can be preset via RS485
Setpoints	Provide 4 CO2 setpoints for PID control: CO ₂ ≥ 600ppm; CO ₂ ≥ 800ppm; CO ₂ ≥ 1000ppm(default); CO ₂ ≥ 1200ppm; Selected by jumpers
Modbus interface	Modbus RS485 interface, 19200bps, 15KV antistatic protection.

6 LED lights From left to right: Green/Green/Yellow/Yellow/Red/Red	1 st green light on as CO2 measurement ≤ 600ppm 1 st and 2 nd green lights on as CO2 measurement > 600ppm and ≤ 800ppm 1 st yellow light on as CO2 measurement > 800ppm and ≤ 1,200ppm 1 st and 2 nd yellow lights on as CO2 measurement > 1,200ppm and ≤ 1,400ppm 1 st red light on as CO2 measurement > 1,400ppm and ≤ 1,600ppm 1 st and 2 nd red lights on as CO2 measurement > 1,600ppm
Operation conditions	0~50°C (32~122°F); 0~95%RH, non condensing
Storage conditions	0~60°C (32~140°F)/0~80%RH
Net weight	180g
Dimensions	100mm×80mm×28mm
Installation standard	65mm×65mm or 2"×4" wire box
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Models Guide

Type	Model	Description
CO2 PID Controller	F2000TSM-CO2-S100-PID-02/05	1Xanalog output with PID (linear output selectable), CO2 range: 0~2,000ppm/0~5,000ppm
	F2000TSM-CO2-S101-PID-02/05	1Xanalog output with PID (linear output selectable), Modbus interface. CO2 range: 0~2,000ppm/0~5,000ppm
	F2000TSM-CO2-L100-PID-02/05	6 LED lights indicates CO2 ranges. 1Xanalog output with PID (linear output selectable), CO2 range: 0~2,000ppm/0~5,000ppm
	F2000TSM-CO2-L101-PID-02/05	6 LED lights indicates CO2 ranges. 1Xanalog output with PID (linear output selectable), Modbus interface. CO2 range: 0~2,000ppm/0~5,000ppm

Wiring Diagram



Mounting

