

# Carbon Dioxide Transmitter& Detector DATASHEET

Model: F2000TSM-CO2 Series

With Temperature & Humidity Detection and Transmitting Optional

CE Approval

## □ Features

- ◆ Real-time detecting CO2 level. Temperature and humidity detection is optional.
- ◆ NDIR infrared CO2 module inside with four CO2 detection range selectable.
- ◆ CO2 sensor has Self-Calibration Algorithm and 15 years lifetime
- ◆ Mounted type and duct type selectable
- ◆ Special kind “L” series with 6 lights Indicates CO<sub>2</sub> level and makes CO<sub>2</sub> level clear show.
- ◆ Special model with a touch button to operate a fan control.
- ◆ Design for HVAC, ventilation systems, offices, classrooms or other application places.
- ◆ Providing up to three analog outputs for CO2/temperature/humidity.
- ◆ Easy choice of voltage or current via jumpers: 0~5VDC/0~10VDC/4~20mA/0~20mA.
- ◆ One relay output is available
- ◆ RS-485 communication interface is optional: 15KV antistatic protection, independent address setting
- ◆ 24VAC/VDC power supply can be connected with the wire terminals, also a power adaptor's plug connected into the socket available.
- ◆ CE-Approval



Transmitter type-S series



Indicator type-L series



Transmitter type-J series



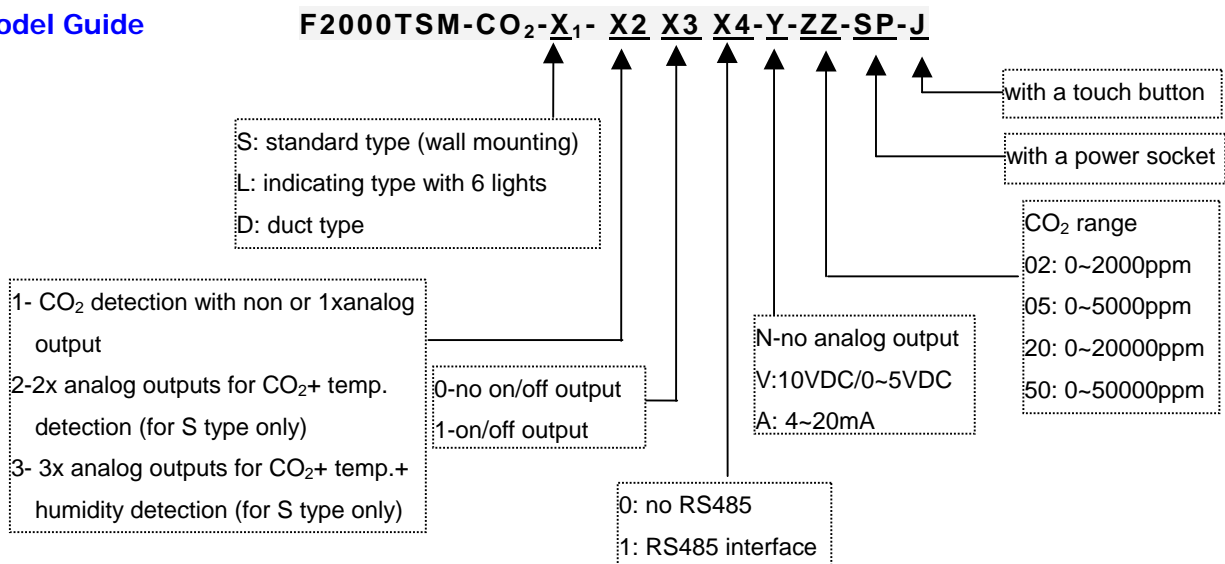
Transmitter type-D series

## □ Specifications

Gas detected	Carbon Dioxide (CO <sub>2</sub> )
Sensing element	Non-Dispersive Infrared Detector (NDIR)
Temperature sensor	NTC with linear output
Humidity sensor	HS series capacitive sensor with linear output
Temperature dependence	0.2% FS/
Temperature correction	Self compensation
Power supply	24VAC/24VDC
Consumption	1.5 W max. ; 0.8 W avg.
Accuracy@25 (77 ),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	24 hours (first time) 10 minutes (operation)
CO <sub>2</sub> measuring range	0 ~ 2,000ppm / 0 ~ 5,000ppm / 0 ~ 20,000ppm / 0 ~ 50,000ppm selectable in orders
Temperature measuring range	0 ~ 50 (32 ~ 122 )
Temperature measurement accuracy	±0.5 (1 )

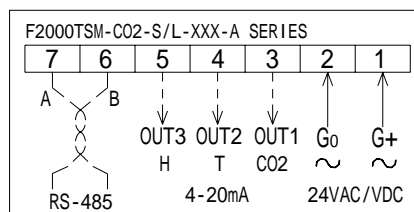
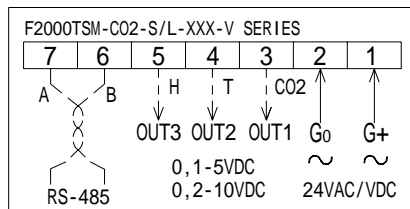
Humidity measuring range	5 ~ 95%RH
Humidity measurement accuracy	±3%RH (40%RH~60%RH, 25 )
Analog outputs	Up to 3 X analog outputs 0~10VAC or 4~20mA selectable in the order or by jumpers
On/Off output	1x relay on/off output with 2A switch currency optional
Touch button	Easily select fan on/fan auto/turn off
Communication interface	RS-485, 9600/14400/19200(default)/28800 or 38400bps (programmable selection), 15KV antistatic protection.
Flow rates	Diffusion version 80 ~ 120 cc/min (for wall mounting type) Flow through version 40~50cc/min (for duct type)
Operation conditions	0~50 (32~122 ); 0~95%RH, non condensing
Storage conditions	-40~70 ( -40~158 )
NDIR life	15 years
Net weight	180g
Transmitter dimensions	100mm×80mm×28mm
Installment standard	65mm×65mm or 2"×4"wire box
Wiring Connection	Wiring terminals or the power plug(optional)
Standard Approval	CE (EN61000-4-2, EN61000-4-3, EN55014)

□ Model Guide

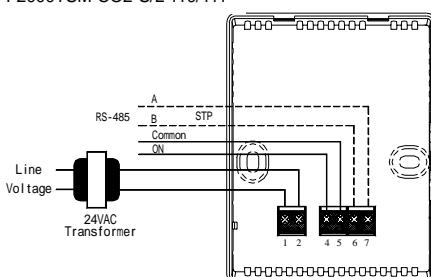


Pay attention: If X3 is 1, X2 is only 1 too. If X3 is 0, X2 can be selected 1or 2 or 3.

□ Wiring Diagram

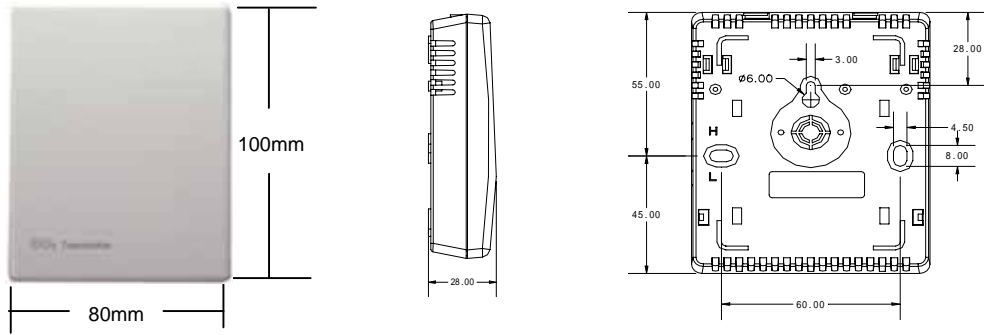


F2000TSM-CO<sub>2</sub>-S/L 110/111

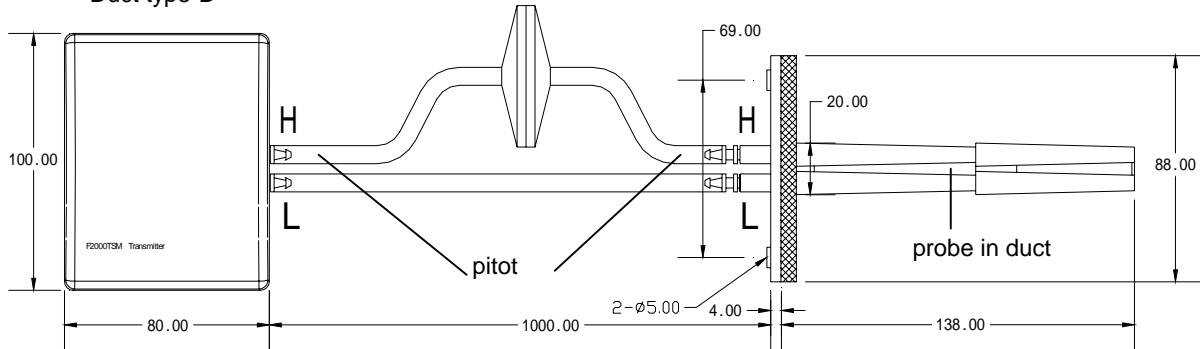


□ **Mounting**

Wall mounted type



Duct type-D



□ **Shipping Information**

Indiv. Ctn. Dim	115mm×95mm×45mm
Master Ctn. Qty	80
Master Ctn. Dim	44cm(L)×32cm(W)×32cm(H)
Master Ctn. Wt.	16KG