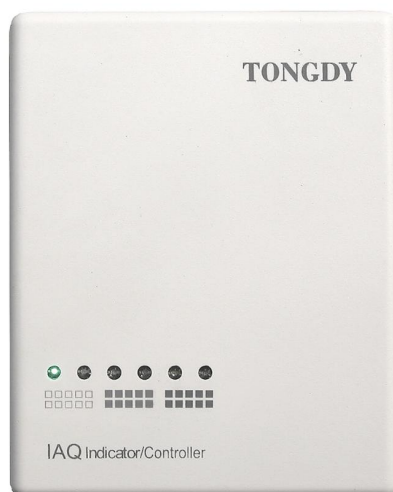# Tongdy

Tongdy Sensing Tech.

Indoor Air Quality Indicator /Controller

Applications

- Ambiance air quality detection and alarm
- Ventilation systems
- Air cleaning systems
- Bas systems
- Offices, schools and other indoor spaces

Scan the QR code to visit our website

www.iaqtongdy.com

info@tongdy.com

Product No: F2000TSM-VOC

- Real time detect and indicate Indoor Air Quality
- High sensitivity to VOC and various other indoor air gases
- 5~7 years lifetime
- Temperature and humidity compensation
- Providing 1x 0~10VDC/ 4~20mA linear output for VOC measurement
- Modbus RS485 communication interface
- Providing 1x dry contact output to control a ventilator
- Featured 6 LED indicator lights indicates different IAQ levels
- The highest performance with the lowest price

Features

- Wall mounting, real time detect indoor air quality
- With Japanese semiconductor mix gas sensor inside. 5~7 years lifetime.
- High sensitive to contaminative gases and various kinds of odorous gases within the room (smoke, CO, alcohol, human odor, material odor).
- Two types available: indicator and controller
- Six LED lights to indicate six different IAQ levels.
- Temperature and humidity compensation makes the IAQ measurements consistent.
- Modbus RS-485 communication interface, 15KV antistatic protection, independent address setting.
- Optional one on/off output to control a ventilator/air cleaner. The user can select an IAQ measurement to turn-on the ventilator between four setpoints.
- Optional one 0~10VDC or 4~20mA linear output.

F2000TSM-VOC is designed to detect room IAQ level with a Modbus RS485 and an optional linear analog output, as well as an optional relay output to control a ventilator or an air cleaner based on the pre-set measurement.

Its internal mixed gas sensor (normally called VOC sensor) is very sensitive to VOC concentration and other air pollutants such as cigarette smoke, ammonia and H2S. It also has high sensitivity to CO, alcohol, natural gas and odorous smells from human bodies. Compared with other single air sensor, F2000TSM-VOC series is better for longtime IAQ detection.

Applications

- Indoor air quality indicating
- Used in houses, offices, theaters, shops, restaurants, train stations and many other places
- Automatically ventilation control
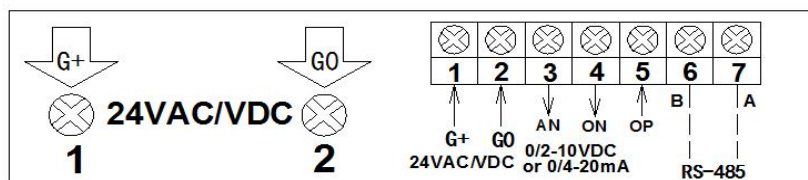- Energy saving for ventilation and AC systems

Specifications

Gas detected	VOC (toluene emitted from wood finishing and construction products); Cigarette smoke(hydrogen, carbon monoxide); ammonia and H2S, alcohol, natural gas and smell by people's body.
Sensing element	Semiconductor mix gas sensor
Measuring range	0.1~30ppm
Power Supply	24VAC/VDC
Consumption	2.5 W
Load (for the analog output)	>5K
Sensor query frequency	Every 1s
Warm up time	48 hours (first time) 10 minutes(operation)
Six indicator lights	The first green indicator light：Best air quality The first and the second green indicator lights：Better air quality The first yellow indicator light：Good air quality The first and the second yellow indicator lights：Poor air quality The first red indicator light：Poorer air quality The first and the second indicator lights：Poorest air quality
Modbus interface	RS485 with 9600bps(default) 15KV antistatic protection, independent base address
Analog output (Optional)	0～10VDC linear output
Output resolution	10Bit
Relay output (Optional)	One dry contact output, rated switching current 2A(resistance load)
Temperature range	0～50℃ (32～122℉)
Humidity range	0～95%RH，non condensing
Storage conditions	0～50℃ (32～122℉) /5~90%RH
Weight	190g
Dimensions	100mm×80mm×28mm
Installation standard	65mm×65mm or 2"×4"wire box
Wiring terminals	Maximum 7 terminals
Housing	PC/ABS Plastic fireproof material , IP30 protection class
CE approval	EMC 60730-1: 2000 +A1:2004 + A2:2008 Directive 2004/108/EC Electromagnetic Compatibility

Models

ITEM	MODEL	DESCRIPTION
IAQ Indicator	F2000TSM-VOC-S110C-V/A	IAQ detector with 1X0~10VDC linear output. (Can be selected 4~20mA by jumpers) Modbus RS485 interface
	F2000TSM-VOC-S100C	IAQ detector, Modbus RS485 interface
	F2000TSM-VOC-S100C-SP	IAQ detector, Modbus RS485 interface. Power supply with a 24V/100~240VAC power adaptor
	F2000TSM-VOC-L110C-V/A	IAQ transmitter with 6 LED indicator lights, 1X analog output, Modbus RS485 interface
	F2000TSM-VOC-L100C	IAQ indicator with 6 LED indicator lights, Modbus RS485 communication interface
	F2000TSM-VOC-L100C-SP	IAQ indicator with 6 LED indicator lights, Modbus RS485 communication interface. Power supply with a 24V/230V power adaptor
IAQ Controller	F2000TSM-VOC-L101C	IAQ indicator/controller with 6 LED lights, One dry contact output, Modbus RS485 interface
	F2000TSM-VOC-L111C	IAQ indicator/controller with 6 LED lights, 1X0~10VDC linear output. One dry contact output, Modbus RS485 interface

Wiring Diagrams

Mounting

TONGDY

IAQ Indicator/Controller

100mm

80mm

28.00

28.00
55.00
ø6.00
3.00
4.50
8.00
H
L
45.00
60.00