

# Indoor Air Quality Monitor / Controller

model#: F2000IAQ-VOC

Temperature & Humidity Monitoring

- ◆ Real time detecting indoor air quality with LCD display
- ◆ High sensitivity for VOCs and other indoor contaminative gases
- ◆ 5~7 years long life
- ◆ Temperature and humidity detection and compensation
- ◆ Provide up to 1 analog output and 2 dry contact outputs
- ◆ Optional Modbus RS485 communication interface
- ◆ Strong function, high performance, low price

IAQ is a comprehensive index, including room temperature, humidity, fresh air, and diverse low concentrations air contaminants. Monitoring IAQ is very important to guarantee healthy life and work.

F2000IAQ-VOC is specially designed to detect indoor air quality in offices and home environments. Its internal gas sensor has high sensitivity not only to VOC's such as toluene emitted from wood finishing and construction products but also to other air contaminants which are emitted by cigarette smoke, ammonia and H<sub>2</sub>S. It's also sensitive to carbon monoxide, alcohol, natural gas and smell from people's body. So it is more suitable for monitoring IAQ than other sensors which one is only for one kind of gas.

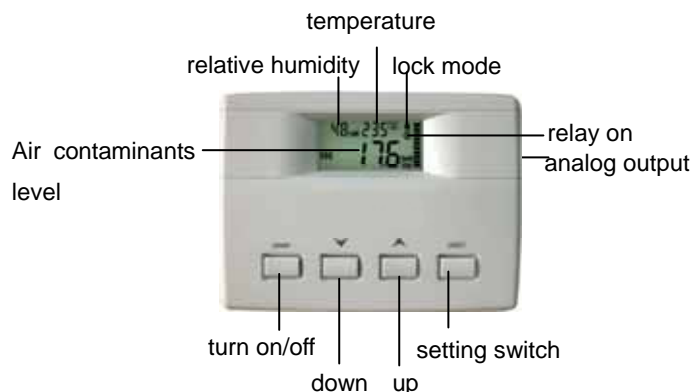
F2000IAQ-VOC also can be used as a controller in ventilation system and AC system.

## □ Features

- ◆ Real time monitor ambience air quality with a mix gas sensor
- ◆ Japanese semiconductor gas sensor with 5~7 years long life
- ◆ Monitor temperature and relative humidity
- ◆ LCD display air quality as well as temperature and humidity, fan status etc. Makes reading and operating easy and accurate.
- ◆ user-friendly setting buttons
- ◆ Temperature and humidity compensation makes the IAQ measurement more consistent in different environments
- ◆ Modbus RS-485 communication interface optional, 15KV antistatic protection, independent base address setting
- ◆ Up to 1x0~10V analog output and 2xrelay dry-contact outputs
- ◆ Two alternatives for the analog output : linearized over full range output or PID control output.
- ◆ The relays can be selected to control IAQ , temperature or humidity (programmable setting)
- ◆ Timer of turning-off function for the ventilator device from 0.5 to 12 hours.
- ◆ Low power consumption

## □ Application

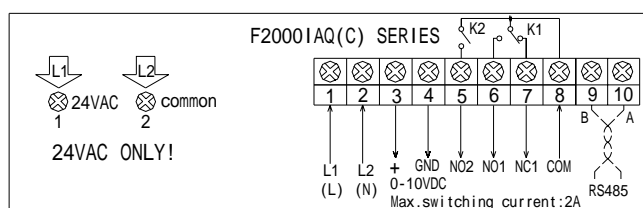
- ◆ Ambience air quality detection and alert
- ◆ Ventilation control
- ◆ Air quality monitors
- ◆ Odor monitors.



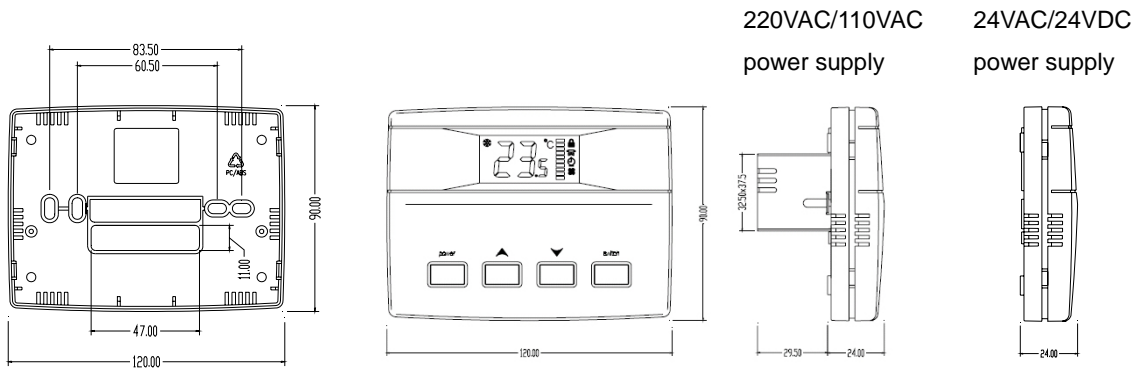
## □ Specifications

Gas detected	VOCs ( 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	
Power supply	24VAC/24VDC 230VAC or 110VAC	
Consumption	2.8 W	
Response Time	<5 minutes for 90% step change	
Warm up time	48 hours (first time), 1 hour (normal operation)	
VOC measuring range	0 ~ 30ppm	
Display resolution	0.1ppm	
Temperature & Humidity Sensor	Temperature	Relative Humidity
Sensing element	NTC	Capacitive sensor
Measuring range	0~50	0 -95%RH
Accuracy	±0.5 (25 , 40%-60%RH)	±3%RH (25 , 40%-60%RH)
Display resolution	0.5	1%RH
Stability	±0.5 per year	±1%RH per year
Analog output	0 ~ 10VDC linear output or PID control output, programmable selection	
Output resolution	10Bit	
Relay output	Two dry contact outputs with programmable selection to control VOC, temperature, humidity. Rated switching current 2A(220VAC/30VDC), resistance load	
Modbus interface	Modbus RS-485 protocol. 19200bps(default) 15KV antistatic protection, independent base address, 31 max network nodes	
Operation temperature	0 ~ 50 (32 ~ 122 )	
Operation humidity	0 ~ 95%RH , non condensing	
Storage conditions	-40 ~ 70 (-40 ~ 158 )	
Net Weight	280g( 24VAC) 320g(110VAC/230VAC)	
Dimensions	120mm×90mm×24mm 120mm×90mm×24mm+28.5mm bulge	for 24VAC/DVC power supply for 220VAC/110VAC power supply
Installment standard	65mm×65mm or 2"×4" wire box	
Interface connections (Max.)	10 terminals	
Wiring standard	Wire section area <1.5mm <sup>2</sup>	
Quality System	ISO 9001	
Programming and selection	Via DIP switch and external push-buttons	
Outputs (max.)	1~2 dry contact relay outputs, 1X0~10V output	

## □ Wiring Diagram



## □ Mounting



## □ Models Guide

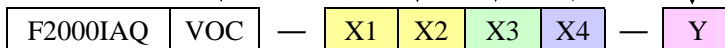
Detection Gas  
 VOCs (toluene emitted from wood finishing and construction products),  
 Cigarette smoke (hydrogen, carbon monoxide),  
 Ammonia and H<sub>2</sub>S, alcohol, natural gas and smell by people's body.

Code		Model
2	0	Standard type
4	0	Standard type with RS-485 communication interface

Code	Amount of analog output
0	No analog output
1	1 * 0 – 10 VDC output

Code	Amount of dry contact output
0	No
1	1 relay dry contact output
2	2 relay dry contact outputs

Code	Power supply
A	230VAC
B	100VAC
C	24VAC/24VDC



Example: F2000IAQ-VOC-2011 indicates the monitor can supply one analog output and one relay dry contact output.