

# F2000IAQ-CO DATASHEET

Carbon Monoxide + Temperature + Humidity Monitor  
Two Stages Alarm for CO level

- ◆ Real time detection and controlling ambience carbon monoxide level
- ◆ Detection temperature and optional relative humidity
- ◆ Preset the 1st and 2nd alarm point for carbon monoxide measurement
- ◆ LCD display CO level, temperature and humidity at the same time
- ◆ Provide up to 1 analog signal output and 2 dry contact outputs
- ◆ Provide RS485 communication Interface(optional)
- ◆ High performance, low price

## □ Features

- ◆ Real time monitoring carbon monoxide level with range from 0 to 1000ppm
- ◆ Semiconductor sensor with 5 years long lifetime
- ◆ LCD can display CO, temperature and humidity, also ventilation device status etc.
- ◆ Full time monitoring CO level, even the slightest leak can be detected
- ◆ It can work as a alarm or controller of carbon monoxide, also as a transmitter
- ◆ Provide up to 0 ~ 10V analog output and 2 relay dry contact outputs
- ◆ Two alternatives for the analog output: linearized over full range output or PID control output
- ◆ Preset the first and the second alarm levels for measured carbon monoxide with a buzzer alarm
- ◆ RS-485 communication interface, 15 KV antistatic protection, independent address setup

## □ Application

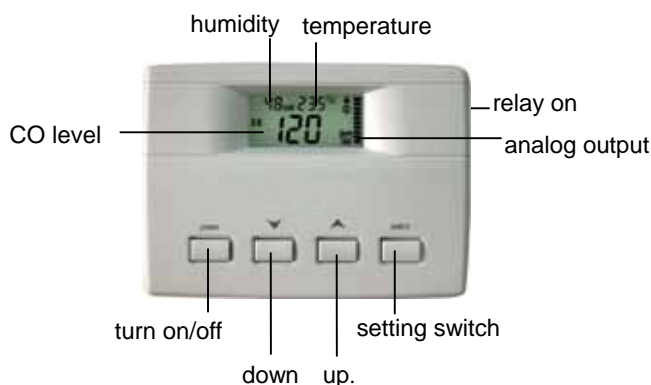
Carbon monoxide is a deleterious gas with colorless and odorless character , which could be absorbed by lung quickly, the speed rate of combination of CO and hemoglobin more than 250 times with oxygen, then stops oxygen circulation around the body; which have big character of heavy toxicity, so CO poisoning have become a big problem around the world.

F2000IAQ-CO is used to monitor room CO level and temperature as well as relative humidity. With one 0~10VDC analog output and two dry-contact of relay outputs, F2000IAQ-CO can be as a programmable logical controller to direct control a ventilation system, and also as a transmitter of CO level to connect with a DDC/PLC.

F2000IAQ-CO can provide RS-485 communication interface to connect it with a PC or another control system, so make each room ventilation system be managed and controlled intelligently. It's as a prevent monitor of CO potential leak and a controller of ventilation system in bellows application.

- ◆ Human environment, Industrial environment
- ◆ Underground parking lot, maintenance garage
- ◆ Freezing machine room and other places where air quality is easy to worsen

## □ Buttons and LCD



## □ Specifications

Gas Detected	Carbon monoxide
Sensing Element	Semiconductor gas-sensitive component
Temperature Sensor	NTC 5K
Humidity Sensor	HS series capacitive sensor
Power Supply	24VAC/VDC (220VAC/110VAC Selectable with orders)
Power Consumption	2.8W
Response Time	<5 minutes for 90% step change
Signal Update	1s
Warm up Time	36 hours (first time) 10 minutes (normal operation)
CO Measuring Range	0~1000ppm
Display Resolution	1ppm
CO Setting Resolution	1ppm (Minimum)
Temperature Measuring Range	0~70 (32~158 )
Fire Alarm	65 (149 )
Humidity Measuring Range	0 ~ 99% RH
Analog Output	0 ~ 10VDC linearized output or PID control output, programmable selection
Output Resolution	10Bit
Relay Output	Two dry-contact outputs of relay. One is for the ventilation control, and another is for the second CO alarm. Rated switching current 2A (220VAC/30VDC), resistance Load
Communication Interface	RS-485, 9600,14400,19200(default), 28800,38400 bps (programmable), 15KV antistatic protection, 3 independent base address, max network node 128
Operating Temperature	0 ~ 70 (32 ~ 158 )
Operating Humidity	0 ~ 95%RH, non condensing
Storage Conditions	-40 ~ 70 (-40 ~ 158 )
Net Weight	260g( 24VAC) 300g(110VAC/220VAC)
Dimensions	120mm×90mm×24mm for 24VAC/DVC power supply 120mm×90mm×24mm+28.5mm bulge for 220VAC/110VAC power supply
Installation Standard	65mm×65mm or 2"×4" wire box
Interface Connection (Max)	10 terminals
Wiring Standard	Wire section area<1.5mm <sup>2</sup>
Manufacturing Process	ISO 9001 Certified
Programming and Selection	Via internal DIP and external push-buttons

## □ Shipping Information

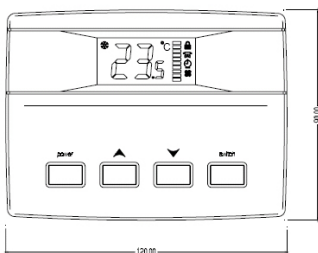
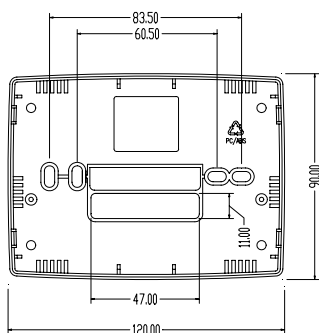
For 220/110VAC power supply

Indiv. Ctn. Dim	135mm×95mm×55mm
Master Ctn. Qty	40
Master Ctn. Dim	44cm(L) X 32cm(W) X 32cm(H)
Master Ctn. Wt.	15Kg

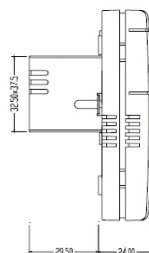
For 24VAC/VDC power supply

Indiv. Ctn. Dim	135mm × 95mm × 32mm
Master Ctn. Qty	80
Master Ctn. Dim	44cm(L) X 32cm(W) X 32cm(H)
Master Ctn. Wt.	24Kg

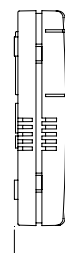
## □ Mounting



220VAC/110VAC  
power supply



24VAC/24VDC  
power supply



## □ Model Guide

Gas Type	
CO	Carbon Monoxide

Code		Type
6	0	Commercial model
8	0	With RS-485 network communication interface

Code	Analog output
0	No analog output
1	1 X 0 – 10 VDC output (ineffective for 61 type)

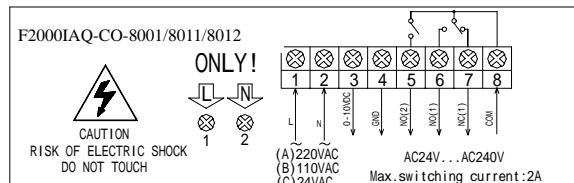
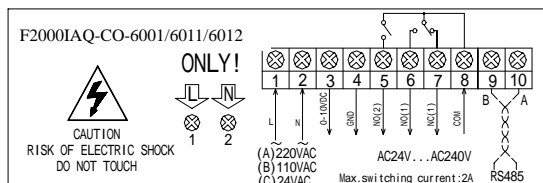
Code	Dry contact output
0	No
1	1 relay dry contact output
2	2 relay dry contact outputs

Code	Power supply
A	220/240VAC
B	100/120VAC
C	24VAC/24VDC

F2000IAQ	CO	X	0	X	X	X
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Example : F2000IAQ-CO-8012 indicates that the monitors can supply 1 analog output and 2 relay dry contact outputs , with RS485 communication interface.

## □ Wiring Diagrams



**New product launch:** the CO monitor/controller with electrochemistry CO sensor will be issued in April 2008.