



GS-IAQ Series

Indoor Air Quality Detector



Overview

The GS-IAQ Series monitors up to 6 parameters that include Particulate Matter (PM1, PM2.5, PM4 & PM10), Volatile Organic Compounds, Carbon Dioxide, Formaldehyde, Humidity & Temperature and provide either a BACnet® or Modbus signal for connection to a building automation system. The GS-IAQ Series features field replaceable sensor modules, a full-colour capacitive touch screen LCD that's user configurable, a configurable alarm relay output. All this housed in a new modern, quick mount enclosure.

Applications

- Commercial
- Industrial
- Residential

Features & Benefits

- Measures 5 or 6 parameters
- Field replaceable sensor modules
- BACnet® or Modbus communications
- Full-colour configurable touchscreen LCD
- Configurable alarm relay
- Modern, quick-mount enclosure

Model Selection

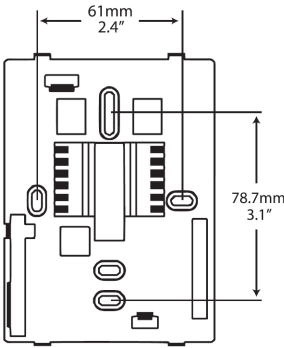
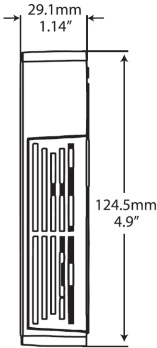
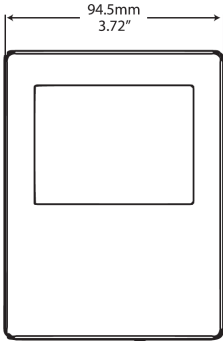
GS-IAQRM5XV	Air Quality Room Multisensor - PM, CO ₂ , TVOC, RH & Temp, Viewable LCD - BACnet MS/TP or Modbus RTU communications
GS-IAQRM5XC	Air Quality Room Multisensor - PM, CO ₂ , TVOC, RH & Temp, Concealed LCD - BACnet MS/TP or Modbus RTU communications
GS-IAQRM6FV	Air Quality Room Multisensor - PM, CO ₂ , TVOC, RH, Temp & CH ₂ O, Viewable LCD - BACnet MS/TP or Modbus RTU communications
GS-IAQRM6FC	Air Quality Room Multisensor - PM, CO ₂ , TVOC, RH, Temp & CH ₂ O, Concealed LCD - BACnet MS/TP or Modbus RTU communications

Product Specifications

Particulate Matter	
Type	Laser Scatter Method (Field Replaceable)
Particulate Size	PM1.0, PM2.5, PM4.0, and PM10
Mass Concentration Range	0 - 1000 ug/m3 or 0 - 3000 #/cm3 (Selectable)
Mass Concentration Resolution	1 (ug/m3, 1#/cm3)
Accuracy PM1.0 and PM2.5	±10 ug/m3 (0 – 100 ug/m3), ±10%M.V. (100 – 1000 ug/m3)
Accuracy PM4 and PM10	±25 ug/m3 (0 – 100 ug/m3), ±25%M.V. (100 – 1000 ug/m3)
Sensor Life Expectancy	> 10 years
Carbon Dioxide (CO₂)	
Type	Dual channel non-dispersive infrared (Field Replaceable)
Accuracy	± (30ppm + 3% of measured value)
Range	0 - 10000 ppm
Auto-Cal	Selectable On (ASC) or Off (FRC)
Altitude Adjustment	0 - 3000 meters
Calibration	Field calibration capable with calibration kit
Sensor Life Expectancy	> 15 years
Volatile Organic Compounds (VOC)	
Type	MOX metal oxide semiconductor (Field Replaceable)
Range	VOC Index (0 - 500) or TVOC (1300 ppb or 6000 ug/m3)
Resolution	1 (VOCI, PPB, ug/m3)
Relative Humidity (RH)	
Type	Thermoset polymer-based capacitance sensor chip (Field Replaceable)
Range	0 -100% RH
Accuracy	±1.5% RH
Resolution	0.1% RH
Calibration	+/- 10% Offset
Temperature (TEMP)	
Type	Bipolar transistor sensor chip (Field Replaceable)
Range	0 to 60°C, 32 to 140°F
Accuracy	± 0.2°C, ± 0.4°F (Typical)
Resolution	0.1°C/°F
Calibration	-5 to 5°C Offset, Resolution = 0.1°C ; -10 to 10°F Offset, Resolution = 0.1°F
Formaldehyde (CH₂O)	
Type	Electrochemical (Field Replaceable)
Range	0 - 1000 ppb or 0 - 1230 ug/m3
Accuracy	±10% FS@25°C
Resolution	1 (ppb, ug/m3)
Sensor Life Expectancy	> 6 years

Network Interface	
Hardware	MS/TP, 2-Wire, RS-485
Software	BACnet® or Modbus
Baud Rate	9600, 19200, 38400, 57600, 76800, or 115200
Address Range	BACnet®: 0 - 127, Modbus: 1 - 255
Relay	
Contact Rating	Form A, 2A max 24Vac/dc
Switching Power	60W, 62.5VA
Setpoint/Hysteresis/Delay	Selectable based on selected sensor
Relay Setpoints (Selectable)	"PM Mass Concentration: 50 - 900 ug/ m3; VOC: 100 - 500 VOC Index; CH2O: 50 - 900 ppb; CO ₂ : 500 - 9000 ppm; Humidity: 20 - 90%; Temperature: 5 - 40°C / 40 - 100°F"
Relay Configuration	Via BACnet®/Modbus
Visual Indication	
Display	3.5" full colour graphic LCD
User Interface	Capacitive Touchscreen
Display Options	Viewable or Concealed
Display Parameters	Temperature and Humidity - Standard CO ₂ , VOC, PM & CH2O - Selectable On/Off
Status Bars	Green/Yellow/Red - Selectable On/Off
Status LED	Green/Yellow/Red - Selectable On/Off
Enclosure	
Material	White PC/ABS, UL94-V0, UV Protected
Connection	Wall plate with screw terminal blocks
Dimensions	124.5 mm H x 94.5 mm W x 29 mm D (4.9" x 3.72" x 1.14")
General	
Power Supply	12 - 28 Vac/Vdc
Consumption	Maximum 150mA @ 12Vdc, 1.8W
Wiring Termination	Backplate mounted terminal block (14 to 22 AWG)
Operating Conditions	0 to 60°C (32 to 140°F), 0 to 95 %RH non-condensing
Sensor Coverage	100 m2 (1000 ft2) typical
Certifications	CE, UKCA

Dimensions



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