



# GREYSTONE

ENERGY SYSTEMS INC

## TOTAL INDOOR AIR QUALITY



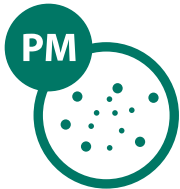
RoHS  
COMPLIANT



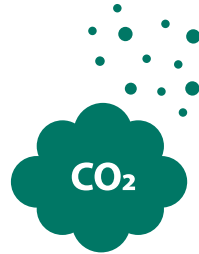
GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM

## TOTAL INDOOR AIR QUALITY

With the worldwide need for accurate monitoring of indoor air quality, Greystone's new IAQ is a Total Indoor Air Quality Monitor. The IAQ will monitor up to 6 parameters that include Particulate Matter (PM1.0, PM2.5, PM4.0 & 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 IAQ features field replaceable sensor modules, a full-color capacitive touch screen LCD that's user configurable, and a configurable alarm relay output. All this housed in a new modern, quick mount enclosure.



Particulate Matter



Carbon Dioxide



Volatile Organic  
Compounds



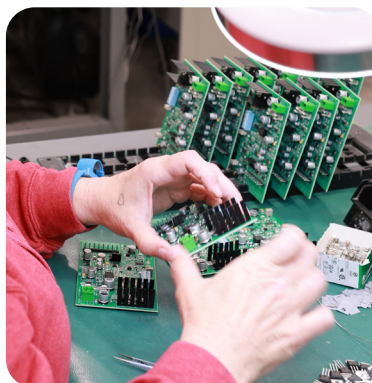
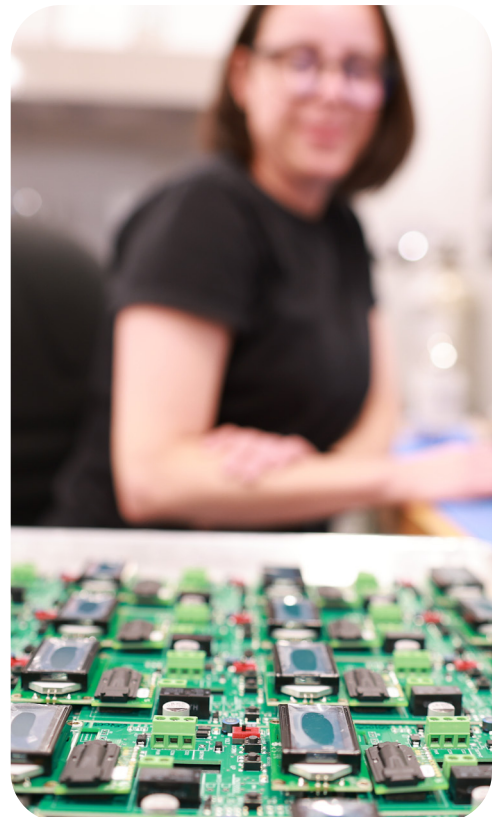
Formaldehyde



Humidity

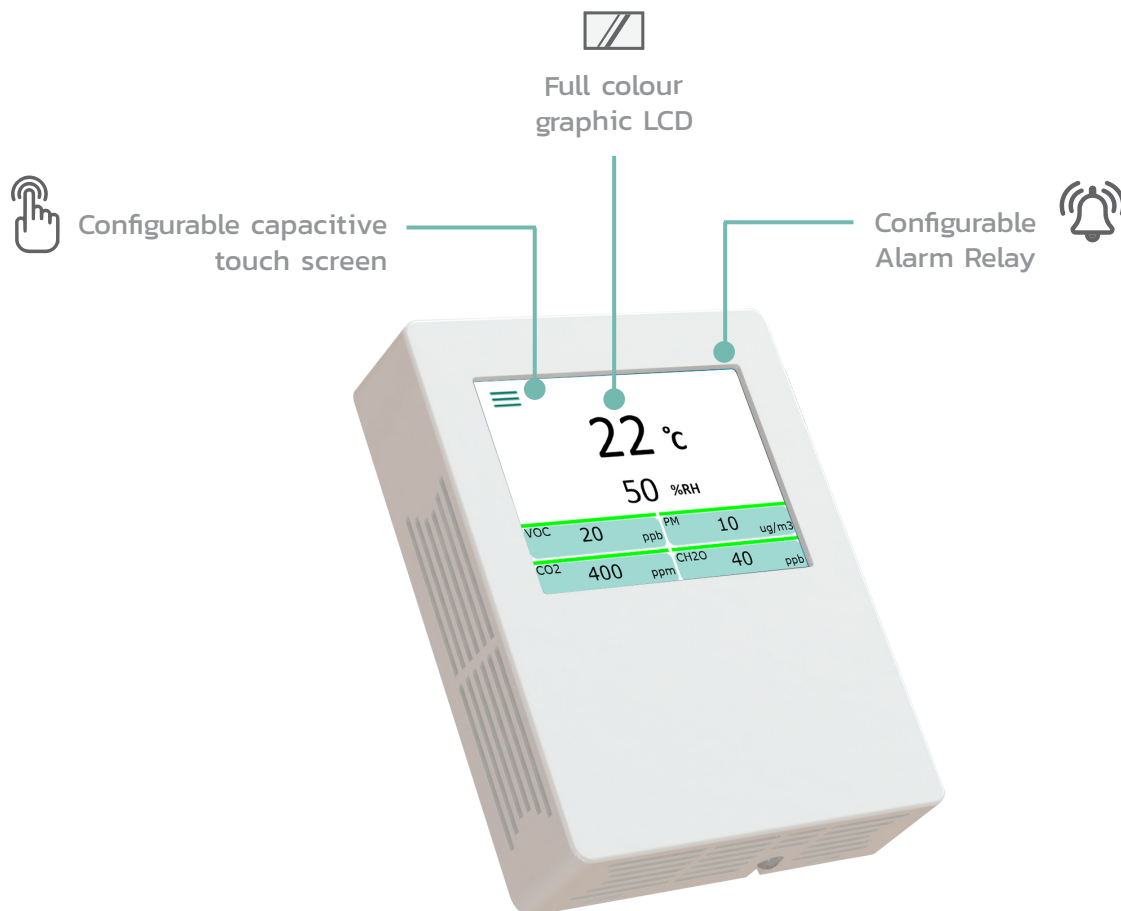


Temperature



## PRODUCT HIGHLIGHTS

- Measurements for Particulate Matter (PM1.0, PM2.5, PM4.0 & PM10), Total Volatile Organic Compounds, Carbon Dioxide, Relative Humidity & Temperature with optional Formaldehyde
- Field replaceable sensors
- Full color LCD with capacitive touch screen and backlight control
- Configurable LCD for parameter values
- LCD touch screen lockout feature
- Viewable or concealed LCD cover options
- Red/Green/Yellow LED for air quality
- Wide voltage range 12Vac/dc to 28Vac/dc
- Integrated power switch for quick sensor change
- Enclosure designed for quick installation
- Backplate mounted terminals for easy installation
- Removable cover for troubleshooting with unit powered
- Temperature display with selectable °C/°F units
- CO2 Auto-calibration enabled/disabled modes
- CO2 field calibration compatible
- Alarm relay can be assigned to any of the parameters
- Programmable alarm relay setpoint, hysteresis and time delay with visual indication on LCD
- Facilitates compliance with ASHRAE 62.1 standard for air quality
- Contributes toward satisfying Feature A08 and TO6 under the WELL Building Standard®



SPECIFICATIONS	
PARTICULATE MATTER (PM)	
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	>10 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	RS-485, 2-Wire, Modbus
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; CO2: 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 CO2, 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
Certifications	CE, RESET

# QUICK MOUNT ENCLOSURE

The 3-piece construction consists of a backplate, sensor bracket and cover. To install, mount the backplate, complete wire terminations and snap on the cover/sensor bracket module. Once installed, the cover can be removed with a single security screw, which allows access to the replaceable sensor modules and other servicing features.

- Connects to a variety of electrical box styles.
- Backplate mounted terminals for easy wiring.
- Well-vented for superior air circulation, sampling, and dissipation of any self-generated heat.
- Protected from discoloration from UV.
- Security screw for easy cover removal.



# REPLACEABLE SENSOR MODULES

