GREYSTONE
ENERGY SYSTEMS INC

The AIR42, Indoor Air Quality Sensor uses an advanced MEMS metal oxide semiconductor sensor to detect poor air quality. The sensor reacts quickly to detect a broad range of VOCs such as smoke, cooking odors, bio-effluence, outdoor pollutants and from human activities. The sensor captures all VOC emissions that are completely invisible to CO_2 sensors. The AIR42 provides a linear analog signal output of 0-5 or 0-10 Vdc for connection to a building automation system, as an analog stepped output of 0-10Vdc as well as an adjustable relay output. Optional temperature outout is available.

SPECIFICATION:

Sensing Technology	MEMS metal oxide semiconductor VOC sensor
Measurement Range	450-2000 ppm CO_2 equivalent or 0-100% (menu selectable)
Drift Compensation	Automatic baseline correction
Power Supply	20-28 Vac/dc (non-isolated half-wave rectified)
Consumption	35 mA max @ 24 Vdc
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected, over voltage protected
Operating Conditions	0-50 °C (32-122 °F), 5-95 %RH non-condensing
Linear Output Signal	0-5 / 0-10 Vdc (menu selectable) = 0-2000 ppm CO_2 equivalent
Analog Stepped Output Signal	Three steps representing Good, Fair and Poor air quality (each step is independently adjustable from 0-10 Vdc)
Output Drive Capability	10 KΩ minimum
Programming and Selection	Via internal push-buttons and LCD menu
Warm-up Time	5 minutes
LCD Resolution	1 ppm / 1 %
LCD Size	1.4" w x 0.6" h (35 x 15 mm) alpha-numeric 2 line x 8 characters
Wiring Connections	Screw terminal blocks (14 to 22 AWG)
Enclosure	Duct mount, ABS UL94-5VB IP65 (NEMA 4X) 145 w x 100 h x 63 d mm (5.7"w x 3.95"h x 2.5"d)
Probe	177 mm l x 25.4" d (7" l x 1" d)
Weight	290 gm (10.2 oz)
Relay Output	Form A contact (N.O.) 2 Amps @ 140 Vac, 2 Amps @ 30 Vdc (trip point and hysteresis set via menu)
Optional Temperature Sensor	Various thermistors and RTDs, 2-wire resistive output

PART NUMBER SELECTED

PRODUCT SELECTION INFORMATION:

MODEL	Product Description
AIR4200	Duct Air Quality Monitor, 0-2000 ppm CO_2 Equivalent

CODE	Optional Temperature Sensor (Leave blank if not required)
T2	100 Ω Platinum RTD, IEC 751, 385 Alpha, thin film
T5	1801 Ω, NTC Thermistor, ±0.2 C
T6	3000 Ω, NTC Thermistor, ±0.2 C
T7	10,000 Ω, type 3, NTC Thermistor, ±0.2 C
T8	2.252K Ω, NTC Thermistor, ±0.2 C
T12	1000 Ω Platinum RTD, IEC 751, 385 Alpha, thin film
T13	1000 Ω Nickel RTD, Class B, DIN 43760
T14	10KΩ, type 3, NTC Thermistor, ±0.2 C c/w 11K shunt resistor
T20	20,000 Ω, NTC Thermistor, ±0.2 C
T24	10,000 Ω, type 2, NTC Thermistor, ±0.2 C

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RoHS COMPLIANT
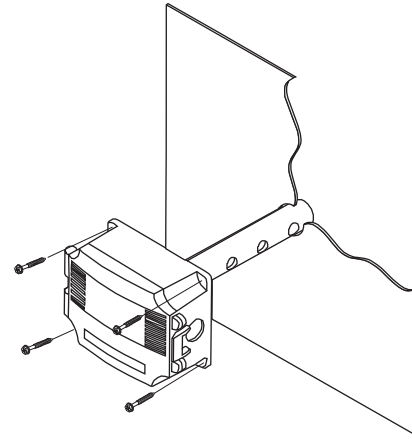
MADE IN CANADA

ISO9001 Certified System

CE

TYPICAL INSTALLATION:

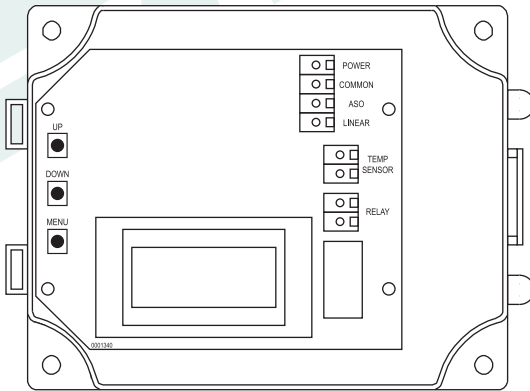**For complete installation and wiring details, please refer to the product installation instructions.**

The AIR42 duct air quality monitor installs on the outside of a air duct with the sampling tube inserted into the duct.

Mount the sensor in an easily accessible location in a straight section of duct at least five feet from corners and other items that may cause disturbances in the air flow. Avoid areas where the detector is exposed to vibrations or rapid temperature changes. Connect conduit and make proper wiring connections,

The AIR42 has a screw block terminal used for connection to the Building Automation System.
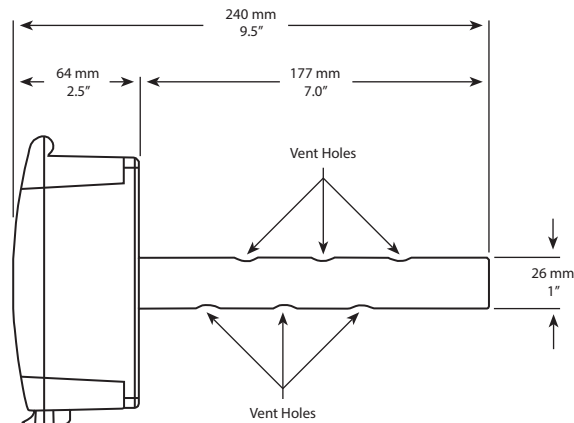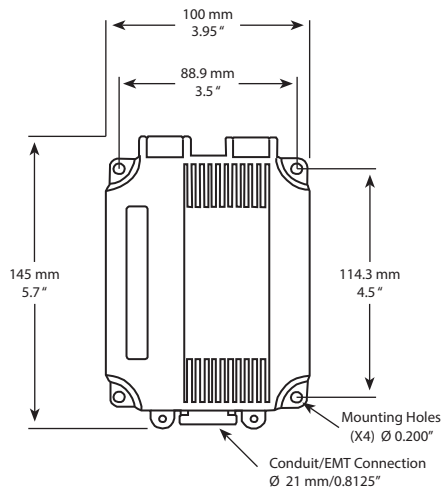

PCB/WIRING INFORMATION

Terminal	Function
POWER	Power input
COMMON	Power and Signal COMMON
ASO	Analog Stepped Output 0-10 Vdc
LINEAR	Analog Output 0-5 or 0-10 Vdc
*TEMP	Resistive Temperature Sensor
*TEMP	Resistive Temperature Sensor
RELAY	Relay Output
RELAY	Relay Output

* Terminals only present if option ordered

DIMENSIONS:

100 mm
3.95"

88.9 mm
3.5"

145 mm
5.7"

114.3 mm
4.5"

Mounting Holes
(X4) Ø 0.200"

Conduit/EMT Connection
Ø 21 mm/0.8125"

240 mm
9.5"

64 mm
2.5"

177 mm
7.0"

Vent Holes

26 mm
1"

Vent Holes

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RoHS
COMPLIANT

Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters for Building Automation Management Systems. We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9001 certified, assuring our customers of consistent product reliability.

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM