GREYSTONE
ENERGY SYSTEMS INC

ROOM AIR QUALITY MONITOR
AIR41 Series

The AIR41 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 CO2 sensors. The AIR4 provides a linear analog signal output of 0-5 or 0-10 Vdc for connection to a building automation system as well as an analog stepped output of 0-10Vdc. Optional features such as a temperature sensor, manual override and adjustible relay output are available.

SPECIFICATION:

Sensing Technology	MEMS metal oxide semiconductor VOC sensor
Measurement Range	450-2000 ppm CO2 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 CO2 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
LCD Backlight	Enable or disable via menu
LED Indicator	Tri-color (Good = Green, Fair = Blue, Poor = Red), enable or disable via menu
Wiring Connections	Screw terminal blocks (14 to 22 AWG)
Enclosure	Wall mount enclosure, White ABS IP30 (NEMA 1) 84 w x 119 h x 29 d mm (3.3"w x 4.7"h x 1.15"d)
Weight	122 gm (4.3 oz)
Optional Override Switch	Front panel switch with FET output, 30 Vdc @ 50 mA max
Optional Relay Output	Form A contact (N.O. or N.C.) 2 Amps @ 140 Vac, 2 Amps @ 30 Vdc (Relay action, 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
AIR41	Room Air Quality Monitor, 0-2000 ppm CO2 Equivalent

CODE	LCD Display
0	Concealed
1	Viewable

CODE	LED Indicator, Tri-color
0	Concealed
1	Viewable

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	10K Ω, 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

CODE	Options (Multiple selections can be made) (Leave blank if no options required)
S	Push button momentary switch - N.O.
R	Relay Output

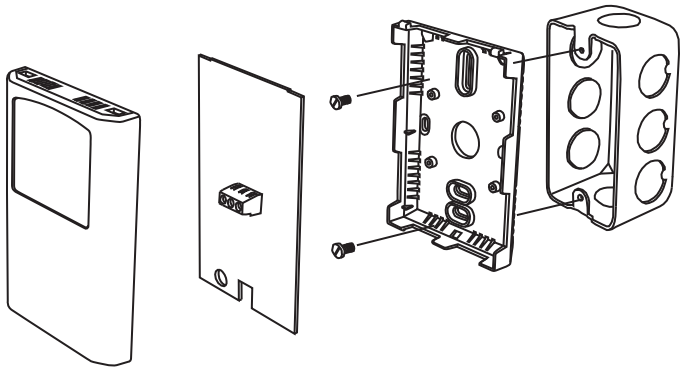
RoHS COMPLIANT

TYPICAL INSTALLATION:

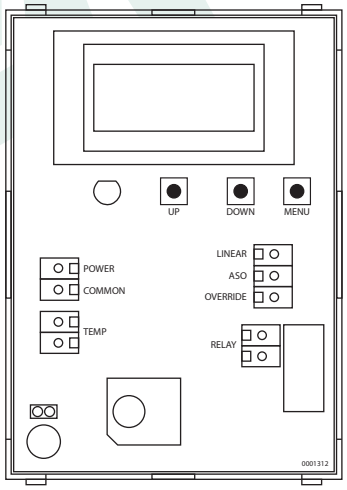
For complete installation and wiring details, please refer to the product installation instructions.

The AIR41 series can be mounted directly to a single gang electrical box or directly to a wall. The backplate includes many mounting hole configurations to allow for mounting on a variety of electrical boxes.

The basic AIR41 has a 4 wire configuration with a screw block terminal provided for connection to the Building Automation System.



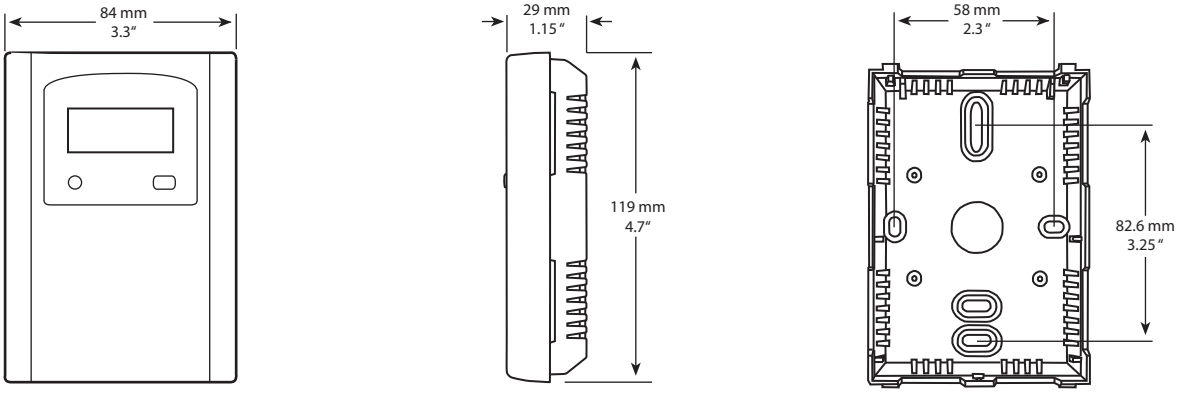
PCB/WIRING INFORMATION



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

* Terminals only present if option ordered

DIMENSIONS:



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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

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