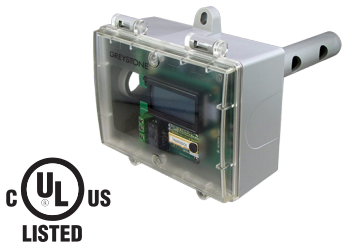
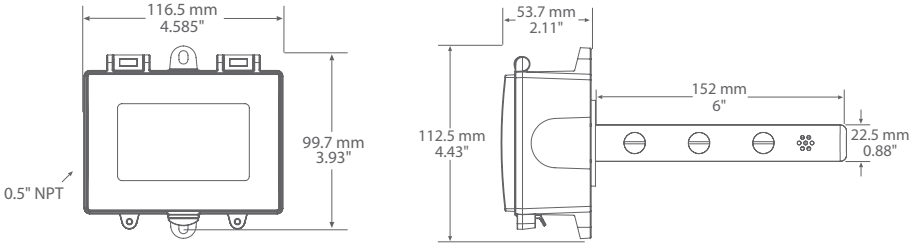
GREYSTONE
ENERGY SYSTEMS INC

DUCT VOC TRANSMITTER





VOCDT SERIES

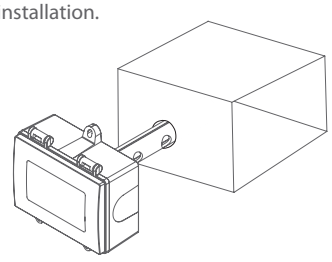
PRODUCT DESCRIPTION

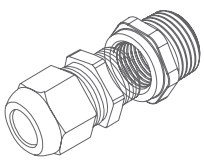
The VOCDT Series Volatile Organic Compound Sensor uses an advanced MOx (metal oxide semiconductor) sensor to detect poor air quality. The sensor reacts quickly to detect a broad range of VOCs such as smoke, cooking odors, bio-effluence, outdoor pollutants and from human activities. Dual linear analog output signals of 4-20mA or 0-5/0-10 Vdc provide indication of the TVOC level and air quality levels against a VOC Index. Optional output parameters of humidity and temperature which can be user selected are also available. Additional add-on features of feed through temperature sensor, manual override and adjustable relay output are available.

TYPICAL INSTALLATION

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

The VOCDTsensor installs on the outside of a return 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 with vibrations or rapid temperature changes. The enclosure provides mounting tabs for ease of installation.





ACCESSORY "F" ENCLOSURE OPTION

Cable Gland Fitting with Thread Adapter 1/2" NPT to M16

SPECIFICATIONS

VOC	**Sensor Type:** MOx metal oxide semiconductor **Range:** VOC Index: 0 to 500 VOCI TVOC: Analog: 0 to 2000 ug/m3 or 0 to 1000 PPB Network: 20 to 6000 ug/m3 or 5 to 1400 PPB **Device Variation:** ±15 VOC Index points, or ±15% VOC Index value (the larger value) **Repeatability:** ±5 VOC Index points, or ±5% VOC Index value (the larger value) **Drift Compensation:** Automatic baseline correction
TEMPERATURE	**Sensor Type:** Bipolar transistor sensor chip | **Range:** 0 to 50°C, 32 to 122°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
OPTIONAL HUMIDITY	**Type:** Thermoset polymer-based capacitance sensor chip **Range:** 0 to 100% RH | **Accuracy:** ±1.5% RH **Resolution:** 0.1% RH | **Calibration:** +/- 10% Offset
RESPONSE TIME	<10 seconds
WARM-UP TIME	1 minute for detecting VOC events, 1 hour to meet specifications
OUTPUT SIGNALS ANALOG MODEL	2X 4-20mA or 0-5 / 0-10 Vdc, selectable User menu to select analog output configuration
OUTPUT SIGNALS NETWORK MODEL	**Interface:** MS/TP, 2-wire RS-485 | **Software:** BACnet® or Modbus (selectable) **Baud Rate:** 9600, 19200, 38400, 57600, 76800, or 115200 (selectable) **Address Range:** 0 – 127 (selectable) – BACnet® **Address Range:** 1 – 255 (selectable) – ModBus
CONSUMPTION	150 mA max
LCD RESOLUTION	VOC Index value (0-500), resolution 1 TVOC value Analog 0 to 2000 ug/m3 or 0 to 1000 PPB , resolution 1 Network 20 to 6000 ug/m3 or 5 to 1400 PPB, resolution 1 Temperature, 0-50°C (32 to 122°F), resolution 1°C(F) Optional RH, 0-100%RH, resolution 1%RH
LCD SIZE	35mm W x 15mm H (1.4" x 0.6") alpha-numeric 2 line x 8 characters
LED INDICATOR	Tricolor (Green, Yellow, Red) see table, enable or disable via menu
OPTIONAL PASSIVE TEMPERATURE SENSOR	**Type:** Thermistor and RTD (see ordering chart) | **Accuracy:** See ordering chart **Output:** 2-wire resistive
OPTIONAL RELAY	Form A 5Amp @ 30Vdc/ac, SELV (Class 2), non-inductive load (Relay action, trip point and hysteresis set via menu)
OPTIONAL OVERRIDE SWITCH	Front panel switch with FET output, 30 Vdc @ 50 mA max
WIRING	Screw terminal block (14 to 22 AWG)
OPERATING CONDITIONS	0 to 50°C (32 to 122°F), 0 to 90 %RH non-condensing
STORAGE CONDITIONS	-20 to 60°C (-4 to 140°F), 0 to 80 %RH non-condensing
ENCLOSURE	Grey Polycarbonate, UL94-V0, IP65 (NEMA 4X)
PROTECTION CLASS	III
POWER SOURCE UL	24Vac/dc SELV (Class 2) supply
EU CONFORMITY	CE
UL MODEL	MIAQDTXPV & MIAQDTNPV
CERTIFICATION	UL 60730 & CSA E60730, (UL E539555 file#)
UL 2043 / CSA/ULC S142 COMPLIANT	Suitable for Use In Air Handling Spaces in Accordance with Section 300.22, (C) of the National Electrical Code
PURPOSE OF CONTROL	Operating Control
TYPE OF ACTION	Type 1
IMPULSE VOLTAGE	330V
POLLUTION DEGREE	2
DIMENSIONS	**Enclosure:** 84mm W x 117mm H x 29mm D (3.3" x 4.6" x 1.15") **Probe:** 22.5mm D x 152mm L (0.88" x 6")
COUNTRY OF ORIGIN	Canada

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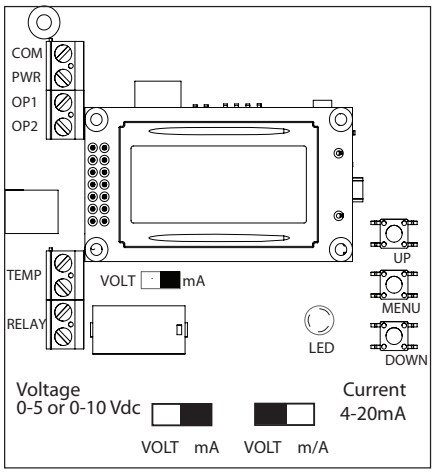
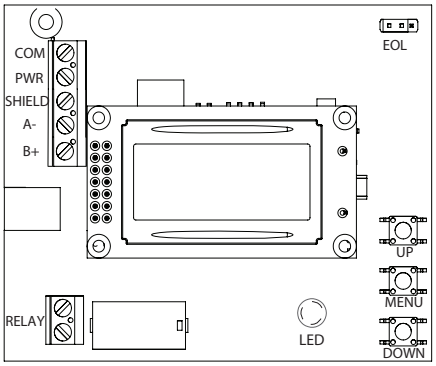
WIRING INFORMATION

VOCDT ANALOG



VOCDT NETWORK



TERMINAL	FUNCTION
PWR	+ 24 Vdc/24 Vac
COM	Common
If Analog Output Selected	
OP1	Analog Output
OP2	Analog Output
If BACnet® or Modbus Output Selected	
B(+)	Network Output
A(-)	Network Output
SHLD	Network Output
Optional Outputs	
RELAY	Relay Output
RELAY	Relay Output
TEMP	Resistance Output
TEMP	Resistance Output

LED INDICATOR: VOC INDEX VALUES

Green LED: 0-50 VOC (Good)

Yellow LED: 51-100 (Moderate)
101-150 (Sensitivity)

Red LED: 151 & up (Unhealthy)

ORDERING

PRODUCT	**VOCDT**	Duct VOC Transmitter
ENCLOSURE	**B** **F**	Polycarbonate, UL94-V0, IP65 (NEMA 4X) Same as B, with thread adapter (1/2" NPT to M16) and cable gland fitting
OUTPUT PARAMETERS	**T** **H**	VOCI/TVOC & Temperature VOCI/TVOC & Humidity/Temperature
OPTIONAL PASS THROUGH TEMPERATURE SENSOR (NOT AVAILABLE WITH BACnet® OR MODBUS OUTPUT. SELECT 00)	**00** **02** **05** **06** **07** **08** **12** **13** **14** **20** **24** **59**	No Pass Through Temperature Sensor 100 Ω Platinum, IEC 751, 385 Alpha, thin film 1801 Ω NTC Thermistor, ±0.2°C 3000 Ω NTC Thermistor, ±0.2°C 10,000 Ω Type 3, NTC Thermistor, ±0.2°C 2.252K Ω NTC Thermistor, ±0.2°C 1000 Ω Platinum, IEC 751, 385 Alpha, thin film 1000 Ω Nickel, Class B, DIN 43760 10,000 Ω Type 3, NTC Thermistor, ±0.2°C c/w 11K shunt resistor 20,000 Ω NTC Thermistor, ±0.2°C 10,000 Ω Type 2, NTC Thermistor, ±0.2°C 10,000 Ω, 25°C, ±1%, B = 3435 ±1% (25/85)
OPTIONAL RELAY	**X** **R**	No Relay Relay
OUTPUT	**A** **N**	Analog (2) Network

PART NUMBER
VOCDT

NOTE: Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

RoHS COMPLIANT

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