Indoor air quality problems, known as "Sick Building Syndrome" have become issues of health and comfort in new and recently remodeled buildings. Buildings are called "Sick" when their occupants experience symptoms such as headaches; eye, nose and throat irritation; dizziness; nausea; sensitivity to odors; and difficulty in concentrating.

Frequently encountered IAQ problems are caused by elevated indoor pollutants such as VOCs (Volatile Organic Compounds) and ineffective ventilation systems in buildings.

VOC emanations (such as toluene), are released by synthetic materials, cleaners, printers, paints, etc.

Once the VOC-2 detects concentrations in excess of calibrated levels, it demands ventilation and/or signals an audible alarm. The VOC-2 can be installed in stagnant areas of buildings where pollutant concentrations will rise. Standard units are calibrated using toluene. Units can also be calibrated with other compounds specified by the customer.
Gases detected: Toluene, hexane, benzene, xylene
Sensor: N-type Metal Oxide Semiconductor (MOS)
Mounting: Wall or column with brackets (supplied)
Unit dimensions: 152mmH x 152mmW x 101mmD
(6”H x 6”W x 4”D)
Supply voltage: 120V AC (Also available 24 or 220V AC)
50-60 Hz, 20VA
Ambient Temp.: 10-40º C (50-100º F)
Dry control contacts: 2
Contact rating: 5A @ 120V AC 1PH
Contact relay 1: Low Level
Contact relay 2: High Level
LED indicators: Power On, Low Level, High Level
Options: Pneumatic sampling : Cat. No.: VOC-2-EN

**Principle of operation**
The ACME VOC-2 uses a tin dioxide (SnO₂) semiconductor gas sensor designed to detect volatile organic compounds. The decrease of electrical resistance of the sensor as it gets exposed to gases or vapors is used as an electrical output signal for detection.

There are two operating levels in the VOC-2. At the LOW level the unit will activate a SPDT relay contact. At the HIGH level it will activate another SPDT relay contact and also will bring on an audible alarm. A thermistor is placed in the detection circuit in order to compensate for temperature variations. Built-in time delays on both ON or OFF relay operations avoid nuisance start-stops of fans or alarms. Units require 120V AC power. Because of possibly long storage time before it is initially energized, allow one week for unit to reach optimum operating conditions. If the unit was de-energized for a couple of days, the time required to have the unit back to normal operation is only a few minutes.

**Additional Volatile Organic Compounds Model No.: VOC-3**
2 fixed contact levels at LOW and HIGH of the specific Refrigerant Leak. Consult factory for alternate contact levels. Wall mounted enclosure. Same dimensions as above.

**Technical Data:**
- **VOC-2**: Volatile Organic Compounds gas detector
- **Typical wiring diagram**

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The information provided by this bulletin is a general description of ACME UNITS. All specifications are subject to change without notice. Installation, maintenance and other instructions provided with the equipment shall be closely followed by installers, owners and users.