

**VOLATILE ORGANIC COMPOUNDS DETECTOR WITH TWO CONTACT LEVELS**



**Features:**

- Fully electronic system with solid state circuitry and built-in sensor.
- Compact corrosion resistant gasketed enclosure.
- Two factory calibrated operating levels (Low & High) with visual indicators.
- Suitable for ventilation control.
- Audible alarm.
- High sensitivity and stability.
- Temperature compensated. High long-term reliability. Can be mounted on a wall or on a column.

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.

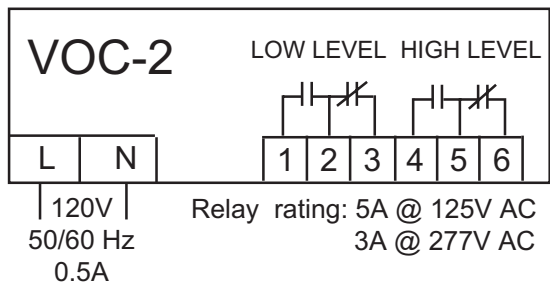
## VOC-2 : Volatile Organic Compounds gas detector

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.:	10-40° C (50-100° 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

## 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.

## Typical wiring diagram



## Technical Data:

### Principle of operation

The ACME VOC-2 uses a tin dioxide (SnO<sub>2</sub>) 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.

### Typical specifications

Supply, install and connect at locations shown on drawings ACME VOLATILE ORGANIC COMPOUNDS DETECTION AND CONTROL UNIT model VOC-2. Units shall be fully electronic incorporating solid state circuitry with built-in temperature compensation, factory calibrated at LOW and HIGH levels. Provide SPDT control relay contacts for each level. Each unit shall include visual indicators for power "ON" and operating status. HIGH level shall activate an integral audible alarm. Unit enclosure shall be gasketed, made of corrosion resistant material. Power supply shall be 120V AC unless specified.

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