



Snifit[®] Model 50

Carbon Monoxide Analyzer

Introduction

Designed for HVAC professionals and utility personnel, the Snifit Model 50 Analyzer is ideal for measuring low levels of CO in ambient air such as in rooms and garages, or around registers, furnaces, stoves, water heaters, and other types of combustion appliances. The Snifit samples the surrounding air and shows the detected concentration of CO on its Liquid Crystal Display. The Snifit is *not* intended to be used in flue gases or in temperatures exceeding 104 °F (40 °C).

Features

- Measures and displays 0 to 1999 ppm CO in room air
- Sensitive CO sensor will last up to 2 years
- Backlight for viewing in dark areas
- Compact pocket size
- Low battery indication
- Manual zero adjust
- Factory calibrated on 100 ppm CO
- Simple field calibration
- Auto power-off after 35 minutes
- Single 9V battery (included) provides at least 1500 hours of operation

Bacharach, Inc.

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Specifications

Gas Monitored	Carbon Monoxide (CO)
Range	0 to 1999 ppm
Resolution	1 ppm
Accuracy	\pm (5% of reading + 5 ppm)
Response	\leq 30 sec. to 90% of final value
Power	9V battery
Battery Life	1500 hours minimum
Temperature Range	32 to 104 °F (0 to 40 °C)
Case Material	High impact plastic
Weight	0.25 lb (0.11 kg) without battery
Dimensions	5.5" L x 2.0" W x 1.6" H (140 x 51 x 41 mm)

Operation

Turning the Snifit On/Off

If not already done, install a 9V battery as described under *Battery Installation*.

Turn on the instrument by pressing its **Power On** button.

Turn it off by pressing **Power Off** (or the instrument will automatically shut itself off after approximately 35 minutes).

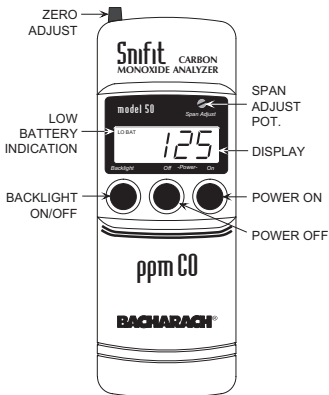


Figure 1. Snifit 50

Zeroing the Sensor

Turn on the Snifit and allow the displayed reading to stabilize before proceeding – approximately 30 seconds. Then with the instrument sampling fresh air

(air that is free of CO), adjust the **Zero Adjust** knob at the top of the instrument for a reading of 0 ± 1 ppm.

If you're not sure about the quality of the surrounding air, you can apply a blend of Oxygen/Nitrogen gas to the sensor as described under *Calibration*.

Checking for CO

Important! *Ensure that the sensor grille at the rear of the instrument is unobstructed and open to the atmosphere. A quick instrument check can be performed by allowing the smoke of a blown-out match to enter into the sensor grille. This should cause the indicated CO level to increase.*

After zeroing the Snifit, simply hold the instrument in the area that you suspect the presence of CO gas. If CO is present, the instrument will indicate the concentration of CO in ppm on its display.

Backlight

Pressing the **Backlight** button will illuminate the display for a period of 8 minutes, or until it is manually turned off by again pressing the **Backlight** button.

Overrange

If the CO level exceeds 1999 ppm, the displayed reading is replaced by the number "1".



Low Battery

When the Snifit's 9V battery is nearing the end of its useful life, **LO BAT** will appear in the upper left hand corner of the display. Although you can continue using the instrument under this condition, you should replace the battery as soon as possible to ensure accurate CO readings.



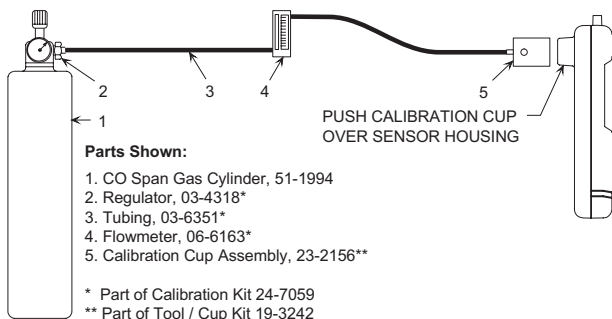


Figure 2. Calibration Equipment Setup

Calibration

Important! For accurate Snifit operation, periodic calibration of its CO sensor is required.

To calibrate the CO sensor, you will need the equipment listed under *Accessories*. Note that the Zero Gas Cylinder is needed only if you're unsure about the quality of the surrounding air for zeroing purposes.

Calibrate the sensor to a known concentration of CO gas as follows:

1. Assemble the calibration equipment per Figure 2.
2. Zero the instrument as previously described under *Zeroing the Sensor*.

If necessary, you can use the calibration cup to apply a blend of Oxygen/Nitrogen gas directly over the sensor by attaching a zero gas cylinder to the regulator and adjusting the regulator knob for a flow rate of 2 SCFH.

3. Push the Calibration Cup over the sensor housing.
4. Attach a CO Span Gas Cylinder to the regulator. Then apply span gas to the sensor by adjusting the regulator knob for a flow rate of 2 SCFH.

- Allow span gas to flow until the displayed reading stabilizes – approx. 3 minutes. Then, using Calibration Tool 06-9453 (supplied in Calibration Tool / Cup Kit 19-3242), turn the **Span Adjust** potentiometer until the displayed reading matches the concentration stamped on the Span Gas Cylinder.
- Calibration is now complete. Turn off the Regulator and remove the calibration equipment.

Maintenance

Battery Installation

Remove the slotted screw from the rear of instrument; then lift off the front case.

Install a 9V Alkaline battery (Duracell MN1604 or equiv.) in the location shown in Figure 3; then reinstall the front case.

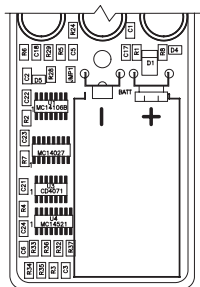


Figure 3. Battery Location

Sensor Replacement

The sensor needs replaced when it can no longer be calibrated to the Span Gas Cylinder value using the **Span Adjust** potentiometer.

- See Figure 4. Remove the screw from the rear of the instrument; then lift off the front case and remove the printed circuit board assembly.
- Unplug the old sensor and dispose of it properly.
- Inspect the sensor gasket and filter. Replace an item if is torn, deformed, or contaminated with dirt.
- Remove** the wire-jumper from the pins of the new sensor; plug in the sensor; then reassemble the instrument.
- Calibrate the new sensor.

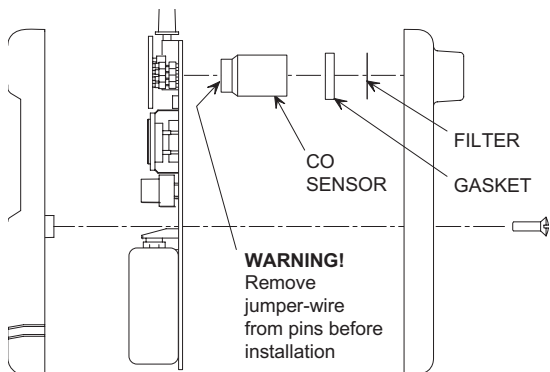


Figure 4. Sensor Installation

Replacement Parts

Item	Part No.
CO Sensor	19-7061
Gasket	19-3234
Filter	19-3244

Accessories

Item	Part No.
Calibration Kit	24-7059
Calibration Tool / Cup Kit	19-3242
Span Gas Cylinder, 100 ppm CO in air	51-1994
Zero Gas Cylinder, 20.9% O ₂ in Nitrogen	51-7131

Bacharach Service Center

Replacement parts and accessories can be obtained by contacting the following Bacharach Service Center:

Bacharach, Inc.
 625 Alpha Drive
 Pittsburgh, PA 15238
 Phone: (412) 963-2214
 FAX: (412) 963-2606