

# FLUKE®

## 975CK Gas Sensor Calibration Kit

### Instruction Sheet

#### **Calibration**

Calibration due dates are tracked using the Meter's clock and stored in non-volatile memory. Due dates can be configured by the user from one to 365 days. When the Meter reaches its calibration due date, it alerts the user but will continue to operate.

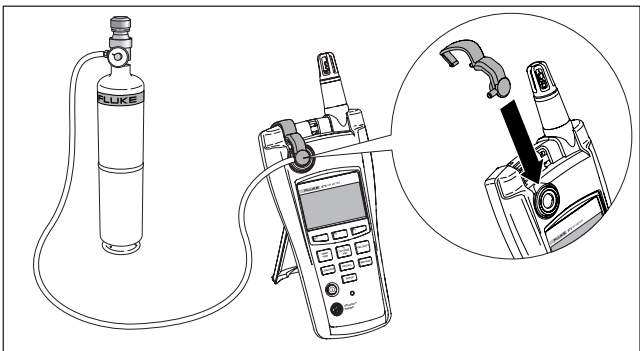
The Meter's CO and CO<sub>2</sub> sensors can be calibrated by the user or returned to Fluke for service. See "Contacting Fluke". The recommended calibration interval is 1 month for CO and 1 year for CO<sub>2</sub>.

Gas canisters are available as an accessory allowing the user to calibrate the CO and CO<sub>2</sub> sensors.

Install the calibration cap and attach the hose to the correct gas canister; mixed CO and CO<sub>2</sub> for calibration gas, Nitrogen for zeroing gas when calibrating CO<sub>2</sub>. See Figure 1

#### *Note*

*Calibration gas is applied at the rate of ½ liter/minute for 2 minutes.*



eha001.eps

**Calibration Connections**

PN 2768489

October 2006

© 2006 Fluke Corporation, All rights reserved. Printed in U.S.A.

All product names are trademarks of their respective companies.

## **Calibrating the CO and CO<sub>2</sub> Sensors**

Calibrate the CO and CO<sub>2</sub> sensors together, or separately.

To simultaneously calibrate both sensors,

1. If not already in calibration mode, press **LOG/SAVE**, **RECALL**, and **SETUP** simultaneously for 3 seconds to enter calibration mode.
2. Press **F1** [Yes] to initiate the calibration procedure.
3. Press **F3** [BOTH].

The Meter display reads:

### **Calibration Procedure Apply Nitrogen...**

4. Apply ½ liter/minute of nitrogen for 2 minutes. Press **F3** [Cancel] to exit calibration.
5. When sensor zero is complete, remove the nitrogen and press **F2** [OK] or **F3** [Cancel] to exit calibration.

The Meter displays:

### **Apply CO Calgas concentration...**

6. Enter the concentration amount using **F1** [DOWN] and **F2** [UP] to change the entry and **F3** [ENTER] to store it.
7. Apply the calibration gas mixture of CO and CO<sub>2</sub>. Press **F2** [OK] or **F3** [Cancel] to exit calibration.
8. When finished, remove gas and press **□** [OK]. Enter the time to next calibration date. Use **F1** [DOWN] and **F2** [UP] to change the number and **F3** [ENTER] to store the number.

The calibration procedure is complete.

## **Calibrating the CO Sensor**

To calibrate the CO sensor:

1. With the calibration cap on, press **LOG/SAVE**, **RECALL**, and **SETUP** simultaneously for 3 seconds to enter calibration mode.
2. Press **F1** [Yes] to initiate the calibration procedure or press **F3** [Cancel] to exit calibration mode.
3. Press **F1** [CO]. The Meter zeros the CO sensor. If desired, press **F3** [Cancel] to abort Meter calibration.
4. Use **F1** [DOWN] and **F2** [UP] to change the gas concentration (ppm). Press **F3** [ENTER] to enter the concentration level.

5. The Meter prompts to apply the CAL Gas. Attach the mixed CO and CO<sub>2</sub> calibration gas canister to the Meter via the supplied hose or press **F3** [SKIP] to exit.
6. The Meter calibrates the CO sensor. Press **F3** to cancel. When finished, remove gas and press **F3** [OK]. Enter the time to next calibration date. Use **F1** [DOWN] and **F2** [UP] to change the number and **F3** [ENTER] to store the number.

*Note*

*When either CO or CO<sub>2</sub> sensors are calibrated, the calibration date is reset by the user.*

CO calibration is now complete and the Meter exits calibration mode.

### **Calibrating the CO<sub>2</sub> Sensor**

To calibrate the CO<sub>2</sub> sensor:

1. If not already in calibration mode, with the calibration cap on, press **LOG/SAVE**, **RECALL**, and **SETUP** simultaneously for 3 seconds to enter calibration mode.
2. Press **F1** [Yes] to initiate the calibration procedure or press **F3** [Cancel] to exit calibration mode.
3. Press **F2** [CO<sub>2</sub>].
4. Specify one-point or two-point calibration methods. The one-point method uses CAL gas only. The two-point method uses CAL gas and also Neutral gas (Nitrogen).

If one-point is chosen:

1. Use **F1** [DOWN] and **F2** [UP] to choose the CAL gas concentration.
2. Press **F3** [ENTER] to enter the concentration.
3. Apply the CAL gas and press **F2** [OK], press **F3** [SKIP] to exit calibration mode. The Meter will now calibrate the CO<sub>2</sub> sensor for 2 minutes. press **F3** [Cancel] to exit calibration mode. If calibration fails, repeat the procedure. If it fails a second time, have the Meter serviced.
4. The Meter finishes the procedure then prompts the user to enter the time until the next calibration. Enter the amount using **F1** [DOWN] and **F2** [UP] to change the number and **F3** [ENTER] to store the number.

If two-point is chosen:

1. Apply the neutral gas (Nitrogen) or press **F3** [Cancel] to exit calibration mode.

2. When zeroing is complete, remove neutral gas (Nitrogen) and press **F2** [OK] or **F3** [Cancel] to exit calibration mode.
3. Apply the CAL gas. Enter the amount using **F1** [DOWN] and **F2** [UP] to change the number and **F3** [ENTER] to store the number.
4. Apply cal gas and press **F2** [OK] or **F3** [Cancel] to exit calibration mode.
5. The Meter finishes the procedure then prompts the user to enter the time until the next calibration. Enter the amount using **F1** [DOWN] and **F2** [UP] to change the number and **F3** [ENTER] to store the number.

CO2 sensor calibration is now complete and the Meter exits calibration mode.

## **Contacting Fluke**

To locate an authorized service center, visit us on the World Wide Web at [www.fluke.com](http://www.fluke.com) or call Fluke using any of the following numbers:

USA: 1-888-99-FLUKE (1-888-993-5853)

Canada: 1-800-36-FLUKE (1-800-363-5853)

Europe: +31 402-675-200

Japan: +81-3-3434-0181

Singapore: +65-738-5655

Anywhere in the world: +1-425-446-5500

### **LIMITED WARRANTY AND LIMITATION OF LIABILITY**

Regulators are warranted for 2 years from the date of purchase against defects in the materials and assembly, and performance within specification. If the regulator is considered by Fluke to be defective then Fluke will replace the regulator at no charge. If the gas canister leaks or the gas becomes unstable within 3 years from the manufacturing date on the canister, Fluke will replace the canister at no charge. These warranties will not cover damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf.

To obtain warranty service, contact your nearest Fluke authorized service center to obtain return authorization information. Regulators need to be sent to that Service Center with a description of the problem. Fluke will not accept return of canisters. Customers must dispose of them in accordance with the disposal instructions on the canister.

THIS WARRANTY IS BUYER'S ONLY REMEDY. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE GIVEN. FLUKE SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

Fluke Corporation  
P.O. Box 9090  
Everett, WA 98206-9090  
U.S.A.

Fluke Europe B.V.  
P.O. Box 1186  
5602 BD Eindhoven  
The Netherlands