

TESTING THE CM-15/15A AFTER INSTALLATION
SUGGESTED FUNCTIONAL TEST

GENERAL: Normally, this will be the only test required for the CM-15/15A, and is the recommended way to test the unit or units after installation. All CM-15/15A units are factory calibrated, and all CM-15/15A units are tested for proper operation prior to shipping. The CM-15/15A unit monitors circuit functions continuously. If the unit detects an improper voltage or an inoperable component, it will default into Error mode. In Error mode, the status light flashes amber, and the Trouble Relay will actuate.

TESTING: Check that the CM-15/15A status light (LED-type light) is illuminated green continuously. If not, do not proceed with this test. If the unit is in error mode, contact your local representative or a Macurco service technician for information on resolving the problem.

1. Observe the color of the status light on the front of the CM-15/15A.
2. If the status light is illuminated green, proceed to step 6.
3. If the status light is any color except green, disconnect the power to the CM-15/15A for at least one minute.
4. Reconnect the power to the CM-15/15A. The unit will be in warm-up mode for 2-1/2 minutes; the status light will alternate between red and green until the unit is ready for operation.
5. When the status light is illuminated green continuously, proceed with step 6. If the status light is not illuminated green after the warm-up period, contact your local representative or Macurco service technician for assistance.
6. Push the Reset/Test switch once.
7. The unit will now clear itself and execute a one-minute self-test cycle. The status light will alternate between green and amber. At the end of the self-test, the status light will turn red for five seconds, the buzzer will sound (CM-15A only) and the alarm relay will close.
8. Wait for the test to end as indicated by the status light illuminated green continuously. If the status led flashes amber, the self-test has failed: contact your local representative or Macurco service technician for assistance.
9. Both the Trouble and Alarm Relays should now be in their normal condition, and the buzzer should be silent (CM-15A only).

CARBON MONOXIDE GAS TEST (Optional)

GENERAL: The CM15-FTK is needed to complete a CO gas test. The kit includes a cylinder of 400 ppm of CO in air. Replacement cylinders are available through your local representative or from Macurco.

- Note:**
1. All units to be tested must be powered continuously for a minimum of **72 hours**.
 2. For optimum test results it is suggested that the unit be in clean air (green status light on) and be in an area of low ambient air flow.
 3. The security or fire alarm control panel should be in a condition that prevents an alarm from being issued to the Security Company or fire department.
 4. Have a stopwatch or timer available, and be prepared to monitor a test that may take up to 15 minutes.

TESTING: Check that the CM-15/15A status light (LED-type light) is illuminated green continuously. If not, do not proceed with this test. If the unit is in error mode, contact your local representative or a Macurco service technician for information on resolving the problem.

1. Remove the CM-15/15A front cover by squeezing the sides of the cover while pulling it away from the base.
2. Open the CM15-FTK. Connect the 400 ppm gas cylinder to the regulator, and then to the bladder.
3. Check the pressure gauge on the regulator. If there is 25 psi or less, the gas cylinder should be replaced before continuing.
4. Allow 2 minutes from the time the regulator is connected to the gas cylinder to purge the connecting tube and bladder.
5. Place the white nylon cap on the end of the bladder over the round white device with the fine screen in the top of the casing (CO sensor). Continue to apply the gas until the test is over. **Note:** The bladder will not inflate.
6. Wait 4 to 15 minutes with the gas applied continuously.
7. When the unit alarms, note the elapsed time. The status light will turn red, the buzzer will sound (CM-15A only) and the alarm relay will close.
8. The fire or security panel should indicate that the CM-15/15A has alarmed.
9. Remove the gas from the sensor after it alarms, or after 15 minutes has elapsed. The CM-15/15A failed this test if it did not alarm by the 15-minute point.

- Note:** If the CM-15/15A does not alarm within 15 minutes, there are three possibilities:
- a. The gas cylinder is empty, check the pressure gauge. Replace the gas cylinder if 25 psi or less.
 - b. The unit needs to be recalibrated.
 - c. The detector is in need of servicing. Contact your local representative, or Macurco service technician for assistance.

10. Replace the CM-15/15A front cover.
11. If there are more units to test, repeat these instructions from step one for each unit.
12. When testing is completed, disassemble the regulator and cylinder. To conserve test gas, the cylinder should be removed from the regulator whenever it is not in use for more than 5 minutes.