REED
INSTRUMENTS

Refrigerant
Leak Detector

WARRANTY
1 YEAR
WARRANTY

Instruction
Manual

Table of Contents

Introduction

Thank you for purchasing the REED C-380 Refrigerant Leak Detector. Please read the following instructions carefully before using the meter. By following the steps outlined in this manual the meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO 9001 facility and has been calibrated during the manufacturing process to meet the stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

Read through your instruction manual before operation for correct and safe usage.

Warning

- Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.
- Do not operate the meter in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- Eliminate any organic solvents around the measuring area as the gases and/or vapors might interfere with the unit's accuracy.
- In order to ensure correct operation and measurement, the unit should be switched on and warmed-up in a non-contaminated environment.
- Be sure to test the meter (see "*Self-Test*" for details) often to ensure safety and the proper use of this unit.

Features

- Detects all CFCs, HFCs, and HCFCs
- Quick response and high accuracy detects small leaks
- 15" (390mm) gooseneck for hard to reach areas
- Designed for one-handed operation
- User adjustable sensitivity (High/Low)
- Tricolor visual indicator
- Audible (buzzer) and visual (LED) alarm indicators
- Low battery indicator and auto shut off
- User replaceable sensor

Included

- Reference Leak Source
- Hard Carrying Case
- Batteries

Specifications

Detected Gases: CFC's: R11, R12, R13
HCFC's: R22, R502, R500
HFC's: R134a, R123, R125,
R23, R404A, R407C, R410A
and other halogen based compounds
HFO's: HFO-1234yf and R514A

Sensitivity: R22, 134A: 6g/year(H), 30g/year(L)
R404A, 407C, 410A: 8g/year(H), 40g/year(L)

General Specifications

Sensor Type: Advanced ionization detector
Display: Tricolor LED bar indicator
Alarm: Audible (buzzer) and Visual (bar indicator)
Sensitivity Settings: Low and High
Warm-up Time: 10 seconds
Response Time: Less than 1 second
Auto Shut-Off: Yes (after 10 minutes)
Low Battery Indicator: Yes
Power Supply: 4 x AA Batteries
Battery Life: Approximately 40 hours
Product Certifications: CE, RoHS
Probe Length: 15" (390mm)
Operating Temperature: 32 to 104°F (0 to 40°C)
Storage Temperature: 14 to 140°F (-10 to 60°C)
Operating Humidity Range: 10 to 70%
Dimensions: 8.5 x 2.6 x 2.2" (217 x 66 x 56mm)
Weight: 9.3oz (265g)

Instrument Description

1. Sensor
2. Sensor Protector
3. LED Leak Indicators
4. Low Sensitivity Button
5. High Sensitivity Button
6. Low Battery Indicator
7. Power ON/OFF & Reset Button
8. Battery Cover
9. Battery Cover Screw
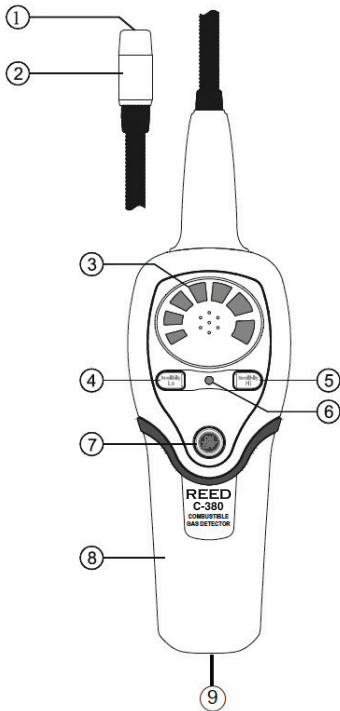
LED Leak Indicator Definition

Ambient Concentration Indication

Lowest

Increasing

Highest

Operating Instructions

Some environmental conditions may cause inaccurate readings such as; high pollutant environments, large temperature variations, high wind velocity, environments containing combustible gases, environments containing organic solvents, adhesive vapors, fuel gases or vesicants.

Power ON/OFF

1. Press the ⊚ button to turn the meter on. Press and hold the ⊚ button for approximately 5 seconds to turn the meter off.
2. When powering on, the LED leak indicators will continuously illuminate while the sensor heats up for approximately 2 minutes.
3. When complete, the meter will emit 2 beeps confirming that it is ready to use.

Note: The ⊚ button not only turns this refrigerant leak detector on and off but also serves as a reset button for ambient concentration (refer to the "Ambient Concentration Reset" section in the manual for further details).

Auto Power Off

To preserve battery life, the meter is programmed to turn off after 10 minutes of inactivity.

Self-Test (Performance Check)

1. Turn the meter on and set the sensitivity level to "Hi".
2. Open the cover to the leak-check bottle and slowly move it closer to sensor tip.
3. If the unit is in working condition the LED leak indicators will light up, from low to high.
4. Repeat this process to confirm that the closeness of the leak-check bottle results in the leak indicators to fluctuate from low to high.

Measuring Procedure

It is recommended to position the tip of the sensor probe within 1/4" (6mm) of the suspected leak source. Slowly move the sensor probe past each possible leakage point.

Note: Fast movement of the sensor probe or blowing into the sensor tip will affect the air flow over the sensor and cause the unit to alarm.

1. When a leak is detected, an audible tone will sound and the LED leak indicators will light from right to left; green (low concentration) to orange (medium concentration) to red (high concentration). Increasing levels indicates that the proximity of the leak is getting closer.

2. When the meter signals a leakage, pull the probe away from the leak for a moment and then bring it back slowly to pinpoint the location.

Note: If the leak is large, try setting the sensitivity switch to LOW (see "*Sensitivity Adjustment*" for details) as it will make it easier to pinpoint the exact location of the leak.

3. Always return the sensitivity switch to HIGH before searching for any additional leaks.

4. When a user is finished testing for leaks turn the unit OFF and store it in a cool, dry, clean place to protect the sensor and unit from any possible damage.

Ambient Concentration Reset

This refrigerant leak detector features an ambient concentration reset function (Zero out) that sets the meter's sensor to ignore the present level of refrigerant concentration. When the meter is initially powered on it will recognize the background refrigerant concentration as 0 by default. Therefore, it is recommended to turn the meter on in an area with clean and fresh air such as outdoors allowing the sensor to zero out in a non-affected area. If a user presses the ⊕ button while measuring, it will reset the current background refrigerant concentration to zero again. This function is designed to allow the user to pinpoint the source of the leak while enabling it to register higher concentrations only.

Sensitivity Adjustment

This unit provides two levels of sensitivity. When the unit is switched ON it is set to high sensitivity by default. To change the sensitivity, press the $\left(\begin{smallmatrix}\text{Sensitivity}\\\text{Lo}\end{smallmatrix}\right)$ button. The two left green LED's will then flash indicating low sensitivity has been selected. To switch the unit back to high sensitivity, press the $\left(\begin{smallmatrix}\text{Sensitivity}\\\text{Hi}\end{smallmatrix}\right)$ button. The two right red LED's will then flash indicating that high sensitivity has been selected.

Replacing the Sensor

To ensure the accuracy of the meter, the sensor must be replaced periodically. The lifespan of a sensor depends on several factors: the technology used, environmental conditions and gas exposure. The more an electrochemical sensor is exposed to gas, the shorter its life. Under normal conditions and proper care, the sensor life span is approximately 1-2 years.

Note: It is recommended to perform self-tests of the sensor prior to taking readings to ensure that the sensor is still in working condition.

1. When ready to replace, remove the sensor protector cover from the tip of the sensor probe. Be cautious when removing the sensor, as the old sensor may still be very HOT.
2. If the old sensor has cooled down, carefully pull it out and insert the new sensor into the plug (see below).
3. Place the sensor protector over the new sensor.

Sensor protector

Sensor
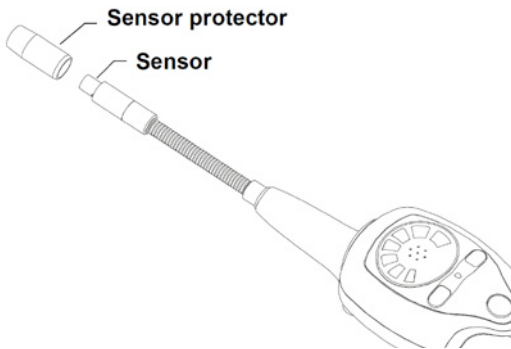
Battery Replacement

When the battery power is running low, the red LED low battery indicator will illuminate confirming that the batteries will need to be replaced.

1. Loosen the battery cover screw and remove the battery cover located on the bottom of the instrument as shown below.
2. Install 4 x "AA" batteries.
3. Replace battery cover by aligning it with the hangle and sliding it back onto the unit.
4. Tighten the battery cover screw to secure back into place.

4 "AA" size
alkaline batteries
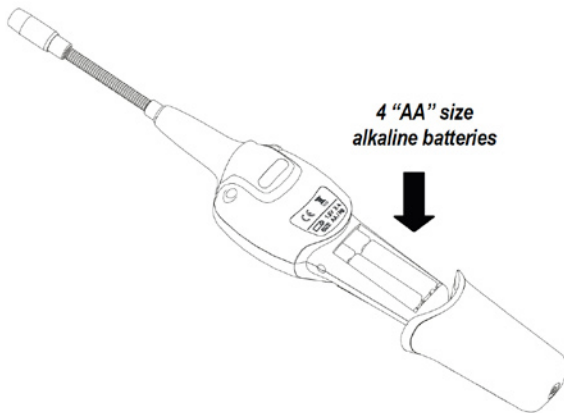
Applications

- Testing residential and commercial refrigeration systems
- Automotive air conditioning troubleshooting

Accessories and Replacement Parts

- **R8888** Deluxe Hard Carrying Case
- **R-134A** Replacement Sensor
- **LC-R01** Replacement Reference Leak Source

Don't see your part listed here? For a complete list of all accessories and replacement parts visit your product page on www.REEDInstruments.com.

Product Care

To keep your instrument in good working order we recommend the following:

- Store your product in a clean, dry place.
- Change the battery as needed.
- If your instrument isn't being used for a period of one month or longer please remove the battery.
- Clean your product and accessories with biodegradable cleaner. Do not spray the cleaner directly on the instrument. Use on external parts only.
- Do not allow any cleaner to enter the unit or to come into contact with the sensor as it may cause damage. Gasoline and any other solvents may damage the plastic and should be avoided.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by email at 1-877-849-2127 or info@reedinstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

Product Support

If you have any questions on your product, please contact your authorized REED distributor or REED Instruments Customer Service by phone at 1-877-849-2127 or by email at info@reedinstruments.com.

Please visit **www.REEDInstruments.com** for the most up-to-date manuals, datasheets, product guides and software.

Product specifications subject to change without notice.
All rights reserved. Any unauthorized copying or reproduction of this manual is strictly prohibited without prior written permission from REED Instruments.

REED
INSTRUMENTS

TEMPERATURE & HUMIDITY

SOUND

MOISTURE

AIR VELOCITY

ELECTRICAL