



Inframate X Operating Manual

1. Product Introduction

Welcome to purchase the Inframate X infrared leak detector. Please read this instruction manual carefully before use to avoid any hazards to you and your product caused by improper operation.

The Inframate X infrared leak detector is a high-precision detection device based on infrared spectroscopy technology. It is specifically designed for quickly locating refrigerant leakage points in refrigeration systems such as air conditioners, cold storage facilities, cold chain equipment, etc. Its core advantages lie in a wide range of detectable refrigerant types (HFCs, CO₂, HC_s), non-contact detection, high sensitivity, and strong anti-interference ability. It is suitable for leakage investigation and environmental protection detection in various scenarios such as heating, ventilation, air conditioning (HVAC), industry, and automobiles.

2. Safety Precautions

1. This product contains a battery inside. Do not place the product in a high-temperature environment or in a fire. Otherwise, there is a risk of explosion.
2. Before conducting the detection, confirm that the filter component has been installed on the device and is clean. Otherwise, it will damage the sensor.
3. It is strictly prohibited for water to be sucked into the air inlet of the probe rod.
4. When using the ultraviolet lamp, do not look directly at the ultraviolet light with your eyes.
5. The instrument is equipped with a rechargeable lithium battery inside. Please do not replace it with other models casually.
6. Avoid inhaling the refrigerant. A high concentration of refrigerant is harmful to the human body and may cause coma or even death.
7. If you find that the product is damaged, please contact us in a timely manner. It is strictly prohibited to disassemble the product privately. Otherwise, it may cause further damage to the product, and in severe cases, it may lead to the battery catching fire or even exploding.

3. Environmental Protection

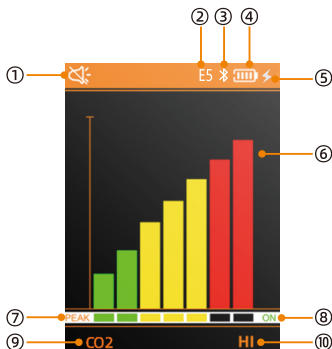
1. When the product reaches the end of its service life, please recycle it in accordance with local regulations. Do not discard it casually to avoid causing environmental pollution.
2. Recycle the scrapped old batteries in accordance with local regulations.

4. Button



ON/OFF	Long press: Turn on/off the power
MODE	Short press: Switch the target gas
PEAK	Short press: Turn on/off and mark the maximum leakage Long press: Turn on/off, Bluetooth
RESET SENS	Short press: Switch sensitivity
MUTE	Short press: Turn on/off the buzzer

5. Display



1. Buzzer
2. Sensor fault
3. Bluetooth
4. Battery level
5. Charging
6. Leakage indication
7. Leakage peak value record
8. Peak value record switch
9. Detection gas type
10. Sensitivity indication

6. Specifications

Principle of the sensor	Infrared spectrum absorption
The lifespan of the sensor	10 years
Sensitivity	Three-level sensitivity adjustment HAL: 3g/a CO2: 6g/a HC: 7g/a (g/a: grams of leakage per year)
Detectable gases	CFCs, HFCs, HCFCs, HFOs, CO2, HCs (R134a, R410a, R744, R290, etc.)
Alarm method	TFT display and audible alarm
Operating environment	Temperature: -10°C – +52°C Humidity: ≤ 90%RH (without condensation)

7. Operation Guide

This product can detect three different categories of refrigerants by switching with the MODE key.

They are respectively:

HAL: R134a, R410a, etc.;

CO2: R744;

HC: R290, R600a, etc.

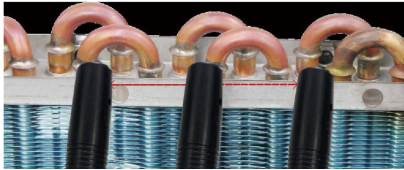
1. Press ON/OFF button to turn on the instrument, and the instrument will start preheating. It takes approximately 30 seconds to reach the optimal detection state.
2. Press RESETSENS button to adjust to the desired sensitivity level. The default sensitivity level is high.
3. After finding the suspected leakage area, bring the probe close and maintain a distance of about 6 millimeters (0.25 inches). Move the probe slowly at a speed of approximately 75 millimeters per second (0.25 feet).
4. When a leakage is detected, the buzzer and the liquid crystal display (LCD) screen will give corresponding prompts simultaneously:

Buzzer: Increasing beep frequency corresponds to greater leakage intensity.

LCD Display: The bar graph height increases with higher leak intensity

Note: Due to the high sensitivity of the product, when detecting the R744 refrigeration system, it is recommended to wear a mask to reduce the impact of exhaled carbon dioxide on the detection results.

An example diagram of the query method is as follows for your reference:



8. Instrument Maintenance

8.1 Battery

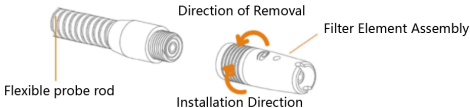
1. Charger specifications: 5V/2A.
2. Avoid charging for an extended period of time. Disconnect the power supply in a timely manner after the battery is fully charged.
3. Avoid charging in a high-temperature environment. Charge the battery in a cool place.
4. Avoid excessive discharge, which may affect the battery life.

8.2 Filter Element Replacement

The filter element can filter large particle contaminants and water vapor, reducing false alarms caused by excessive humidity. When the filter element is severely contaminated (the filter element turns black and is blocked), please be sure to replace it in a timely manner.

The specific replacement method is as follows:

1. Remove the filter element assembly counterclockwise.
2. Replace it with a new filter element assembly and screw it on clockwise.



9. Set of Accessories

1. Infrared Leak Detector	*1
2. Charging Cable	*1
3. UV Lamp	*1
4. Filter Elements	*5
5. Instruction Manual	*1
6. Blow-molded Box	*1

10. Warranty Policy

Warranty Period: 12 months from the date of purchase.

Warranty Coverage:

Covers defects under normal usage conditions.

Valid proof of purchase is required.

Exclusions:

- a. Malfunctions caused by human damage or improper use.
- b. Unauthorized repair or modification.

11. For more details

Scan the QR code for instructions in your language

