INSTRUCTION MANUAL FOR LEAK DETECTOR

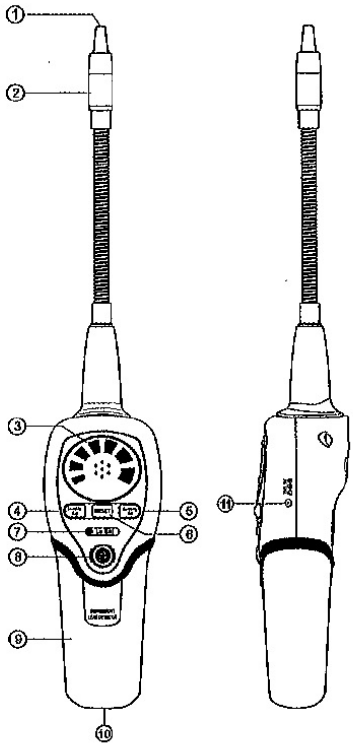
Technicals

Detectables gases: Hydrogen
Sensitivity:

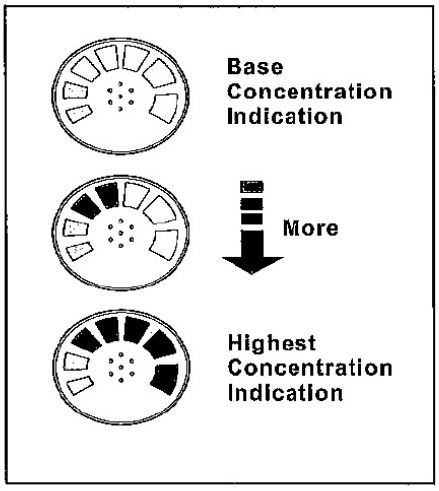
	H	M	L
H	2g/year	15g/year	30g/year

Alarm method: buzzer, tri-colored led bar
Alimentation: 4 AA alkaline batteries (6V DC)
Probe length: 40cm (15.5")
Size/Weight: 173 x 66 x 56 mm (approximately 400g)
Accessories: Alkaline batteries x 4 pieces
Instruction manual, tester for leak detector, case
Battery life: approximatively 7 hours of normal use
Auto-off: 10 minutes
How to de-activate the Auto-off: Keep press the "Hi" button and then turn on the leak detector
Warming time: about 45 seconds
Temperature and Humidity during the use: 0 - 40°C, <80% RH
Temperature and Humidity of storage: -10 – 60°C, <70% RH
Altitude: <2000M (6500')

Panel Description



① Sensor
② Sensor Protector
③ LED Leak Indicators
④ Sensitivity Lo Button
⑤ Sensitivity Hi Button
⑥ Reset Button
⑦ Low Battery Indicator
⑧ Power On/Off
⑨ Battery Cover
⑩ Battery Cover Screw
⑪ AC power adapter connector



Operational guide

The leak detector unit is not provided with anti-explosive dispositives and measures. Do not use it in environments with flammable gases.

There are environmental conditions that may cause a reading error:

Polluting environments

Big temperature variation

Very windy places

Organic solvents, vapours, combustible and vesicant gas cause anomalies on sensor response. Try to avoid environments with these sostances.

Places excessively plenty of Freon gas

To start

Inserting batteries

- Unscrew the screw and remove the counter of battery compartment, situated on the bottom of detector
- Insert 4 “AA” alkaline batteries
- Close the counter and screw it
- When the batteries are about to run out, the Led indicator will light red, signaling the low battery. The batteries must be sostituted as fast as possible
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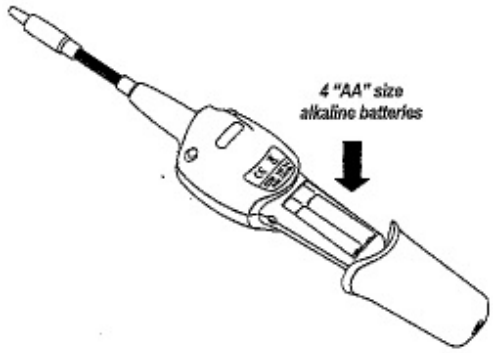


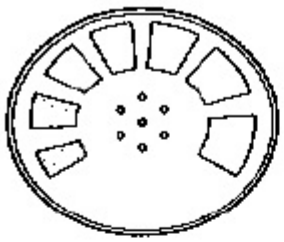
Automatic environmental reset function

This leak detector unit is provided with a dispositive of automatic environmental reset that allows ignoring ambient concentrations of refrigerant.

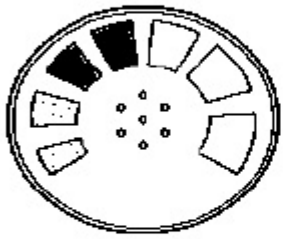
- Setup – at initial switch-on, the unit automatically set itself to ignore the refrigerant level presente in the environment. Only on an higher level or a concentration will cause an alarm signal. This characteristic allows the unit to ignore the refrigerant present during the start. This means that with the unit off, there will indicated no losses.
- Reset – reset the unit during the use produces a similar function, so the instrument will ignore the presence of gas in the environment. This allows the unit to be utilized also in closed places (where the concetration of gas is higher).
  In the same way the unit can be moved to the open air and reset for greater sensitivity. Reset the unit without the presence of refrigerant gas (open air) provokes the detection of all level of concentration over the 0.
- After the unit warms up, the sensitivity level is defaulting setting on “Average” and the “Auto reset” function is on ON.
- The Auto Reset function is better to use at the beginning, when the utent is on movement, searching to identify the source of loss. When the source is determineted, delete the Auto Reset function (pressing for 2 seconds the Reset button) to procede with the loss measuration.
- The Auto Reset function (unlit Reset button) should be off then the detection of losses is done by standing still.

Sensitivity gauge function

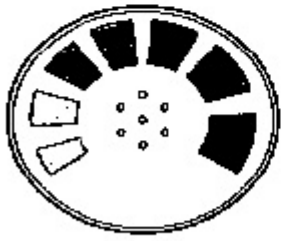
- The instrument posseses 3 sensitivity level. When the unit is on, it's setting on Average level.
- To change the sentivity, press the "Sensitivity Low" button when the button is pressed: the display will show the 2 leds on left (green) signaling that it is selected a low level of sensitivity.
- To go back to high sensitivity, press the "Sensitivity Hi" button. The 2 leds on the right (red) will be illuminated, indicating that the high sensitivity is been selected.



Low Sensitivity level
(Green LED)



Medium Sensitivity level
(Orange LED)



High Sensitivity level
(Red LED)

Operational procedures

How to find the leaks?

Note: an abrupt movement of the probe or blowing inside the top of the instrument, will cause a shift of air around the sensor and the instrument will emit an alarm signal.

(1) The ON/OFF buttont turn on and off the leak detector. Push one time to tunr on the unit, the display will shine after an acustic signal.
Wait 45 seconds for the warm up. During this period the instrument will be unusable and the displays will shine form left to right.
At the end of these 45 seconds the unit will emit a second acustic signal.
Keep pressed the button for 5 seconds to switch off the unit.

(2) As soon as turn on the detector, the Reset button is illuminated, this show that the detector must be yet set up.
Before searching the leak, keep pressed the Reset button to allow the leak detector to find the percentual of gas missing in the environment.
In case it is necessary to change the place of use, it will be necessary to reset again the unit before the leaks research.

(3) Verify the conditions of the unit and of the sensor
Set the sensitivity level on "Higher"
Open the small bottle and move slowly around the sensor at the end of the probe.
If the indicator moves from top to bottom is necessary move away the small bottle and the LED should turn off again. This shows that the uniti s working.
If the unit does not behave as indicated, bring the unit to service.

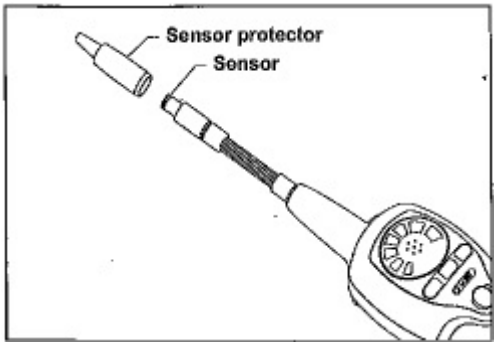
(4) Set the measuring modality

- Put the top of the probe as close as possible at the place of the suspect loss. Try to place the probe at 6 mm from the point of loss.
- Move slowly the probe on every possible point of loss.
- When the instrument find the source of loss, it will emit an alarm sound. More, the indicator will shine from left to right passing by green to orange and in the end to red (higher concentration) at the increase of the level, indicating if we are closest to the source of loss.
- When the source of loss is indentified, move the prove for a moment, then put again near to exactly find the point. If the leakage is large, set the sensitivity on the “Low” level will help to easily find the exactly source of loss.
- Set again the sensitivity on “High” level before serching other possible leaks.
- When the reaserch of losses is finished, turn off the instrument and put it in a clean place, protecting the sensor from possible damages.

Replacing the new sensor

The sensor has a limited period of use. In normal conditions, the sensor can work more than a year. Expose the sensor to an high density of refrigerant (>30000ppm) will cyclically reduce his operative life. It’s important ensure that the surface of the sensor does not show any water drops, vapours, oil, dirt greasy or other forms of contaminations. È importante assicurarsi che la superficie del sensore non presenti goccioline d’acqua, vapori, oli, grasso sporco o altre forme di contaminazione. Moreover, to ensure the good operativity of the unit, the sensor must be substituted periodically.

(1) Remove the conical cap from the top of the probe.
(2) Remove the old sensor and insert the new one in the plug
(3) Replace the cap on the plug



Cleaning

The plastic case of the instrument can be washed with normal household detergents or with isotropic alcohol. Keep attention so that the products used do not enter in the instrument. Diesel and other solvents can damage the plastic.

WARNING

- Use only in a well-ventilated places.
- The tip of the probe must always be kept away from impurities and dirty. When this part is particularly dirt, it will be necessary clean it with a cloth or with compressed air. Do not use detergents or solvents.
- When the leak detector find a possible leak, carry out a check blowing compressed air on the interested area and proceed again with another check. In case of big losses, it is suggested to fill the interested area with compressed air to find the exactly point of the leak.
- The sensor has a limited period of operativity. In normal conditions, the sensor can work for more than a year. Espose the sensor to high density of gas will cyclically reduce its operativity. It is important ensure that the surface of the sensor does not show water drops, vapours, oils, dirty grease or other shapes of contamination. Moreover, to ensure the correct operativity of the unit, the sensor must periodically be substituted.