



LINSTRUMENT

LT-100-PRO2

Leak detector for refrigerants
and hydrogen nitrogen



1. Flexible probe
2. Sensore
3. Display
4. 3-color battery icon
5. Buzzer icon
6. Auto/manual mode icon
7. 3-color sensitivity icon
8. RESET button
9. MUTE button
10. ON/OFF button
11. SENS button (sensitivity)
12. 3x AA battery compartment

Quick start guide

PARAMETERS

Sensor Type	Heated diode semiconductor
Max. Sensitivity	3 g/year
Response Time	< 3s
Warm-up Time	30s
Operating Temperature	0-50°C
Humidity	< 80% RH

Detectable Refrigerants	CFC, HCFC, HFC, HC, HFO and hydrogen nitrogen (N2/H2)
Sensor Lifetime	> 1 year
Reset Function	Auto / Manual
Probe Length	42 cm
Battery Life	7 Hours
Weight	340g

FUNCTIONS

Battery Level Indicator

Battery icon	Battery level
GREEN	High
ORANGE	Medium
RED	Low

Sensitivity Level Indicator

Sensitivity icon	Sensitivity level
RED	High
ORANGE	Medium
GREEN	Low

Note: When the battery level is low, the device will automatically switch off after 10 minutes and the batteries must be replaced.

Alarm and MUTE function

The detector is equipped with visual and audible alarms. In case of a leak, the display will indicate a level from 1 to 7. The larger the leak, the higher the number and the faster the alarm frequency. The alarm can be muted at any time by pressing the MUTE button.

Automatic / Manual Mode

LT-100-PRO2 features an automatic mode that eliminates the effects of ambient concentration on leak detection. By default, the device operates in automatic mode. In this mode, the detector recalibrates every 4 seconds according to the ambient gas concentration. Therefore, it only detects concentrations higher than the ambient level, typically near the leak source.

It is possible to switch to manual mode by pressing the RESET button for 3 seconds. In manual mode, the user must recalibrate the device to the ambient concentration whenever desired by pressing RESET. The display then shows "8" to indicate that calibration has been completed.

In both automatic and manual modes, sensitivity can always be adjusted across 3 levels by pressing the SENS button.

Note: If the ambient gas concentration is high, recalibrating the device (RESET) will decrease its sensitivity. Conversely, if the ambient gas concentration is low, pressing RESET will increase the device sensitivity.

Auto-off

The detector will automatically shut down after 30 minutes without any operation.

Diagnostic function

The device includes a diagnostic function to identify potential faults.

Alarm code	Description
1E	Sensor power supply fault
2E	Missing or defective sensor
3E	Fan fault

OPERATIONS

- Press ON/OFF to start the LT-100-PRO2. The device powers on and begins the sensor warm-up process. A dash in the center of the screen flashes (for approximately 30 seconds).
- Once warm-up is complete, the display shows “0” indicating the device is ready. An audible signal begins and emits one beep per second.
- By default, the device operates in automatic mode indicated by the “@” icon. It is possible to switch to manual mode by pressing the RESET button for 3 seconds. The device must then be calibrated by pressing RESET once again. The display shows “8” to confirm calibration.
- At startup, sensitivity is set to the highest level indicated by a red “S”.
- If the alarm is triggered and the display shows a concentration level from 1 to 7, this indicates gas is present in the area. After 4 seconds, the detector will automatically recalibrate and the display will return to “0”.
- Continue inspecting the system by checking all areas likely to present a leak. If the alarm triggers, move the probe away from the suspected area for 10 seconds and then return to inspect the area several times to confirm the presence of a leak. You may also reduce sensor sensitivity by pressing SENS to decrease alarm intensity and prevent sensor saturation.
- Once the work is completed, press and hold ON/OFF to turn off the device.

ADVICE AND SAFETY PRECAUTIONS

- During leak detection operations, system pressure must be higher than 4 bar and the working area must be protected from wind and drafts. Wind may rapidly dilute the gas in the atmosphere or move the gas cloud away from the leak source.
- If a gas cylinder is used near the inspection area, it is strongly recommended to ventilate the area thoroughly before starting detection.
- In general, it is always recommended to start the leak detector outdoors or in an environment free from any gas traces. This makes it easier to detect the presence of gas in the inspection area and allows the device to recalibrate automatically (automatic mode) to ambient concentration.
- Do not expose the sensor to high concentrations >30,000 ppm as this may permanently damage the sensor. Do not blow on the sensor (this is useless) and do not deprive the sensor of oxygen, which is required for normal operation.
- The probe tip must be moved slowly at a distance of 3-5 mm from the inspection area.
- The LT-100-PRO2 sensor detects a wide range of gases. However, it also reacts to certain chemicals and solvents. Ensure that such products are not present in the immediate environment of the sensor, as they may trigger false alarms.
- LT-100-PRO2 detects hydrogen contained in hydrogen nitrogen. Therefore, it is recommended to ventilate the area thoroughly after a hydrogen nitrogen leak test to avoid saturating the air with this mixture and making detection difficult.

MAINTENANCE

- Sensor lifespan is approximately 1 year depending on frequency of use and exposure to high gas concentrations.
- To replace the sensor, unscrew the probe head and disconnect the old sensor. The replacement sensor is available under reference LT-SENSOR-32/H2 (ref. 2008109).
- To replace the batteries, simply remove the rear cover and insert 3 new industrial-grade AA batteries.

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8 chemin des Tards-Venus

69530 BRIGNAIS

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