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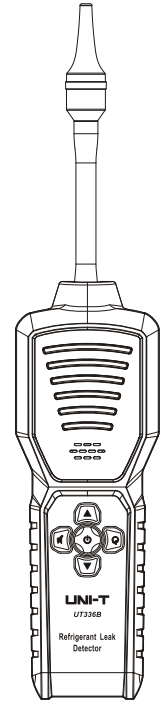

UT336B

冷媒检漏仪使用手册

Refrigerant Leak Detector User Manual

P/N:110401113585X

序言

尊敬的用户：

您好！感谢您选购全新的冷媒检漏仪，为了正确使用本产品，请您在使用前仔细阅读本说明书全文，特别是有关“安全须知”的部分。

若您已经阅读完本说明书全文，建议您将此说明书进行妥善保管，最好与冷媒检漏仪一同放置或放在您随时可以查阅的地方，以便在将来使用的过程中进行查阅。

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一、简介

UT336B是一款电子冷媒检漏仪，采用高灵敏度的半导体传感器以及精密电路设计，具有快速响应、检漏精准、可靠性高，使用方便等特点，创新性的探头灯设计，同步跟随主机的报警灯颜色变化，报警状态一目了然。广泛应用于空调维修、汽车维修、制冷设备检测、冰箱维修等使用到冷媒雪种的制冷行业。

二、特点

★ 高灵敏度，可以检测微小泄漏；
★ 6级灵敏度调节，适合不同泄漏浓度的场景使用；
★ 6级声光报警，黄橙红三色的LED直观警示；
★ 创新性的探头报警灯设计，报警状态一目了然；
★ 开机自动复位，将当前环境条件判为零点；
★ LED电量提示功能；
★ 操作简单，方便易用；

三、配置

主机---------- 1台
说明书---------- 1份
AA 碱性电池------- 4 节
保修证---------- 1张

如发现有部件缺少或损坏，请与您的经销商进行联系

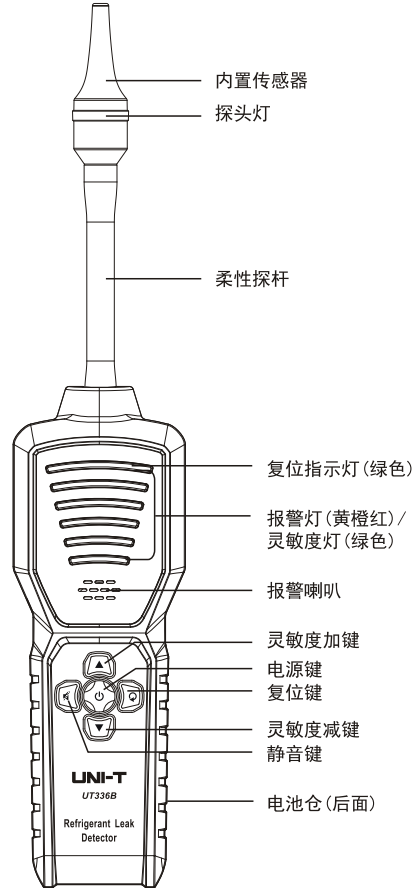
四、安全须知

在使用本仪表之前，请仔细阅读以下“安全须知”并遵循本操作说明

- 使用前请检查仪表和附件，谨防任何损坏或不正常的现象。如发现本仪表壳体已明显损坏，或者您认为本仪表已无法正常工作，请勿再使用本仪表；
- 请勿随意打开仪表以及更改内部接线，以免损坏仪表；
- 请不要在高温、高湿、易燃、易爆、强电磁场环境中存放或者使用本仪表；
- 维护保养请使用软布及中性清洁剂清洁仪表外壳，切勿使用研磨剂及溶剂，以防外壳被腐蚀，损坏仪表；
- 请将本仪表存放于干燥清洁的地方；

五、产品部件和说明

5.1 部件说明

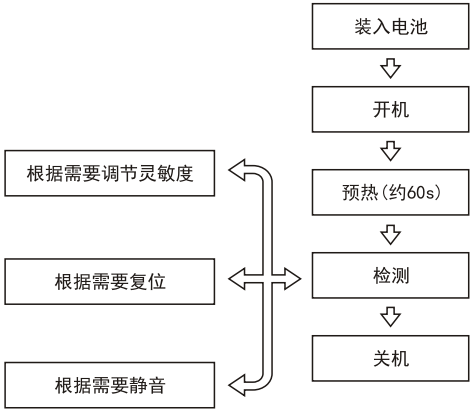


5.2 按键说明

按键	短按	长按	指示灯
灵敏度加键	调高检测灵敏度	/	绿灯逐级亮起
电源键	/	开机 关机	电量充足： 背光亮绿灯 电量不足： 背光亮红灯 电量即将耗尽： 红灯闪烁
复位键	将当前环境气体浓度设为零	/	绿灯亮起2s后熄灭
灵敏度减键	调低检测灵敏度	/	绿灯逐级熄灭
静音键	打开/关闭喇叭提示音	/	/

六、操作说明

6.1 基本检测流程

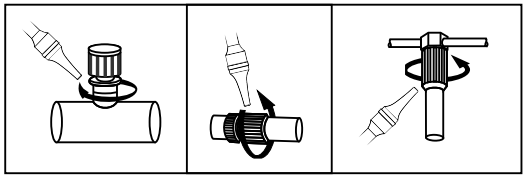


6.2 操作方法

1. 开机自检：长按电源键，6个绿灯逐级亮起后熄灭（同时喇叭滴一声），接着黄/橙/红灯循环逐级亮起，探头灯跟随变化颜色，约60s后熄灭并按当前开机气体环境复位，检漏仪发出均匀的“滴滴”声，探头灯长亮绿色即完成开机自检，可正常检测；
2. 检测：手持检漏仪在制冷系统的管道和接口处移动探头寻找漏源，当检测到制冷剂，会有频率加快的“滴滴”报警声响起，并伴随着泄漏浓度逐级亮起的黄/橙/红报警灯；
3. 调节灵敏度：检漏仪出厂默认灵敏度为3级，在检测过程中，可根据需要短按灵敏度加键或减键调节检测灵敏度大小，6级绿灯也会随着调节指示对应的灵敏度级别；
4. 复位：短按复位键，会将当前的环境气体浓度设为零点，检测到高于此处的泄漏浓度会发出报警，复位时对应的绿色指示灯会亮起2s后熄灭。如果在检测到漏源前就发出报警，请短按复位键置零，直到无报警提示（声音/报警灯）可继续检测；
5. 静音：根据需要短按静音键开启/关闭喇叭声音；
6. 关机：长按电源键，6级绿灯全亮后逐级熄灭完成关机。

7.2 检测方法

1. 目检制冷系统，检查管道上的油污、灰尘点、连接器、节点阀门、维修端口、铜焊点或是线路管道区有可能发生泄露的地方；
2. 移动探头仔细检查每个可疑区域，沿着一条连续的管道检查，这样就不会遗漏潜在的泄漏区域，如果检测到泄漏点，标记后应该继续检测系统的其它部分；
3. 移动探头时应一定的速度在检测点缓慢移动，移动的速度不超过1cm/s，且探头距离线路应保持1-3mm，如下图；



4、① 检漏仪报警时，表示接近泄漏源，重复检测周围区域，是否会重复报警；
② 确定漏源后，将探头慢慢从非报警区的不同方向往报警泄露区移动以定位泄漏源位置；
③ 将检漏仪从泄漏区移开，通过复位检漏仪以及逐渐降低灵敏度，重复多次来定位具体泄漏点；
④ 检测到具体泄漏点后进行标记并继续检测整个制冷系统的其它部分。

备注：
a) 其他污物可能会影响检漏仪的检测，可用干布将泄漏区域擦拭干净以及用干燥的空气吹下泄漏区域再行检测，这样避免了其它因素的影响，再重复检测寻找漏源
b) 对明显的泄漏应当进行如下的检测：
首先用压缩空气对疑似的泄漏区吹气清洁，并进行重复检测，这样有助于定位泄漏位置。其次，将探头移动到新鲜干净的空气中复位，然后将探头靠近泄漏源，并围绕泄漏源缓慢移动来定位泄漏点。

7.3 检测注意事项

a) 大部分漏源环境存在油污灰尘等，应避免探头接触到污物，并防止探头接触任何潮湿或其他溶剂；
b) 当检测环境存在卤素污染时，确保在不离开受污染的环境中时，可通过复位键忽略环境泄漏量；
c) 检漏仪工作时，当检测的区域存在风流动时，泄露的气体会被风稀释或吹走，在检测前应使用遮风装置隔离或屏蔽泄漏区域；
d) 在检测漏源时，需检查制冷系统本身是否有正常的压力，或是局部至少是50PSI，如果压力过低，就有可能检测不到泄露；

七、技术指标

传感器	半导体传感器
极限灵敏度	3g/a
预热时间	60s
灵敏度调节	6级（绿灯LED指示）
报警灯	6级（黄橙红LED指示）
探头灯	未检测到报警时绿灯常亮，检测到报警时跟随主机报警灯颜色变化
电量提示	支持
电池	AA碱性电池*4
电池寿命	约10h（碱性电池）
自动关机	无操作15分钟后自动关机
探头寿命	约2年（按每天使用2.5h计算）
工作环境	0℃-50℃，＜80%RH（非冷凝）
尺寸	190x65x43mm(主机尺寸，不含探杆)
重量	约282g(不含电池)

EMC标准：EN IEC 61326-1:2021

八、适用范围

检漏仪可检测制冷系统和容器中的三大类卤化（包括氯和氟）冷媒：
CFCs R11, R12, R113, R114, R115, R500, R503……
HCFCs R22, R123, R124, R141, R142, R502. . ……
HFCs R134a, R404a, R125, R410A……

九、故障排除

故障	可能原因	可能的解决方法
无法开机	电池已耗尽	更换新电池
开机时黄/橙/红灯全亮且亮灭闪烁20s后自动关机	传感器开路/未接通等异常	拧开传感器罩，检查内置传感器是否安装正常
对已知的漏源无反应	1. 灵敏度低 2. 传感器寿命到期	1. 调高灵敏度或者将探头移动到清洁空气中复位后再检测 2. 购买并更换新的传感器
无漏源却错误报警	大气环境的温度湿度发生改变	按下复位键回到0值

注意：由于传感器特性，长时间（如7天）不使用后，可能出现无法检测到极限3g/a的情况，开机后请等待约5分钟，待传感器完全预热后再检测。

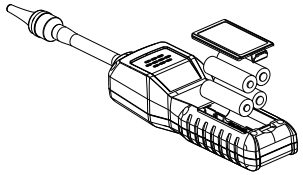
十、保养维护

1. 一般维护

1.1 请勿拧开传感器探头盖，以免影响探测灵敏度和仪表性能；
1.2 注意探头的清洁，防止灰尘、湿气、油脂进入探头内；
1.3 可以使用棉布或干燥的气体对已污浊的探头外部进行清洁。
注意：不能使用像汽油、凡士林、矿物油之类的强溶解剂，以免影响检漏仪的灵敏度；
1.4 电源键的红灯亮起或闪烁时，请及时更换电池，以保证检漏仪的正常使用和测试结果；
1.5 将检漏仪存放于干燥清洁的地方；
1.6 长时间不使用时请取下电池；
1.7 本仪表的维修与服务必须由有资格的专业维修人员或指定的维修部门完成；

2. 电池安装和更换

2.1 本仪表的电源为4节1.5V AA电池，请参考下图安装电池；
2.2 将本产品面板朝下，打开电池盖后按照电池仓内的极性指示安装新电池；
2.3 安装新电池后，扣上电池盖；
2.4 请使用同一型号的电池，不要安装不适当的电池；



* 本说明书内容若有变更，恕不另行通知
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PREFACE

Thank you for purchasing the new UT336B refrigerant leak detector. In order to use this product safely and correctly, please read this guide thoroughly, especially the Safety Instructions part.

After reading this guide, it is recommended to keep the guide at an easily accessible place, preferably close to the device, for future reference.

LIMITED WARRANTY AND LIABILITY

UNI-T guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination and improper handling. The dealer shall not be entitled to give any other warranty on behalf of UNI-T. If you need warranty service within the warranty period, please contact your seller directly.

This warranty is the only compensation you can obtain. UNI-T will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by any reason or speculation. As some areas or countries do not allow limitations on implied warranties and incidental or subsequent damage, the above limitation of liability and stipulation may not apply to you.

1. Introduction

UT336B Refrigerant Leak Detector is designed with high-sensitivity semiconductor sensor and precision circuit, features quick response, high-accuracy detection, high reliability, easy-to-use, etc. The probe light is made with creative design and synchronously follows the color change of alarm lights in device, thus the alarm status is clearly visible. It is widely used in the refrigeration industries of air-conditioner maintenance, vehicle repair, refrigeration equipment inspection, refrigerator maintenance and others need to use refrigerants.

2. Features

- With high sensitivity, and minor leak can be detected.
- Sensitivity adjustment in six levels, suitable for multiple scenarios with different leak concentration.
- Audible and visual alarm in six levels, with intuitional indication of LED in yellow, orange and red.
- Creative probe light design, clear and visible alarm.
- Auto-reset when enable the device, and the current condition is set to zero.
- Function of LED power indication.
- Simple & Easy-to-use.

3. Configurations

Refrigerant Leak Detector ----------1

User manual ---------- 1

AA Alkaline Battery ---------- 4

Please contact agency if any components are missing or damaged.

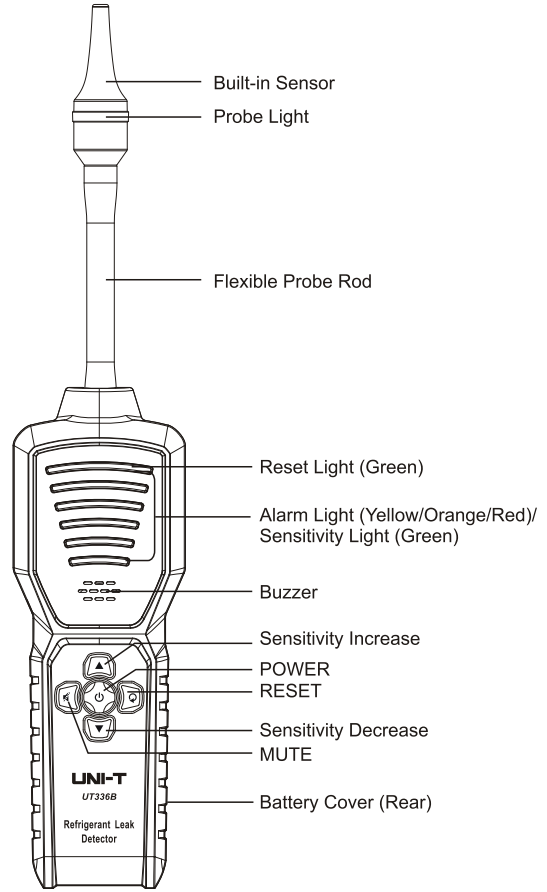
4. Safety

Please read the Safety carefully and follow these steps.

- Check the meter and accessories for any damage or abnormal phenomenon before using. Do not use the meter if the case is apparently damaged, or it is not working properly in any way.
- Do not open the meter randomly and change the internal wirings to avoid damage.
- Do not store or use the meter in high temperature, high humidity, flammable, explosive or strong electromagnetic environment.
- Use soft cloth and neutral detergent to clean the case. Do not use abrasives or solvent.
- Store the meter in a dry and clean place.

5. Components & Buttons

1) Components

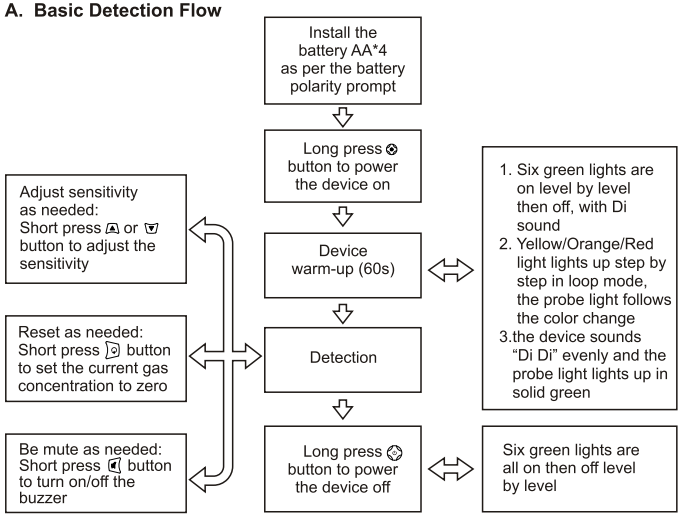


2) Buttons

Buttons	Short Press	Long Press	Lights
Sensitivity Increase	The detection sensitivity is increased	/	Green light is on level by level
POWER	/	Power on/off	Full battery: Backlight in Green Low battery: Backlight in Red Depleted battery: Flashing in Red
RESET	Set the current gas concentration to zero	/	Green light is off after 2s on
Sensitivity Decrease	The detection sensitivity is decreased	/	Green light is off level by level
MUTE	Buzzer ON/OFF	/	/

6. Operations

A. Basic Detection Flow

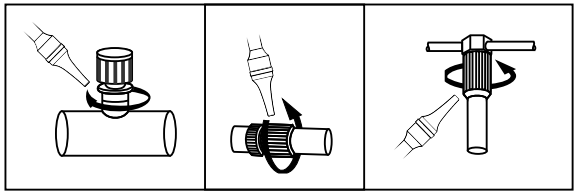


Notes:

a. The default sensitivity of device is level 3.
b. Short press the RESET button to set zero if it is alarming before the leak location is detected.
c. When the refrigerant is detected, there will be with Di sound increasing in frequency, and alarm lights in Yellow/Orange/Red are on level by level as per the leak concentration.

B. Detection Methods

1. Visually inspect the refrigerating system to check if any oil and dust on the pipeline, any leak on the valve, copper welding spot or pipeline.
2. Move the probe to carefully check every possible area, along the pipeline to check and avoid any potential leak missed. Mark it down and go on the detection when any leak area is detected.
3. Move the probe to carefully check every possible area, and the speed of moving probe is ≤ 1cm/s, and the probe distance should be kept in 1-3mm. See followings:



4. ① Alarming of device identifies the approaching leak location, repeatedly detect the surroundings to check if any repeat alarm occurred.
   ② When the leak location is ensured, move the probe from different directions of non-alarm area to the alarm area to locate the leak source.
   ③ Move the device away from the leak area, then reset the device and gradually decrease the sensitivity to repeatedly locate the concrete leak source.
   ④ Mark it down then go on the detection for other parts of the whole refrigerating system when the leak location is concreted.

Notes:

a. The detection will also be effected by other pollutants, using dry cloth to cleanly wipe and dry air to blow the leak area before the redetection to avoid any inaccuracy, and then repeatedly detect to find the leak location.

b. Oil and dust is existed in most of leak conditions, we should prevent the probe from contacting any pollutants, any moisture or other solvents

c. Following is for the obvious leak detection:
Firstly, use compressed air to blow and clean the potential leak area, and repeatedly detect to locate the correct leak location. Secondly, move the probe to the environment with fresh and clean air to reset, then put the probe to the surrounding of leak location, moving probe slowly to locate the leak source.

d. Three main types of halogenated (Chlorine & Fluorine included) refrigerants of the refrigerating system and containers can be detected by the device:
CFCs R11, R12, R13, R14, R15, R500, R502……
HCFCs R22, R123, R141,R142.....
HFCs R134a, R125, R32, R410A……

7. Technical Specification

Sensor	Semiconductor sensor
Maximum Sensitivity	3g/a
Warm-Up Time	60s
Sensitivity Adjustment	6 Levels (Green light)
Alarm Light	6 Levels (Yellow/Orange/Red light)
Probe Light	Light in solid green when no alarm is detected Follow the color change of alarm lights when detects alarm
Battery Status	Supported
Battery	AA Alkaline Battery *4
Battery Life	~10h (Alkaline Battery)
Auto Power Off	Auto shutoff in 15 minutes if without any actions
Sensor Life	~2yr (Calculate as per 2.5h per day)
Operating temperature and humidity	0℃-50℃, < 80%RH (non-condensing)
Size	190x65x43mm(Not probe rod included)
Weight	282g(Not battery included)

EMC Standard: EN IEC 61326-1:2021

8. Troubleshooting

Troubles	Reasons	Solutions
Fail to enable the device	Depleted battery	Replace the new battery
No response to the known leak source	1.Low sensitivity 2.Expiration of sensor life	1.Turn up sensitivity 2.Purchase and change a new sensor
False alarm but no leak source	Humidity changed in the atmospheric condition	Press RESET button to reset to zero
When power on the device, Yellow, Orange and Red lights are all on, then all off, followed with flashing for 20s to power off	Sensor's open circuit/Sensor is not connected	Twist off the sensor cover to check if the built-in sensor is installed normally.

Note:

If the sensor is not used for a long time (7 days or more), may fail to detect the extreme condition of 3g/a due to its characteristic. Thus, when power on the device, please wait for 5min, and detect after sensor's complete warm-up.

9. Maintenance

9.1 General Maintenance

a) Pay attention to the probe cleaning to avoid any dust, moisture, oil into it.

b) Use cotton cloth or dry gas to clean the outside of soiled probe.

c) Replace the battery in time when the red light of POWER button is on or flashing, ensuring the proper use and test results of the device.

d) Store the device and probe in the dry and clean place.

e) Remove battery when the device is not used for a long time.

f) Maintenance and service must be implemented by qualified professionals or specified departments.

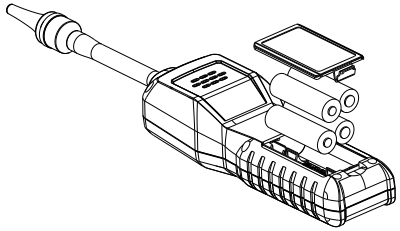
9.2 Battery Installation & Replacement

a) Battery of 1.5 V *4 (AA), and see the followings for battery installation.

b) Facing the panel of device down, open the battery cover to install new batteries as per the battery polarity.

c) Close the battery cover.

d) Please use the same type of battery.



* Please visit https://www.uni-trend.com for details.

* The contents of this manual are subject to change without prior notice.

* Due to different batches, the materials and details of actual products may be slightly different from the graphic information, please refer to the actual product received. Experimental data provided in the page is from internal laboratory of UNI-T, but it should not be a reference for customer to place orders. Any questions, please contact the customer service, thanks!

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