ENGLISH

ET160

INSTRUCTION MANUAL

Refrigerant Gas Leak Detector

- DETECTS CFC'S, HFC'S, HCFC'S, AND BLENDS
- AUTO-ZEROS AT START-UP
- 18 INCH GOOSENECK PROBE FOR EASY ACCESS

2 m

HOLD APO

KLEIN TOOLS

Intertek
5001743

GENERAL SPECIFICATIONS

Klein Tools' ET160 is an easy-to-use tester that provides audible and visual alarms in the presence of CFC's, HFC's, HCFC's and blends. Detect as low as 100 ppm of common refrigerant gases.

- **Audible Alert:** 85 db ticking, modulation proportional to gas concentration
- **Visual Alert:** 5× blue LED, illumination proportional to gas concentration
- **Range*:** 100 to 3,000 ppm
  LOW sensitivity* (white light): 200 to 3,000 ppm
  HIGH sensitivity* (yellow light): 100 to 1,000 ppm
- **Initial calibration:** 50 seconds to zero calibration
- **Response time (after calibration):** 3 seconds
- **Sensor:** Heated diode
- **Sensor Life expectancy:** 5 years
- **Probe:** 18" (457 mm) gooseneck
- **Batteries:** 4× AAA alkaline
- **Operating Altitude:** 6562 ft. (2000 m)
- **Relative Humidity:** <80% non-condensing
- **Operating Temp:** 32° to 122°F (0° to 50°C)
- **Storage Temp:** -4° to 122°F (-20° to 50°C)
- **Dimensions:** 8.11" × 2.72" × 1.75" (206 × 69 × 45 mm)
- **Weight:** 15 oz. (425 g) including batteries
- **Tripod Mount:** 1/4-20 UNC
- **Drop Protection:** 6.6 ft. (2m)
- **Standards:** EN14624:2020

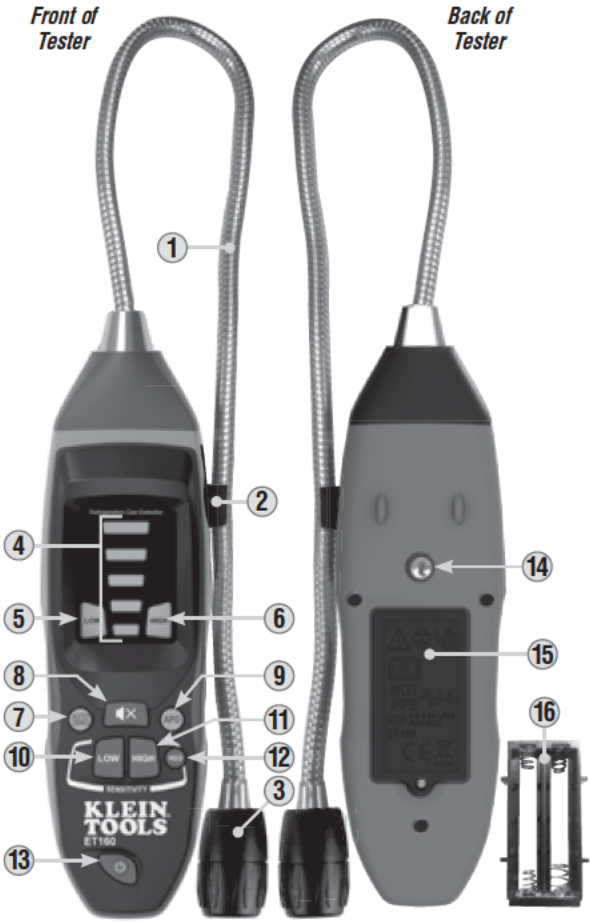
**Based on R-134A. Other gases or mixtures will have different values. Specifications subject to change.*

⚠ WARNINGS

To ensure safe operation and service of the tester, follow these instructions. Failure to observe these warnings can result in severe injury or death. Know the characteristics of the gas you are working with and use proper precautions to avoid hazardous conditions.

- Read, understand, and follow all instructions to ensure safe operation.
- Always turn on the gas detector in an area known to be free of gases.
- Initial calibration should be performed in an area known to be free of refrigerant gases. Calibration in an area containing refrigerant gas will result in incorrect calibration and lower than actual readings. This could result in refrigerant gases not being detected.
- The refrigerant gas leak detector is **NOT** intended as a personal protection device (PPE).
- The refrigerant gas leak detector is **NOT** insulated. Avoid contact with areas where energized conductive elements may be present. Shut off power to the area before starting measurements.
- Do NOT probe moving machinery that could catch any part of the meter and cause harm to the operator and the meter.
- Always wear approved eye protection.

FEATURE DETAILS



1. Gooseneck
2. Gooseneck Clip
3. Sensor Head
4. Indicator Lights
5. LOW Sensitivity Light
6. HIGH Sensitivity Light
7. Auto-Zero Button
8. Mute Button
9. Auto Power-Off (APO) Button
10. LOW Sensitivity Mode Button
11. HIGH Sensitivity Mode Button
12. HOLD Button
13. Power Button
14. 1/4-20 UNC Tripod Mount
15. Battery Door
16. Battery Cartridge (inside battery compartment)

NOTE: There are no user-serviceable parts inside tester.

SYMBOLS ON METER


Warning


Wear approved eye protection


Risk of Electric Shock


Read instructions


Do NOT probe moving machinery

Not intended for use as Personal Protective Equipment (PPE)

FUNCTION BUTTONS

AUTO-ZERO BUTTON (7)
Press to set zero point calibration in a known clean environment.

MUTE BUTTON (8)
Press to mute the audible alarm. Visual indicators will continue to function as normal.

AUTO POWER-OFF (APO) BUTTON (9)
Press to enable or disable the Auto Power-Off feature. When enabled, the button will illuminate blue, and the tester will automatically power off after 10 minutes of inactivity.

LOW BUTTON (10)
Press to enter Low Sensitivity mode (200 to 3,000 ppm). White light will blink.

HIGH BUTTON (11)
Press to enter High Sensitivity mode (100 to 1,000 ppm). Yellow light will blink.

HOLD BUTTON (12)
Press to lock the current measurement on the display. Press again to return to taking active measurements.

POWER BUTTON (13)
Press and hold for 3 seconds to turn tester on or off.

OPERATING INSTRUCTIONS

1. In an area where gas is known to be not present, press the power button ⑬ for 3 seconds. The tester will beep and start a 50-second zero-calibration process while the first indicator light (blue) ④ blinks. Once complete, all indicator lights ④ ⑥ ⑥ will blink for one second, then the HIGH indicator light ⑥ will illuminate and continue to flash, indicating it is ready to take a measurement.

2. Start measuring in the High sensitivity mode (100 to 1,000 ppm). To view higher values (200 to 3,000 ppm), press the LOW button ⑩ to enter Low sensitivity mode.

3. Point the sensor ③ towards the area to test. If all blue indicator lights are illuminated in High sensitivity mode, switch to Low sensitivity mode by pressing the LOW button ⑩.

   NOTE: *Changing from High to Low sensitivity mode may cause some of the indicator lights to turn off.*

4. As you get closer to the source of a leak, the concentration levels detected will increase, as indicated by increasing audible/visual alarms. Move the sensor head in the direction of increasing audible/visual alerts to the source of the leak.

⚠***WARNING: High concentrations of refrigerant gases can cause asphyxia and other hazards that could cause serious personal injury or death. Know the characteristics of the gas you are working with and use proper precautions to avoid hazardous conditions.***

MAINTENANCE

BATTERY REPLACEMENT

When the LOW alert ⑤ and HIGH alert ⑥ lights are illuminated at the same time, the batteries must be replaced.

1. Loosen screw and remove battery door ⑮.
2. Remove battery cartridge ⑯ from battery compartment. Note orientation.
3. Remove and recycle 4 spent AAA batteries.
4. Install 4 new AAA batteries into cartridge, noting proper polarity.
5. Place battery cartridge back into the battery compartment, aligning the leads (fits only one way).
6. Replace battery door and tighten screw securely.

SENSOR SERVICING

When ALL lights on the tester ④, ⑤, ⑥, ⑦, ⑨ are illuminated, the sensor ③ has failed and the unit must be serviced. Contact Klein Tools at **1-800-553-4676** or **customerservice@kleintools.com** for further details. ***There are no user-serviceable parts inside tester.***

CLEANING

Be sure tester is turned off and wipe with a clean, dry lint-free cloth. ***Do not use abrasive cleaners or solvents.***

STORAGE

Remove the batteries when the tester is not in use for a prolonged period of time. Do not expose to high temperatures or humidity. After a period of storage in extreme conditions exceeding the limits mentioned in the General Specifications section, allow the tester to return to normal operating conditions before using.

WARRANTY

www.kleintools.com/warranty

DISPOSAL / RECYCLE

Do not place equipment and its accessories in the trash. Items must be properly disposed of in accordance with local regulations. Please see **www.epa.gov** or **www.erecycle.org** for additional information.