



VIVAX

METROTECH

HL5000-H₂

Tracer Gas Sniffer





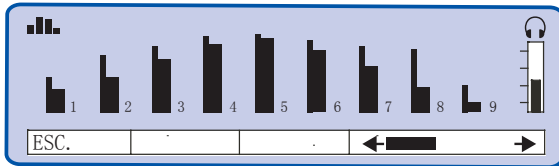
How Does Tracer Gas/Test Gas Measurement Work?

The use of tracer gas for locating leaks in water pipes with electronic gas detection equipment has been tried and tested for several years.

To find a leak, the pipe to be investigated is filled with tracer gas (welding gas - 5 % hydrogen and 95% nitrogen) through a hydrant or house connection. Hydrogen escapes from the leak and can be located at the surface. Based on its low specific density and molecular structure, hydrogen gas has the particular characteristic of quickly penetrating all materials (concrete, tiles, blacktop, etc.) where it can then be detected using the PAM-H₂.

Due to its precise and quick reaction, the HL5000-H₂ is ideal to locate even the smallest leaks accurately.

The Histogram Measurement - watching & listening to the gas penetration



Operating the system in gas mode is very similar to operating in standard 'noise location mode' as the functions of both modes are almost the same. The measured gas concentration is displayed graphically (as a bar graph) and numerically (in ppm). Simultaneously the measured gas concentration is indicated by a sound signal through the headphones (deeper sound → lower gas level; higher sound → high gas level).

Adjusting the Sensitivity

Using the two soft keys (bottom right), the sensitivity of the system can be set. One of the following ranges can be selected:

- 0 ... 20ppm
- 0 ... 50ppm
- 0 ... 100ppm
- 0 ... 500ppm
- 0 ... 1000ppm
- 0 ... 5000ppm
- 0 ... 10000ppm

Current Value Graphically

Current Value Numerically

in ppm 20

The currently selected sensitivity range is displayed above the soft keys.

Performing a Zero Balance

It is recommended to perform a zero balance prior to every measurement. In order to do so, hold the gas sensor up in the air, far from the ground, and press the soft key under the symbol briefly. Wait for the numerical gas value to even out at approx. zero, then press the soft key once again in order to finish the zero balance and return to the gas mode menu.

Reduce water loss faster...

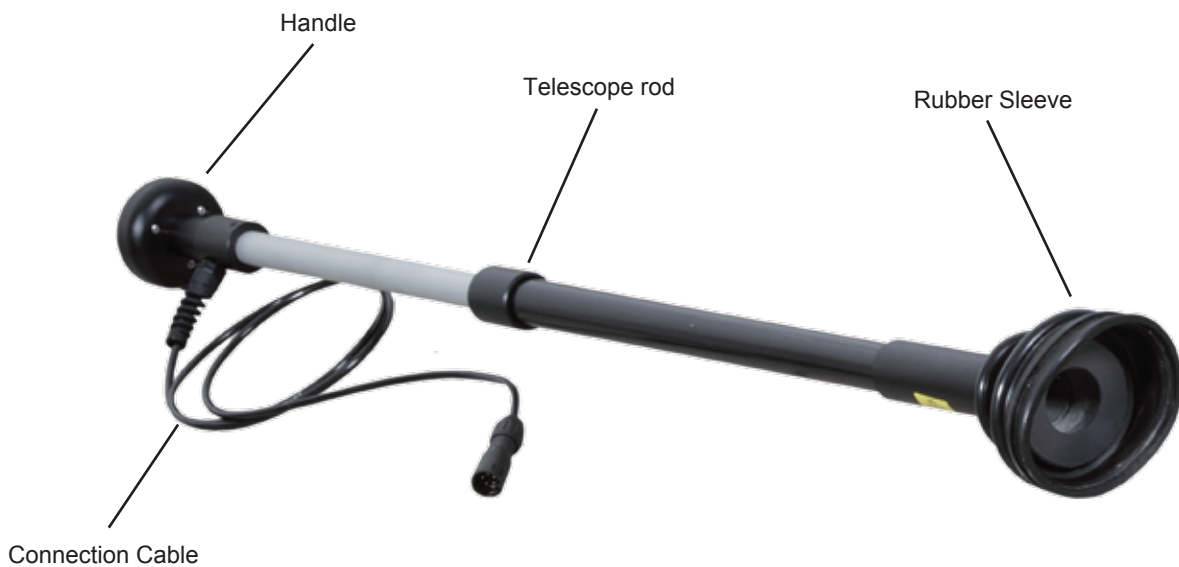


Performing a Measurement

The procedure in locating tracer gas doesn't differ from the procedure in locating leak noises: put the gas sensor on a measuring point on the ground – read measured value from the display or listen to the sound on the earphones – press the mute button – go to the next measuring point – press the mute button again – read measured value – and so on ...

Histogram Function

By the help of the histogram function the last 9 recorded measurements can be displayed in the form of bar graphs. The function is available in gas mode, too. The handling is the same as in noise mode. The only difference is that the dual segment analysis (DSA) is not needed because every bar graph represents exactly one measured gas level.



Due to the telescopic function, the sensor rod can be adapted to the user's individual height. The sensor rod is connected to the microphone connector on the right hand side of the device. The gas sensor is located at the bottom of the rod and covered by a rubber foot. Do not put the sensor under water.



Technical Specification

PAM-H₂

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| Analysis Bandwidth | 0 - 10,000ppm |
| Sensitivity | 0.7ppm H ₂ in air |
| Response Time | < 2sec |
| Warm-up Time | 6sec |
| Operating Life of the Replaceable Gas Sensor | 2 to 5 years (depending on intensity of use) |

HL5000 Main Unit

| | |
|------------------------------------|---|
| Analysis Bandwidth | 0Hz - 4000Hz |
| Filter Cut-Off Frequencies | 0 - 70Hz, 106Hz, 160Hz, 240Hz, 360Hz, 540Hz, 800Hz, 1200Hz, 1800 - 4000Hz |
| Histogram Recordings | 9 dual displays |
| Storage of Noise Levels | 3 - 10 - 30min |
| Display 130 x 36mm | LCD display |
| LCD Backlight | Built-in |
| Power Supply | 10 x AA batteries, (1.5Volt) |
| Operating Time | > 35hours (battery) |
| Storage | 9 measurements |
| Mute Button | Built-in |
| Operating Temperature | 14°F to 122°F (-10°C to 50°C) |
| Storage Temperature | 14°F to 158°F (-10°C to 70°C) |
| Protection Class when in Operation | IP54 |
| Dimensions | 8.5in (L) x 3.7in (W) x 4.3in (H) (215mm x 95mm x 110mm) |
| Weight | HLE 5000: 2.6lbs (1.2kg) (with batteries) |

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