The complete system for leak detection using hydrogen gas
Yes, it leaks … but where?

- Telephone cables
- Gas-filled power cables
- Petrol stations
- Gas pipelines
9012 XRS – Xtra Rapid Search
– faster and more accurate
The new Sensistor 9012 XRS Leak Detector constitutes a complete field-based system based on proven hydrogen-gas detection technology. It offers the most sensitive and flexible leak detection system on the market in a heavy-duty, smart and ergonomically designed package. The leak detector instrument is very easy to use, and its rugged construction makes it close to maintenance-free.

The 9012 XRS is completely selective – it only reacts on hydrogen gas, which in very low concentrations is used as tracer gas. Sensistor Technologies has developed its own hydrogen gas sensor, which when combined with advanced computing electronics results in an unsurpassed sensitivity threshold of an impressive 200 ppb (0.2 ppm).

This extreme level of sensitivity is necessary to quickly detect even the smallest leaks. However, to be able to detect major leaks, it is a necessity to be able to decrease sensitivity. This is why the 9012 XRS features a sensitivity adjustor to instantly adapt to any detection condition. The instrument instantaneously responds to the tracer gas, and additionally it has a very short reset time to enable a new measurement to be performed immediately.

With the most efficient leak detector on the market you’ll find leaks faster
Many leaks are so large they can be spotted with the naked eye. Others are so tiny, you’d need a microscope to spot them. Nevertheless, all leaks cause operational interruptions, they harm the environment, cause financial losses and may endanger life. The faster a leak is detected – no matter what the size – the more you stand to gain. So, go ahead and invest in the most efficient leak detector on the market. It’s an investment that will soon pay off.
An instrument for all types of leaks. The 9012 XRS offers the broadest accessory programme on the market. It can be adapted to any leak detection job, no matter how demanding. It is comfortable, quick and easy to use. When equipped with a suitable test probe, the 9012 XRS is the perfect instrument to detect leaks, no matter how small or large.

**Telephone cables.** For a long time, the predecessor to the 9012 XRS has established an industry standard in leak detection in pressurised telephone cables, buried, ducted or aerial. Every day, Sensistor detectors are used by thousands of users all over the world as the most effective means of cable maintenance. Users comprise British Telecom, Verizon, Telia and Deutsche Telekom. With the 9012 XRS, it is possible to improve cable maintenance, thanks to shortened leak detection times, improved ergonomics and better functionality. All accessories are 100% compatible with the previous 8012 Leak Detector as well as the new model 9012 XRS.

**Gas-filled power cables.** The 9012 XRS offers excellent opportunities to verify the intactness of gas-filled power cables and other equipment in the power industry, e.g. hydrogen-cooled generators.

**Petrol stations.** Underground conduits between tanks and pumps are exposed to considerable mechanical stress from traffic. A leak in a pipe could cause serious damage to the environment, not to mention serious financial losses. With the 9012 XRS it is easy to detect leaks in tanks and pump lines.

**Gas pipelines.** Leaks in gas pipelines constitute serious safety hazards. The 9012 XRS is well suited for leak detection on all types of gas pipelines. Thanks to its high sensitivity, even minute leaks can be detected with pinpoint accuracy.

**Heating systems.** With the 9012 XRS it is no longer necessary to break open an entire floor bed to find a leak in a heating conduit. The 9012 XRS is able to locate the leak quickly, and it will minimise the scope of the repair works – as well as the cost. Simple and efficient leak detection opens up the possibilities for insurance companies to save considerable money.

**Water pipes.** The 9012 XRS is the right instrument for leak detection on live or emptied water pipes. Using the 9012 XRS, leaks can be detected no matter what material the pipe is made of. Its high sensitivity makes the 9012 XRS ideal for leak detection, even on live pipes, thus saving time and minimising the inconvenience to connected customers.

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**Leak detection with hydrogen gas – a truly light task**

Hydrogen gas, H₂, the lightest of all gases, consists of the smallest molecules. This is what gives hydrogen gas unprecedented penetration ability, even through materials as dense as concrete. Leak detection with hydrogen gas builds on the principle of a tracer gas, consisting of 5% hydrogen gas and 95% nitrogen gas, being introduced into the system to be leak tested. The tracer gas mix can be ordered from most large gas suppliers, and it is neither inflammable, toxic, nor corrosive. It is completely harmless to the environment. What’s more, it is cheap to purchase, resulting in cost-efficient leak detection.

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**9012 XRS Leak Detector**

- **Quicker detection** – high and adjustable sensitivity
- **Reliable detection** – the most H₂ selective sensor in the world
- **Ergonomic** – easy to carry, with smart details
- **Easy to use** – Press ON to commence detection. Automatic switch-off
- **Quick charging in the car** – 5 minutes of charging is sufficient for 20 minutes of detection
- **Heavy-duty design** – and also waterproof (IP65)
- **The original** – the world’s best leak detector
Accessories – for all situations

**Surface Probe – 8612**
Detects leaks in buried and ducted cables and pipes with no need of drilling into the ground. The Surface Probe features a two-speed vacuum pump, which sucks in tracer gas from the ground, street surface or floor before the gas dissipates.

**Ground Probe – 8212**
The Ground Probe is designed for leak detection in tough environments such as gravel, snow, clay and sand, or in locations where vegetation makes the use of Surface Probe 8612 impossible.

**Wheel Unit – M12**
The M12 is an accessory to the 8612 Surface Probe and facilitates easier leak detection on large surfaces. The Wheel Unit has a soft rubber mat underneath, which when fitted to the 8612 Surface Probe sucks in tracer gas from an expanded surface.

**Aerial Cable Probe – 8312**
This special accessory is used to find leaks in aerial cables. It rolls along the cable and is attached to a 7 m long telescopic fibreglass pole.

**Hand Probe Extension – P12**
The P12 makes it easier to use the hand probe at ground level, or to simply extend its reach. The hand probe is fitted through the extender pipe and attached at its bottom.

**Hand Probe – H21**
The H21 is a standard accessory with the 9012 XRS. The actual sensor is seated at the tip of the probe, which in turn is connected to the leak detector via an electric cable. The detector immediately responds when the probe encounters tracer gas.

**Duct Probe – 8712**
The 8712 Duct Probe is specially designed for leak detection in ducted telephone cables. The sensor is attached at the end of a specially designed 100 m long fibreglass rod, which instantaneously transfers its signals to the leak detector. It can be used in wet and dirty conduits even if they are filled with water or clay.

**Metre counter – L12**
The L12 is an add-on for the 8712 Duct Probe and allows exact measurement of the distance to the leak.

**Duct Fan – F12**
This accessory is used at the duct mouth to prevent the tracer gas from saturating the duct. The Duct Fan ensures a clear, distinct leak signal.
Tracer gas facts

Pure hydrogen gas is never used as tracer gas, since it is highly inflammable. Instead, a gas mixture of 5% hydrogen and 95% nitrogen is used. This mixture is not flammable (refer to ISO 10156), non-toxic, non-corrosive and pro-environmental. Hydrogen and nitrogen both exist in all biological systems. (Some gas suppliers have their own trade name for this gas mixture, e.g. Naton 5 from AGA, Shielding Gas NH5 from Air Liquid and Protec5 from Air Products). Standard mixtures are much cheaper than custom made mixtures and cost around 0.005 Euro / litre.

Moreover, hydrogen gas is approved as a foodstuffs additive under code E949.

9012 XRS Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Value</th>
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<tbody>
<tr>
<td>Sensitivity</td>
<td>0.2 ppm H₂ in air</td>
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<tr>
<td>Response time</td>
<td>&lt;1 sec.</td>
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<tr>
<td>Pre-heating time</td>
<td>&lt;6 sec.</td>
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<tr>
<td>Outputs</td>
<td>- Display with 10-segment LED indicator</td>
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<tr>
<td></td>
<td>- Speaker, 5-1,600 Hz</td>
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<tr>
<td></td>
<td>- Earphone, standard 3.5 mm jack, &gt; 8 ohms</td>
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<tr>
<td>Battery type</td>
<td>Rechargeable lead batteries (gel electrolyte)</td>
</tr>
<tr>
<td>Battery capacity</td>
<td>13 hours at 20°C, 6 hours at -20°C</td>
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<tr>
<td>Charger</td>
<td>AC charger (100-240 VAC) and Car charger (9-15 VDC) included</td>
</tr>
<tr>
<td>Casing</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Protection</td>
<td>Waterproof (IP65)</td>
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<tr>
<td>Dimensions and weight</td>
<td>250 x 120 x 85 mm, 1.9 kg</td>
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<tr>
<td></td>
<td>In carrying case: 260 x 220 x 95 mm, 2.5 kg</td>
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