SEWERIN
Technologies for leak detection.

SePem®

Noise loggers for monitoring
water pipe networks
sturdy – convenient – reliable

LEAK DETECTION
made in Germany

SePem® – sturdy – convenient – reliable

Detect water losses early

Leaks in water pipe networks can result in significant water losses. Thanks to systematic monitoring of the network with ***SePem***® data loggers, you can reliably identify existing leaks and catch new ones early on – much faster than with conventional methods.

Systematic leak detection

The ***SePem***® system comprises the ***SePem® 01 Master*** receiver as well as any number of data loggers; the ***SePem® 100s*** are preferable for mobile use whereas the ***SePem® 150s*** are designed for permanent use. They are magnetically attached to valve rod extensions, or to hydrants or other fittings in the pipe network. The microphone integrated in the logger converts the structure-borne noise in the line to a sound signal. This is cyclically recorded during times of low consumption – usually during the night between approx. 2:00 am and 4:00 am, when there is very little sound interference in the surrounding area, if any. On a leak-free line the noise level measured during this time is virtually zero. If there is a leak in the pipeline, the noise logger will measure values much different to zero, thus indicating a leak.

SePem® 100:
data loggers for mobile use

The ***SePem® 100*** data loggers with integrated aerial are perfect for mobile use in the water pipe network. They are placed on fittings at measuring points in a specified section of network and record the level for a programmable period of time during the night – usually half an hour. The loggers are collected in the next day. The measurement data is transmitted to the ***SePem® 01 Master*** by radio. Noticeably high measurement values indicating a leak are immediately flagged up by an audible signal. This is a reliable way of detecting existing leaks. The data loggers are then successively inserted in other sections of the network until the whole network has been checked.

SePem® 150:
safety through permanent monitoring

The ***SePem® 150*** data loggers are designed for the stationary monitoring of water supply networks. They have an external aerial and are permanently fixed to fittings. The ***SePem® 150s*** record the minimum level every night for a programmable period of time, for example half an hour. The locations are periodically patrolled, for instance daily or weekly, when the noise loggers send their data telegrams to the ***SePem® 01 Master***. Unlike the mobile application, there is no comparison of the absolute levels of two measuring points, but rather a relative change in the level at a measuring point means that a new leak can be very quickly identified.

Sturdy technology you can rely on

- The data loggers feature the high protection class IP68. The housing is made of stainless steel and a special, tried and tested plastic, which is also used, for example, in the housing of pumps used in sewage treatment. This makes the ***SePem® 100*** and ***SePem® 150*** totally waterproof and dustproof, resistant to all corrosion and other stresses and suitable for use in all environments.
- With a battery life of many years, the ***SePem® 100s*** and ***SePem® 150s*** are operational for a long time and are equipped for any task.

Reliable and efficient

- The ***SePem® 100*** and ***SePem® 150*** data loggers feature highly sensitive Piezo microphones, which are specially optimised for leak detection and can pick up noises over very large distances.
- The data can be read out easily by bidirectional radio. In the case of the permanently installed ***SePem® 150*** loggers, you do not need to open the covers; simply drive by with the ***SePem® 01 Master*** to record the data.
- As well as the minimum level, the transmitted telegram contains the width and frequency of the noise and is clearly displayed on the ***SePem® 01 Master*** screen. There are additional options for verifying the measurement results, for example by precluding sound interference such as rain, traffic, power lines etc.
- During the patrol, a full data set containing the plot of the last measurement can also be retrieved at the touch of a button from every ***SePem® 150*** logger in addition to the data telegram. Again, it is not necessary to open the manhole cover to obtain all of this data. A brief pause within the radio range of the ***SePem® 150*** is sufficient.

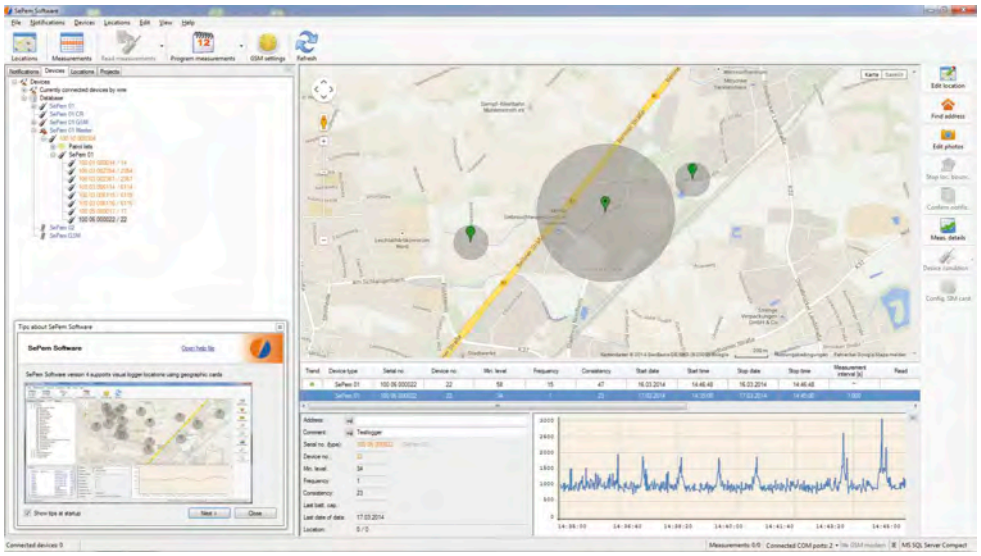
Convenient to use

- The online measurement function allows you to take current measurements on site which can be displayed on the ***SePem® 01 Master***. For example, this means that you can check the suitability of measuring points during the day at the time of installation before the actual measurement at night or determine appropriate installation intervals. Or you can verify the plausibility of measurement data collected overnight directly on site.
- The measuring times and periods of radio activity are freely programmable.
- The ***SePem® 01 Master***, with its simple and intuitive menu navigation, provides fast and reliable results and can also be reliably operated by less experienced users.

SePem® software for easy evaluation

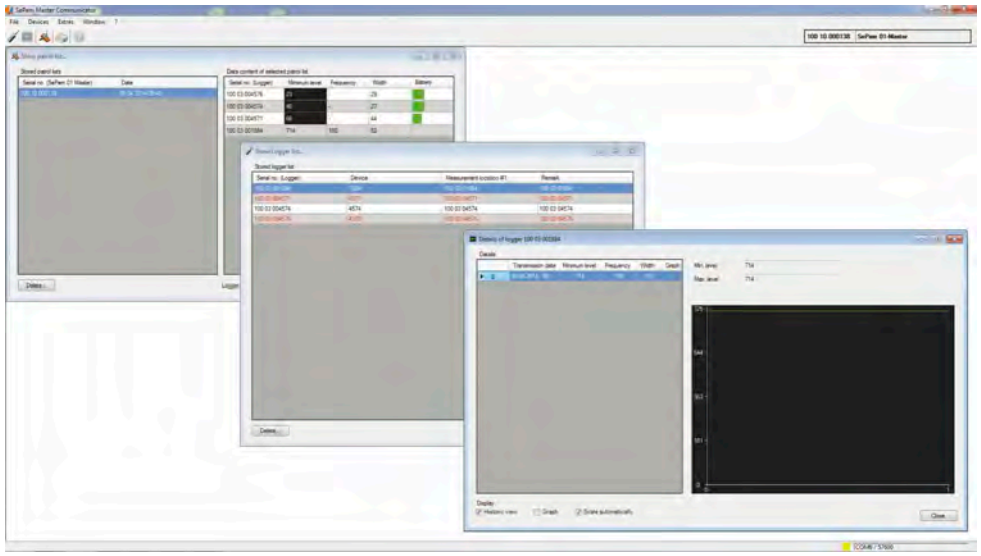
The ***SePem® software*** is a convenient tool for evaluating data. The data from the ***SePem®*** noise loggers is transmitted from the ***SePem® 01 Master*** to PC by USB. The loggers can then be dragged & dropped into position on a map if the PC is connected to the internet. All the measurements recorded are then assigned to this measuring point.

There are many functions available to professionally display the requirements both at mobile and stationary applications. In the absence of an internet connection, the measurement data is displayed in the usual way in a table in the Explorer view.



SePem® Master Communicator for data backup and visualisation

The ***SePem® Master Communicator*** software is freeware, which allows you to display the data managed on the ***SePem® 01 Master*** directly on a PC. The patrol lists are transmitted directly after connection and saved in a database. In logger lists you can directly access and easily manage measurements from the individual ***SePem®*** noise loggers.



Please contact us for a comprehensive quotation, including additional technical specifications and information on accessories.

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