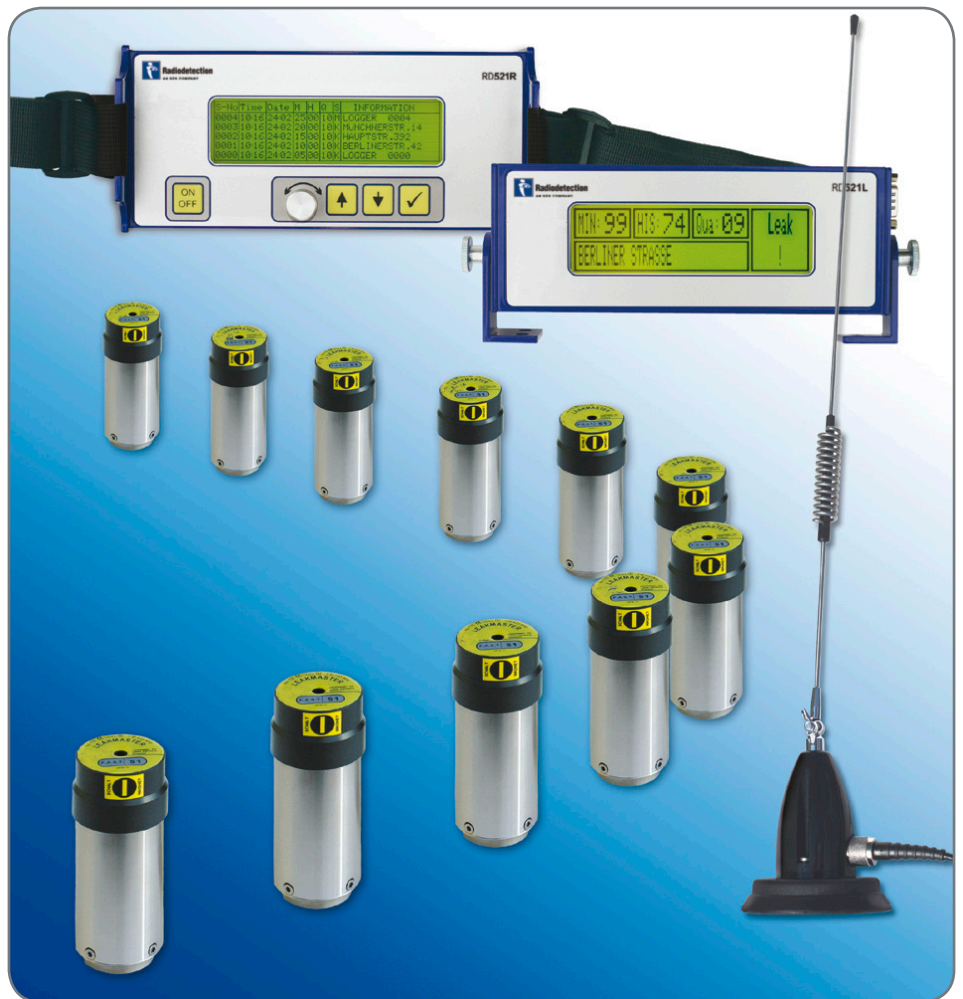


RD521 Water Monitoring System

Water pipe integrity monitoring with wireless read-out

Features

- Acoustic Zone Monitoring.
- Speedy leakage locating process from a mobile unit.
- Integrated hearing protection.
- Multiple RD521 can be deployed to cover a large water network.
- Reliable robust loggers with battery life up to 10 years.
- Portable receiver can be van mounted to allow fast, efficient coverage of deployed transmitters.
- Data may be linked to GPS and digital maps for review.



General Information

The RD521 wireless monitoring system sets a new benchmark for the water network servicing business. The noise levels saved by the distributed data loggers are transmitted to the mobile vehicle, where even an untrained operator is able to detect any leakages due to the precise data received.



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RD521 Water Monitoring System

Description of functionality

At any leakage point, the outpouring water generates a particular noise that travels along the water pipe. This noise can be detected at valves, hydrants, water meters and other fittings. The shorter the distance between the noise source and the detection point is, the clearer and more intensive the received signal. The RD521 mobile radio data logger considerably reduces the time required to locate a leak. If the entire network section is equipped with transmitters, one operator can check between 220km and 350km of supply pipes per day.

The loggers measure and analyse leakage noise during the low consumption period at night-time (between 2am and 4am). This data is saved and transmitted by radio every 5 seconds. The battery of the logger is designed for a 10-year lifetime.

The mobile vehicle, such as a maintenance van, acquires the data automatically and the measurement results are displayed optically and acoustically to indicate the exact location of the leakage. If the minimum overnight noise level has risen, then the pipe section may be leaking.

The device determines the minimum noise level of the night before on the basis of 24000 acquired measurement values. Information about the leak is determined by comparing the measurement quality over the previous 14 nights. This information includes:

- Leakage
- No leakage
- Possible leakage

Technical Specifications:

RD521 Logger

Data Transfer:

Preset periodically:
between 6am & 7pm 12 times per minute
between 7pm & 6am once per minute.

Continuous:

- Minimum level of the past two weeks.
- Measurement quality (rain, wind, etc.)
- Current MIN/MAX level.
- Logger number.
- Location of acoustic logger.

Operation time:

- 8 – 10 years with the same batteries.
- 5-year warranty.

Measuring time:

Selectable:

- The whole day.
- 2am – 4am.

Updatable and programmable.

Transmitting power:

Power: 10mW
Frequency: 433Hz.

Protection class:

IP 68.

Sensor:

Piezoceramic.

Temperature Range:

-15°C up to +55°C.

Dimensions:

40 or 44mm height, 112mm with integrated antenna.

Weight:

About 0.45kg.

Material:

V2A plastics.

RD521 Receiver

Material:

Aluminum.

Display:

- Topography.
- Measurement quality.
- Noise level.
- Previous measurements.
- Leakage status.
- Current MIN/MAX level.

Power Supply:

- Internal rechargeable battery.
- External 12 volts DC.

Interfaces:

- Printer/PC.
- GPS optional.
- External LCD.

To see the full range of products and services provided by Radiodetection visit:
www.radiodetection.com

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