

Product Information

PipeLog

Status detection via radio link of district heating pipes for network analysis and long-term data acquisition

The **PipeLog** from LANCIER Monitoring closes the gap between comfortable continuous monitoring and the manual measurement of district heating pipes, which can only be read out with a great deal of personnel and time, since:



1. Until now many district heating pipes have been operating without adequate monitoring systems, i.e. blindly. Damage is only reacted to, if large amounts of water or heat are unintentionally lost. The reasons for this are savings made on specialist staff and qualified, meaningful monitoring technology.
2. The measurement at manual test points is very time consuming. Therefore they often go unchecked soon after installation. The consequence is a damage of pipe that is detected far too late.
3. As sooner damages are detected, the less time and money is required for repairs and downtimes can be avoided.

Using the **PipeLog** system manual monitoring or status control points, which previously had to make do without continuous monitoring, can now be queried at regular intervals and without much effort.

The basis for this are battery-powered radio sensors (on loops fed out from the plastic jacket pipe monitoring sensor system), which perform at least one insulation and loop measurement a day and record the values in an internal memory. The resulting complete data history can be read out while walking or driving past thanks to a **wireless, secure and automatically established radio connection**.

An intuitive-to-use readout device that belongs to the **PipeLog** system allows even untrained staff to read out stored measurement data. A press of a button is sufficient to acquire the collected data.

Neither manhole covers nor entrance doors need to be opened.

Any time-consuming schedule coordination with operators or inhabitants becomes completely unnecessary. Similarly, expensive shaft inspections can also be dispensed with. Depending on the structural situation on site the range can be several hundred meters.

The entire process (connection set-up > login > data transmission > logout) only takes a few seconds. For the purposes of the pipeline evaluation and the visualisation of collected measurement data, the latter are then stored centrally and can be accessed at any time using Excel or the LANCIER UMS server.

The **PipeLog** is particularly suitable for:

- NiCr, Nordic (EMS) systems and hierarchical systems.
- Small pipeline sections, where continuous monitoring would not be financially worthwhile.
- All pipelines, where previous monitoring systems do not trigger a central alarm.
- All heating network operators.

PipeLog highlights

- **Significant time savings** during data acquisition.
- **Extreme cost savings** thanks to the querying of measuring points while walking or driving past with **low personnel costs and untrained staff**.
- **Significant savings potentials thanks to early damage detection** and associated cost-minimised repair measures.
- Regular data acquisition creates a meaningful measuring point history over several years and therefore **better error analysis and evaluation** of any damage that occurs.
- **Over 5 years of battery life** with daily measurements.
- **Low follow-up costs**.
- **Minimal installation costs**.

Ordering Data

PipeLog

Radio sensor for mobile measurement data readouts

Order-no. 075834.000

Readout unit

for PipeLog radio sensors

Order-no. 075945.000

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Technical Data

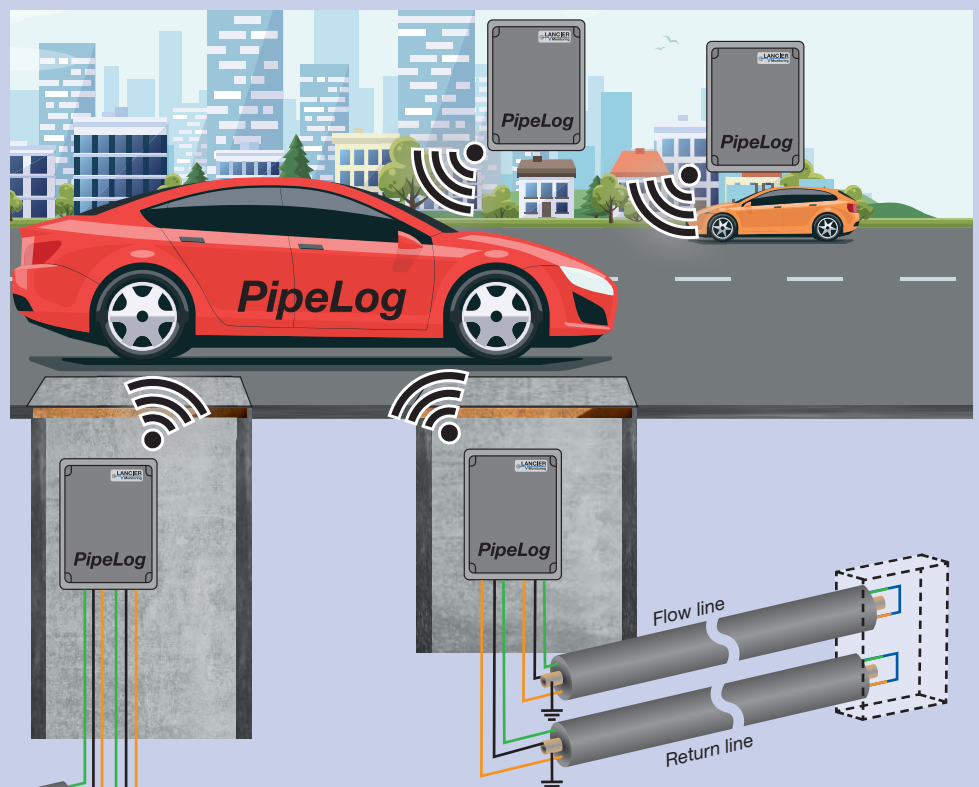
Supply voltage	Exchangeable lithium battery, 3.6 V
Battery lifetime	> 5 years at daily measurement
Measurement channels	2 (e. g. for flow and return line of a district heat pipe)
Measurement range insulation	0 .. 10 M Ω (fault: ± 3 % of measured value ± 10 k Ω absolute)
Measurement range loop	0 .. 5 k Ω (fault: ± 3 % of measured value ± 0.05 k Ω absolute)
Pipe length	NiCr: max. 750 m HDW / Cu (Nordic System): max. 2.500 m
Measuring voltage	≤ 12 V DC
Data transfer	Wireless M-bus standard, automatic connection sender/receiver
On-site display	4 LED: 2 x Status, 1 x USB-Power, 1 x USB-Detect
On-site operation	1 button for real-time measurement
Interface	USB 2.0 interface for configuration of device
Operating temperature	-20 .. +60 °C
Degree of protection by enclosure	IP 66/67
Dimensions	130 x 100 x 180 mm (W x D x H)

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PipeLog

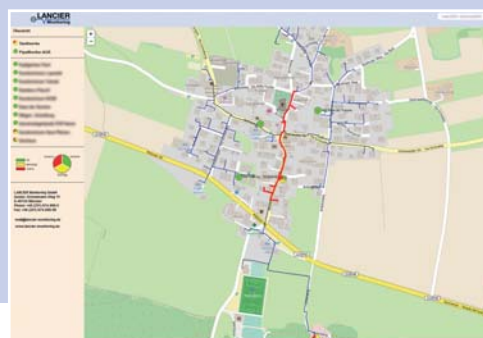
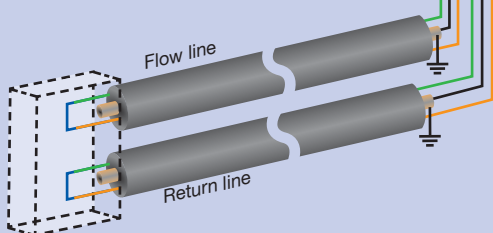
Data transfers take place while driving or walking past with connections that are established automatically and securely.

Radio sensors are positioned inside shafts, control panels, functional or residential buildings.



PipeLog

2 channel radio sensor for the measurement of insulation and loop resistance from district heating pipes.



Evaluation of the measurement data and alarm report with visualisation of its geographical position in the LANCER Monitoring UMS System.