

# Product Information

Integrated  
temperature  
monitoring!



## PipeAlarm2 LTE/UMS

### battery-operated and LTE based district heating pipeline monitoring device

The **PipeAlarm2 LTE/UMS** equipment series by LANCIER Monitoring is the compact, **battery-operated** monitoring solution for pipe networks with a pair of monitoring conductors in the insulating layer. It is easy to install and easy to operate. **On-site power and network connections are not required.** Alarms are sent via **LTE or GSM networks**.

**PipeAlarm2 LTE/UMS** provides for a 2-channel parallel monitoring of the flow and return in a district heating pipeline. Therefore the equipment measures the insulation and loop resistance of a pair of conductors in the insulating layer of the pipe (both "Nordic System" and "NiCr System") in accordance with EN 14419.



Additionally, there are two access ports for dry contacts, to monitor external signals (e.g. float switches). **Where there are leaks in the pipe, a break in the measuring loop or in the pipeline joints and where there are changes in the state at the contact ports, these raise the alarm** and thus help to prevent greater damage and losses. **PipeAlarm2 LTE/UMS** equipment takes measurements at least daily (more frequently can be configured at will, near contacts are polled at 10-second intervals) and sends a message to the UMS server via mobile data connection if there is an alarm. A weekly status message is always sent, which reports the condition of the equipment. The last 90 measurements are stored securely in the internal EEPROM memory.

Configuration, setting the limit values for the loop and the insulation resistance, as well as reading off the measurements can be carried out on-site on a laptop via the USB 2.0 port.

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## Technical Data

### PipeAlarm2 LTE/UMS short

### PipeAlarm2 LTE/UMS

Supply voltage	Exchangeable lithium battery, 3,6 V	
Battery lifetime	> 5 years (at daily measurement and weekly status message)	
Measurement channels	2 (e. g. for flow and return line of a district heat pipe)	
Measurement range insulation	0 .. 5.0 MΩ fault: 3% of measured value ±10 kΩ absolute	0 .. 10 MΩ fault: 3% of measured value ±10 kΩ absolute
Measurement range loop	0 .. 5.0 kΩ fault: 3% of measured value ±0.02 kΩ absolute	0 .. 9.99 kΩ fault: 3% of measured value ±0.02 kΩ absolute
Measuring distance	NiCr ≤ 750 m, nordic ≤ 3,000 m	NiCr ≤ 1,500 m, nordic ≤ 3,000 m
Length calculation	no	yes, for NiCr
Measuring voltage	12 V DC	
Contacts	2 access ports for dry contacts, line length 10 m max., permanently monitored	
Measuring range temperature	-20 °C .. +140 °C	
Display	for each measurement channel: 1 LED bar graph for „Measurement value Iso” for each measurement channel: 1 signal LED for „loop malfunction” for each contact: 1 signal LED, 6 status LEDs	
On-site operation	1 button for real-time measurement with display and test message transmission 1 USB 2.0 port for equipment configuration, limit value setting and measurement read-out	
Interfaces	USB 2.0, temporary, for configuration	
Operating temperature	-20 °C .. +50 °C	
Admissible humidity	0 .. 100 %	
Degree of protection by enclosure	IP 66	
Field of application	Indoor and sheltered installation according to DIN VDE 0100 part 737. residential and business area as well as small enterprises	
Dimensions	180 x 180 x 100 mm (w x h x d)	

## Ordering Data

**PipeAlarm2 LTE/UMS short** (maximum length of measurement track NiCr ≤ 750 m)

**Order-no. 075968.100**

**PipeAlarm2 LTE/UMS** (maximum length of measurement track NiCr ≤ 1500 m)

**Order-no. 075968.200**

**Spare part**

**Lithium-Battery 3,6 V** with bracket and connection cable

**Order-no. 075969.000**

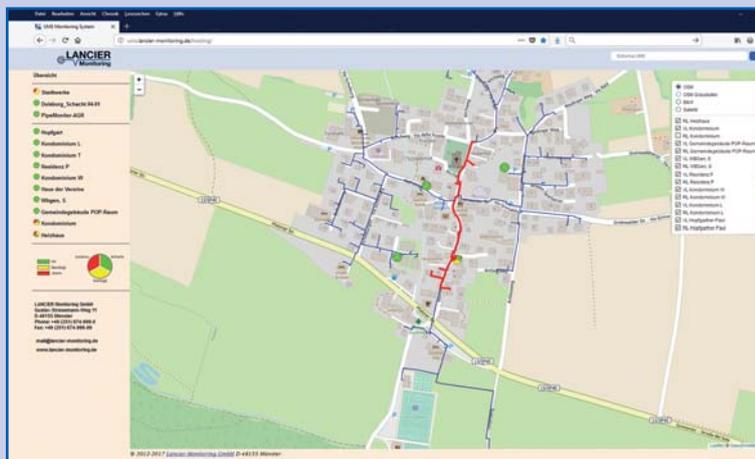
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### System diagramme

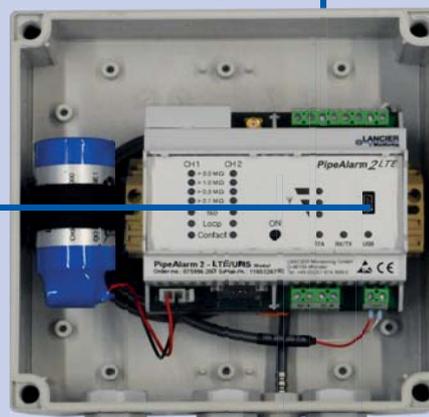
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All monitoring stations and routes are shown in the UMS- or EasyView software with measurement and alarm values, GIS coordinates as well as mapping.



**Local configuration via USB 2.0**



**Data transmission to the UMS-Server**  
Via mobile network.

**LTE/GSM**



**LTE/GSM**

Measuring data and device information are stored in an Oracle data base at the LANCER Monitoring UMS-Server.

Further alarm distribution per e-mail, fax and so will be managed by the UMS-Server.

