Intelligent remote monitoring for our drinking water supply system!

HAWLE.**LIVE**

Power-saving & reliable remote monitoring – simply smart!

With the HAWLE.**LIVE** system, water supply systems of all sizes are remotely monitored on an IoT basis, or existing systems can be efficiently expanded.

The installation, including the supplied sensors, is very easy. The data transmission is carried out via the GSM network.

HAWLE.**LIVE** optionally triggers an alarm if the previously defined alarm and warning limits are exceeded or not reached. Notifications of all measured values remain permanently stored and serve as a complete documentation on a desired platform.

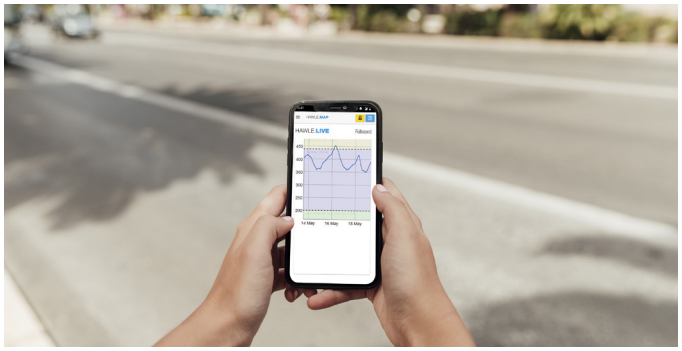
The visualisation/evaluation of all data can be realised in the Hawle.**MAP** for a wide spectrum of end devices e.g. sensors.

The service portfolio of possible monitoring includes water level, water meter/flow, water pressure and door contact.

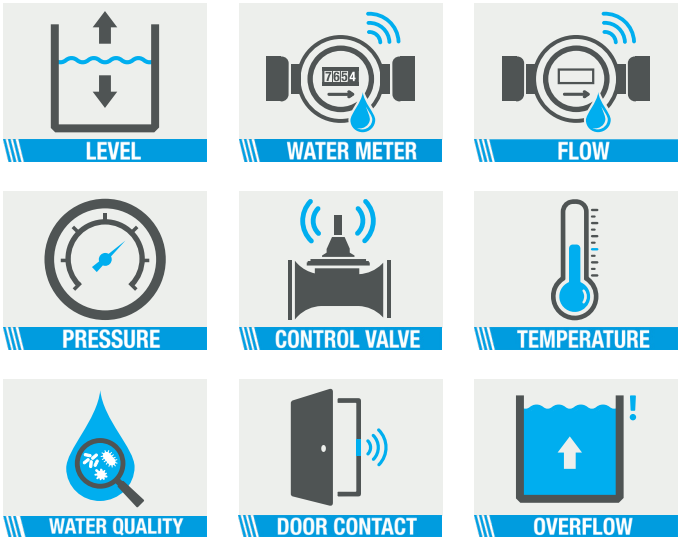
- Simple installation (Plug & Play)
- Individually configurable
- Battery operated base station
- No hidden costs
- HAWLE.**MAP** integration

Features

- Power supply:
  - Internal battery powerpack
  - Optionally with local power supply
- Data transmission via 4G (LTE), 3G, 2G, global SIM card, powerful antenna
- Individually adjustable warning and alarm limits, notification by SMS and/or e-mail
- Period adjustable alarm call plans, configurable online
- Various evaluations possible (graphics & reports)
- No software installation necessary, preinstalled setup



Applications



More applications in development!

The individual HAWLE.**LIVE** applications can be combined.

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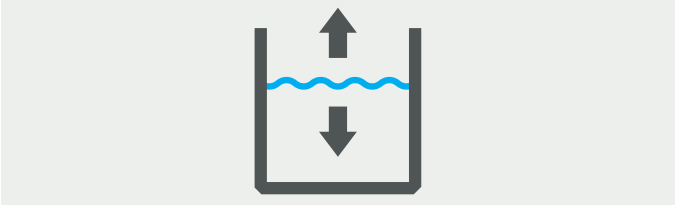
Level

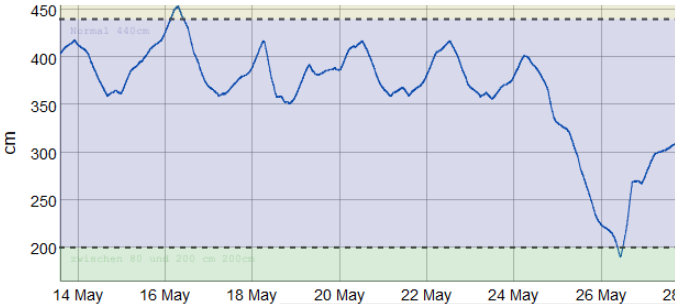


retrofittable and easy-to-use for monitoring of elevated tanks.

The battery-operated HAWLE.**LIVE** transmission unit including a level measuring probe is installed and ready for use in just a few steps.

The level measuring probe must be placed in the elevated tank according to the installation manual.
Immediately afterward the level of the tank is monitored online and displayed in the HAWLE.**MAP**.

Graphicx



Featuers

- High precision level sensor witz IP-68 protection class
- Measuring range 0 to 5 meters (standard)
- Alarm and warnings limits are individually configurable
- Batteries for eight years included in the price
- Battery replacement:
  - o 1 sensor: approx. 2 years
  - o 2 sensors: approx. 1,5 years

Water meter

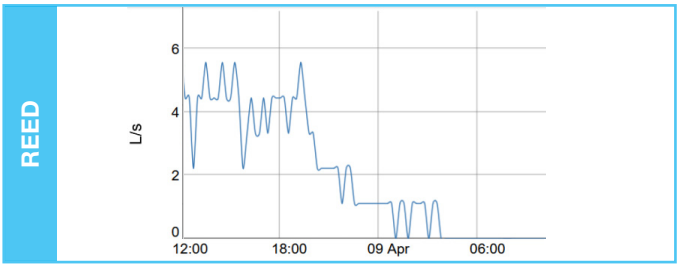
Retrofittable and easy-to-use for monitoring of water meters.

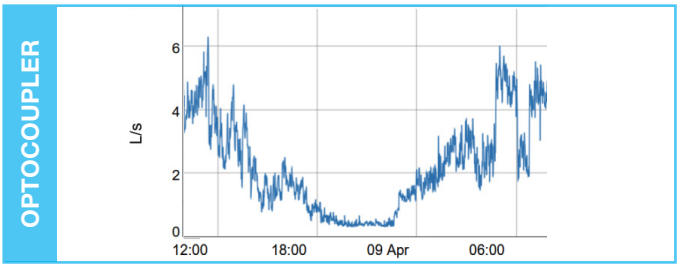
Our HAWLE.**LIVE** - solution for the ddigitalization of existing and newly installed water meters offers support in many ways.

- Water consumption
- Flow measurement & documentation
- Alarm in case of a possible water pipe break or deviation from operation parameters

The reed sensor as well as the optocouplers are installed and ready for use within a few minutes. This makes HAWLE.**LIVE**, in combination with water meters, the perfect solution for individual customer needs.

Graphics





Featuers

- Overview of the flow rate and meter reading
- Night minimum consumption measurement
- Zero consumption measurement
- Reed contact as well as optocoupler for the individual water meters
- Measuring range 1 litre to 1000 litres per pulse
- Battery replacement:
  - o 1 water meter: approx. 2,5 years
  - o 2 water meters: approx. 2 years

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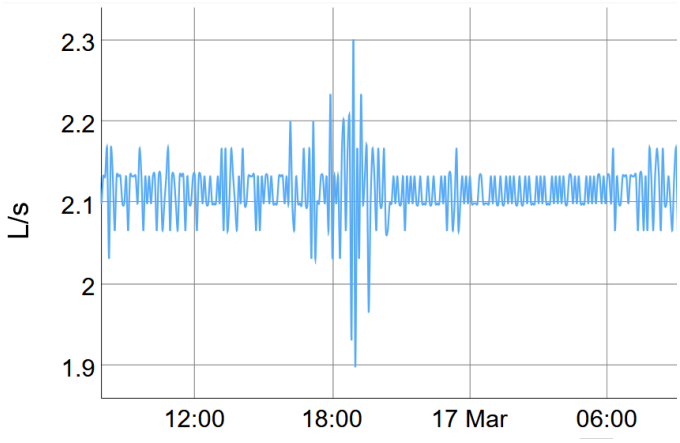
Flow

Graphics



Retrofittable and easy-to-use for monitoring the flow rate.

The flow rate is an important value for the entire water supply to record the consumption as well as to find leakage in the piping system. HAWLE.**LIVE** can, in addition to the water meter, record the flow rate in several ways:

Ultrasound: Clamp-on sensors can be used to measure the flow through pipes without having to drill or drain them. Economic advantages, as well as a load-free and simple installation in the existing network, are among the biggest benefits of this option.

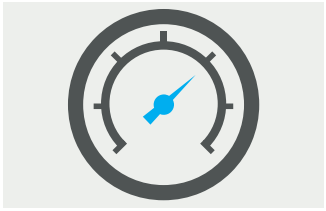
CLAYTON control valve: Using a sensor specially developed for CLAYTON control valves, the flow is measured through an existing control valve of any dimension.

The sensor, developed especially for this application, is inserted in a CLAYTON valve and provides you with valuable flow rate data.

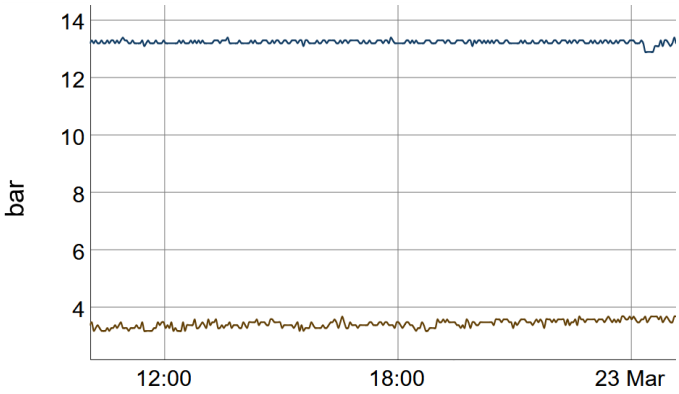
Featuers

- Very high measuring accuracy
- Exact representation of the flow rate
- Stationary power supply advantageous
- Battery change approx. once a year if a stationary power s upply does not apply

Pressure / Control valves



Graphics



HAWLE.LIVE monitors and documents the pressure in the local network and the proper functioning of control valves.

With the supplied pressure sensors, every network section can be monitored and documented. An optional alarm system informs you in case of operating deviations.

Featuers

- High precision pressure sensors with IP-68 protection class
- Measuring range 0 to 16 bar / on request 0 to 25 bar
- Battery replacement:
  - o 1 sensor: approx. 2 years
  - o 2 sensors: approx. 1,5 years

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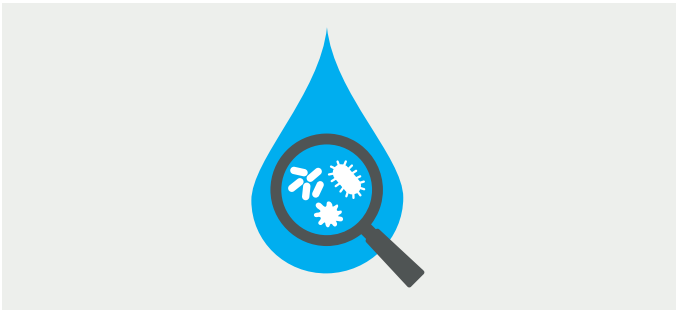
Water quality



Smart measurement of the water quality.

The i::scan is a multi-parameter spectrometer that can be installed directly in water lines. The probe is in direct contact with the medium and is mounted on a pipe saddle.

The Hawle.**LIVE** supplies the i::scan with power and is responsible for controlling the probe, interpreting the sensor data and transferring the data to our Hawle.**MAP**. The Hawle.**LIVE** in combination with the i::scan fits together perfectly and can be easily integrated into any water supply system.

Parameters

- Turbidity (NTU-EPA, FTU-ISO)
- Colour
- UV254 / UVT
- Organic parameters (TOC, DOC, CSB)
- Additonal parameters on request

TURBIDITY is caused by small particles in the water. These are undissolved, inorganic minerals or organic particles. Turbidity is therefore often an indicator of impurities in the water.

COLOUR: Drinking water should be colourless.
Yellow to yellow-brown: humic substances
Yellow to brown: water containing iron and manganese
Blue: corpreous water

UV254 is a simple indicator of organics in the water

TOC indicates the sum of the total organic carbon collected in the water. TOC describes organic contaminants in a water system and is used in quality control and cleaning validation.

DOC is the dissolved organic carbon content measured by turbidity compensation.

Features

- Plug & Measure
- UV LED based spectrometer 245 - 880nm
- State of the art light source technology
- Automatic clearing device possible
- 100 % corrosion free
- Direct contact with the medium
- Direct mounting in the pressure line
- Hawle.**MAP** Integration

Applications

- Monitoring of drinking water quality
- Monitoring of sources, raw water
- Process optimization
- Smart sensor network
- Flocculant dosing
- Monitoring the purification of wastewater treatment plants

i::scan installed directly in the pressure line.

The i::scan can be installed in the pressure line without interrupting the water flow.

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