

# Groundwater datalogger

Groundwater | Water Level | Water Monitoring

## General Description

The iLevel-GW Nano is an absolute pressure groundwater data logger for measuring and storing water pressure and temperature. By means of a steel cable the iLevel-GW Nano is lowered in the water level pipe and fixed below the lowest water level.

The ultra low-power data logger records the measured values in adjustable measuring intervals with a runtime of up to 10 years (~2 million measurements). For data readout, the iLevel-GW Nano is pulled out of the measuring well and the data is conveniently read out via short-range radio using a laptop.

In the logger software (cloud application), the true water level is calculated from the recorded absolute water pressure and the barometric pressure. (Please note: The air pressure needed to calculate the water level is recorded with a barologger. Only one barologger is required for a measurement field.)

## Operation

The iLevel-GW Nano, equipped with a sealed lithium battery, is optimized for low-power long-term use of up to 10 years and beyond. The data logger operates in a very low power mode and wakes up only for measurement or data readout by short-range radio.

The autonomously working iLevel-GW Nano continuously stores water pressure, water temperature, and battery condition.

## Applications

The iLevel-GW Nano is the ideal measuring device for measuring campaigns where quick and easy installation is important. The programmed data logger is lowered into the measuring well with a steel cable and is immediately ready for use.

- Groundwater: Water pressure, air pressure and water temperature recording
- Water level in surface waters: Especially to be used in flood-prone areas (moors, flood plains), where differential pressure probes stop their service in case of flooding as the differential pressure opening is blocked by the overflowing water.

## Features

- Made of stainless steel
- Dimensions optimized for insertion in pipes from 1" upwards
- Up to 10 years maintenance-free operation
- Data readout via 433 MHz short-range radio
- Absolute pressure logger / barologger - same design



## Specifications

<b>Measuring Ranges</b>	- 0-2 bar => 0-2000 hPa - 0 - 10 mH <sub>2</sub> O, 0 - 20 mH <sub>2</sub> O, 0 - 90 mH <sub>2</sub> O - Other ranges on request
<b>Accuracy</b>	Max. ±0.15 % FS (linearity best straight line at RT, hysteresis, repeatability)
<b>Long-term Stability</b>	Typ. ±0.1 % FS, max. ±0.2 % FS (limited to max. ±3 mbar)
<b>Overload</b>	4 x pressure range
<b>Communication</b>	Local: 433 MHz, license-free ISM radio
<b>Power Supply</b>	Lithium batteries 1xAA Mignon (up to 10 years operating time or ~2 Mio measurements)
<b>Data Memory</b>	2 MB memory up to 150.000 measurement series, non-volatile, storage cycle freely-definable
<b>Operating Temperature Range</b>	Operating range -5 °C (only in liquid media) to +80 °C
<b>Material</b>	Stainless steel 316 L / 1.4435
<b>Dimensions (Ø x H)</b>	24 mm x 210 mm
<b>Conformity / Compliance</b>	CE

## Accessories



**Well caps:** with hex nut, aluminium, weatherproof, frost-proof, corrosion resistant, various styles and sizes



**USB dongle:** 433 MHz near field radio interface for local connection

**Suspension cable:** steel cable Ø 1 mm

[Please ask for details.](#)



Reseller

**KISTERS Australia** | sales@kisters.com.au | kisters.com.au

**KISTERS Europe** | hydromet.sales@kisters.eu | kisters.eu

**KISTERS New Zealand** | sales@kisters.co.nz | kisters.co.nz

**KISTERS North America** | kna@kisters.net | kisters.net

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