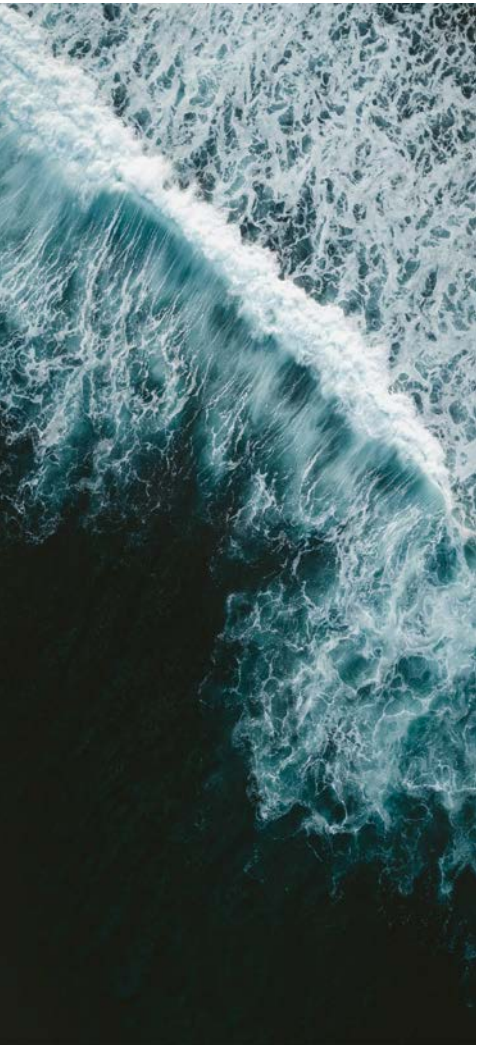
Landis+Gyr ULTRAWATER® W270 Smart water meter

Landis+Gyr
manage energy better

Simplify Water Management



Easy, reliable, connective: ULTRAWATER® W270 – the smart lightweight for IoT-ready water metering.

Sustainable, climate-friendly, liveable: Smart cities promise a great future by using intelligent and digital technologies. This includes smart water infrastructures that generate, transmit, and analyze data to enable targeted optimizations for water management and distribution networks as well as a fast detection of threats to the water. And that's where our smart W270 water meter comes into play.

Although it's very small and lightweight, the W270 unlocks great intelligence, reliability, and simplicity for water management: Thanks to its connectivity and enhanced features, the smart water meter offers advanced metering and remote insights on consumption, delivery quality, and meter point status. And this with highly accurate and long-term stable ultrasonic measurements for many years.

The W270 is made for a lifetime of 15+ years and is easily recyclable with its composite measuring tube, carefully selected materials, and potting-free green design.

Smart functions for Metering Intelligence

Near-field communication (NFC)

Parameterization, data read-out, or fault finding: The integrated NFC interface allows easy meter access on site for different user roles (installers, consumers, etc.) via smartphone and UltraConnect app.

Temperature measurement

To prevent frost-related damages and accelerated bacteria growth, the W270 triggers a frost warning or ice alarm when the temperature gets too low and a hot temperature warning when it gets too warm (cold water meter).

Stagnation detection

A stagnation warning is triggered according to the preset number of days without flow.

Reverse flow detection

In case of an installed meter or a flow in the wrong direction, a warning is triggered. For determination of the risk of contamination and non-revenue water, the reverse volume is registered.

FOTA (Firmware update over-the-air)

Via the NB-IoT interface and cellular network, remote updates with new features, new standards, and bug fixes are possible. A meter exchange is unnecessary.

Advanced battery management

Thanks to its low-power design with NB-IoT, the W270 can operate for 15 years without battery exchange. The power consumption is monitored, and the remaining battery life is continuously predicted.

Sampling rate

The W270 measures the flow 1/s (1 Hz). This allows to measure also short, intermitted consumptions.

ULTRAWATER® W270 – simply intelligent

Simply connective

The W270 is available either with NB-IoT (LwM2M for interoperability) interface or with a LoRa® and wM-Bus interface. The NB-IoT model is ready-to-use as it comes: It uses the cellular network for data transmission, remote parameterization, FOTA, planned reports, and real-time alarms. The combined LoRa/wM-Bus (OMS 4) model can easily be integrated in an existing LoRa or wM-Bus infrastructure and allows protocol switching in the field.

Simply informative

The W270 generates, displays, and transmits vital information such as detailed alarms and warnings about potential problems with temperature, stagnation, tampering etc. To provide a full overview over the meter's history, the comprehensive logbook can record up to 40 events. A datalogger records historic values. And the flow profile can be analyzed using the integrated flow histogram. This simplifies estimating the amount of water lost due to leaks.

Simply durable

The W270 is based on our proven, rugged, and long-term stable ultrasonic technology. We've been developing and deploying this technology for more than 40 years. Without any moving parts, it's resistant to abrasion and particles and ensures a long meter lifetime. An advanced sealing concept provides IP68 and IP66 protection and makes the meter fully waterproof. The meter also withstands direct sunlight and changing temperatures. And its low-power design enables a battery life of up to 15 years.

Simply sustainable

The W270 is made to protect the environment: Its long-life and low-power design ensures high durability. Its material is carefully selected. And the meter is easily recyclable. Its packaging is optimized for minimal waste. And the compact and lightweight design reduces not just the material used but also transport emissions.

Sizes

Connection	Length [mm]	Q3 [m³/h]
DN15 G ¾	110	1.6
DN15 G ¾	105	2.5
DN15 G ¾	110	2.5
DN20 G1	130	2.5
DN20 G1	130	4
DN20 G1	190	4

Technical data

Operation / Storage temperature	+0.1 … +65 °C / -20 … +70 °C
Water temperature range	MID Class T50: +0.1 … +50 °C MID Class T30/70: +30 … +70 °C
Protection class	IP68 and IP66: Submersible and protected against water jets
Power supply	1x Li/$SOCl_2$ battery, lithium content: 5 g
Installation	Orientation: Vertical, horizontal, tilted Installation like non-smart meters: All start-up procedures are carried out automatically
Pressure class/loss class	MAP 16 / ΔP40, ΔP63
Sampling rate	1 Hz (1 integration per second)
Logbooks	Metrological log: 10 firmware updates, 5 adjustments (calibrations); event log: up to 40 events; communication log
Datalogger	Set of 9 values; 15 years, 72 months, 200 days, 168 hours
NFC user roles	– Consumer: Read only, check and analyze consumption, only own meter – Installer: Commissioning only – Service technician (certificate secured): Commissioning, parameterization, analyze meter, all own meters, test, reset – Lab (certificate secured): Adjustment, test, reset
NB-IoT	Standard: NB1 & NB2 – SIM card: Landis+Gyr or customer supplied – Protocol: OMA LwM2M – Frequency Bands: 3, 5, 8, 20, 28
LoRa	Version: 1.0.3 – Class: A (bidirectional) – Protocol: M-Bus – Frequency: 868 MHz – Activation: OTA or ABP – Transmission int.: 15min, 30min, 60min, 12h, 24h
wM-Bus	OMS Generation 4 – Modes: T1 or C1 – Protocol: wM-Bus – Frequency: 868 MHz – Security profile: Unencrypted, 5/A, 7/B – Data content: Preselected or customized – Transmission int.: 20s, 15min

About Landis+Gyr

Landis+Gyr is the leading global provider of integrated energy management solutions for the utility sector. Offering one of the broadest portfolios, we deliver innovative and flexible solutions to help utilities solve their complex challenges in smart metering, grid edge intelligence and smart infrastructure. Landis+Gyr operates in over 30 countries across five continents, with the sole mission of helping the world manage energy better.

More information is available at
www.landisgyr.eu

Landis+Gyr Business Unit
Heat & Water in short

- Competence Center for Ultrasonic Flow Measurement in Germany
- Since 1983 experiences with ultrasonic flow measurement
- Operations on all five continents
- Order-related production depending on individual order codes
- Modularity and software optimization leads to fast reaction times on orders
- Certified acc. to ISO 9001, 14001 and EC Directive D + H1 (MID)
- Committed to improved energy efficiency and environmental conservation
- Solid and established partner network

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