

Sagemcom



SICONIA® WM Advanced - AP

NB-IoT / LoRaWAN / wM-Bus

A multi-communication meter with integrated pressure and acoustic sensors, designed to reduce Non-Revenue Water (NRW)

The SICONIA® WM Advanced meter range provides **accurate measurement** across a wide flow range. Its **ultrasonic technology** eliminates all moving mechanical parts inside the meter, removing wear phenomena that could affect metrological performance. Billing therefore remains reliable and stable throughout the meter's lifetime.

Thanks to its **multi-communication technology** integrating **NB-IoT, LoRaWAN and Wireless M-Bus**, the meter adapts to utilities' different deployment strategies. It ensures efficient and secure transmission of consumption data, meter alarms and water network events.

With its **acoustic sensor dedicated to leak detection and its pressure sensor (options to be selected when ordering)**, SICONIA® WM Advanced-AP brings new network monitoring capabilities and contributes to improving network efficiency.

One meter. Up to **3** simultaneous communication options

When your projects require maximum communication flexibility, the **SICONIA® WM Advanced** range can embed several radio connectivity technologies to adapt to your field constraints, meter reading strategy and operational objectives.

With the **hybrid meter reading**, you can combine **fixed remote reading** (NB-IoT or LoRaWAN) and **wM-Bus radio walk-by/drive-by reading**. Fixed networks also provide **secure bidirectional communication**, enabling you not only to collect metering data and alarms, but also to interact remotely with the meter to modify its parameters or perform updates.

Hybrid reading: maximum coverage, guaranteed service continuity

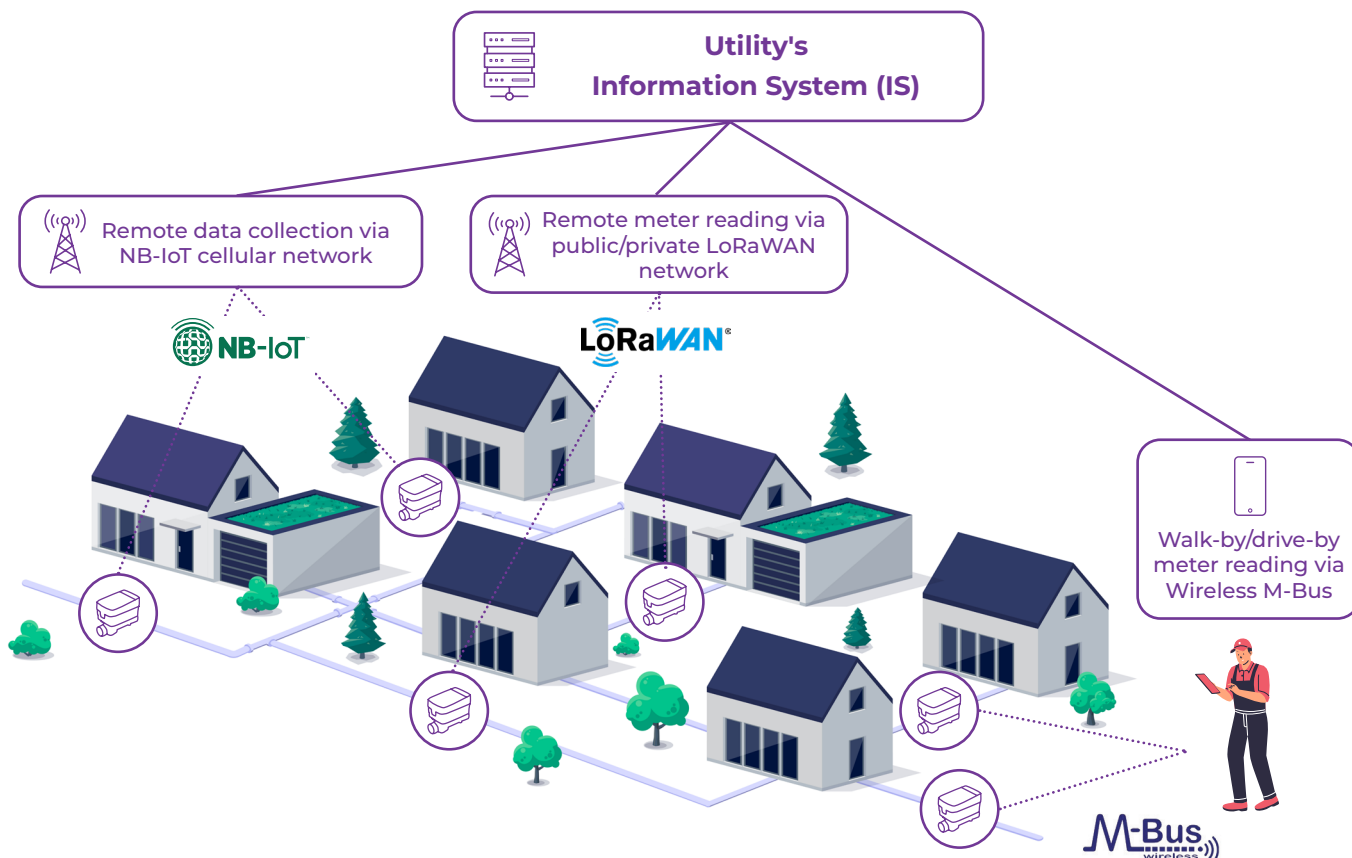


Automatic daily **remote meter reading**

- Direct data transmission to the Information System
- Extended network coverage

Walk-by/drive-by meter reading

- Areas outside network coverage
- Backup communication solution



Maximizing NB-IoT collection performance

To maximize data collection via the NB-IoT network, Sagemcom offers two complementary solutions to improve radio connectivity performance and ensure that the meter remains adaptable to network evolutions throughout its lifetime.



eSIM GSMA SGP.32 – Multiple profiles, one SIM card

- Support for multiple operator profiles on a single SIM card
- Operator selection based on network coverage availability
- Ability to add or modify operator profiles throughout the meter's lifetime
- Flexibility to adapt to evolving telecom contracts
- Reduced risks associated with dependency on a single operator

SMA connector for external antenna – The right antenna for each installation

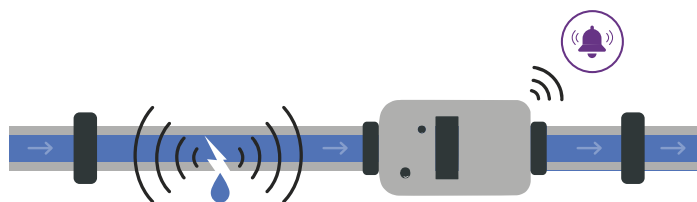
- Designed for installations with poor radio coverage
- Especially suited for deep pits, underground chambers and technical rooms
- Compatible with a wide range of external antennas



The **SICONIA® WM Advanced-AP** range gives you a more complete and accurate view of your network and effectively contributes to reducing non-revenue water (NRW), while improving service performance and reliability.

Listen to the network. Locate leaks. Reduce Non-Revenue Water (NRW)

As soon as a leak appears, whether on the distribution network or at the customer's premises, the **dedicated low-frequency acoustic sensor** captures the vibrations propagating through the pipes, even over long distances.



Using acoustic data from several meters, the solution **precisely locates the leak** by triangulation. Thanks to our advanced analytics algorithms, alerts are automatically generated and transmitted, reducing detection times and enabling targeted intervention before losses worsen. This solution is therefore a major asset for sustainably reducing non-revenue water (NRW) and improving network performance.

Monitor and optimize network pressure

The integrated pressure sensor provides continuous visibility of pressure at the point of delivery, helping optimize network performance, reduce water losses and sustainably improve quality of service.

- **Receive real-time alerts through spontaneous alarms** for overpressure, underpressure or pipe burst events, so you can intervene immediately before impacts worsen.
- **Ensure your contractual level of service** through continuous pressure monitoring at each subscriber's premises and rapid anomaly detection.
- **Control the network's hydraulic head** to ensure homogeneous distribution, prevent underpressure or overpressure areas and improve the overall efficiency of the infrastructure.

- **Protect your infrastructure over the long term** by controlling overpressure and hydraulic variations, thereby limiting pipe wear and the risk of new leaks.
- **Reduce operating costs** through dynamic pressure management, also helping reduce the network's energy consumption.
- **Accelerate decision-making with accurate field data**, improving hydraulic modeling, intervention planning and investment optimization.

Pressure sensor use cases:

1 Localized Pressure Drop

The pressure sensor enables the detection and localization of hydraulic incidents across the water network. Hydraulic head, which combines elevation and pressure, is the key reference parameter for water network analysis.

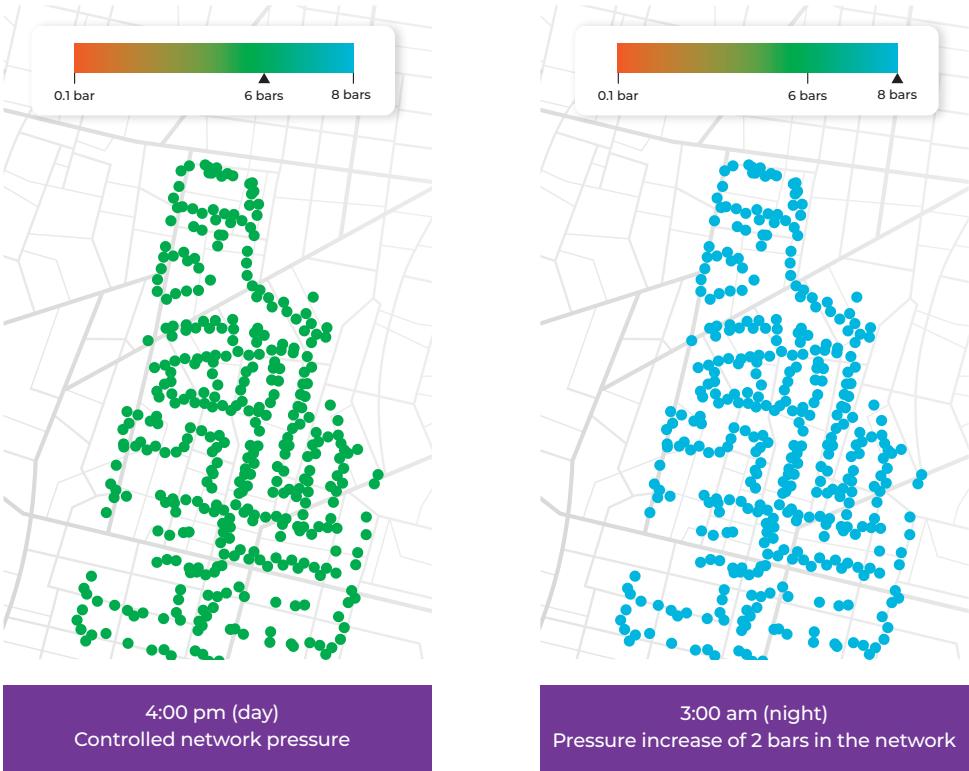


A localized low-pressure zone may indicate an exceptional withdrawal event, such as fire hydrant operation, a pipe burst, or a pump failure. The integrated pressure sensor immediately detects the event, quantifies its impact, and generates an alert.

2 Continuous pressure management

During the day, the integrated sensor enables the identification of service connections where the contractual pressure level is not being met.

At night, network pressure may increase due to lower water consumption. Optimizing this pressure reduces the stress exerted on infrastructure, thereby limiting the occurrence of new leaks while also decreasing the energy consumption associated with pumping.



Combining an acoustic sensor and a pressure sensor within the same meter significantly enriches the data available for our **analytical algorithms**, enabling earlier, more reliable and more accurately localized leak detection within the network.

Technical features

TECHNICAL CERTIFICATIONS

- ISO 4064
- MID, OIML R49 and INMETRO
- EN 13757

DRINKING WATER CERTIFICATIONS

- Large portfolio of drinking water certifications, including in particular :
 - WRAS
 - ACS
 - DM174
 - HYDROCHECK
 - KIWA
 - Compliant with the European Drinking Water Directive (DWD)

COMMUNICATION



- Hybrid communication :
 - NB-IoT
 - LoRaWAN 1.0.4 : Bands EU868, US915, AU915 and AS923
 - wM-Bus 868MHz
- Bidirectional communication : Firmware Over The Air (FOTA) and On-Demand Read (ODR)
- Configurable spontaneous alarms
- Local Bluetooth interface for after-sales service

CYBERSECURITY

- Security by Design approach
- Compliance with European regulations: NIS 2, Cyber Resilience Act (CRA), etc.
- Data encryption

SMART NETWORK MONITORING

- Early leak detection across the distribution network and customer premises, helping reduce water losses
- Continuous pressure monitoring
- Ambient and water temperature monitoring
- Advanced protection against fraud and tampering
- Backflow detection and measurement

ENERGY

- Lithium battery
- Up to 15 years of lifetime*

ENVIRONMENT

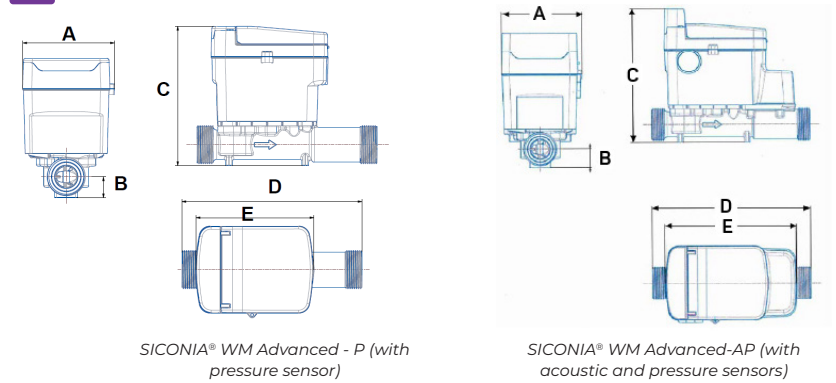
- IP68 protection rating
- Ambient temperature : -20°C to +70°C

*Depends on configuration and environmental conditions

Metrology

	SICONIA® WM Advanced-AP		
	DN15	DN20	DN25
Accuracy class	Class 2		
Permanent flow rate : Q3	2.5 m³/h	4 m³/h	6.3 m³/h
Starting flow	2 l/h	3 l/h	6 l/h
R ratio (Q3/Q1)	R250 to R800	R250 to R630	R250 to R400
Nominal pressure	16 bars		
Temperature class	T30, T50		
Measurement frequency	8 flow measurements per second		
Installation in any position	H, V, H/V		
Sensitive class	U0/D0		

Dimensions



	SICONIA® WM Advanced-AP		
	DN15	DN20	DN25
Threads	G3/4"	G1"	G1"½
A (mm)	78.4	78.4	78.4
B (mm)	14	18	21
C (mm)	129.3	134.3	139.3
D (mm)	110, 115, 134, 165	130, 154, 165, 190	178, 260
E (mm)	106.6	106.6 (127.7 with acoustic)	106.6 (127.7 with acoustic)
Materials	Brass or Composite (PPS 40%GF)		

The **acoustic sensor** is available on the lengths written in purple (brass only)

LCD Interface

The complete SICONIA® WM water meter range features an LCD display. With its 10-digit register (7 integer digits and 3 decimal digits), it ensures highly accurate reading and offers a display capacity that exceeds the requirements of the Measuring Instruments Directive (MID).

	1	The measured volumes are indicated in m³, associated with 3 decimal places giving an indication in liters
	2	Animated icons showing when there is an active flow through the meter
	3	MID certified information
	4	The meter is in a backflow situation
	5	The pipe is not filled with water
	6	One or more events/alarms are currently active
	7	RF status information
	8	Battery level information

All rights reserved. The information and specifications included are subject to change without prior notice. Sagemcom Energy & Telecom tries to ensure that all information in this document is correct, but does not accept liability for error or omission. Non contractual document. All trademarks are registered by their respective owners. Simplified joint stock company Capital 36 626 034,60 Euros - 518 250 337 RCS Nanterre. 10/2026

Sagemcom Energy & Telecom SAS

Headquarters : 4 Allée des Messageries
92270 Bois-Colombes - FRANCE
Tel : +33 (0)1 57 61 10 00 - Fax : +33 (0)1 57 61 10 01

www.sagemcom.com

Sagemcom