

Sagemcom



SICONIA[®] WM Advanced - VP

NB-IoT

An ultrasonic smart water meter featuring an integrated remote control valve and pressure sensor

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.

The SICONIA® WM Advanced - VP water meter leverages existing cellular IoT networks to provide reliable and secure remote data transmission. It enables rapid reporting of critical alarms and daily consumption monitoring.

With its **integrated remote-controlled valve and pressure sensor (option to be selected when ordering)**, SICONIA® WM Advanced-VP enhances network monitoring and water management, helping utilities improve operational efficiency and service quality.

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-VP** 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.

Control the network remotely with the integrated valve

The **remotely controlled** valve turns the meter into a true network control point, enabling utilities to act on flow without any field intervention. Thanks to its multiple positions, the valve can either provide a reduced flow rate or completely shut off the water supply, depending on local regulations. This helps protect installations, secure revenues, and manage consumption as closely as possible to each subscriber.

- **Protect installations with automatic shut-off in the event of a leak** or abnormal consumption, preventing water damage and waste before the situation worsens.

- **Secure your revenues** by limiting the flow of subscribers with outstanding payments, providing an effective recovery lever while maintaining a minimum service level and preserving the customer relationship.

- **Offer a prepaid service** where the valve opens only when credit is available, enabling precise and autonomous consumption management.

- **Reduce your operating costs** by eliminating field visits for disconnections, reconnections, and emergency interventions, which can now be performed remotely.

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.

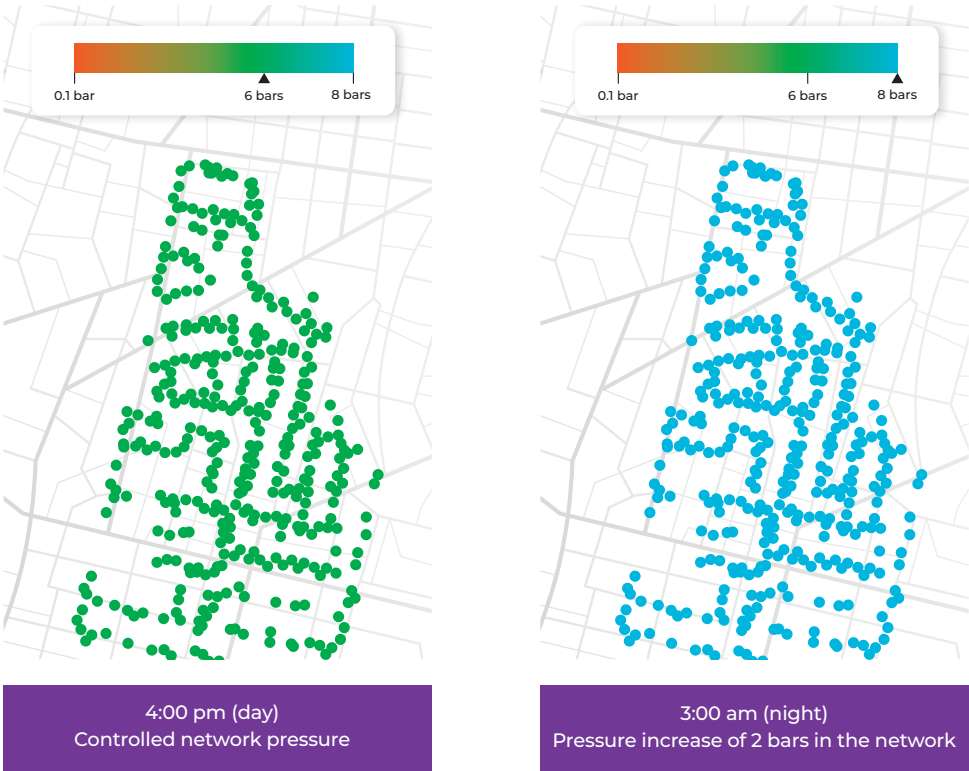


A localized low-pressure zone may indicate an exceptional withdrawal event, such as fire hydrant operation, a pipe burst, or a pump failure. The integrated pressure sensor immediately detects the event, quantifies its impact, and generates an alert.

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



- NB-IoT
- 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 dection and loss reduction
- Continuous pressure monitoring
- Remote valve control
- Ambient and water temperature monitoring
- Advanced protection against fraud and tampering
- Backflow detection and measurement

ENERGY

- Lithium battery
- Up to 13 years of lifetime*

ENVIRONMENT

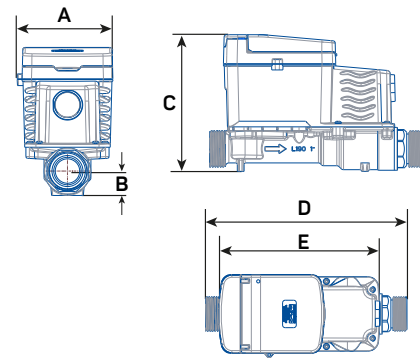
- IP68 protection rating
- Ambient temperature : -20°C to +70°C

*Depends on configuration and environmental conditions

Metrology

SICONIA® WM Advanced - VP	
DN20	
Accuracy class	Class 2
Permanent flow rate : Q3	4 m³/h
Starting flow	3 l/h
R ratio (Q3/Q1)	R250 to R800
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 - VP	
DN20	
Threads	G1"
A (mm)	78.4
B (mm)	18
C (mm)	134.3
D (mm)	190
E (mm)	151.2
Materials	Brass

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

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