

SMART FLOW Data logger.

Remote flow and pressure monitoring.

Data logger with built-in with LTE Cat. M1/NB IoT/2G communication module

SMART FLOW Data logger is a compact data logger which registers pressure and water flow in water works network. It uses the licensed GSM network infrastructure for data transmission.

The device meets the requirements of IP68 , it's designed to be installed in full immersion.

The logger can be installed directly on the water meter and record the volume using inductive sensors.

Additionally, the recorder is equipped with two configurable inputs that can be used as: impulse inputs to connect water meters, pressure sensor inputs, digital binary inputs.

SMART FLOW data logger is equipped with the NFC interface designed to configure the device locally.

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SMART FLOW reserves the right to implement changes in the design of the equipment without prior notice. The functions indicated above are examples and are adjusted depending on the Manufacturer and software of a given system. Purchaser is obliged to inform SMART FLOW about the required functionalities.



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Features.

- Registration of counters from associated flow meters or water meters with a configurable recording period from 1 to 60 minutes. The numerator value is recorded in full resolution together with the fractional part in m³. Each sample is identified by a time stamp and a unique record identifier
- Registration of minimum and maximum pressure values with independently configurable measurement and recording period from 1 to 60 minutes
- Built-in inductive sensor for direct installation with a compatible water meter
- Built-in magnetic field sensor detects tampering attempts from a directly cooperating magnetic clutch water meter
- Built-in water sensor around the device, register and detects ex. moment of flooding of the chamber and restoring normal condition
- Built-in ambient temperature sensor
- Supports all types of impulse connections with flow direction support from up to two flowmeters attached independently
- It has a geolocation position register for synchronizing the installation location with the associated telemetry system
- It has a local communication interface in the NFC standard enabling local configuration of the device and local reading of recorded data and alarms in CSV format.



Process alarms in real-time.

Two-level identification of exceeding the minimum and maximum flow (warning and alarm option) independently for both associated water meters/flowmeters

Two-level identification of exceeding the lower and upper water pressure levels or its level, independent for both measurement inputs

Alarm for pre-programmed water leakage detection

Water backflow detection

Movement detection, removing the device from the water meter

Status alarm from up to four two-state sensors, e.g.: open, position, level with the possibility of assigning a label

System alarms.

Low battery level

Opening the device housing

Flooding of the water meter chamber surrounding the device

No GSM network coverage

Alarms are recorded in the local memory with the date, hour, minute and second of alarm opening and ending. Process alarms are sent immediately to the associated telemetry system.



Technical specification.

Power supply	High-current lithium-thionyl battery with a nominal voltage of 3.6V, size D according to IEC 60086-1 and a maximum capacity of 14 Ah. Battery life: 5 years when sending data once a day.
Ingress protection	IP68 according to EN 60529
Operating temperature	From -25oC to +50oC
Dimensions	109,3 mm x 109,02 mm x 44,7 mm
SMART FLOW Inputs	<ul style="list-style-type: none">• Inductive sensor for compatible water meters: ITRON, DIEHL METERING, APATOR, SENSUS (direct connection)• Flood sensor• Magnetic field sensor• Two measurement inputs: voltage 0.5 to 4.5V• Four digital inputs: binary – signaling or counting
SMART FLOW pressure sensor	<ul style="list-style-type: none">• Option 1: pressure sensor 0-10 bar (measurement accuracy: 0,5% FS)• Option 2: pressure sensor 0-26 bar (measurement accuracy: 0,5% FS) Operating temperature: from 0oC to +30oC
Data registration period	Measurement data (support for two bi-directional counters, analog inputs (parallel recording of minimum and maximum values): from 1 to 60 minutes, events with time of occurrence and end
Reporting frequency	Configurable from 1 to N times per day, direct report after occurrence of the alarm
Data transmission	<ul style="list-style-type: none">• Local data readout via mobile device with NFC• Integrated LTE Cat. M1/NB IoT/2G modem• Support for transmission protocols: TCP, UDP, HTTP, FTP, SMS
Clock	Built-in clock for official and universal time. Synchronized with the GSM network operator or NTP time server