

Hydro Meter H12-G (-N)

Smart metering module for wireless meter readings



- *Optimized for wireless reading from the electronic meter iPERL™*
- *Reliable digital reading of data directly from the meter*
- *Indication of backflow and indication of absence of medium*
- *Emergency detection and recording*
- *Readings in the daily interval*
- *GPRS (H12-G) or NB-IoT (H12-N)*
- *Local NFC communication (phone, tablet)*
- *Mechanically resistant design, high IP67 protection, non-corrosive materials, self-diagnostic functions*
- *Partnership with meter manufacturers, secure communication*

Basic description

The Hydro Meter H12 module is a wireless module used for remote readings of electronic water meters in smart metering networks with support for the SensusRF radio protocol at frequencies of 433 and 868 Mhz.

In addition to the counter status, the H12 module also monitors extraordinary events, such as reverse flow, disconnection of the sensor from the meter, exceeding the set limits, etc.

Hydro Meter H12 allows users to access online and historical consumption at individual consumption points and monitor emergencies in near real time.

Connectivity

Communication of the H12 module with the meter is performed wirelessly at regular intervals. Together with the value of the counter, the meter transmits information about detected alarms.

Remote communication is realized by GPRS technology and is performed automatically according to the settings of the module parameters or it can be called locally via the NFC interface.

The device automatically logs in to all available networks of operators at the place of installation of the module, including foreign operators, while maintaining the same operating costs for the transmitted data *). This feature can be used to advantage, for example, in border areas or in the event of a failure of one of the available networks.

The device is without a classic SIM card. This achieves higher reliability and integration of the device, which can be quickly installed without the administration associated with the management and procurement of a suitable SIM card.

Basic functions

You can monitor the status and special events such as:

- backflow detection
- exceeding the maximum flow value
- exceeding the daily set limit
- exceeding the night minimum
- separate consumption counters for tariffs
- detection of the absence of the medium
- low battery detection
- battery disconnection detection

The reading interval of the current counter status can be configured. The frequency of data transmissions can be selected at intervals of daily, weekly or monthly. Extraordinary events are sent as a matter of priority - immediately after they are detected.

Follow-up services

By default, data from the device is published through a unified portal for data visualization and management operated by the device manufacturer. It is a graphical superstructure for administration and supervision, which is suitable for users of administration and maintenance of a smart metering network.

Optionally, a comprehensive data visualization service can be offered to the operator's end customers, which can be tailored to individual needs - such as daily, monthly and annual subscription reports, forecasts, emergency notifications via e-mail or SMS. The basic variant of data publication is the establishment of web services for integration with the customer's information system.

*) Applies only to H11-G in the European Union. For conditions in other states, please contact info@fiedler.company

Mechanical design

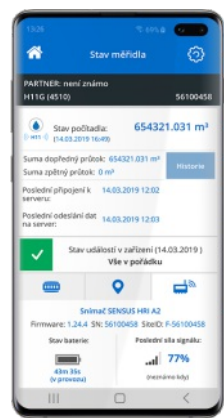
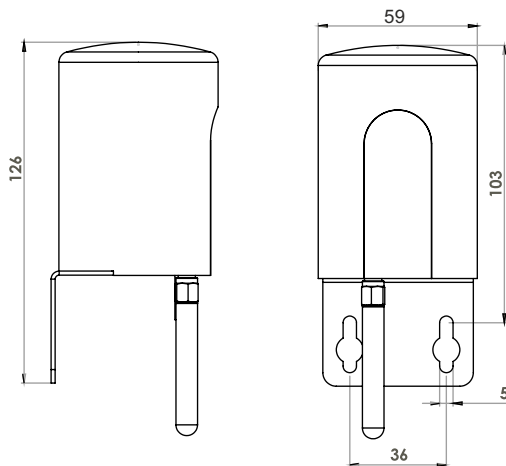
The Hydro Meter H12 module is designed for long-term operation without an external power supply. The body of the module with compact dimensions is made of highly durable materials that excel in long life when operating in extremely humid and dusty environments. The materials used are made of chemically stable plastic and the holder is made of stainless steel. The protection meets the IP67 standard.

The design is designed so that the device can operate reliably and unattended for the life of the meter. The service life is mainly affected by the battery, the service life of which depends mainly on the frequency of sending data. The device is optimized for sending daily counters at weekly intervals. The battery pack is designed to be replaceable. After removing the stainless steel module holder, the battery compartment is exposed.

The device is equipped with an integrated antenna in the body of the module for receiving data from up to two wireless meters. For the deployment of the module on the site, the installation of meters with support for radio communication using the SensusRF protocol is assumed.

Technical parameters

Meter connection:	radio connection, SensusRF protocol, 433/868 MHz, internal antenna
Flow registration:	separate counter states for normal and return flow
Counter status storage:	adjustable in the interval 1 hour to 1 month (default 1x / day at 00: 00*)
Counter size:	64 bits (> 1.8 * 1016 m3), resolution 1 liter
Type of local communication:	NFC - reading current values, command
Remote communication:	GPRS module, adjustable frequency 1x day..1x month
GSM antenna:	external - included, SMA connector
Frequency bands -G:	2G GPRS Class 12; 850, 900, 1800, 1900 MHz / 800 MHz / B20
Extraordinary transmissions:	possibility of transmission after event detection *)
Self-diagnostics:	battery voltage, GSM field strength, total time of switching on the GSM
Power battery:	primary lithium battery 3.6 V / 13 Ah, connected cable with connector
Battery life:	up to 10 years depending on the frequency and volume of GSM transmissions, reading frequency
Dimensions:	diameter 59 mm, height 90 mm (without holder and GSM antenna)
Material:	plastic (POM) and stainless steel (holder)
Weight / IP:	350 g (including battery and GSM antenna) / IP67



Installation

The mechanical installation of the H12 module consists in its installation within a range of up to 100 m from the meter - this allows installation outside the shaft in which the meter is located. The module can therefore be mounted in a suitable place with a GSM signal to ensure stable communication.

Settings can be made remotely via the CloudFM portal or on site / site with the Connect mobile application.

You can communicate with the device contactlessly using a mobile phone or tablet. There is no need to connect with a communication cable, it is enough to attach a portable device equipped with NFC wireless communication technology.

A standard Internet browser can be used for remote setup. The setup wizard ensures that the device is properly paired before it is installed on site.

For pairing, it is necessary to know the serial number (S / N) of the H12 module, the identification number of the meter and the mode for communication (frequency). Pairing can therefore be performed without knowledge of the current state of the meter on the meter and without detailed technical knowledge of the meter, eg pulse weight. This minimizes the risk of human error.

*) battery life is inversely proportional to the frequency of traffic on the server, the number of transferred cases and the frequency meter reading.