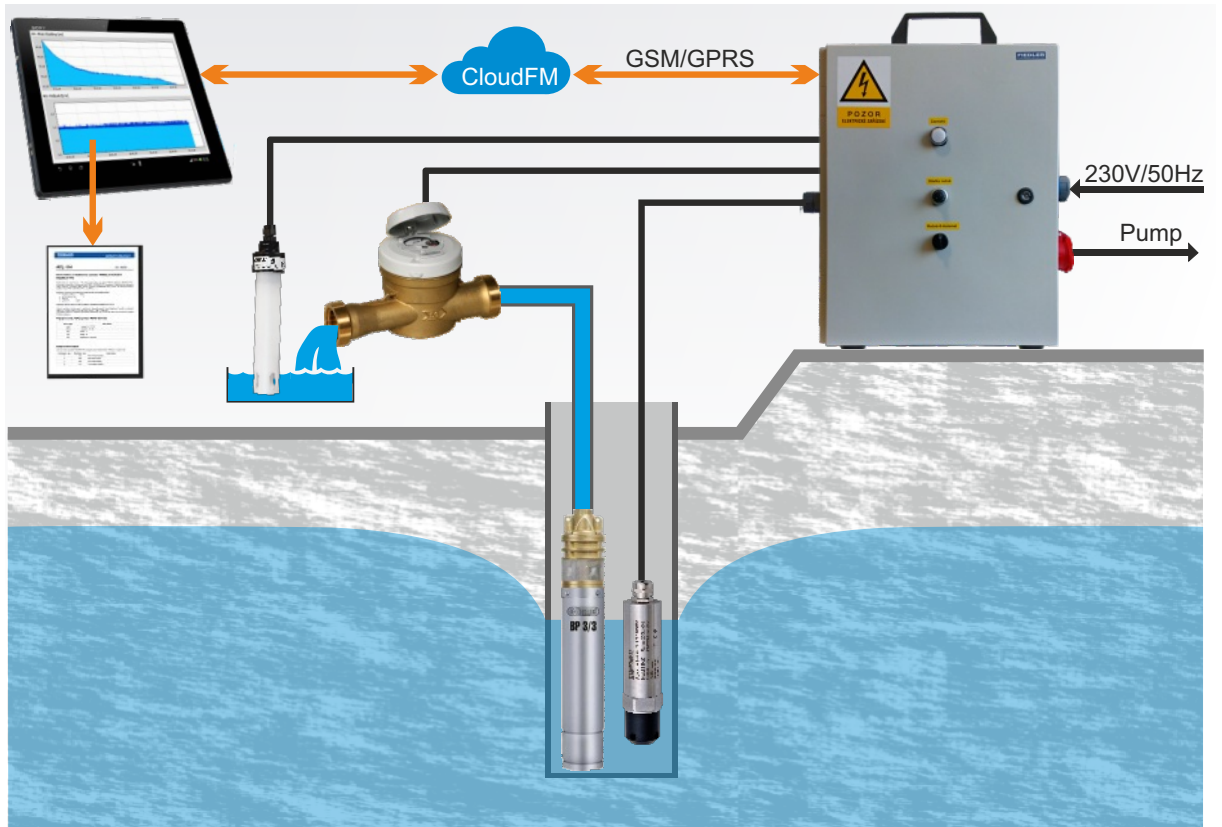


H510 Variable Measuring Set for performing pumping tests of drilled wells



Basic description

Hydrodynamic pumping and rising tests are used to verify the yield of drilled wells. The H510 set enables the automatic performance of these hydro-dynamic tests autonomously and for a long time, even without the requirement for the presence of an operator at the equipment.

Constant flow or level control

The control recording unit of the assembly continuously measures the level in the well using an immersion level sensor and regulates the pump speed in the well via a frequency converter to ensure either a constant, preset flow independent of the current level in the well or maintain such a flow with pump speed pumping to maintain a constant level. The pump flow is continuously measured by a water meter, which is part of the H510 assembly as well as an immersion level sensor.

Remote control

The control unit records the measured level and the instantaneous flow in its data memory and transmits these measured values at regular intervals via the GSM / GPRS network to a database operated on the manufacturer's server.

The user has access to the measured data via a web browser in the form of graphs and tables. Data can be downloaded from the server to your own PC and create overview reports, etc.

Measuring set control

The control panel of the switchboard contains a switch between manual and automatic operation of the device.

Manual steering

In manual operation, the pump speed is set using a multi-turn adjustment element on the cabinet door so that the required flow through the water meter can be fine-tuned. The measured data on the level height and the total flow are displayed on the color graphic touch display of the measuring station.

Automatic operation

By default, the assembly is set to constant flow control mode. The required flow rate can be entered on site via the keyboard and display of the control unit, or remotely from the cloud environment.

The automatic operation of the device uses the P3 controller of the H3 unit to control the speed of the pump. The current output of the controller controls the frequency converter connected in front of the pump so that a constant flow is maintained even when the level above the pump changes.

Remote control

The authorized user can not only check the measured data via a web browser, but also remotely change the settings of the parameters of the current pumping test (eg required instantaneous flow or required level, change limit values for sending warning SMS and more).

H510 variable measuring set

FOR PERFORMING PUMPING TESTS OF DRILLED WELLS

Composition of the measuring set

The basic composition of the measuring set includes:

- Switchboard equipped with: H3 control unit, frequency converter, 230V/16A connection for power cable, 3x400V / 16A socket for 3x400V pump, 1.5 kW, controls for manual control, connectors for connection of level probe and water meter
- Water meter FLODIS 2.5-15-165-3/4
- Inductive speed sensor of water meter CYBLE
- Immersion level sensor TSH37-40/50K
- Hinge for mounting the level sensor
- O2 Standard CZ SIM card - long-term loan

The measuring range of the level sensor and the length of its cable or the type of water meter can be changed according to the requirements of the customer. When ordering the device, it is also possible to agree on an extension of the number of input connectors for additional addition of quality probes to the set.

Datahosting

The report also includes the right to use data hosting on the manufacturer's server. SIM card rental and the use of data hosting is a paid service operated on the basis of a concluded contractual relationship between the manufacturer and the customer of the set.

Add-ons and extensions

The basic measuring set can be supplemented with qualitative sensors of pumped water:

- PH485 probe (pH and water temp. measurement)
- ESV11 probe (water conductivity measurement)
- S461 sensor (optical haze sensor)

The measuring probes can be placed in the well behind the water meter.

The large number of recording channels of the H3 control unit also allows for possible monitoring of the levels of existing wells and boreholes in the vicinity. A limitation in this case may be the length of the connecting cables between the control unit and the level measuring point, or even the number of inputs of the control unit.

Control system

The warning SMS system integrated in the H3 control unit checks the measured values and, if the pre-set limits of the monitored level or flow are exceeded, it sends a warning SMS to the selected telephone numbers.

In the event of a mains supply failure, the control unit of the measuring set is powered by an internal backup battery. The SMS warning system can thus alert the operator both to a mains power failure at the measurement site and to its resumption.



Technical parameters:

Power supply:	connection for power cable, 230 V AC / 16 A
Pump output:	socket 3 x 400 V AC / 16 A
Maximum permitted pump power:	1.5 kW
Measuring unit control unit:	H3-G-TB3-B
Frequency converter:	ATV320U15M2C
Cabinet dimensions:	515 x 415 x 230 mm (without portable handle and drawers)
Weight:	20 kg
Level sensor:	TSH23, measuring range 0..40 m water column, cable 50 m
Water meter:	FLODIS 2.5-15-165-3/4, Qn = 2.5 m ³ / hour, DN 15, thread G 3/4"