HYDRO LOGGER H1
Small telemetric stations - GSM Datalogger

- *Pulse inputs for connection of OPTO and REED water meter sensors*
- *Current inputs for pressure and water level sensors in water reservoirs and pumping stations*
- *Binary inputs(flooding, running of pumps)*
- *Data GSM/GPRS transfers into the server*
- *Integrated warning SMS messages system*
- *Operating time of the battery up to 5 years without its exchanging, input for external power supply 12VDC*
- *Parameters configurable via the Internet*
- *Robust enclosure with High Protection Ip67*

FIEDLER

Cheap and reliable hydro logger for shafts, storage water tanks and pumping stations.

Water level monitoring in storage water tanks

Reading of water meters

Registration of pressures

Calculation and recording of instantaneous flow

Low operating costs

Own power supply

GPRS communication

Warning SMS system

Examples of applications

HYDRO LOGGER H1 is one of small telemetric stations developed by FIEDLER-MÁGR. Datalogger Is suitable for data collecting from places without mains power supply. Also H1 are used in a cases when shorter intervals of measured data transfering into the server are enough (daily intervals). Data transfer and sending SMS are activated as soon as preset limit values are reached.

Typical application of HYDRO LOGGER H1:

- Telecounting of water meters. Monitoring of instantaneous and minimal night flows.
- Continual flow, pressure and level monitoring in shafts and storage water tanks.
- Network of rain gauge and stream gauge stations with possibility to send warning SMS

Basic describtion

HYDRO LOGGER H1 has a graphic screen for measured values displaying (flow, pressure, water level, temperature, battery voltage). The screen also displays an actual signal of GSM for easier installation in outdoor. H1 has its own battery designed for several years of operation. This battery can be spared by connecting of external power supply 8-15 VDC.
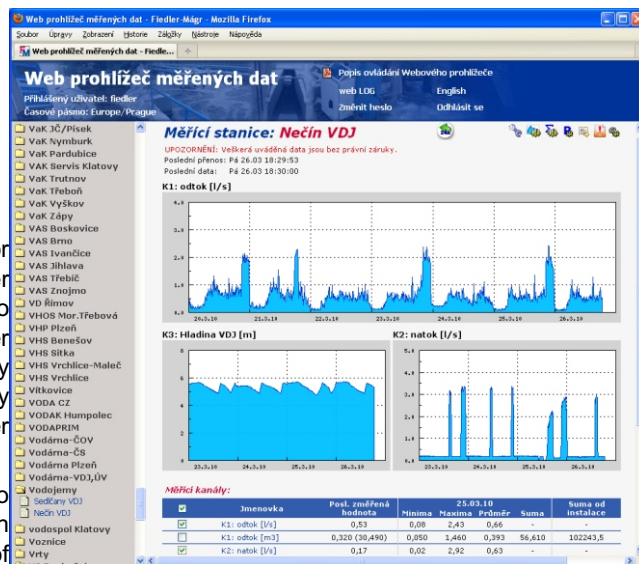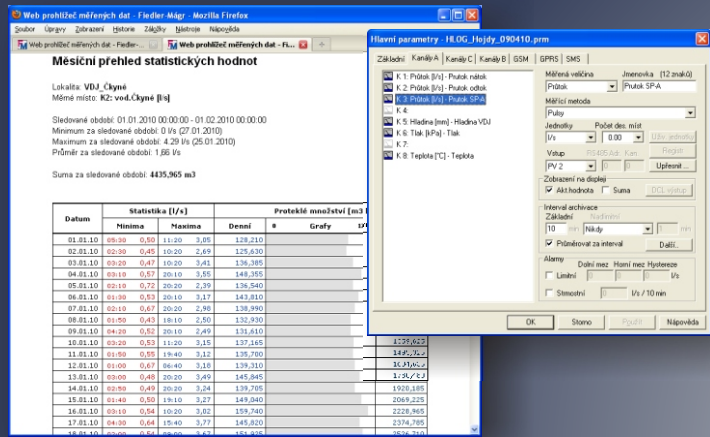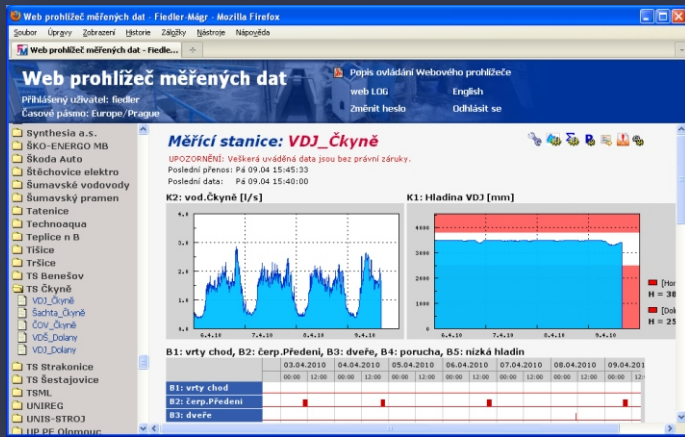
A buid-in programmable voltage changer allowes to connet up to 2 pressure or water level sensores with output signal 4-20mA. Current for power supply of these sensores and OPTO sensores is monitored . If current is increasing, the user is warn of possible failure of connected sensores. The memory capacity and software of H1 are practicaly not different from stations STELA.

H1 has a robust mechanical design with High Protection IP67,which is necessary for placing in a permanently humid environment of storage water tanks, water treatment plants and shafts.

Data hosting

HYDRO LOGGER H1 makes use of producers data hosting in the same way like stations M4016 and STELA. No need for the user to make own server and to do operations and services around it.

Registered users have access to saved data on the server, through standard web browser, whenever. Except of graphical and chart visualization, the server also enables statistical calculations of balance flow rates, search out of limit values, data exports in several sizes and other functions.

Water Supply Hydro-meteorology Science & Research

Full list of products and price list are available on:
www.fiedler-magr.cz
e-mail: fiedler@fiedler-magr.cz

SOFTWARE

Measuring channels

Specific name, number of decimal positions for measuring and archiving, units, measuring method and many other parameters are possible to assign to each recording channel.

The archiving interval is adjustable separately for each channel. After getting over set limits (limit alarm) or after quick change of values (gradient alarm), station data logger enables to display more often records of selected values.

Checking channels for recording of battery voltage, size of external power supply voltage, current took by connected sensors, sensors of temp. and humidity inside the data logger were newly added.
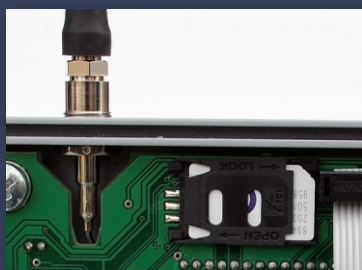
Basic soft functions

- Calculation an instant. flow from pulses (REEDand OPTO).
- Monitoring of daily and total flow from the date of installation.
- Calculating function above measuring channels (total, sliding total or average, differences, trends, correction with polynom of second number) with output into the separate channel and into the SMS….
- Limit and gradient alarms for each channel.

Data transfer between server and DATA LOGGER H1:

- Measured data transfer to the server in set times..
- After alarm state evaluation, switch to more often transfers.
- Controlling supply of the GPRS module enables long year lasting operations with no need of battery exchange more than 4000 data reports or SMS messages.
- Parameter. via the server including saving changes in setting.
- Setting of time at the station according to server.
- FW data logger upgrade through the server.

Warning and informative SMS system:

- Phonebook for 10 recipients, grouping enabled.
- 14 adjustable warning SMS messages (arbitrary text, automatic inserting of actual values, various launching conditions with operating period, hysteresis).
- 8 pre-set SMS messages.
- Possibility to compound informative SMS messages (actual values, remaining credit balance, maximums and minimums…)
- Time of inf. SMS delivery is adjustable in daily, weekly and monthly demand.

CONNECTING OF SENSORS

Inputs:

- **PV1-PV2:** 2 quick inputs with integrated pulses counters for OPTO or REED sensors.
- **PV3-PV4:** 2 Pulse-binary inputs for REED sensors or like inputs of binary states (running or failure of pumps, flooding of reservoirs, security guard, etc.)
- **AV1- AV2:** 2 current inputs: analogue signal 0-20 mA, 4-20 mA, 1-5 mA, 0-5 mA, 0-1 mA.
- Variation: 2 voltage inputs: 0 to 2,0V
- **RS-485:** Serial network interface for connection of separate measuring probes (e.g. US1200-ultrasonic water level sensor).
- **T1:** input for connexion of external temperature sensor DIGITHERM (semiconductor sensor with accuracy better than 0,5 °C).

HYDRO LOGGER H1 is equiped by combinated sensor which monitors temperature and humidity inside the device.

PC (laptop) connection under software MOST:

- conector M8 - Rs232, communication cable KP232/M8 and converter USB/RS232to the device can be ordered

TECHNICAL PARAMETERS

Recording channels: 8 analogues, 4 binary, 1 text, 8 checking

AD converter resolution: 16 bits, 0-3 decimal place

Sensors power supply: programmable voltage 6V/14V, current measurement

Storage Interval: adjustable separately for each recording channel, in range from1 minute up to 1 day.

Data memory: 2MB Flash, up to 300.000 values

Supported values: flow, water lewel, pressure, rainfalls, temp.

Real time correction: automatic from the server

Supply battery: one lithium battery SAFT LSH 20 3,6V / 13Ah

External power supply volt.: 8-15VDC, quescent current 50uA

Number of sent data reports or SMS messages: 4.000

Operating time: 5 years without battery changing - according to the number and type of connected senors, frequency of measurement and number of data reports

GSM/GPRS module: GPRS Class 12, slots: 4Rx / 4Tx

GSM antenna: mast ant. 1dB, FME conector (incl. in the price)

Working temperature range: -20 ... +50 °C

Material of case: Aluminium, alloy and plastic, **Cover:** IP67

Dimension: 160 x 90 x 60 mm (without GSM and entry gland)

Weight: 1,05 kg including a stainless holder and battery

Data server: https://stanice.fiedler-magr.cz