SlimLogCom
Groundwater Monitoring - Online

Data collection and transmission of water level and quality via GSM/GPRS or FTP-Push

Key Features

- Data transmission via GSM/GPRS networks:
  - automatic data retrieval
  - Data push to FTP-servers
  - SMS data transmission
  - SMS-Alarm
- Time-Server synchronisation
- Memory for 280.000 values
- Possibility of event-driven data acquisition
- Watch-dog function for safe operation and high data security
- Cost reduction due to longer control intervals
- for observation tubes starting from Ø 1 $^{1}/_{2}$ ”
- Subsurface installation possible

Subsurface installation

Internet-Hydrocenter

Longtime Monitoring

Groundwater Monitoring site

Measuring site installation

Fresh water reservoirs

Flow measurement

Configuration with SEBA-HDA

We are certified
ISO 9001:2008
Certificate No. 01150509
Quality is our standard

System Description

The GSM/GPRS transmission and datalogging system SlimLogCom is a miniature data transmission system with integrated data logger for an economic control of groundwater monitoring stations.
The following features are characteristic for the SlimLogCom System:

1. Compact Construction

Our SlimLogCom module with integrated GSM/GPRS modem and antenna is suitable for installation in observation wells starting from 1 $^{1}/_{2}$" diameter.
For observation wells 2" or bigger, control measurements with electric contact meters (KLL) are possible without removing the system from the casing.

2. Energy Management

Standardly, the system comes with three 1,5V Alkali manganese batteries. A sophisticated energy management (time slot procedure) provides high battery lifetime and therefore a minimum amount of maintenance. A battery change is blindingly easy.

For longer download intervals, the SlimLogCom system can be equipped with two 3,6 V lithium batteries. With a weekly download interval the lifetime of the sytems is more than 8 years.

3. Automatic call of the measuring sites and SMS alarm

The SlimLogCom System can be called comfortably in individually programmable time slots via the software DEMASole. Independently, alarm limits can be defined (e.g. water level, battery capacity). SMS alarms can be sent to up to 8 different mobile phone numbers, as well as by email (GPRS) or via a provider to a facsimile instrument.
Alternatively, data transmission is possible in push-operation to an FTP-Server. Registered data can also be sent via SMS if neccessary.

Sensors directly connectable to SlimLogCom

Water level:

- with DS22

measuring ranges:
0-2, 0-5, 0-10, 0-20 m

accuracy
± 0,1% = <1cm WL
at 10m measuring range

dimensions: Ø 22 mm
182 mm length

Water level/Temperature:

- with DST-22

as DS22
incl. temperature sensor

measuring range:
0°...25°C
(further ranges upon request)

accuracy:
± 0,1°C

dimensions: Ø 22 mm
182 mm length

Water quality:

- with MPS-D3, MPS-D8

for monitoring of parameters like:

- water level
- conductivity
- pH
- etc.

further technical information on the MPS please see Waterquality brochure

dimensions:
MPS-D3 Ø 40mm
MPS-D8 Ø 48mm

Operation with SEBA-HDA or Notebook

The adjustment and programming of the SlimLogCom System can be conducted with a notebook, an interface cable and the userfriendly configuratio software SEBAConfig. Alternatively to the notebook, SEBA recommends the robust, handy SEBA-HDA or SEBA-HDA Nomad (Hydrological Digital Assistent). Or ask for us for the new HDA-Pro (Tablet-PC).

SEBA-HDA "tough and robust handheld"

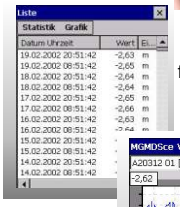
Robust PDA for tough field operations and an alternative to the notebook. Vibration, impact, dust and water resistant magnesium housing according to IP 67 for the operation between -30°C and +60°C. Operation time of up to 30 hours on one charge.

Simple operation resp. input of parameters (e.g of control values) via TFT colour LC-touchscreen or stylus

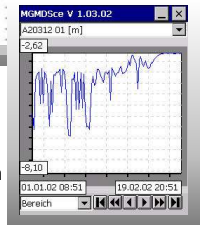
Included in the delivery:

- Operation software SEBA-ConfigCE for simple programming, adjustment and operation of the entire SlimLogCom System as well as for transmission of the stored values to your PC.
- Evaluation software MGMDS / MLMDS CE for plausibility check of stored measuring data in form of graphs and data sheets.

SEBA-HDA
with SEBAConfigCE



MLMDS CE
for presentation
in form of
data sheets



MGMDS CE
for presentation
in form of
graphs

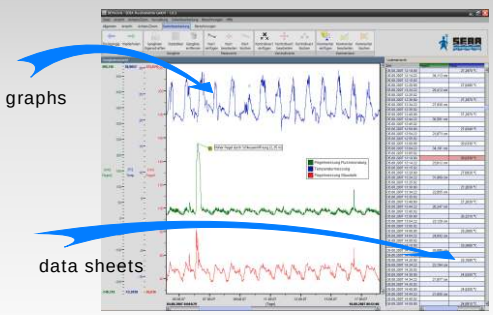
Automatic monitoring data retrieval with DEMASole or with Hydrocenter via Internet

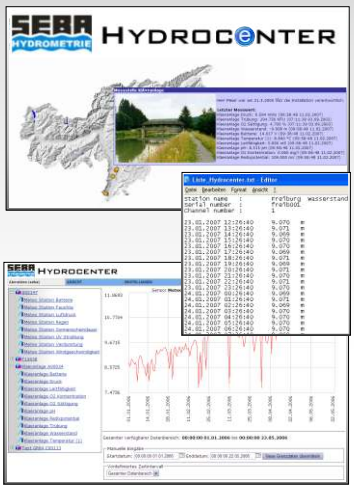
Storage and management of data (SQL-database) with DEMASdb and Visualisation of measuring values (graphs/lists) with DEMASvis

In order to conduct an automatic monitoring data retrieval from the SlimLogCom, the comfortable DEMASole software is implemented and the data can automatically be stored in DEMASdb.

DEMASdb offers a comfortable graphical user interface, an automatic data retrieval software (DEMASole) as well as an evaluation module (DEMASvis) which includes various calculation functions. Depending on the size of the network, DEMASdb is provided with a paradox-, MySQL or Oracle- database. Optionally, DEMASdb can also be integrated with an already existing SQL database (e.g Oracle, MySQL). DEMASdb enables a simple data management of monitoring networks of various extents: small (10 sensors), middle (50 sensors) and large (> 100 sensors).

graphical user interface





- Client/Server operation, network capability, user administration
- DEMASole: data retrieval of monitoring stations via GSM/GPRS, Satellite, landline or TCP/IP
- DEMASvis: evaluation of measuring data (multi-graphs,multi data sheet)
- DEMASdb: storage of monitoring data (SQL-database connection)
- Alarm in case of exceeding of predefined thresholds (e.g. FAX, SMS, Email)
- Export of monitoring data to other software (automatically)

Technical Data SlimLogCom

Electronics:
- consumption (in power down mode): < 50µA
- peak current (modem transmitting): max. 500mA
- serial flash memory with 4 MB (approx. 280.000 values)
- Flashcontroller 16bit with integrated watch-dog
- RTC (battery-backed)
- logical channels: up to 32 channels
- A/D converter 16 bit

Inputs:
- RS485 Sensor interface (SHWP)
- Up/down counter input, phase counter, impulse (rain)
- 2 contact inputs (control, protocol)
- 2 analogue (bi/unipolar) for standard signals (e.g 0-1V, 4-20mA etc.)

GSM/GPRS modem (integrated):
- Frequency: 850/900MHz/1800/1900MHz (EGSM, Quadband), GPRS
- HF output max: 2W (850/900 MHz); 1W (1800/1900 MHz)
- SIM-Card: 1,8V / 3V
- electric current: ~ 50mA (receipt)
  0.5A (transmission)
- FTP-Push Operation: in ZRXP or D-channel format
- SMS Transmission: in Binary format

Interface/s: RS 232
Option: Bluetooth
(additional external module)

SMS-Alarm: 8 x SMS-Alarm to a mobile phone
SMS-Alarm to facsimile instrument

Time Slots: freely adjustable

Power Supply:

Standard: 3x1,5V Alkali-Manganese batteries
operation time: > 1 year @ 1 call/day

Option: 2x3,6V Lithium batteries
operation time: up to 8 years @ 1 call/week
(depending on the quality of the GSM connection)

Housing: aluminium, IP67
dimensions: Ø 35 mm, height 380 mm
height incl. antenna 420 mm

Antenna: screwed on, robust, weather-proof
standardly with dualband mini rod antenna*)

Operating temperature: -20°...+70°C

*) Possibility to connect external antenna (e.g. subsurface antenna, Puck antenna, angle rod antenna etc.)

SEBA Data logger

Pressure Sensor DS-22
for water level registration

- high accurate, robust and long-term stable pressure transducer with stainless steel housing
- accuracy: <± 0,1% = <1cm WS at 10m measuring range
- long-term stability: <0,1% /year
- measuring ranges: 2,5; 5,0; 10,0; m waterlevel etc.
- special cable for pressure transducer (food safe!) with integrated pressure compensation tube (lenght up to 300m)

Combined sensor DST-22:
for waterlevel and water temperature registration

Float-operated Floatsens:
for registration of waterlevel

- SMD-Technique with automatic test routines
- 16 Bit microprocessor
- Watch-Dog to observe the CPU activities
- serial communication interface RS 485
- real-time-clock (RTC)
- encoder
- power supply with changeable Lithium battery sufficient for >5 years (with 60 min. interval)
- operation temperature: -20...+70°C
- watertight PVC housing
- dimensions: Ø 40mm, lenght 280mm
- installation device for top pieces of min. 2"

Multiparameter Sensor MPS-D
for monitoring of water quality parameters:

- waterlevel
- water temperature
- conductivity
- pH/Redox
- dissolved O_2
- turbidity
- etc.

- special cable (food-safe!) with integrated compensation tube (length up to 300m)

further technical information (further parameters) please see separate brochure on Waterquality Monitoring.

Read-out & Operation

HDA
hydrological
digital assistant

HDA-Pro
robust Tablet-PC

technical data HDA and HDA-Pro pls see separate brochure

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