Manual

contents

Introduction

1 | General Information

Our Dataloggers and Measurenet-Software has been created and testet with highest accuracy. All Application modules have been tested for security gaps and stated as productive first when positive results are gained. We can not guarantee implementation of malicious code if new gaps appear.

Operating your own Server: as a matter of course we serve any updates relevant to security as soon as possible. Please watch your Operating System and its Components for any Updates and please keep it up to date (regard auto-updates).

Server operated by STS: in case you assigned us hosting your data any Updates will be implemented by us. There is no need for you to care for the Operating Software or any of its Components.

2 | Datalogger

2.1 | About the Product

The Groundwaterdatalogger is developed especially for Measuring Groundwater Levels. Its Components have been selected very carefully with regard in high quality. It can be inserted directly in measurement sites beginning at 2“ in diameter. The Datalogger is waterproof by design and is powered by standard batteries that reach work up to 2 years if daily gprs-transmission is selected. It can be used in bigger sites, too when you use an apdapter or an installing rope. There are two Input Channels for Water-pressure and Water-temperature.

The Datalogger is equiped with an internal digital Temperature- and Humidity-sensor (accuracy at +/- 0.4°C and +/- 2 % RH). It is implemented for security reasons: if the logger should lose his water-tightness (may caused by breaking seals when assembling or changing the batteries) it is possible for Humidity to get into the body. This may cause Damages. A simple small Bag of Desiccant (SilicaGel) can help.

2.2 | Communication

The Logger can communicate locally by using wireless 433 MHz-Radio-Interface. This frequency is useful to obtain an higher level of watertightness. The user has no need to open the Device to receive Data or to change Parameters. For long-distance data-communication the Device is equipped with GPRS (General Package Radio Service).In this case the data is brought by Cellphone-Technology directly to an internet-enabled Server. You can create even big networks with your Devices, with low maintenance and high comfort. The Devices sync their clock with the server´s clock – time differences can not develop. T least, GPRS is the most efficient way to transmit data to your Workstation.

2.3 | Mechanical Information

The Device has 2 Metal rods as outer Protection and a fitting made of reinforced plastic, holding the Electronic and Battery-box. To open the Battery-box you just need to open the lower Part of the Body.
Please be sure not to damage any Seal or Winding (by sand for Example). Look out for any Damages and grease the Seals well. Never be violent.

To assemble in field remove the antenna. Before re-assembling you should change the Desiccant (for Example Silicagel(R)). It is placed near the SIM-Card-Holder at the back. Important: Look out for any Damages and grease the Seals well. Damaged Seals need to be replaced immediately. Depending on which type of Desiccant you use, the Humidity should be not higher than 20%. There is evidence of leak in case of an upward trend. At values higher than 50% the Electronic is in Danger! Hint: most of Desiccants can be re-generated by Drying at 120°C-150°C for 20 minutes.

2.4 | Electrostatics

Important Note: By opening the Device you could reach the Electronics. Inputs and Outputs of the Device are protected against electric discharges and surges (so-called ESD). But please do not touch any Part of the electronic Components. If you need to touch any Part, please discharge yourself, maybe by touching grounded metal parts.

2.5 | Initial Commissioning

Please notice that we do ship any Devices de-energized, justified by european shipping-instructions. Regard the Chapter „Assembling and Changing Batteries“.

2.6 | Assembling and Changing Batteries

Possible Types of Batteries are Mono-cells (often called Type „D“) with 1.5 Volt. You should only use Alkali-Manganese Batteries! The most expensive Batteries are not always best fit; we advise Brands „Energizer“ or „Duracell“.

To install the Battery you just pull the Metalsleeve (look for batch: Battery) down. Attention: please be sure not to install the Supplies with Reverse-Polarity! Reverse-Polarity may Damage the fuse (can only be replaced in factory) or may cause major Damages to the Electronic.
The Device can hold the correct time for a short range. If the Electronic registers a „Power On“-Signal the green LED blinks for 10 times. After that, the Device is ready to use and has to be re-synced.

2.7 | Assembling SIM-Card

Hint: It is important to know about any preferences according your SIM-Card and Provider. You need to have special Parameter-Information to enable E-Mail- and GPRS-Communication. This Information is normally send to you within your SIM-Package.
Important: To open the Card-Holder press lightly the drawer and push it forwards, so that the bar releases the drawer. To close the drawer push backwards. The bar snaps in.

2.8 | Assembling Antenna

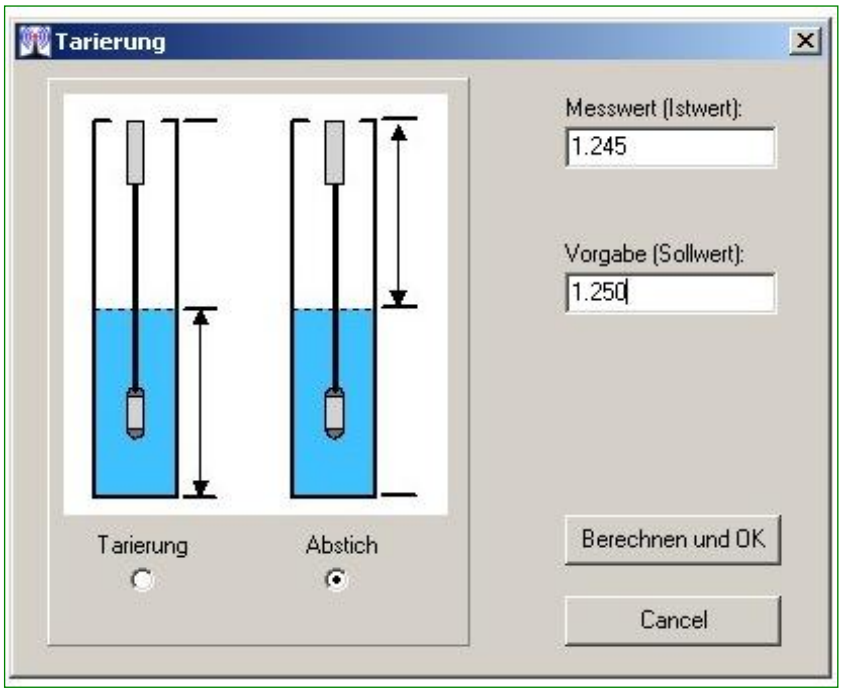
Hint: By using an Standard-GSM-Antennaconnector you can use any Antenna design for Gsm with an FME-Connector.

When assembling the Antenna put the Connector way down in the jack to get best contact. Please tighten the Screw by Hand. Do not use any Tools to avoid damage.
Hint: if you have low radio reception please change the Position of the Antenna. Sometimes a little Correction of its Position raises the radio reception a lot. If the radio reception is too low, we help you getting a more suitable Antenna.

Especially the Round antenna „Helical“ is suitable to be installed directly into Measuresite-Caps. It is made of reinforced plastic and it comes with an FME-Connector.

Install the Antenna by drilling a Hole into your Cap and seal it with silicone. Please do not fill the internal body of the Antenna to avoid loss of power. Install the Cable by rolling it inside; it may not be squeezed. Some Caps are to thick for using the Screw (M16 /12). In that case glue the Winding properly with silicon to the Cap´s Drilling-hole.

2.9 | Adjusting the Taring



The Taring is ment to improve the Adjustment of the Values to fit your Measuresite. When delivered, the Device is configured to measure Watercolumn correctly. Practically you may want to measure the Difference between Water-surface and a Reference, like Surface. In that case, you want to measure the so-called Tap, otherwise you want to measure the Taring (Watercolumn above the Probe).

In both cases you need to have the Values to be measured (Set-Point). The value actually measured by the Device is known, too. If you executed a measure, the Just-Value is put into Field Just-Value by the Shell-Software; for Example 1.245 Meters.

Compared to the measuring by hand (1.5 Meters) there is a gap of 0.005 Meters. The Probe has to be adjusted 1.25 Meters by filling the Field Just-Value with „1.25“ Meters and clicking Button „OK“.

3 | STS-Shell

3.1 | About the Product

The Software is created to communicate locally between PC and GPRS-Datalogger. As Interface we use Radio Frequency at 433 MHz.

By using STS-Shell you can change Parameters of the Device and directly display Measurements.

3.2 | Installation

Before Connection the Dongle please install the Software. The Drivers needed by the Dongle are installed directly when installing Shell.

To install use the delivered Medium or download the latest Software package from your Account in Online-Software.

The Installation starts by double-clicking the *.exe-File automatically. In case of successful Installation, please click „Installation complete“.

3.3 | Functions / Adjustments

The Main Window of the Shell is arrange in three main Parts:

- Menu with different Buttons
- Main Window with actual Information
- Device-list with available Dataloggers

3.3.1 | Setup:

General Adjustments

Folder Data Path SERIAL: The Folders concerning the Devices are created at the Path defined here, named by the Device-ID. Parameters and raw data created by Shell are stored here.

Default Path Export: Define the Path to your Exported Data-files.

Open Data with build-in Viewer (Textmode): Measured Values are displayed as Text (ASCII).

Open Data with CS-View (Graphical viewer): Measured Values are displayed as Graph and Table

Open exported Data as CSV-File (Spreadsheet): Measured Values are displayed as CSV-Files (Comma-separated Values).

Decimal Comma: In some countries a Comma is used as decimal delimiter, in other countries a Point is standard. At this Point you can define, in which format you want to store your data. When exporting data by Shell, this preference recognizes your choice.

Extended Info in exported Data: The Device saves not only measured values, but any Information concerning the communication with your local PC. It may bother when using exported data in spreadsheet. You can disable exporting further information by disabling this function. It is helpful to export Information when searching for Gaps or Failures.

Language: DropDown Menu to select Language.

Product Activation: In some cases further Functions are needed. In that case you get an Access-Code to activate these Functions.

Service

GPRS Mail: You can send a test-mail to the server to check GSM-Communication. To use this Function you have to connect to a Device. A Terminal opens and lists the progressed Steps.

Terminal: opens a Terminal-Window. It enables the Device to print Text directly in ASCII. It is helpful when checking the connection to Internet-server. Language is English by default and cannot be translated.

Echotest: tests the signal strength of the 433 MHz radio interface. It has to be stopped by user interaction to end the Test.

Update Logger Firmware: Used to update Device. After short security check you can chose a local Update-file from any folder on you disk and transfer it to the Device. Further Information under Point „Updates“.

Update USB-Dongle Firmware: Used to update USB-Dongle-Firmware. After short security check you can chose a local update file from any folder on you disk and transfer it to the Dongle. Further Information under Point „Updates“.

3.3.2 | Buttonmenu

Button Identify Logger: Connects a Device appearing at the list at the right. It has to be marked in that list.

Button Display Measure: By pushing that Button the Device will send actual Values to the Shell. These Values will not be stored in Device or Shell an will not be transmitted to Server. You can use the Values for Taring your Probe.

Button synchronize Clock: The device clock will be synchronized with your local PC-Time. Notice that the Device will sync with the Server next time it transfers data to internet server. Local PC-Time often differs to actual time.

Button Load to Disk: Using this Button you can load Data from actual connected Device to your local Disk. You can choose to load incremental (any Data except already transmitted) or full Set of Data. Folder in which to store can be chosen at setup (see Chapter Setupmenu)

Button Data from Disk: Opens data stored locally on disk (for Example *.g2p-Files)

Button Clear Logger: This Button enables you to clear all Data stored in Device. A Security hint appears before erasing all Data.

Button Parameter: A new Window „Parameters“ (see 3.3.3) opens.

3.3.3 | Button Parameter

Global Parameter: Global Parameters define the Measuring-Intervals

Period: Measuring-Period starting at 1 Minute. Notice the Drop Down-Menue to choose correct Hours (hr), Minutes (min) or Seconds (sec). If you try to set Period lower than 1 Minute it will not be transferred to Device.

Period Offset: Starting at a Period of 5 Minutes the Device chooses the next modular time slot. That means, if you choose Period 1 hr the Device will send Data at the next full Hour. When choosing 12 hr the Device sends at 0:00h and 12:00h. You can slide this Slots by using Offset. In last case choosing Offset at 2hr the Transmission will started at 2:00h and 14:00h although Period is set to 0:00h and 12:00hr. It helps you if many Devices are locked in the same GSM-Cell to avoid Traffic Jam.

Alarm Period: Measuring-Period in case of emergency.

Name: You can define a specific Name for your Device (site number, Street/Crossing). The online system will recognize your Choice and displays it in Device list.

Real time Mode

The live mode serves for a continuous local transmission of the data via radio to a receiver. If it is active the device sends the actual measured value to the shell software of each measurement. The value then is showed up in the main window. This allows e.g. to see how the actual level is changing during a pumping test (minimum measuring interval <2 sec.).

There are 3 modes available for the live mode:

- **Intelligent**: The logger recognizes when a receiver is accessible. It sends independently data to this logger with the configured measuring interval.

- **Always**: The logger always sends data, no matter if the receiver is accessible. This configuration consumes continuously power!

- **Off**: The logger sends no data.

HK-Counter: Measuring-Period for internal (House-keeping) Values. 1 = any Measure in normal Period, 10 = any 10th Measure in normal Period (when measuring any minute it will be any 10th minute). In case of Emergency the Housekeeping values are measured any Period.

Log HK: Choose, if Housekeeping should be done. By setting check marks you can enable/disable each Parameter.

Parameter Set: Displays actual used Set of Parameters. Parameters cannot be change at this Point. The File-name is generated with timestamps and Device-ID.

GPRS / GSM Setup: Opens Window to set transfer parameters and Modem-Preference (see 3.3.5).

Channel Parameter: Using Channel Parameters you can choose, which Channel is used for which Probe. Standard is: Channel 1Waterlevel, Channel 2 Water-temperature.

#1: means, Channel 1 is selected. Using Arrow up will switch to the next Channel.

Type: Displays the Type of Probe, which is connected in this Channel and can not be changed.

Unit: DropDown Menu to select Value-Unit.

ID: This Parameter is meant to mark a Measure in for Example a Database. At least theres is a „0“ this Point has no Features. Data between „1“ and „65535“ are used in Tables as Headers in Exported Data.

Action: to be marked with check-marks.

Log Channel: Values of this Channel will be logged, when check-mark is set.

Check Alarms: must be set if Device should used for Alerting.

Scale

Offset: Value to be substracted from measured Value (for Example when referring to NN). Notice: positive Values will substracted, negative Values will be added. Example: the Probe gauges 10 Meters Water-column, but should display 110 Meters over NN. In that case you have to insert „-100“ to get a Value of 110 Meters (10 - (-100) = 110). You could use „Taring“ as well to let the System calculate.

Multi: This is set to 1.0000 when used in freshwater. By adding an negative Prefix („-“) you will switch the Measurement to negative Values. You can adjust the Probe according to the density of the medium. To adjust the Probe against saltwater you have to substract the Percentage of salt in the water from 1.0000; Example: 3% Salt in Water = 0.99700).

Tare: Opens the Window to Taring (see 3.3.4)

Alarm: Set your threshold Values here. When reaching these Values the Device will switch to Alarm-Mode.

Low: lower Value to be reached

High: higher Value to be reached

Power Up Wait: Warm up time for the sensor (for PTM/N of STS please 1000 msec)

Sensor min / max.: not necessary with pressure sensors. With slowly sensors (e.g. water quality) it is very useful to use a measured time span. It depends on the sensor-type.

Type: Drop-down menu – choose-able are SDI (for general SDI sensors e.g. temperature). SDI12-Pressure (STS) for the pressure channel of the datalogger and wireless sensor (to connect additional sensors via short-range radio)

Use cache: has to be activated with following channels, if a sensor delivers multiple values (e.g. pressure and temperature)

Index: Numbering of the sensor channels (e.g. pressure = 0 as the first channel and temperature =1 as second channel. If the sensor would deliver additional values the index count raises +1 for each index)

S.Nr.: SDI 12 address oft the respective sensor (default is 0)

Bef.: 0 means SDI command m!, with that commando you can start a measurement.

Further Buttons

Transfer: Transferring Parameters to Device.

Cancel: Cancel Editing without saving.

Write Par...: Save Parameters local without transferring to Device.

Read Par...: Open Parameters, that are stored local on Disk.

3.3.4 | Tare

Here you can choose if Water-column or Taring should be gauged.

Set-Point: The Taring is ment to improve the Adjustment of the Values to fit your Measure site. When delivered, the Device is configured to measure Watercolumn correctly. Practically you may want to measure the Difference between Watersurface and a Reference, like Surface. In that case, you want to measure the so-called Tap, otherwise you want to measure the Taring (Watercolumn above the Probe).
In both cases you need to have the Values to be measured (Set-Point). The value actually measured by the Device is known, too. If you executed a measure, the Just-Value is put into Field Just-Value by the Shell-Software; for Example 1.245 Meters.

Compared to the measuring by hand (1.5 Meters) there is a gap of 0.005 Meters. The Probe has to be adjusted 1.25 Meters by filling the Field Just-Value with „1.25“ Meters and clicking Button „OK“.

Just-Value: Insert your desired Result. This could be the Taring or a referenced Value (like Meters to NN).

Calculate and OK: When ready press „Calculate and OK“ to set your desired Values. You can find the results in Scale: Offset and Multi.

Cancel: Cancel without saving your Edits.

3.3.5 | GSM Setup

General Adjustments

GSM/GPRS Mode: You can enable or disable GPRS-Modem with this Options.

GSM PIN: Insert the 4 numbers PIN-Code of your SIM-Card in this Field.

Min. Temp (°C): This Option is to protect the GPRS-Modem. Set this Value to allow the Modem to work up to this Temperature. By Default this is set to -10°C and should not beset lower. If this Value is undercut the Device will go on gauging Data, but will not send them to the Internet-server. It will go on transmitting Data when reaching higher Temperatures than set in this Field.

Allow Roaming: If you set a check-mark here, the Device is allowed to use a foreign GSM-Net. Unchecked mark means, the Device is forced to use its Home-net even a foreign Net is stronger.

GSM Period: Set Transmission-Period here, how often Data should be transmitted. The Period starts at 5 Minutes and is scalable. Choose the Unit (hr, min, sec) via DropDown-Menue.

GSM Offset: Similar to Offset at „Period“. Starting at a Period of 5 Minutes the Device chooses the next modular time-slot. That means, if you choose Period 1 hr the Device will send Data at the next full Hour. When choosing 12 hr the Device sends at 0:00h and 12:00h. You can slide this Slots by using Offset. In last case choosing Offset at 2hr the Transmission will started at 2:00h and 14:00h although Period is set to 0:00h and 12:00hr. It helps you if many Devices are locked in the same GSM-Cell to avoid Traffic Jam.

GSM Alarm Period: Set the transfer interval at which the data should be transmitted to the server in case of alarm. This is from an interval of 5 minutes up scalable. Using drop down menu you can choose between seconds (sec), minutes (min) or hours (hr) intervals.

Network Parameter

Insert your Provider´s Data here.

GPRS APN: (Access Point Name) The Access Point defined by your Provider.

PPP User: Username for using GPRS defined by your Provider.

PPP Password: Password for using GPRS defined by your Provider.

GPRS Retries: Checking this mark enables the Device to retry Transfers if a Transmission is aborted or not successful. The Device retries for 3 times to save energy. It´s matter of Internet-concept, that Packages should get lost in case of high system load.

Internet Parameter

Internet Server: IP-Address or URL of your Internet-server.

Script: Path to Script where to send Data to.

E-MAIL Format: The Devices can send E-Mails via Internet-server. This could be in clean ASCII Text-format or in HTML-Format.

Receiver´s E-MAIL: Insert Receiver´s E-Mail Address.

GRPS Sync.: Activating this checkmark will enable the Device to sync against Server´s time.

Auto Clear: The Device will erase automatically all Data in his Memory when filled up to 95%. This will only happen, when all Data is transmitted.

GPRS Offset (sec): The Web server typically has a clock that is synchronized periodically and thus is always right, usually in the format GMT (Greenwich Mean Time, which contains no summer time change). For info: Berlin, Rome, etc ... has an offset of 1 hour for GMT time (= GMT +1) have. For loggers in the time zone is GMT +1 so it should be entered here, the value 3600 (there are also some countries in the world who have no full hour offset (eg India, Iran, Afghanistan).

Alarm receiver:

Alarm E.Mail Adresse #1 - #4: Optionally insert up to 4 E-Mail-Receiver in case of emergency (Alarm-Mode).

Further Buttons

OK: Click this Button to affirm your changes.

Cancel: Cancel without saving your Edits.

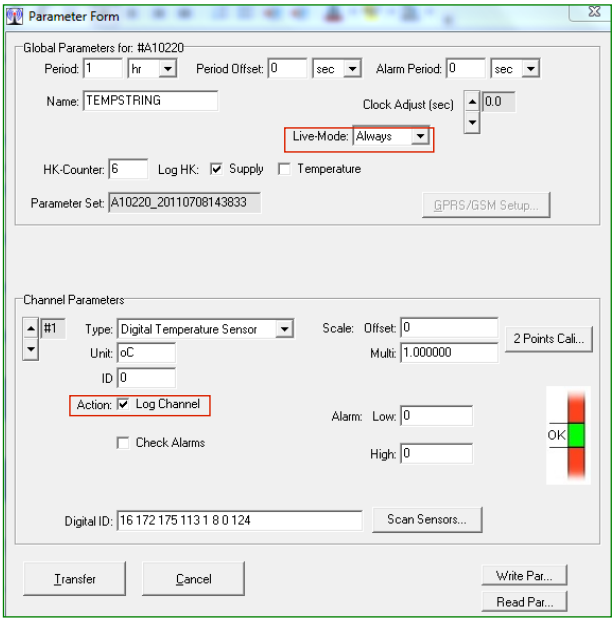
3.4 | SDI-12 GRPS Datenlogger

The latest generation of the SDI-12 GPRS datalogger can parallel record and process up to max. 24 channels. Besides you can link various radio datalogger with your GPRS datalogger. This allows a extended functionality with you can add and observe very compact miniradiologger in your onlinesystem. How you integrate your short-range datalogger into your onlinesystem will be shown in the following chapter.

3.5 | Connecting radio data-logger with SDI-12 GRPS data-logger

To connect a radio datalogger with a SDI 12 GRPS datalogger you have to do some presets. You have to put the measurement period twice higher than the measurement period of the GPRS datalogger to get a correct data transmission.

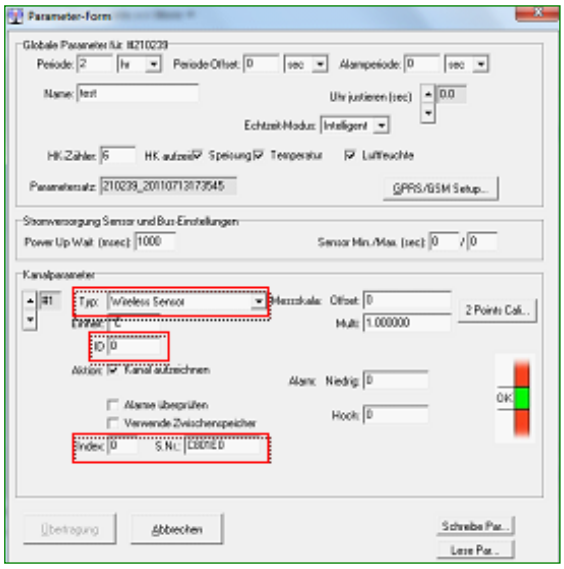
The setting of the live mode has to be set on always. Otherwise the data only would be send if a usb-dongle get in contact with the minilogger and the GPRS datalogger wouldn't get them automatically.



The checkbox **Action** has to be activated with **record channel** #1 and #2.

In the parametersettings of each GPRS datalogger which get the data of the miniradiologger, you have to configure following settings for every channel:

Type: Wireless sensor



Connect the GRPS datalogger with the short-range logger

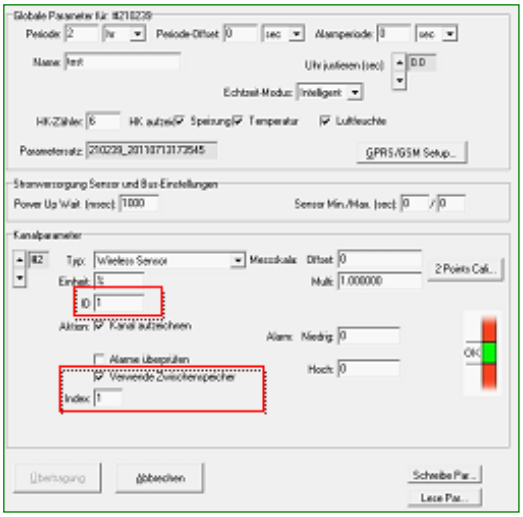
ID: 0 (Corresponds channel 1)

First channel of the short-range logger

Index:0 S.Nr.: XXXXXX

The index describes the used channel to each ID. The serial number is the number of the linked short-range logger.

For each additional channel you have to configure this too.



ID & Index: Both values will be increased by 1 chronological for every following channel.

Use cache: The serial number of the device is used, which has the index 0. Thus you don't need to type in the serial number again of a short-range logger for each following channel.

4 | Onlinesoftware

4.1 | About the product

This Software has been created to enable you for initial and efficient way to your Data. Further it informs you about the condition of your Devices and your Measure-net.

4.2 | Initial Commissioning

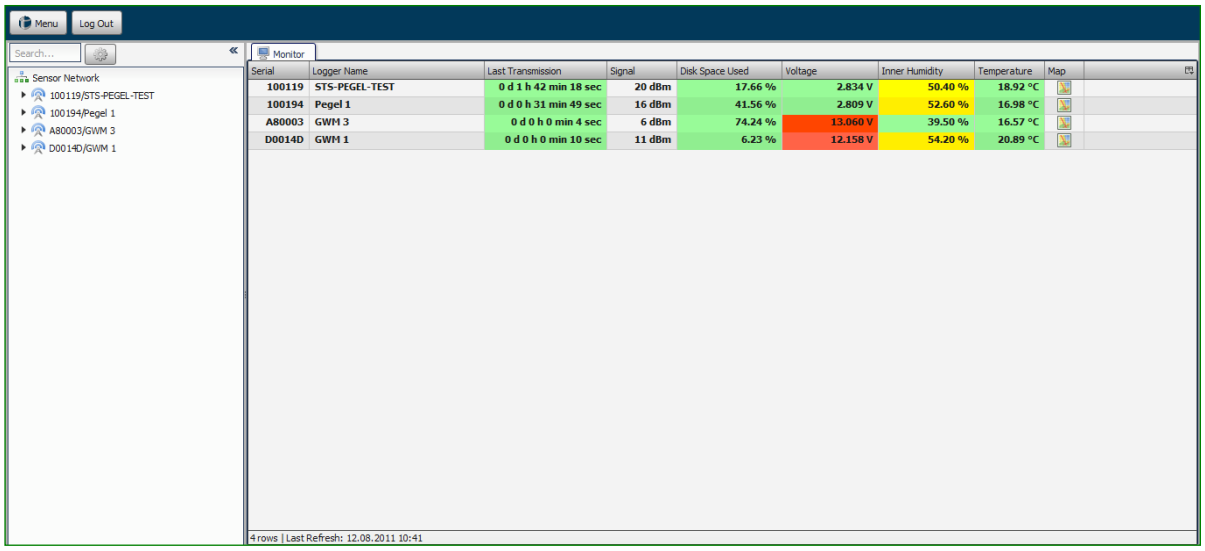
The Software comes fully integrated in general. Any specific or custom settings will be implemented at start. It is not necessary to take special actions. Handling of this Software is point of the following pages.

4.3 | Login

You received your Login-Data by STS. Please insert your Username and Password here.

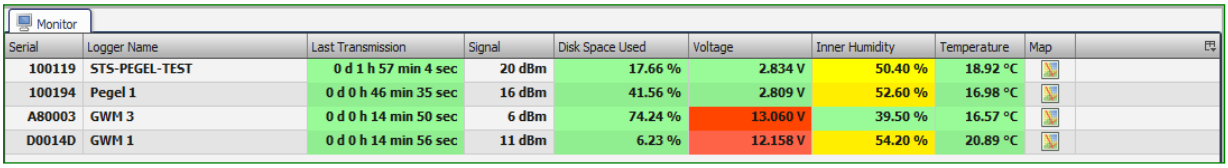
4.4 | Main window

The online portal is divided into 3 areas. On the left side you find the overview of your whole sensor network. On the right side is the status monitor and the respective diagrams which are displayed in tabs. In the upper area of the portal you find a menu in which you can log-out or change your current used language.



4.5 | Status monitor

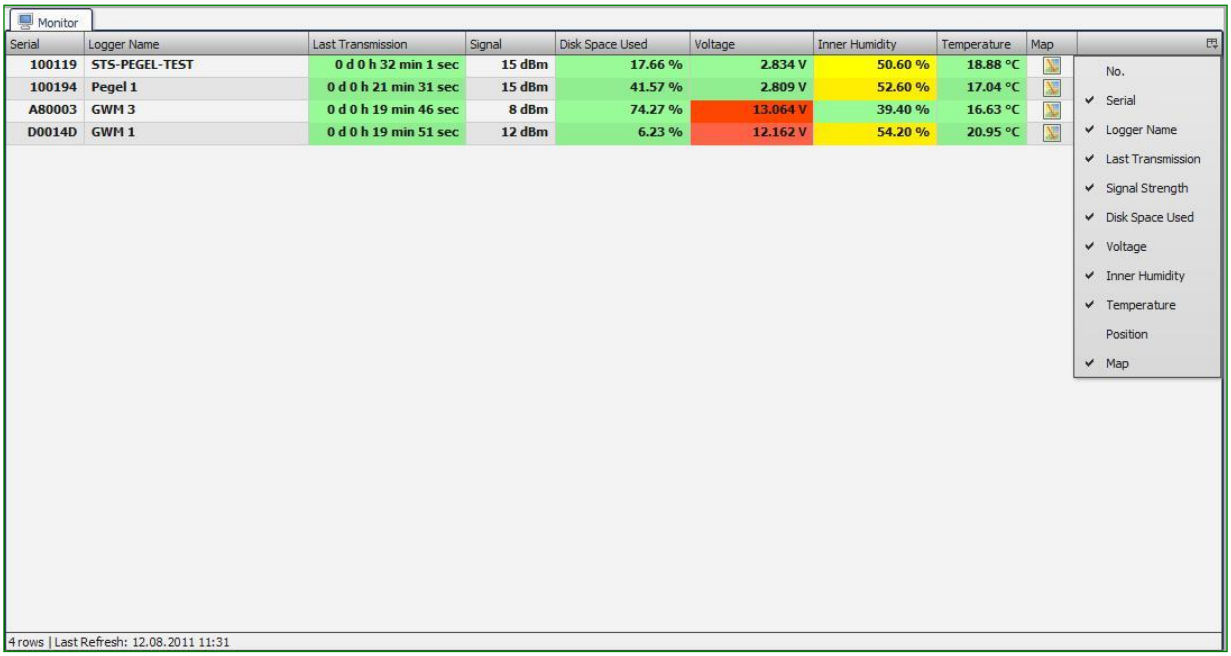
This module gives you a quick and intuitive overview about the status of your devices. You can see the status of different values: Signal strength, Disk space usage, and more important parameters. The traffic colors are an intuitive way to display the current status of your sensor network.



The meaning of the threshold values:
Green: Parameter values are in perfect condition.
Yellow: Parameter values are in acceptable condition.
Red: Parameter values are in critical condition.

Furthermore all related measuring values will be displayed in this window area. The usage of tabs facilitates the navigation within the different diagrammatic representations, if you look at data from multiple devices.

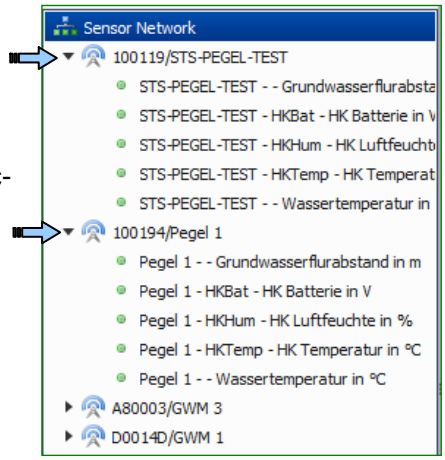
In the column “map” you will find a minimap via OpenStreetmap for each sensor in the field.



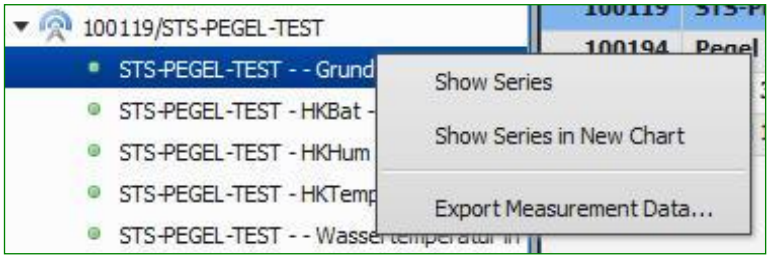
The last column of the status monitor contains a list with which you can add or remove single columns.

4.6 | Measured values

In the left window your whole sensor network is displayed. There you can interact with each device. You can get advance views of the single functions if you click on the respective triangle next to the device name. Then the respective categories appear of the measured values.



With a right-click you get 3 options



Show series: Displays the series in the right window.

Show series in new chart: Opens the measured values in a new diagram in the right window, if you don't want the data displayed with another measured values within a single diagram.

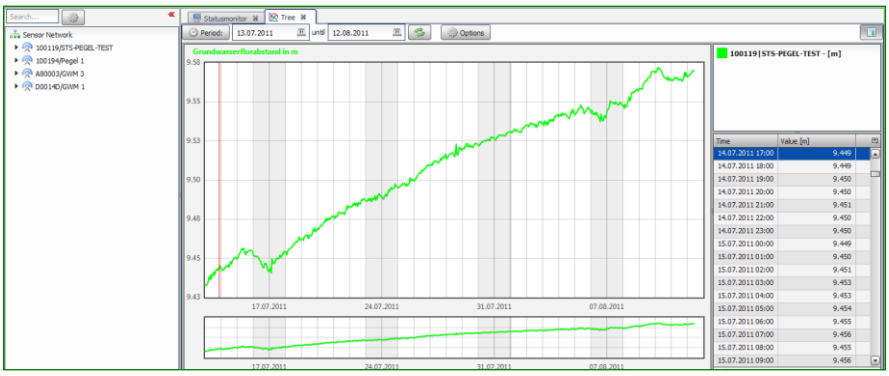
Export measurement data: Choose the period of time and the desired format.

The CSV format is to be suited for continuable local analysis of the data in spreadsheet programs (e.g. Microsoft Office Excel or OpenOffice Calc) or statistic evaluators (e.g. STATISTICA or SPSS).

The export has been created for daily use and contains only two heading rows (1. Row Logger serialnumber | Loggername; 2. Row measurement type | measurement unit) and two columns inclusive column headings. In the first column you will find the measuring time as a timestamp (data_timeas) and in the second column you will find the associated measuring value (data_valueend).

Selection of a chart view

To get a desired diagram view double-click on the respective entry of the sensor network. Then a tab appears with the description “diagram”.



You will get the latest measuring results. If you want to see older values, you have got the possibility to specify the period of time. To do that please click on the Button “Period” and choose a Option (e.g. last 7 days, last month, etc.).
Optionally you can view a specific date if you want to. The standard setting of the period of time is the visualization of the last month. To change the period of time of the visualization please click on the calendar icon and choose another start and end time.

Furthermore you got more options for selection:

1) Connect table with chart:

If you hover with the mouse pointer over the measuring values you will get the associated values marked up in the table on the right side. So you get a quick overview about the respective value range nearby.

2)Flip left y-axis

The y-axis will be inverted and the measuring values accordingly presented.

3)Flip right y-axis

The y-axis will be inverted and the measuring values accordingly presented.

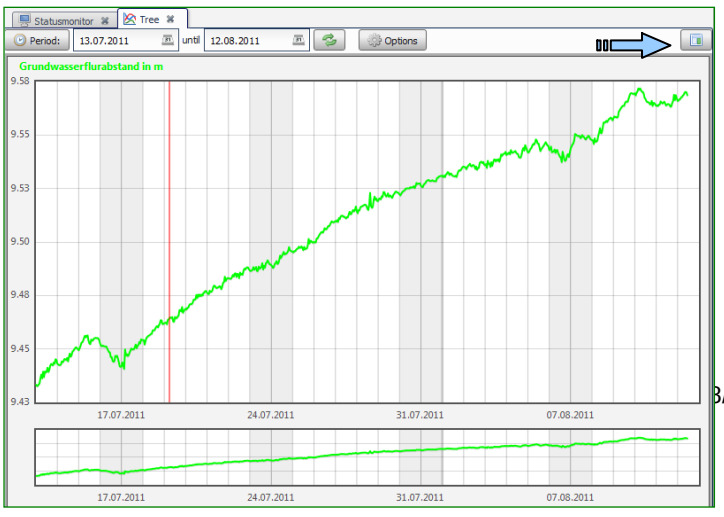
4)Zoom: Choose the art of zooming

- Off
- In x direction
- In y direction
- In both directions

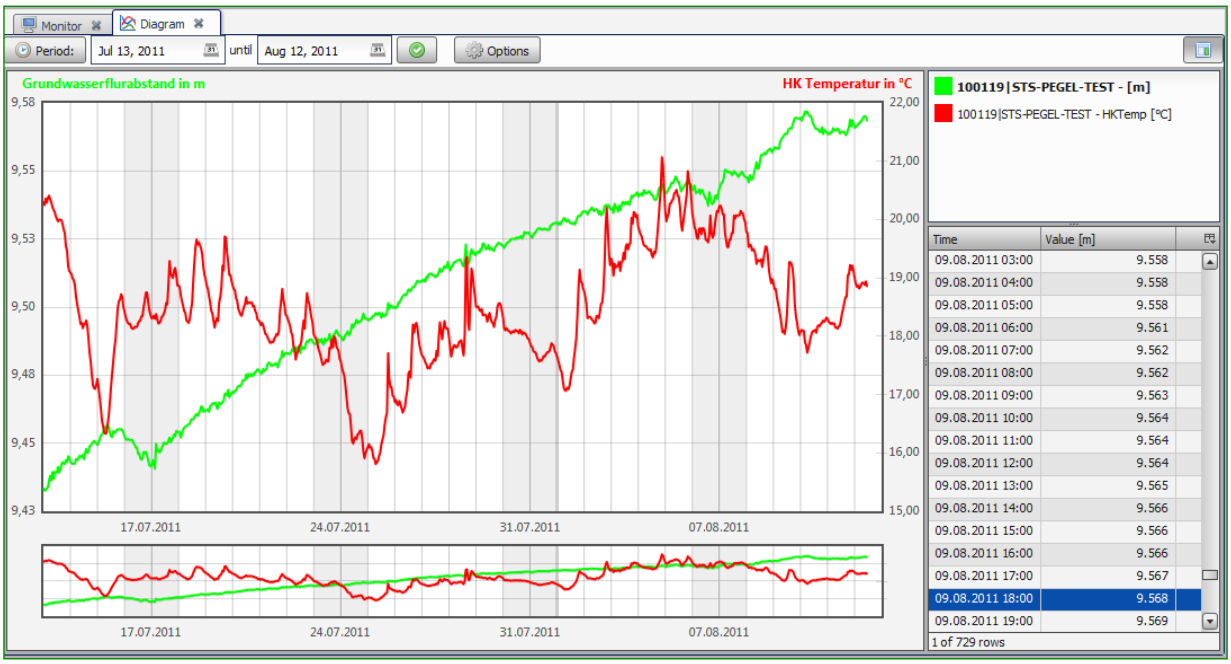
5)Crosshair: You can choose various types of crosshairs

- Off
- Vertical
- Horizontal
- Cross

To get a pure visual overview of the measuring values without table entries, please click on the button in the upper right corner.



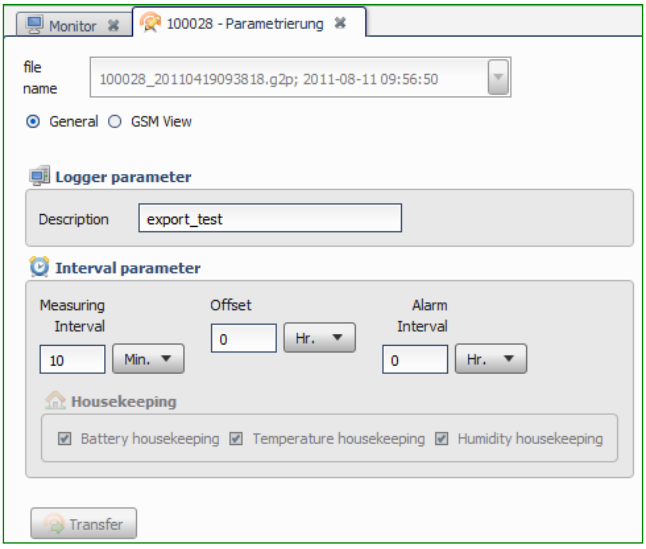
The online portal offers you the possibility to display two measuring values in one diagram. To do that please choose two values within a device of your sensor network. To switch between the measuring values click on one device entry in the upper right window.



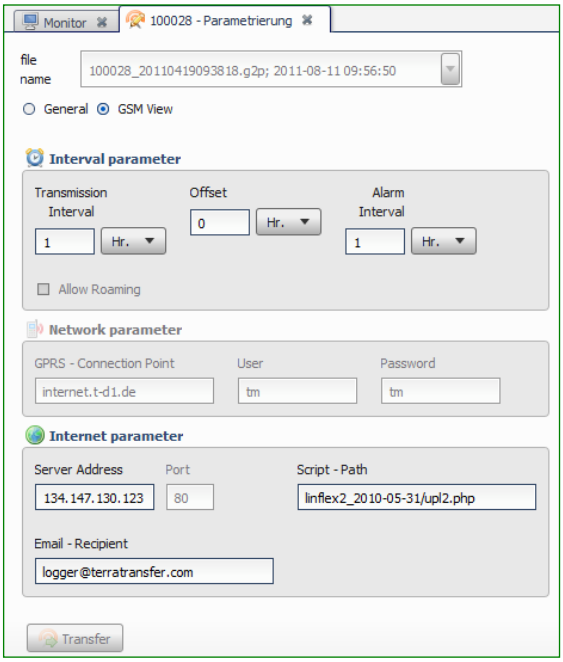
The diagram shows in a dynamic scaling the values of the defined period of time and the chosen sensor channel of the device list. The lower diagram is used as an overview window, while you can zoom in the upper diagram. To zoom-in into the diagram please left-click and hold the mouse button to draw a rectangle. You can draw one in the upper and lower overview.

4.7 | Informations about parametrization / Logger data

Momentarily you can't execute a parametrization. The parametrization menu only serves as a information window about the current logger settings.

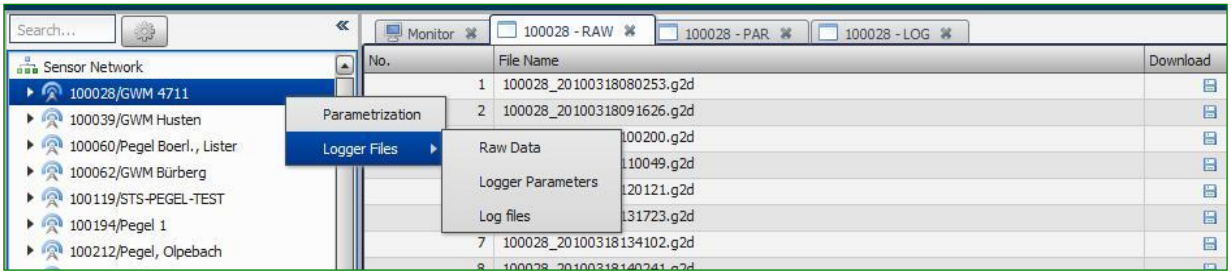


General logger settings



GSM logger settings

You have the possibility to view single raw data (RAW), logger parameter (PAR) and log data (LOG) in respective tabs. The raw data can be opened with CS View (GP Shell) and the parameter data can be edited with GP Shell, too.



5 | Maintenance

5.1 | Datalogger

Our Dataloggers are really low in Maintenance.

Please do not use hard or barb Stuff, nor aggressive Polish to clean the Device.

The Power-supplies need to be changed only if necessary; no need of Intervals.

Open Batterybox only when dry; Precipitation may cause Damage.

5.2 | STS-Shell

The Shell-Software is free of maintenance. Updates will be served for you in your customer Loginpages and can be Downloaded from there.

5.3 | Onlinesoftware

The Online-Software is free of maintenance. Any Updates will be implemented by us.

In case of using your own Server-hardware we need to have the possibility of remote access. Otherwise you will get an Update-package and have to install the updates by yourself. In that case we cannot guarantee for conduction.

6 | FAQ – Frequently asked Questions

6.1 | Datalogger

- The box of my Device is damaged:
  - Please contact Customer support immediately and sent the Device to maintenance.
- The Cable is damaged:
  - Please contact Customer support immediately and sent the Device to maintenance.
- The Humidity in my Device is rising:
  - if Humidity is rising the Descant must be replaced. Replace with a new bag (we prefer 2-Gram Silicagel). You can order it from your local customer support.
  - If the Humidity in your Device is rising quickly, the Device may be leaky (often caused by change of Temperature). Please check immediately all sealing, Screws and the Dessicantbag. Please contact the Customersupport.

6.2 | STS-Shell

- Failure at Install: No Interface 'Wireless Dongle' found
  - Shell needs to start a connected Dongle and didn´t find any connected to your PC. Please make sure to connect a Dongle to a free USB-Port and start Shell again.
- Accesscode
  - Connection to any Device is protected by an 4-letter Accesscode. This Accesscode will be delivered with the Datalogger and has to be inserted to Shell before connecting to Device.

6.3 | Onlinesoftware

- How can I change the Steps in which the Status-monitor colors my Devices?
  - At this time there is only the way to contact your customer support to change the default settings. There will be a administration area to set these preferences by yourself.
- How can I open RAW-Datafiles?
  - You must have installed the Shell locally on your PC.

7 | Servicecontact

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