SEBA HYDROMETRIE

Dipper-PT Data Logger

Reliable water level and temperature measurements

- Reliable and robust
- Precise and long-term stability
- Slim design
- Easy operation
- Upgradable
- Individually programmable
- Practically maintenance-free

ISO 9001:2015 QZV We are certified Quality is our standard

C12_Dipper_PT_e 09.10.2023


Pump tests


Construction Monitoring

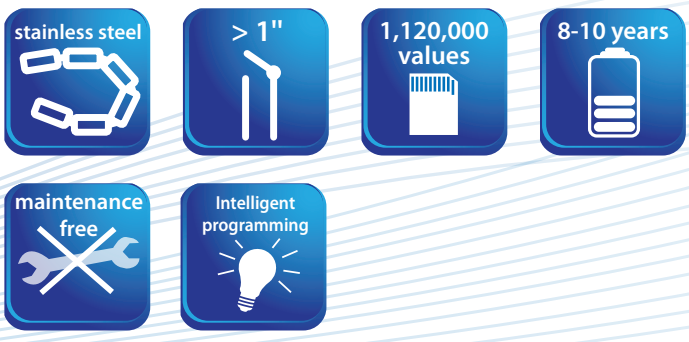

Long-Term Monitoring

Dipper-PT

SEBA's engineers responsible for research and development are faced with a difficult task, as it is very hard to improve an already perfect product. Long-term experience, know how, and vital feedback from our word-wide customers enables the team always to develop new and brilliant solutions for the Dipper–PT. The Dipper-PT is an multi-functional data logger for the accurate collection of both ground and surface water data. Regardless of the challenges faced, the Dipper-PT always performs to the highest satisfaction.
With options to upgrade, operation terminals, and customised software applications, SEBA Hydrometrie offers the complete range of loggers and sensors necessary for the operation of a modern environmental monitoring network.

Logger

- Ruggedised stainless-steel housing for use in extreme conditions (e.g. monitoring of landfill sites, contaminated land, etc.).
- Slim 22 mm Ø, 300 mm lengh for installation in well casings starting at 1"
- Large 16 MB loop memory for 1,120,000 measurement values. (More than enough to be able to turn your attention away from the calendar, even with short measuring intervals.)
- Minimal maintenance required due to low power consumption. Two lithium batteries ensure high operational reliability and have an approximate lifespan of 8-10 years. This reduced maintenance regime saves operational costs and is kind to the environment.



Sensor technology

In order to supplement the brilliant range of SEBA data loggers and to ensure complete reliability of the measurements, SEBA uses oil-free, ceramic pressure sensors with a measurement range of 0-200 m.
They provide precise and reliable measurements, impress with their exellent long-term stability, and are robust and easy to clean. Airpressure variations are compensated for immediately using a special measuring cable with an integrated pressure-compenssation tube.
The high-precision temperature sensor integrated into the Dipper-PT as standard leaves nothing to be desired.


capacitive, ceramic pressure sensor

Flow Measurement

Well control

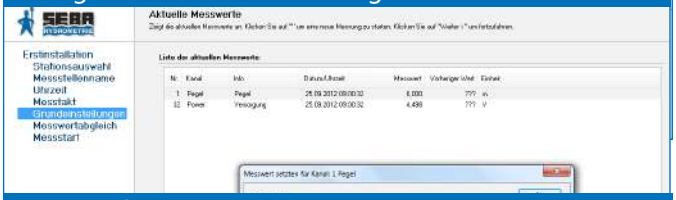
OPERATION SOFTWARE

SEBA-Config PC

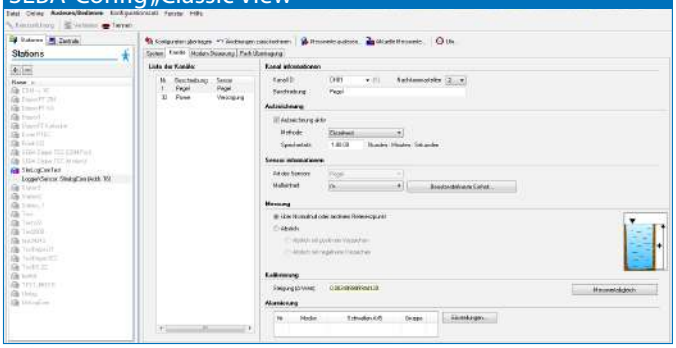
The new "SEBA- Config" software for Windows, offers the user a comprehensive, "easy to use tool" for initial installation and subsequent operation. Programming a logger has never been easier: Install the Dipper-PT, launch SEBA-config and off you go!
Of course, the Dipper-PT does more than just collect data. In the corresponding mode, it also provides you with exactly the measured data that you actually need: Quicklog mode for pumping tests, results mode for recording incidents of excess levels or shortfalls, determination of average values in the monitoring of surface-water levels, or simply taking measurements at fixed intervals. Voila!
Additionally, with the SEBA-Config software it is possible to insert check values recorded during site visits, so that later back in the office a detailed quality assurance (QA) on the PC is possible.

SEBA-Config „user guidance"

Configuration with SEBA-Config



SEBA-Config „Classic View"

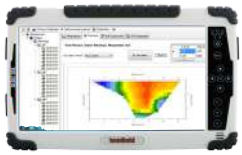


SEBA-ConfigApp

The users of tablet PCs and smartphones can also use SEBA-Config on their devices.
With SEBA-ConfigApp for iOS and Android operating systems, programming is clear and simple. With just one click, the retrieved time series are delivered to the user in the form of graphs and/or a list for plausibility checking.

Connectivity options

SEBA loggers can be downloaded and programmed with any operation terminal of your choice.

Operation Terminal	Mode of Transmission	Operation software
Notebook (Windows) 	**Interface Converter (RS 485/USB)** 	**SEBA-Config** 
HDA-Pro (Windows) 	**Interface Converter (RS 485/USB)** 	**SEBA-Config** 
Tablet (Android, iOS) 	**Bluetooth®**  **BlueCon 2** 	**SEBA-ConfigApp**   
Smartphone (Android, iOS) 	**Bluetooth®**  **BlueCon2** 	**SEBA-ConfigApp**   

Monitoring well

Subsurface installation

To be used with ...

Are you already using Dipper-PT, but need current data without having to travel constantly to your measuring sites to download it?
Do you want to save on operating costs for maintaining your monitoring network?
Do you have underground and/or above-ground measuring sites with a pipe diameter of 2" or more? Then we have the solution!

Dipper-PT with data transmission:

SlimCom

With the SEBA „SlimCom" remote data transmission module with integrated 4G or LTE-M modem, your data can now come to your office. Simply insert a data card, connect the "SlimCom" to the Dipper-PT(EC) and program the destination address. Whether in routine operation or in the case of an incident: your "SlimCom" sends you all relevant data independently to a communication server of your choice. Using freely programmable time slots, you can also adjust parameters remotely or retrieve data conventionally.

The RDT modules SlimCom 4G and SlimCom LTE-M are operated with standard, easily replaceable 1.5 V alkaline manganese batteries. Optionally, the use of commercially available 3.6 V lithium batteries is also possible and makes sense if long service lives of several years are to be achieved without changing the batteries (example: hourly measurement of water level and temperature, 1 x daily remote data transmission via LTE-M: approx. 5 years). Maximum operational safety is achieved through the energetic decoupling of the SEBA's data logger Dipper-PT and the SlimCom. If a malfunction does occur, this will not affect the operability and functionality of your Dipper PT. Your data is safe!

Furthermore, not only does the Dipper and "SlimCom" system detect when alarm conditions have been breached, but it also reacts promptly to them by transmitting data at shorter intervals (dynamic push). This ensures that you have always things under control. Especially when it really matters.

Maintenance and battery replacement are also very easy with the „SlimCom": With the help of a hanging ring integrated in the SEBA cap (optional), the „SlimCom" can be easily removed from the measuring point. Routine battery replacement is also completely uncomplicated with the practical bayonet lock.
the practical bayonet lock.

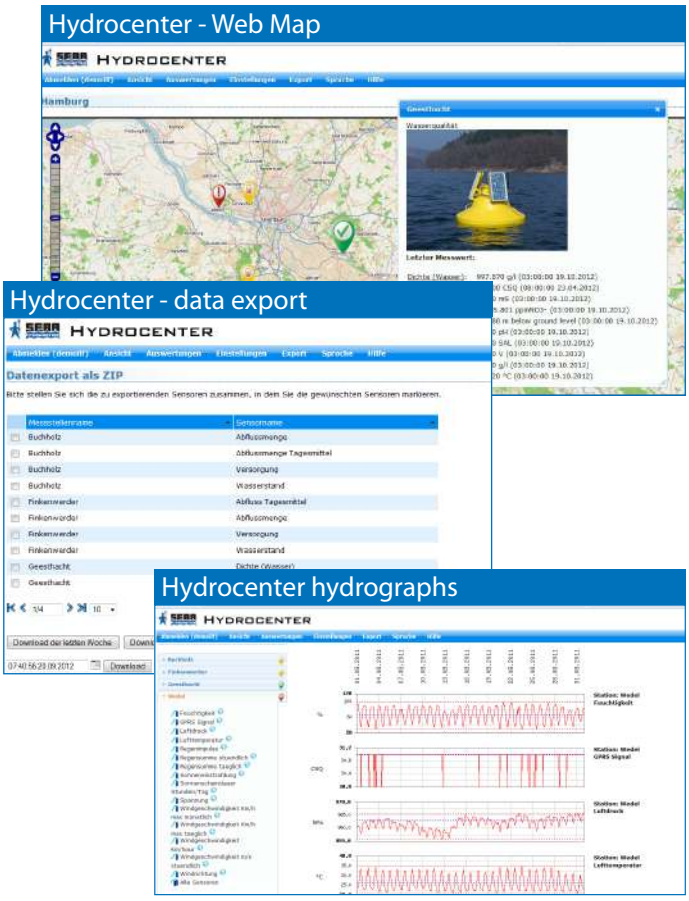
To be used with...

SEBA-Hydrocenter (Webmodul)

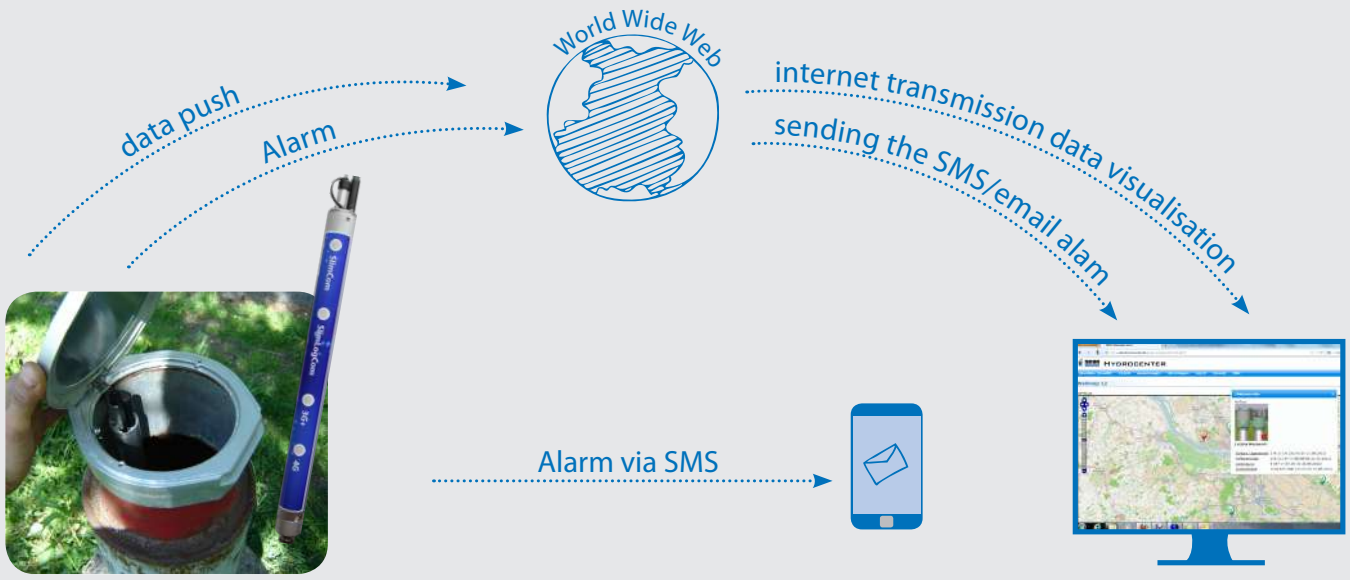
Do you not have a communication server of your own? Would you prefer not to deal with the data management yourself, or are you tired of constantly asking your system administrator for help?
With the SEBA-Hydrocenter, we provide you with a password-protected Internet portal, which presents current measurements in a clearly presented format. The only thing you have to do is place the order. We take on the initial setup, creation of your measuring sites, data provision, and server hosting. This gives you the freedom to concentrate on the essentials!

Advantages for the user:

1. At the office, at home, or on the move, your data is always available online.
2. Current measured data is displayed clearly in the form of lists and multiple graphs
3. Incidents (e.g., missing measured values, critical battery voltage) are displayed visually
4. Measured data can be shared with other authorized users (environmental agencies, engineering firms, consortium members, etc.) in a password-protected format.
5. The geographical locations of the measuring sites are marked on OpenStreetMap
6. The time series can be downloaded to a local PC for further processing.



How the SEBA-Hydrocenter Pro works



Visualisation- and Management Software

DEMASdb and DEMASvis

Ultimately, you want to be able to work effectively with the collected data on your own PC. Right? Experience shows that this can be a rather tedious process with the usual spreadsheet programs. With our "DEMASdb" data-management software and "DEMASvis" for visualizing and processing time series, you have everything you need! Your data flows freely and without hindrance from your measuring site to your database archive, with no cumbersome conversion processes — this saves huge amounts of time, money and patience when it comes to data handling.

DEMASdb is a graphical database interface designed especially for the purpose of recording, archiving and managing measured data. DEMASdb is suitable for both large and small monitoring networks. Whether it is online or offline data, DEMASdb channelizes all incoming measured data, stores these in the built-in database, and therefore brings order to the system.

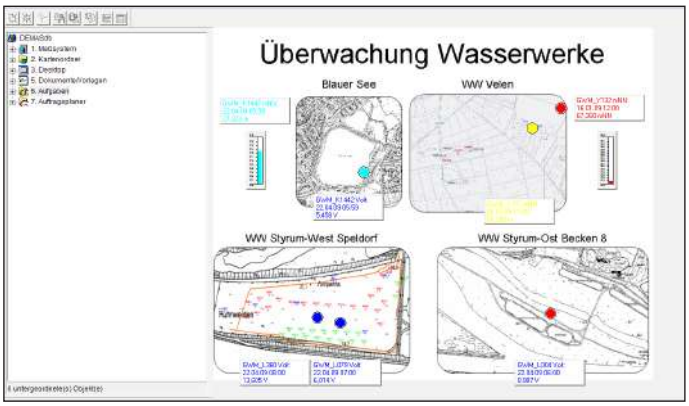
Alternatively, DEMASdb can also be linked to existing SQL databases (e.g., Oracle, Microsoft SQL Server, MySQL). DEMASdb is also multiuser capable: a large number of users can access the data set, and yet the system ensures that all data remains consistent. Configurable user rights can be used to impose restrictions on partially authorized or unauthorized users.

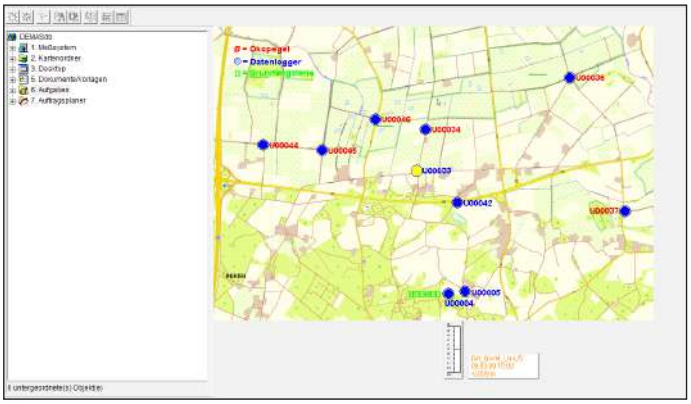
With the DEMASdb's export function, you can convert your time series into various formats and pass them on to third parties.

DEMASvis can be supplied both as a single-workstation application and as a module in conjunction with DEMASdb. A simple click on the desired measuring site in the Stations Explorer opens DEMASvis in order to display the collected data in a clear form as a graph or list. Furthermore, a multitude of editing and calculation functions are available to you, along with extensive correction options (reference correction, drift correction, and more).

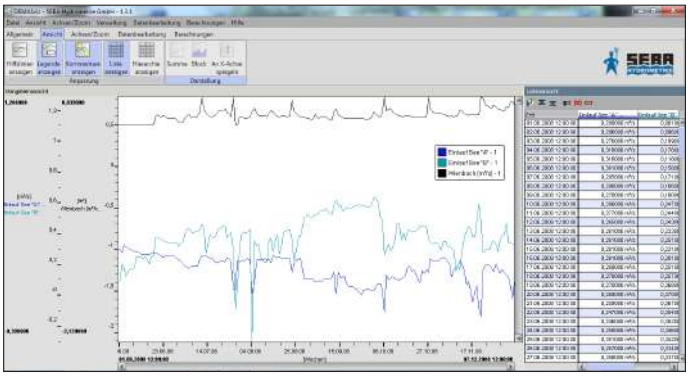
Interested? Download both tools from our download archive at www.seba-hydrometrie.com and give them a try!

DEMASdb





DEMASvis



Technical Data Dipper-PT

General:	32 Bit micro processor	
	16 MB Flash storage (= 1,120,000 measured values)	
	Watch-Dog for monitoring of microprocessor activities	
	RS 485 serial communication interface with protective cap	
	Optional connection with SEBA BlueCon 2	
	Real-time clock	
	Analog input (water level and temperature)	
	Power supply with replaceable Lithium batteries sufficient for approx. 8-10 years (at 60 min. intervals)	
	Operation temperature range: -25...+70 °C	
Pressure sensor for water level measurements:	Robust ceramic pressure sensor providing long-term stability	
	Measuring principle:	capacitive
	Accuracy:	± 0.05 % = 1 cm for 20 m measuring range
	Long term stability:	± 0.1 %/year
	Temperature stability:	± 0.01 %/K
	Measuring ranges:	0-2, 4, 5, 10, 20, 30, 40, 50, 70, 100, 200, 300 m
Temperature sensor:	NTC30 with polynomical linearisation	
	Measuring range:	-5...+50 °C ± 0.1 °C
	Accuracy:	0.3 °C (standard), 0.1 °C (optional)
Special cable:	Shielded round cable with integrated pressure-compensation tube (up to max. 1,000 m length) incl. moisture absorber, two-stage, consisting of dryinMeasurg cartridge and Gore-Tex membrane	
Storage of measured values:	Storage in realtime	
	16 bit resolution	
	Storage of control values with date/time	
	Measuring interval: 30 seconds up to 99 hours, optional from 1 second (Quicklog)	
	Programming: normal measure, averaging, event control, delta mode * NEW *, control of pump tests (QuickLog mode) *NEW*	
Housing:	**Material:**	Stainless steel, rust-free
	Dimensions:	22 mm Ø, 300 mm length
	Installation device for top pieces of min. 2"	
	Option:	Installation devices for 2" - 6" pipe diameter
Power-pack module (Quicklog):	Power supply with 4 x 1.5 V replaceable C-type batteries (alkali-manganese, MN1400, LR14, C) Option: Lithium C cells sufficient for approx. 5 years (at 15 min. intervals)	
	Material (housing pipe):	Aluminum
	Dimensions:	35 mm Ø, 345 mm length
	Protection class:	IP 68
	Installation device for top pieces of min. 2"	
	Option: Installation plates for 2–6" pipe diameter	
	RS 485 serial-communication interface with protective cap	
	Option: connection with SEBA BlueCon 2	

The right is reserved to change or amend the foregoing technical specification without prior notice.

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