Leak detection and monitoring of water supply networks

868 MHz

sebaKMT
by Megger®

Your water network in sight at all times

Billions of people have to be supplied with drinking water every day. The early detection of leaks is therefore a central issue for every water supplier to ensure a reliable water delivery to customers.

In many places, leaks occur due to outdated pipe networks, poor maintenance, material fatigue or overuse:

The water, which was previously treated at great expense, escapes in enormous quantities without reaching the consumers. Supply failures and increased production costs as well as immense secondary damage are the consequences. That is why every minute counts when it comes to locating broken pipes and leaks. Reliable equipment that enables accurate measurements, is easy and quick to operate and can be used anytime and anywhere.

Thanks to decades of experience as a manufacturer of leak detection systems, SebaKMT offers a comprehensive product portfolio, from early leak detection to the quantification of losses and pinpoint location.

Ease of use as well as reliable and accurate measurement results have always been the focus of our SebaKMT products.

sebaKMT
by Megger®

NOISE LEVEL LOGGER - NETWORK

PRESSURE AND FLOW MEASUREMENT

ULTRASONIC FLOW MEASUREMENT

NEW

The portable Interface – compact in design, great in delivery

The SebaKMT PocketServer 3 is a digital interface that fits in every pocket. It enables you to read out and parametrise Loggers, as well as to carry out offline correlations, commissioning and maintenance.

CORRELATION

LINE LOCATION

ACOUSTIC AND TRACER GAS LOCATION

OTHER INFORMATION

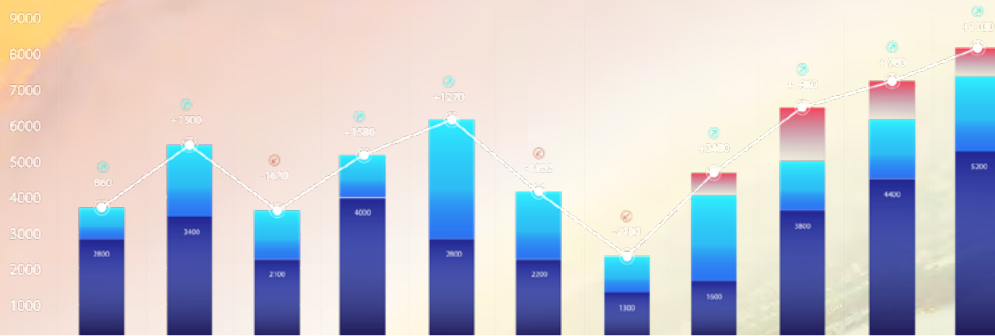## WEB SOFTWARE (CLOUD-SOLUTION)

POSEYEDON
Keep an eye on your water network

The PocketServer 3 is compatible to all Seba data Loggers of the 3 series product family:

- Sebalog D-3
- Sebalog N-3
- P-3-1 and P-3-Mini
- Transmitter Series

Monitoring

PocketServer 3

Digital Logger-Interface for data management

- Reading and programming of all your SebaKMT data Loggers
- Installation and maintenance of Logger networks
- Data transfer to FTP-Server via LTE/UMTS Sticks

Technical data	
Dimensions	150 x 92 x 29 mm
Weight	280 g
Supply	Internal lithium battery
Operating time Charge time	Up to 8 Hours approx. 5 Hours
Operating temperature	- 20 °C … + 60 °C
Radio performance	10 mW
Communication	868 MHz Funk, 2.4 GHz Wi-Fi

Seba pro tip:

Use the full range of functions comfortable and intuitive with the optionally available Samsung Outdoor Active Tablet.

Digital interface

The SebaKMT PocketServer 3 is a compact digital interface that fits comfortably in your pocket.
It forms the interface and is therefore compatible to all current SebaKMT data Loggers of the 3 product family, such as N-3, D-3, P-3/-Mini or GT-3-1.

The performance spectrum of the PocketServers-3 offers the possibility to program and read out Loggers and transmitters. It can also be used to install noise Logger networks or to carry out maintenance work.
The PocketServer 3 thus follows in the footsteps of its predecessor the Commander CDR-3.

The PS-3 is easily operated via a Wi-Fi capable terminal such as a smartphone or tablet.
The measurement data can be downloaded via USB stick into the SDV-3 PC software or directly from the field to an FTP server, e.g. SebaCloud™, using LTE/UMTS sticks.

The SebaKMT PocketServer 3 is a compact digital interface. It is compatible to all common SebaKMT data Loggers of the 3 series product family. In addition to this there is the IP68 outdoor tablet, which allows you to use the full range of functions of the device.

The performance spectrum of the PocketServers-3 offers the possibilities to program and read out Loggers and transmitters and to perform offline correlations with the help of the multi-sensors COR-MS-3. Furthermore, the device can also install the networks of the N-3 noise Loggers or perform maintenance work.
Thus the PocketServer 3 is similar to its predecessor, the Commander COR-3.

The device can be operated with any Wi-Fi capable terminal device, regardless of the operating system.
After the measurements have been taken, it is finally easy to transfer the measured data. This is done using a USB or an LTE/UMTS stick and the measurement data can be stored and displayed directly on the SebaCloud™.

PocketServer 3	
Product description	**Order number**
PocketServer 3 Set (868 MHz)	1009795
PocketServer 3, hard case incl. foam inlay, USB Stick, Power supply, USB cable	

Sebalog N-3 network

Correlating noise Logger network

- Daily data transmission
- No time-consuming patrol of individual Loggers
- Remote configuration
- Most simple installation process
- Cost-effective data transmission

Technical data	
Dimensions	115 x 45 mm Ø
Weight	400 g
Supply	Internal battery
Operating time	5 years in standard conditions
Protection class	IP68
Operating temperature	- 20 °C … + 60 °C
Data memory	100 days
Radio range	80 m, depending on local conditions
Interface	Bi-directional wireless transmission

Automatic leak location - correlating network

Time is the decisive factor when it comes to detecting and locating leaks. Modern monitoring systems, such as the Sebalog N-3 sound Logger network, are therefore designed to identify existing leaks and to detect new leaks in the shortest possible time. Thus they ensure sustainable low losses in the network.

Always up to date

The Sebalog N-3 network provides you with the latest measured data on a day-to-day basis. Automatic data transmission saves you the time consuming task of patrolling each Logger. It also offers a wide range of analyses, such as the ESA value or the history function, so that you can track the condition of the network over a long period. This means critical sections of the network are easy to identify and there won't be any nasty surprises.

The next step – network correlation

When the Loggers detect a leak, you can query the automatically recorded noise data from the affected measuring points. Depending on the configuration of the network, noise data are available for transmission either on the same day or the day after. You can listen to the recorded noises in order to tell whether the alarm message from the logger was caused by genuine leak noise or from disturbing ambient noise.

But that's not all, you can correlate the noise data from several Loggers to pinpoint where the noise is coming from. Automatic daily synchronisation of the entire Logger network ensures that the correlations are highly accurate.

Efficient data transmission

The operating costs for data transmission for automated systems must not be ignored. That's why the Sebalog N-3 network offers you the option of transferring measured data from up to 50 noise loggers in a single data transmission. This means SebaKMT leads the field when it comes to the efficient transfer of measured data from loggers.
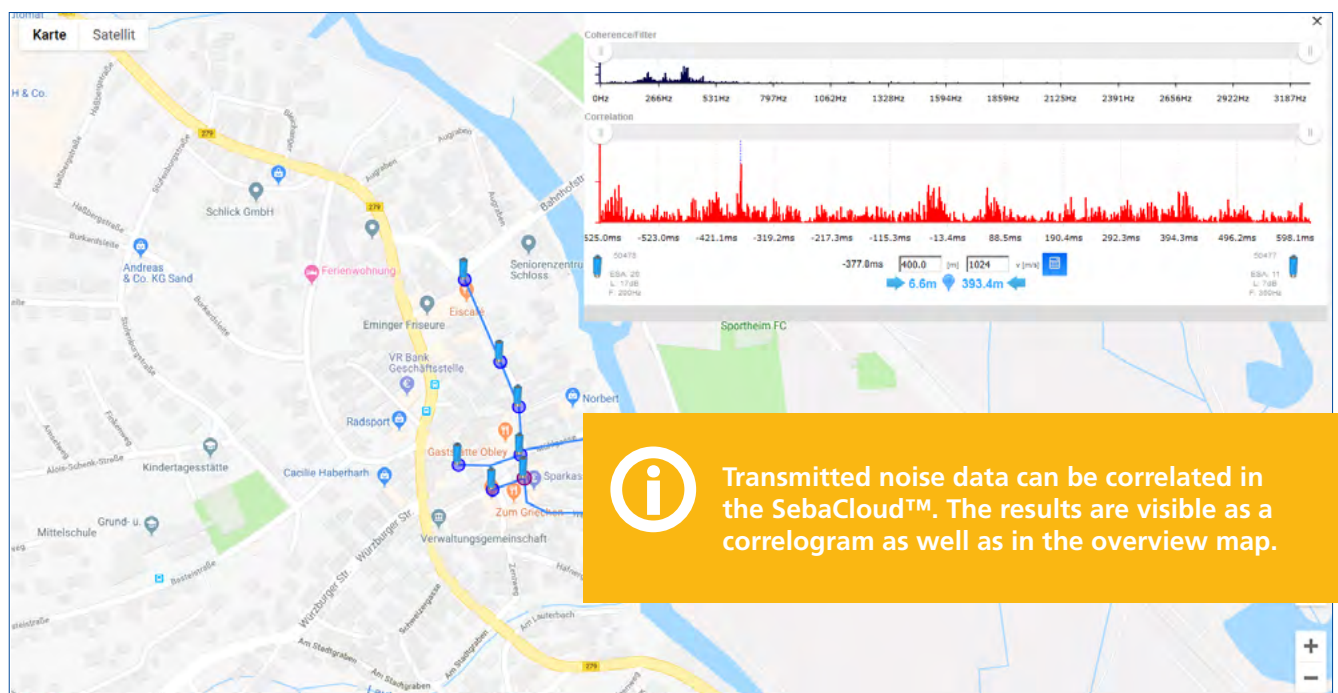
(i) Transmitted noise data can be correlated in the SebaCloud™. The results are visible as a correlogram as well as in the overview map.

Sebalog N-3 network

N-3 Noise Logger	
Product description	**Order number**
☐1 **Single Logger N-3**	820019682
☐2 **Single Logger N-3-TNC**	820025700
☐3 **Single Logger N-3-Hydro-TNC**	1005559

N-3 Logger sets incl. Transport box	
10x N-3 Logger incl. 5x Adapter angle	118304294
15x N-3 Logger incl. 5x Adapter angle	118304295
30x N-3 Logger incl. 10x Adapter angle	118304296
45x N-3 Logger incl. 15x Adapter angle	118304297
60x N-3 Logger incl. 20x Adapter angle	118304299
75x N-3 Logger incl. 25x Adapter angle	118304302

N-3-TNC Logger sets incl. Transport box	
10x N-3 Logger incl. 5x Adapter angle	118304318
15x N-3 Logger incl. 5x Adapter angle	118304319
30x N-3 Logger incl. 10x Adapter angle	118304321
45x N-3 Logger incl. 15x Adapter angle	118304322
60x N-3 Logger incl. 20x Adapter angle	118304323
75x N-3 Logger incl. 25x Adapter angle	118304324

N-3 Noise Logger

Product description	Order number
N-3-HYDRO-TNC Logger set	1007008
Sebalog RI, Sebalog N-3 (15 pcs.), PC Software SebaDataView 3, Transport box Sebalog N-3, Foam inlay for Sebalog N-3, USB cable 2.5m, yellow stickers(0-99)	

Product description	Order number
RI Logger set (10)	118304288
Sebalog RI, Sebalog N-3 (10 pcs.), PC Software SebaDataView 3, Transport box incl. Foam inlay, USB cable, yellow stickers(0-99)	

Product description	Order number
RI Logger set (15)	118304289
Sebalog RI, Sebalog N-3 (15 pcs.), PC Software SebaDataView 3, Transport box Sebalog N-3, Foam inlay for Sebalog N-3, USB cable 2.5m, yellow stickers(0-99)	

Commander-3-1

Product description	Order number
Commander-3-1 complete set	118302239
Commander 868 MHz, PC Software SebaDataView 3, Carrying bag, Headphones, Vehicle charging lead, Aerial with magnetic holder, Charging unit, USB connection cable , GPS module	

GSM-Box Radio Network

| Product description	Order number
1 **GSM-Box-3-2**	1011493
GSM-Box-3-1	118304286
2 **Repeater - Wireless amplifier**	118307791
Repeater SET - 5 pcs. incl. 5 Cable ties	118304291
Repeater SET - 10 pcs. incl. 10 Cable ties	118304292
Repeater SET - 15 pcs. incl. 15 Cable ties	118304293

1   2

LTE
NB-IoT

GT-3 series

Data transmission via LTE or NB-IoT

Monitoring the drinking water network can be time-consuming and costly. Often, in order to read sensors, e.g. noise and pressure loggers, the sensor system must be approached. The GT-3-1 can save you this trouble.

The GT-3 series was designed to transmit data collected by noise and pressure loggers from the measurement point to your office. Using 4G (LTE) or NB-IoT, on-site monitoring is no longer necessary. Save time and money and monitor drinking water network from the office.
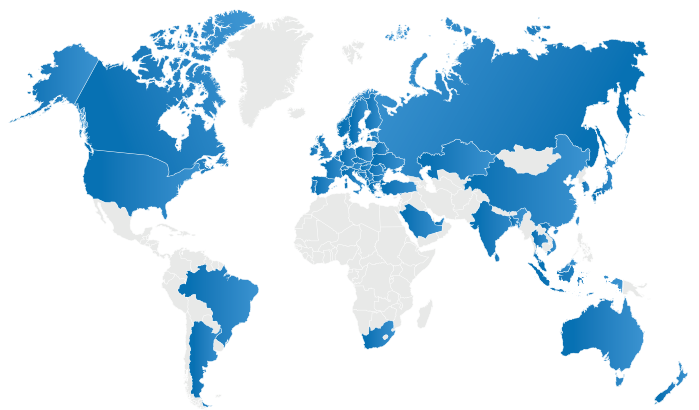
LTE & NB-IoT

Data transmitter – for noise level and pressure logger

GT-3 with NB-IoT transmission technology

A new feature of the GT-3 NB-IoT is the possibility to choose between two preset measurement modes.
For traditional leak detection, use the night measurement, or select the permanent measurement for 24-hour monitoring at 15-minute intervals.

- Transmission of noise data
- Leak detection mode with daily data upload or 15-minute measurement with hourly data upload
- Smartphone app for quick installation
- Embedded Roaming SIM with settings pre-programend
- Transmitter already added to Poseyedon customer account
- Typical battery life 5 years
- Simple and fast, battery exchange in field

### GT-3-1 with LTE transmission technology

Up to three devices (noise level and pressure loggers), can be connected in parallel to the LTE transmitter.
This makes it very efficient when it comes to multi-parameter measurement. Standard uploading of gathered data is once per day, but can be extended to twice a day. Contacting and programming is fully wireless offering the best flexibility and easy workflow. Surely, all its parameters can also be configured by remote through our latest cloud portal POSEYEDON (see page 44/45).

- Parallel transmission of noise and pressure data
- Creating and transmitting sound recordings
- Use of the LTE 4G standard
- Typical battery life of 3 years
- In-field battery exchange possible

Comparison GT-3 series	GT-3-NB-IoT	GT-3-1 LTE
Battery	1x SAFT LSH14 (5,8 Ah)	1x SAFT LSH14 (5,8 Ah)
Typical lfetime	5 years	3 years
Data transmission	NarrowBand (NB-IoT)	4G (LTE)
Supported loggers	N-3 noise level / frequency logger	N-3 noise level / frequency logger P-3 / P-3-Mini pressure logger
Measurement mode	Night-time measurement (e.g. 2-4 am) Real-time measurement (every 15 min.)	Night-time measurement (e.g. 2-4 am)
Values per measurement	100 (freely adjustable)	100 (freely adjustable)
Installation via	Smartphone App (GPS4GT)	SDV-3 (with laptop and RI) PocketServer PS-3
Battery replacement in field	✓	✓
Protection class	IP 68	IP 68
External antenna	✓	✓

PRESSURE AND FLOW MEASUREMENT
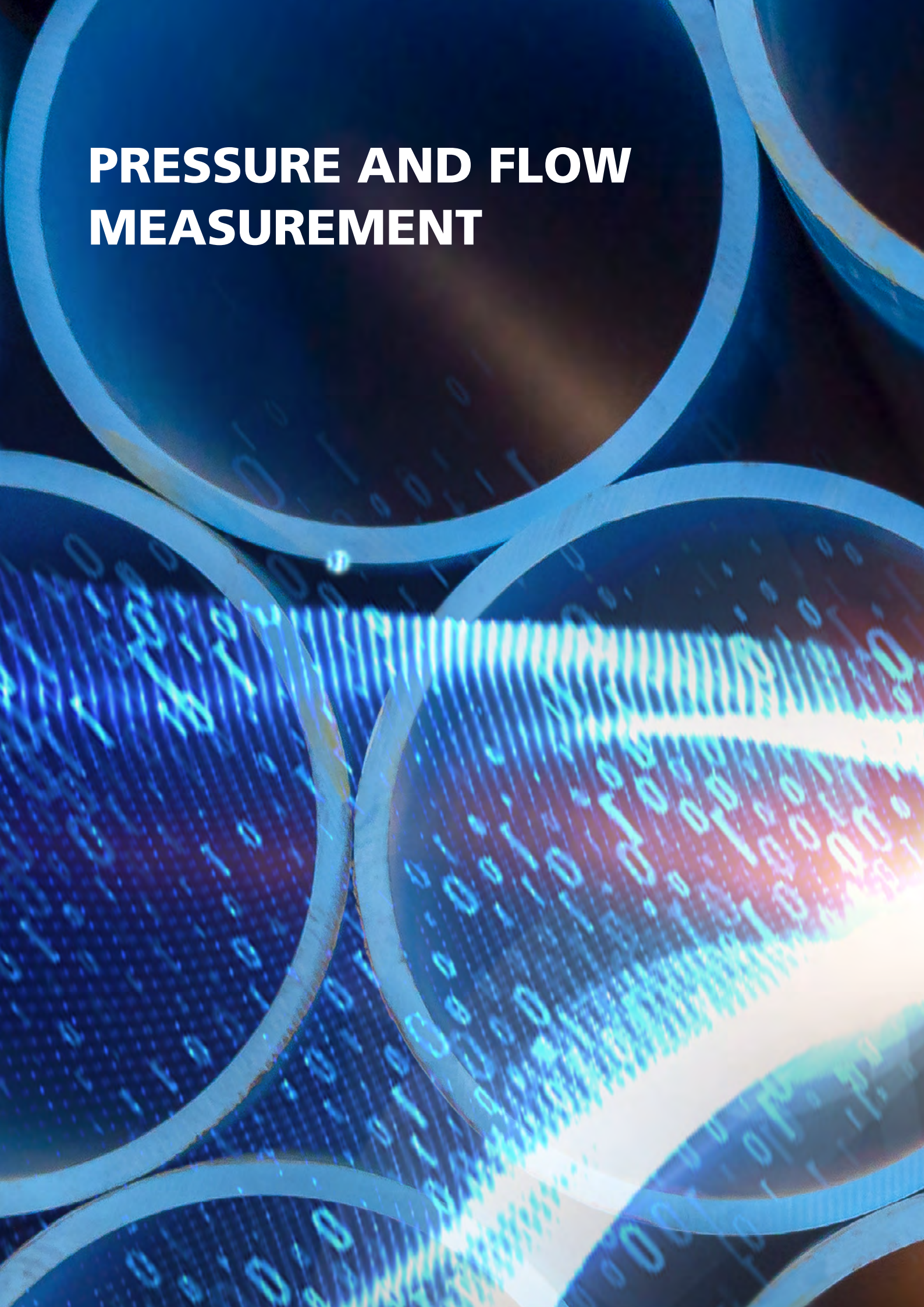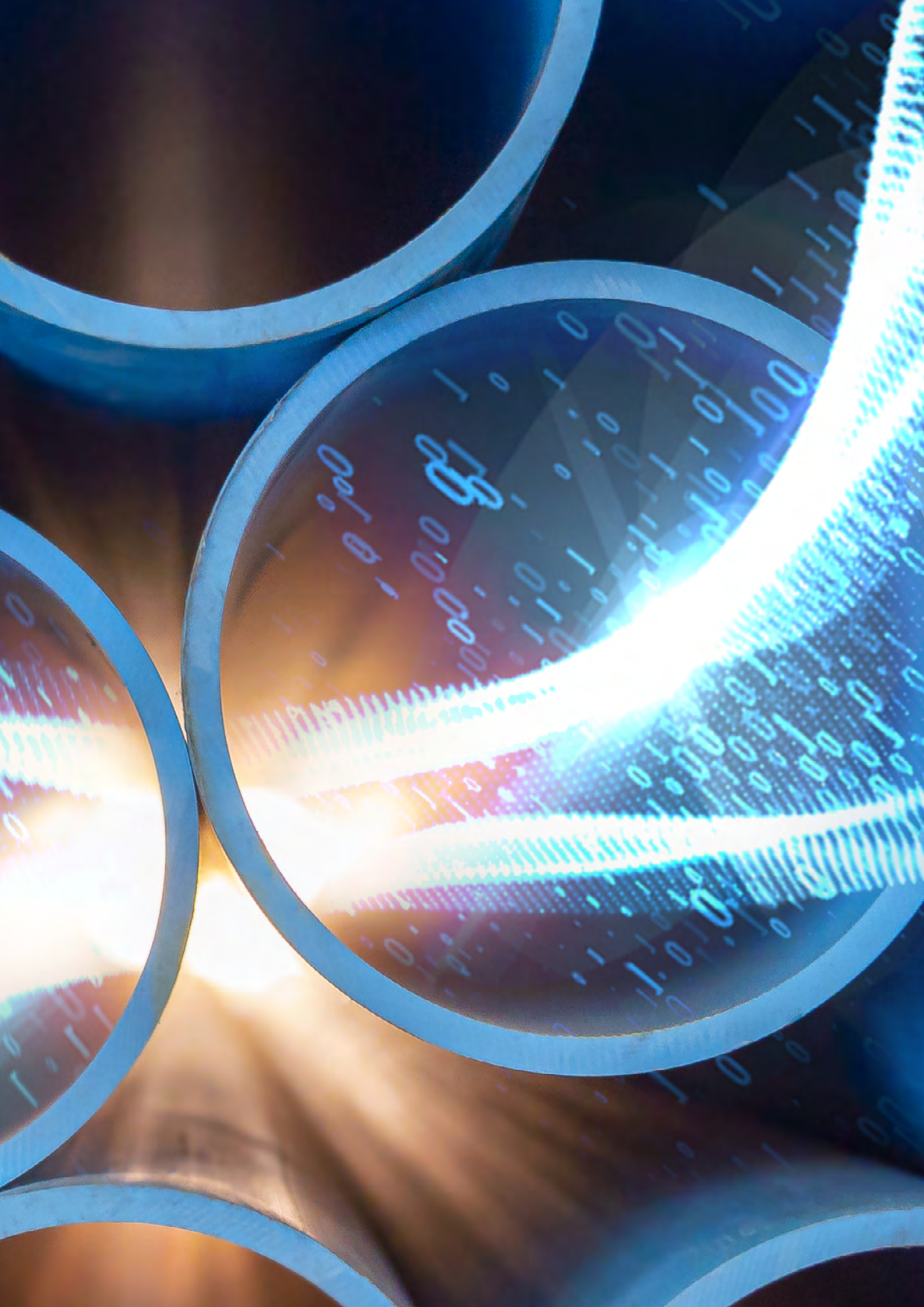
Sebalog D-3

Pressure and flow rate data loggers with GPRS

- Simple installation and
  full remote configuration
- Compact and robust design for safety
  for maximum safety
- Alarms conveniently sent to smartphone
- Memory for over 1 million readings

Technical data	
Dimensions	185 mm x 115 mm
Weight	900 g
Supply	Internal battery External battery (Opt.) External permanent (Opt.)
Operating time	5 years under Standard conditions
Protection class	IP68
Operating temperature	- 20 °C … + 60 °C
Internal memory	Up to 1.7 billion readings
Data transmission	868 MHz Funk 3G/2G

Real time measurement

With the function "real time measurement"
and "step test" you can measure with the
D-3 and observe "live" on the computer.

The most universal data logger

Thanks to its compact and robust design and the totally waterproof housing, the Sebalog D-3 data logger is very hard-wearing. It reliably informs you of the flow rate status from the pressure and flow measurements in your supply network on up to 4 channels.

It sends the latest data automatically on a day-to-day basis via 2G or 3G to your control centre or can be received, edited and displayed within the SebaCloud or the new POSEYEDON cloud platform

Always up to date with the online measurement and alarm function
Great emphasis was placed on user-friendliness with the Sebalog D-3. It supports online measurements on all channels which enables you as the user to access any saved measurement data and up-to-date readings at any time from the convenience of your smartphone.

Feel secure!
The Sebalog D-3 alarm feature can inform you immediately if there is a significant change in the pressure level or flow rate, because the current measuring data of the Sebalog D-3 are directly available online after an alarm.

You have a reliable overview of your data - no matter where you are - to know exactly where the source of the noise is located.

> ℹ **We will be pleased to configure the Sebalog D-3 that is suitable for your application. Choose from a wide range of options, such as 2 or 4 measuring channels, with or without GSM modem for permanent data transmission, with internal 16bar, 25bar or even 35bar pressure sensor. But you need two internal pressure sensors? No problem, contact us, we will do it!**

Radio frequency 868 MHz	
Product description	**Order number**
2 Measurement channels	
Sebalog D-3 with 2 Channels	1003786
Sebalog D-3 with 2 Channels, Pressure: 16	1003790
Sebalog D-3 with 2 Channels, Pressure: 25	1003794
Sebalog D-3 with 2 Channels, Pressure: 35	1003798
Sebalog D-3 with 2 Channels plus GSM modem	1003770
Sebalog D-3 with 2 Channels, Pressure: 16 plus GSM modem	1003774
Sebalog D-3 with 2 Channels, Pressure: 25 plus GSM modem	1003778
Sebalog D-3 with 2 Channels, Pressure: 35 plus GSM modem	1003782

Product description	**Order number**
4 Measurement channels	
Sebalog D-3 with 4 Channels	1003788
Sebalog D-3 with 4 Channels, Pressure: 16	1003792
Sebalog D-3 with 4 Channels, Pressure: 25	1003796
Sebalog D-3 with 4 Channels, Pressure: 35	1003800
Sebalog D-3 with 4 Channels plus GSM modem	1003772
Sebalog D-3 with 4 Channels, Pressure: 16 plus GSM modem	1003776
Sebalog D-3 with 4 Channels, Pressure: 25 plus GSM modem	1003780
Sebalog D-3 with 4 Channels, Pressure: 35 plus GSM modem	1003784
Sebalog D-3 with 4 Channels, Pressure: 2x 25 plus GSM modem	1007432
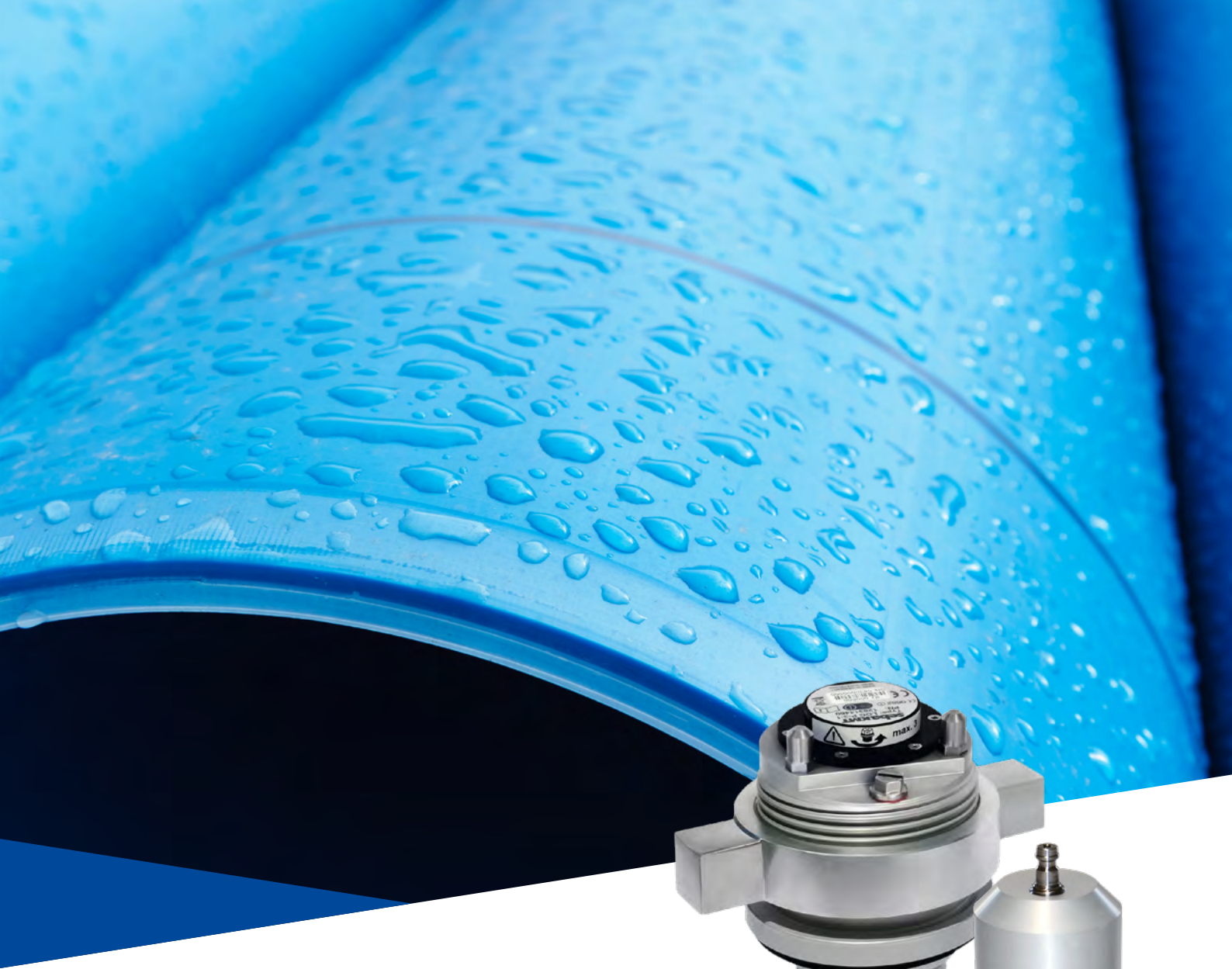
Sebalog P-3-1 / P-3-Mini

Pressure logger especially for drinking water suppliers

- Compatible with the transmitter series
- Pressure surge recording
- Virtually indestructible housing (IP68 class)
- Fits in every shaft
- Long operating time for several years
- High-precision pressure sensor
- Low overall height
- Large data memory

Technical data	P-3-1	P-3-Mini
Dimensions	110 x 96 mm Ø	120 x 63 mm Ø
Weight	approx. 1 kg	approx. 365 g
Protection class	IP68	
Measuring range	0 … 16 Bar (25 & 35 opt.)	
Operating temperature	- 20 °C … + 60 °C	
Supply	Internal lithium battery	
Operating time	> 5 years or 10.000.000 measured values	
Memory	> 1.500.000 measured values	
Interface	868MHz Funk	
Maximum error of pressure sensor	1%	
Log interval	1 s … 24 h	

Logger for pressure monitoring and pressure surge recording

The Sebalog P-3 pressure loggers are ideal for monitoring the pressure within drinking water supply networks. They are used for short-term measurements, for pressure monitoring in permanent installations and for the determination of pressure surges.

Due to its small size the P-3-1 pressure logger fits easily into any underground hydrant. The P-3-Mini even fits into shafts with limited installation space due to its particularly small design. Thanks to the extremely resistant housing, the P-3 pressure loggers are especially suitable for continuous operation suitable in the field.

With the Sebalog P-3-Mini it is possible to get a wireless readout without opening a shaft cover or in combination with the GSM transmitter to download data comfortably from a distance.

The setting possibilities of the Sebalog P-3-Mini are various. Its very large memory capacity allows measurements to be carried out at short intervals over extended periods of time.

ⓘ **Our P-3 pressure logger data can of course also be used within the POSEYEDON cloud.**

Sebalog P-3-1	
Product description	**Order number**
Single logger	128314460

Single logger kit	128310231
Sebalog P-3-1, Sebalog RI, hydrant key adapter, PC software SebaDataView 3, magnetic adapter, USB cable 2.5m	

Starter kit	118308296
Sebalog P-3-1 (3 pcs.), Sebalog RI, Hydrant key adapter, PC Software SebaDataView 3, Magnetic adapter, transport box Sebalog P-3, USB cable 2.5m	

Sebalog P-3-Mini	
Product description	**Order number**
Single logger	1004701

Sebalog P-3-Mini set	1005736
Pressure Logger with radio (868 MHz), adapter for UF-Hydrant, P-3-Mini, pressure hose, magnetic adapter, PC software SebaDataView3	

Flow measurement

Portable and stationary
pressure and flow meter

Portable	Stationary
UDM 300	SebaFlow
UDM 500	UDM 501

Portable ultrasonic flow meters are the ideal flow meter for long-term measurement campaigns in the field. Depending on the programmed measuring interval, it can operate autonomously for several months. Setting up a flow measurement point is done in no time and requires no interruption of operation. It then provides accurate measurement results with the highest reproducibility and without any measured value drift.

Thanks to their excellent sensitivity to very low flow velocities (Up to 0.01 m/s), they are ideally suited for monitoring drinking water networks by measuring the minimum flow rates at night.

All this makes the UDM series the ideal companion for the daily work of water utilities, hydrologists and engineering offices.

Stationary ultrasonic measuring instruments are ideally suited for metro logical monitoring of drinking water networks. The installation requires no intervention in the pipeline. This allows the simple and cost-effective installation of additional flow measuring points in an existing drinking water supply network.

In addition, it detects even the lowest flow speeds of up to 0.01 m/s with high accuracy.
For drinking water suppliers, however, the precise monitoring of minimum night flow rates is an essential part of their leakage detection measures.

There is no zero drift correction procedure for our measuring instruments - because they simply do not drift.

The devices are equipped with the most robust mounting systems. Wide stainless steel straps ensure the secure and permanently stable mounting of the sensors, which are additionally protected by a robust stainless steel cover.

All this guarantees the durability of the measuring system, which is suitable for installation in the shaft as well as for installation directly in the ground.

Portable
Flow Measurement

UDM 300	
Product description	**Order number**
1-MHz Set [1]	1006592
Recommended for Ø 80 … 400 mm UDM 300 Transmitter, 1-MHz pair of sensors, LEMO Connector, Mounting system, coupling paste, coupling film, Universal charging unit, Steel brush, tape measure 2 m, Transport box	

2-MHz-Set	1006594
Recommended for Ø 25 … 200 mm UDM 300 Transmitter, 2-MHz pair of sensors, LEMO Connector, Mounting system, coupling paste, coupling film, Universal charging unit, Steel brush, tape measure 2 m, Transport box	

0,5-MHz-Set	1006593
Recommended for Ø 400 … 3100 mm UDM 300 Transmitter, 0.5-MHz pair of sensors, LEMO Connector, Mounting system, coupling paste, coupling film, Universal charging unit, Steel brush, tape measure 2 m, Transport box	

UDM 500	
1-MHz Set	1012795
Ultrasonic Flow Meter, Connecting device, Mains supply and charging unit, Transport box, Tube coupling paste, Double Sensor, Analysing Software	

Stationary Flow Measurement

UDM 501	
Product description	**Order number**
UDM 501 M 12 V DC	1004842
UDM 501 M 24V DC	1007828
UDM 501 M 230V AC	1007381
UDM 501 K 12V DC [1]	1006500
UDM 501 K 24V DC	1009336
UDM 501 K 230V AC	1009335

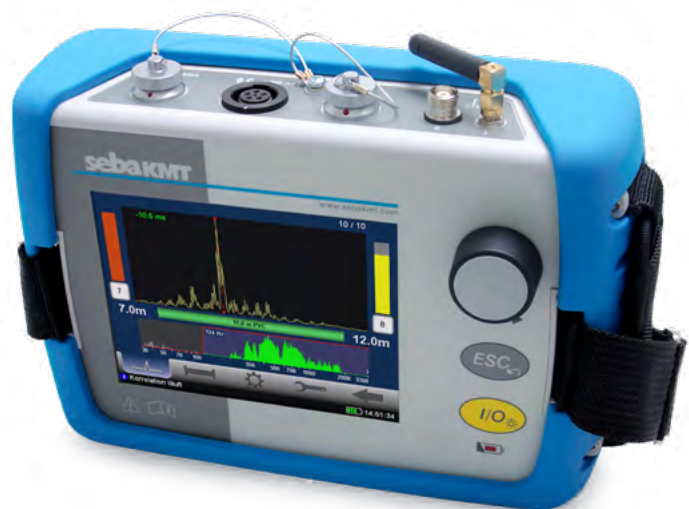| SebaFlow	
Product description	**Order number**
SebaFlow 1MHz Sensors (recommended until approx. DN400)	1005714
SebaFlow 500kHz Sensors (recommended from approx. DN400)	1006499
Extension sensor cable	1006993

[1]

CORRELATION

Correlator Series

Correlux Hybrid Correlator for
online and offline measurements

- Online and offline correlation
- Long operating time and inductive sensor charging
- Point location using multi-sensors or ground microphone
- Perfect for plastic and transport pipes
- Multi-correlation without pipe parameter input

Technical data	
Dimensions	90 x 185 x 60 mm
Weight	400 g
Supply	3.6 V Lithium Battery
Operating time	> 10 h
Operating temperature	-10 °C … +50°C
Storage temperature	-25 °C … +70°C
Display	LCD, Value 0-99
Memory	Last measured value

Easiest Handling

Simplest handling with colour touch screen. Furthermore the housing is of the Correlux C-3 light and handy.

Online and offline Correlation

The Correlux C-3 is suitable for both immediate measurement (online) and night measurement (offline). If the measuring point is easily accessible and is not in a danger zone, the online measurement is used for Stretchers. Here the so-called power transmitters (transmitter & microphone) are exposed. These transmit the live signal directly to the correlator and you get the result immediately.

However, if the measuring point is located in an area that is difficult to access or if there is too much interference noise, then you have the possibility with the power transmitters or with up to eight Multi-sensors to create a to perform offline measurement.

Correlux C-3			
Product description	**Standard**	**Pro**	**ProPlus**
C-3 Correlator	✔	✔	✔
2 Power transmitter (A/B)	✔	✔	✔
Multi-sensors	🚫	3 Pieces	8 Pieces
Headphones	✔	✔	✔
Case with charging function	✔	✔	✔
Charging unit / Car Charging unit	✔	✔	✔
PC-Software	✔	✔	✔

Correlux C-300			
Product description	**Standard**	**Pro**	**ProPlus**
C-300 RI	✔	✔	✔
2 Power transmitter (A/B)	✔	✔	✔
Multi-sensors	🚫	3 Pieces	8 Pieces
Headphones	✔	✔	✔
Case with charging function	✔	✔	✔
Charging unit / Car Charging unit	✔	✔	✔
PC-Software	✔	✔	✔

Correlux C-30			
Product description	**Standard**	**Pro**	**ProPlus**
LOG RI	✔	✔	✔
Multi-sensors	3 Pieces	5 Pieces	8 Pieces
Case with charging function	✔	✔	✔
Charging unit / Car-Charging unit	✔	✔	✔

Correlator series

Correlux C-3	
Product description	**Order number**
C-3 Standard Set	1006550
Correlator, COR Power Transmitter (2 pcs.), Case (Basis), Stereo Headphones, Active universal microphone (2 pcs.), Charging unit, Car charging adapter 3.5 m, Extension rod for PAM T-2/U (2 pcs.), Nylon braided cord 3 mm blue 2 m (2 pcs.), Connection cable Sebalog D (Output USB), CorreluxView PC-Software	
C-3 Pro Set	1006551
Correlator, COR Power Transmitter (2 pcs.), Active universal microphone (2 pcs.) Correlux Multi-sensor (3 pcs.), Case, Charging unit, Car charging adapter, Stereo Headphones, Extension rod for PAM T-2/U (2 pcs.), Nylon braided cord (2 pcs.), Magnetic angled adaptor (2 pcs.), Connection cable Sebalog D (Output USB), CorreluxView PC-Software, Label set, Mounting kit	
C-3 ProPlus Set	1006552
Correlator, COR Power Transmitter (2 pcs.), Active universal microphone (2 pcs.), Correlux Multi-sensor (8 pcs.), Case for COR C-3 (Basis), Case, Charging unit (2 pcs.), Car charging adapter 3,5m (2 pcs.), Stereo Headphones, Nylon braided cord (8 pcs.), Extension rod for PAM T-2/U (2 pcs.), Tripod adapter (8 pcs.), Label set, Magnetic angle adapter (8 pcs.), Connection cable (Output USB), CorreluxView PC-Software, Mounting kit	
Correlux C-3 Extension set Standard → Pro	1007804
3 Charging station + 3x MS-3 Multi-sensors	
Correlux C-3 Extension set Standard → ProPlus	1007807
Case incl. 8x MS-3 Multi-sensors	
Correlux C-3 Extension set Pro → ProPlus	1007810
Case incl. 5x MS-3 Multi-sensors	

Optional	
Charging unit CPK 3/CMK 3	1006646
Car charging adapter 3.5 m	810000006
Charging station for COR MS-3 (3 pcs.)	2005511

PAM HYDRO-3 Set	
Product description	**Order number**
PAM HYDRO-3 Set	1007009
Piezo hydrophone (2 pcs.), Adapter (2 pcs.), Venting hose (2 pcs.), Connection cable (2 pcs.), Storz coupler (size C) female threat G1 1.5" (2 pcs.), GEKA coupler (2 pcs.), Transport box	

Laptop correlator

Correlux C-300	
Product description	**Order number**
C-300 Standard Set	1009931
USB receiver box, Antenna analogue (433 MHz), Stereo Headphones, Adapter BNC-FME, Antenna digital, USB cable 1m USB 2.0 A-, 2x COR Power Transmitter, Case for COR C-3 (Basis), PAM CORR-2 Active universal microphone sensors (2 pcs.), Foam adapter for COR C-300-RI, Charging unit f. CPK 3/CMK 3, Car charging adapter 3.5m, Extension rod for PAM T-2/U (2 pcs.), Nylon braided cord (3 mm / blau / 2 m) (2 pcs.), CorreluxView PC-Software	

C-300 Pro Set	1011179
USB receiver box, Antenna analogue (433 MHz), Adapter BNC-FME, Antenna digital, USB cable, COR Power Transmitter (2 pcs.), Active universal microphone sensors (2 pcs.), Correlux Multi-sensor (3 pcs.), Case, Foam adapter, Charging unit, Car charging adapter 3.5m, Stereo Headphones, Tripod adapter (3 pcs.), Magnetic angled adaptor (3 pcs.), Mounting kit, Label set, Extension rod for PAM T-2/U (2 pcs.), Nylon braided cord (3 pcs.), CorreluxView PC-Software	

C-300 ProPlus Set	1011185
USB receiver box, Antenna analogue (433 MHz), Adapter BNC-FME, Antenna digital, USB cable, COR Power Transmitter (2 pcs.), Case, Active universal microphone sensor (2 pcs.), Nylon braided cord (8 pcs.) Correlux Multi-sensor (8 pcs.), Case for COR C-3 (Basis), Foam adapter, Charging unit, Car charging adapter 3.5m, Stereo Headphones, Tripod adapter (8 pcs.), Magnetic angled adaptor (8 pcs.), Mounting kit, Label set, Extension rod for PAM T-2/U (2 pcs.), CorreluxView PC-Software	

Multipoint correlator

Correlux C-30	
Product description	**Order number**
C-30 Standard Set	1011112
Case, Charging unit, Radio Interface (868MHz), Correlux Multi-sensor (3 pcs.), Tripod adapter (3 pcs.), Nylon braided cord (3 pcs.), Magnetic angled adaptor (3 pcs.), Label set , Mounting kit	

C-30 Pro Set	1011113
Case, Charging unit, Label set, Radio Interface (868MHz), Correlux Multi-sensor (5 pcs.), Tripod adapter (5 pcs.), Nylon braided cord (5 pcs.), Magnetic angled adaptor (5 pcs.), Mounting kit for COR MWA (5 pcs.),	

C-30 ProPlus Set	1011114
Case, Charging unit, Radio Interface (868MHz), Correlux Multi-sensor (8 pcs.), Tripod adapter (8 pcs.), Nylon braided cord (8 pcs.), Magnetic angled adaptor (8 pcs.), Label set, Mounting kit (8 pcs.)	

Acoustic series

Portable leak detector HL 50-BT

- Simple operation
- Frequency filters for various applications
- Always ready for use
  due to rechargeable battery
- External ground microphones connectible
  for professional leak detection
- With integrated sensor and
  Bluetooth® wireless headphones

Bluetooth®

Technical data	HL 50-BT
Dimensions	90 x 185 x 60 mm
Weight	400 g
Supply	3.6 V Lithium Battery
Operating time	> 10 h
Operating tempera-ture	-10 °C … +50°C
Storage temperature	-25 °C … +70°C
Display	LCD, Value 0-99
Memory	Last measured value

With integrated sensor and Bluetooth® headphones

Thanks to the special ergonomic shape, the HL 50-BT held in one hand during use. For the operation of the HL 50-BT only four function keys necessary (selection, filter, mute, volume) , which can be comfortably played with the thumb are available.

In the standard version, the HL 50-BT offers an integrated sensor as well as a Bluetooth® radio headphone. There are no annoying connection cables. Thus the HL 50-BT offers optimum freedom of movement and is for the tapping of slides and hydrants, but also suitable for fittings in buildings.

The measured sound level is simultaneously displayed numerically and graphically as bars on a large LCD display. The currently set filter range is also shown. When ending a measurement, the last measured sound level is marked in the bar.

For maximum flexibility and professional applications, the HL 50-BT can be equipped with three different external microphones.

HL 50-BT	
Product description	**Order number**
HL 50-BT Set	1009207
HL 50-BT, Headphones, USB charging unit, Probe tip, Extension rod, Magnetic adapter, Slide adapter 20/42 mm, Power adapter EU/US, Transport box	

Acoustic Series

Hear and see leaks
with the HL 7000

- Intuitive operation with clear touch colour display
- Always ready for use by powerful lithium-ion batteries
- Integrated GPS receiver
- Environmental/noise reduction
- Frequency Analysis
- Option: Connection of a tracer gas sensor

Technical data	HL 7000
Dimensions	200 x 80 x 650 mm
Weight (without sensor)	700 g
Supply	3.6 V Lithium Battery
Operating time	> 10 h
Operating temperature	-20 °C … +60 °C
Storage temperature	-25 °C … +70 °C

Comfortable applications

The HL 7000 floor sound system offers you a wide range of possibilities thanks to its variable construction and automatic 360° sensor-recording various possibilities for locating leaks. Due to the powerful lithium-ion batteries work assignments with more than 10 hours duration are no problem.

The Bluetooth®-enabled, wind-protected piezo floor microphone with integrated pre-amplification displays very low leakage frequencies on soft materials such as PVC or PE just as clearly as high frequencies on steel or cast iron pipes.

In the robust loading and transport box, each part of the HL 7000 equipment has it´s place. All chargeable components such as the control unit, the sensor rod and the Bluetooth® headphones can be charged together in the case thanks to the pre-installed charging cables.

In the event of pipe damage, the water flowing out of the case causes two different noises that spread out in different ways. The Hydrolux HL 7000 makes these two noises visible and audible for you. In the centre of these applications is an intuitive control panel. With its high-resolution 4.3" touch colour display they present all relevant menu items and measurement data in an easily understandable way. The menu navigation is child's play. Extremely light in weight (600 grams) and yet robust, the control unit can be can be used: worn on a belt, fixed to the sensor rod or simply clipped to trousers or belt attached. Wear the device exactly as you wish or as the situation requires. This ensures fatigue-free working.

Work completely wireless thanks to Bluetooth®.

Thanks to integrated Bluetooth® technology there are no cables to get in the way more between the control unit, headphones and the respective sensors. Noise from wind and cable contact is a thing of the past on. This allows you to concentrate fully on the leakage noise.

Acoustic Series

Hydrolux	
Product description	**Order number**
HL 7000 Pro	1011016
HL 7000, Headphones, Carrying handle, PAM W-7, Charging unit, Tripod adapter, Software HydroluxView, belt clip, Transport box, Bracket and Mounting kit	

Correlux	
Product description	**Order number**
Correlux C-3-HL Set	1007624
COR C-3, PAM W-2, Tripod Adapter, Connection cable, Headphones, Carrying handle, Vehicle charging lead, Charging unit, Transport box	

Hydrolux	
Product description	**Order number**
HL 7000 Standard US 1 **/ CHN** 2	1 **1011527 /** 2 **1011529**
HL 7000, Headphones, Carrying handle, PAM W-7, Charging unit, Tripod adapter, Software HydroluxView, belt clip, Transport box, Bracket and Mounting kit	

WEB SOFTWARE

SebaCloud™

Online access to all your data -
anytime and anywhere!

- Clear and detailed status display
  their water network
- Remote configuration of
  important measurement parameters
- Monitoring of transport pipes
- Immediate warning in case of problems with mains operation
- All pipe network data can be retrieved at any time,
  whether in the office or on the road
- Integration in GIS / SCADA Systems
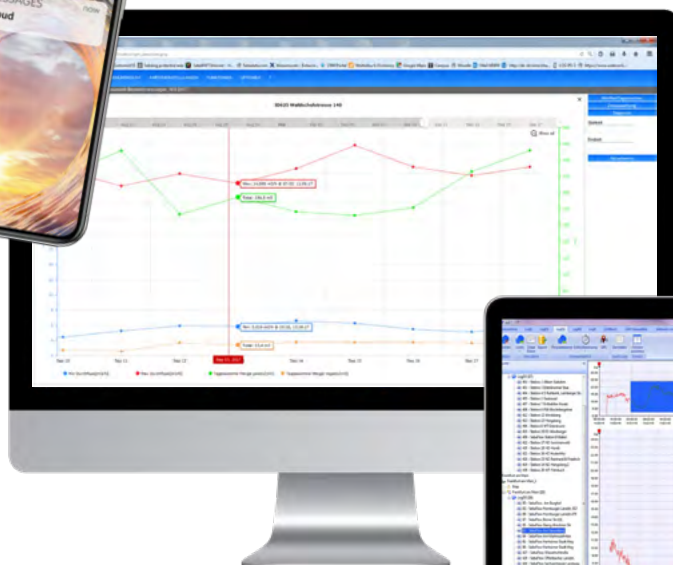
ⓘ **With SebaCloud™ your data becomes mobile:**

**Via web browser you have access to exactly the information and data you need,
anywhere and anytime: Leakage noises, meter readings, flow and pressure conditions**

Leak detection in 21st century

With SebaCloudTM, the web software from SebaKMT, you always have an overview of your entire network, can view current as well as historical measurement data and follow the development of measurement data over a longer period of time. Furthermore you can store your pipe network data, correlate measurement results and view diagnostic functions around the network.
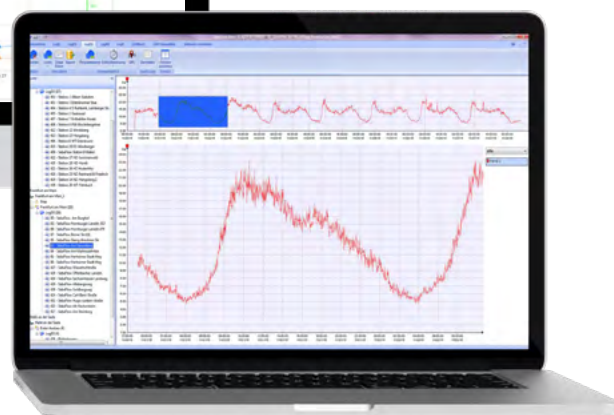
Alerting on Smartphone

Perfectly suited for monitoring of your pipe networks, thanks to alerting via e-mail and SMS.

SebaCloud™	
Product description	**Order number**
Installation SebaCloud™	1009207
Set up a SebaCloud user account. For the annual user fee of the SebaCloud™ web software please additionally choose between "LIGHT" or "PRO" version.	
Annual license SebaCloud™ LIGHT	90026592
Annual license to use the Light-Version. This is classified as follows: 1- 5 Pieces: LOG DX, LOG D3, GSM-Box 1-15 Pieces: GT-3-1	
Annual license SebaCloud™ PRO	90026591
Annual license to use the Pro-Version. This is classified as follows: From 5 : LOG DX, LOG D3, GSM-Box From 15 : GT-3-1	
Script SebaCloud™	90011479
This article contains the web script of SebaCloud™. When ordering, the customer receives the script, installation instructions and free updates for a period of 12 months after ordering.	
BIN2CSV	1004873
This article contains the converter software BIN2CSV. When ordering, the customer receives the software to load data from the cloud and automatically convert it to CSV format.	

Analysis with SebaDataView

Retrieval and evaluation of the measured data conveniently from a PC or laptop.

SebaCloud™ Software

In addition to the data from the D-3, you can also take readings from noise loggers, pressure and flow measurements or Save and evaluate correlations.
The SebaCloud offers you a large storage space.

POSEYEDON

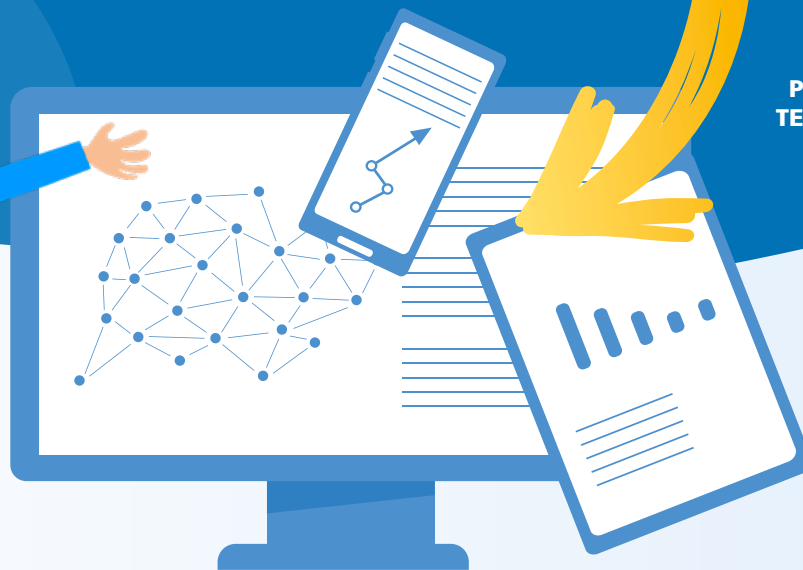**Keep an eye on your water network**

FLOW

ACOUSTICS & FREQUENCY

PRESSURE & TEMPERATURE

LTE
NB-IoT
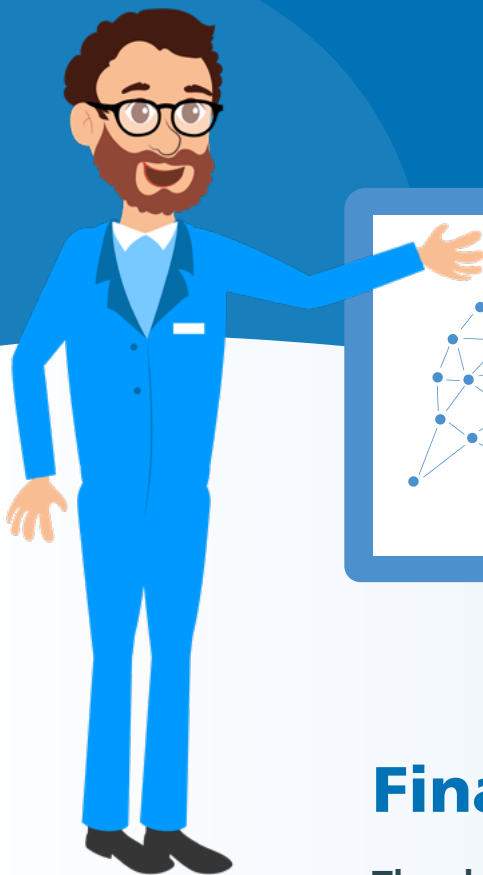
Finally!

The cloud solution for leak detection and Monitoring, which covers all your tasks in water management can support.

- All live data and evaluations under control anytime and anywhere
- Easy to understand and clear user interface
- Stable, fast, secure and energy-efficient data transmission
- Automatic Online Correlation
- Continuous development of functions (e.g. pattern recognition)

Dashboard
→ Heatmap, leakages, evaluation

Network Manager
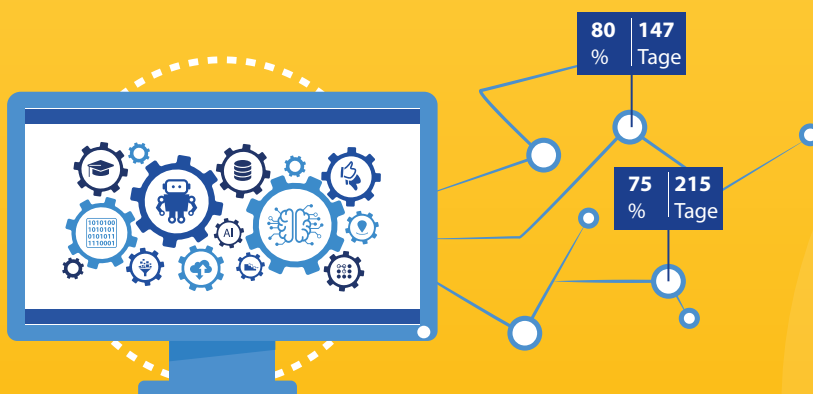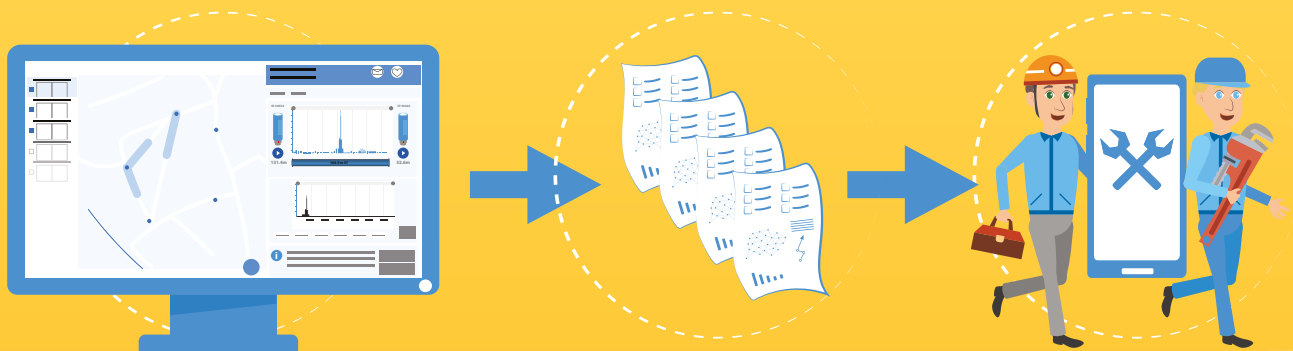→ Connection to GIS system

Ticket system
→ Efficient service management

Reporting system
→ individually configurable reports

| 80 % | 147 Tage |

| 75 % | 215 Tage |

POSEYEDON –
for less water loss!
www.poseyedon.com

PIPE LOCATION

Location technology

Utility locating system	
Product description	**Order number**
5 Watt	
CARLOC Transmitter	102-1766
CARLOC Transmitter with Li-Ion Set	1013366
Receiver suitable for the Transmitter	102-1765
5 Watt PLUS	
CARLOC PLUS Transmitter	102-1767
CARLOC PLUS Transmitter with Li-Ion Set	1013367
Receiver suitable for the Transmitter	102-1764
12 Watt	
CARLOC Transmitter	102-1768
CARLOC Transmitter with Li-Ion Set	1013368
Receiver suitable for the Transmitter	102-1765
12 Watt PLUS	
CARLOC Transmitter	102-1769
CARLOC Transmitter with Li-Ion Set	1013369
Receiver suitable for the Transmitter	102-1764
Bag for all Receiver & Transmitter	222-4109
Accessories	
Live-Adapter to transmit onto live LV lines to 480 V	220-2832
UTG Transmitter Lithium Battery Kit (EU)	220-2221
Induction clamp 5 inch (12.7 cm)	220-2829
Induction clamp 7 inch (17.8 cm)	220-2830
Broadband clamp 75 mm (7.6cm)	222-2831
Fault Probe (A-frame)	220-2834
Bag for Fault Probe	222-4857
Stethoscope	220-2835
EML Boot - Add-on marker locator (EU)	220-2833
Dual direct connect leads	222-4863
MFL TX 12 V Adapter Cable Assembly	222-3808

Locating cables and pipelines

Product description	Order number
Easyloc Standard-System complete	890005617-S
Receiver Easyloc RX Standard, Transmitter Easyloc TX, Grounding set, Ground stake, Carrying bag, Manual	
Easyloc Plus-System	890016224-S
Receiver Easyloc RX Plus, Transmitter Easyloc TX Plus, Grounding set, Carrying bag, Manual	
Easyloc RX Basic	890010236
Receiver set with Manual	
Easyloc RX Standard	890003780
Receiver set with Manual	
Easyloc RX Plus	890016177
Receiver set with Manual	
Easyloc TX Basic / Standard Transmitter set	890005586
with Grounding set, Ground stake & Manual	
Easyloc TX Plus Transmitter set	890016200
with Grounding set, Ground stake & Manual	
Easyloc RX Cam	890010258
Receiver with Manual	

Acoustic detection of non-metallic pipes

Product description	Order number
Pipe Pecker RSP 3	813360
Control unit with Battery, Shoulder strap, Pulse generator, Charging unit and device case	

WATER TEST VAN

SebaKMT
Water test van

Always and everywhere ready for use

- Data can be analysed on site

- All devices are safely stowed away
  and ready to hand

- Devices can be charged on the way

- Separate comfortable office area

- Equipment room with high-quality
  Aluminium shelves for equipment

- All pipe network data can be retrieved at
  any time, whether in the office or on the road

Optional

- Built-in water circuit
  optionally also with booster pump

- Additional supply for
  equipment and the entire office area

General performance characteristics
The SebaKMT water measuring van has three separate areas: the driver's cab, the office area (middle area) and the equipment room (rear section).
A partition wall separates the office area of the test van from the driver's cab and the equipment room.
Equipped with an L-shaped desk and a swivel chair anchored in the floor, the office area offers the comfort of a conventional office and optimal working conditions for work on the road. Heat-insulating walls and ceilings provide an improved working environment.
The floor covering is particularly robust and highly resistant. The built-in aluminium shelves provide space for everything that is needed on the move.

Get an offer now for your personal water test van.

By telephone: +49(0)9544 - 680 or by email to sales@sebakmt.com

Leak detection in the 21st century

Optimisation of work efficiency
All devices/instruments are professionally/goodly stored in the measuring trolley and so always ready to use when needed. The devices are in their intended place during transport well and the risk of losing small accessories is minimized.

On-site data analysis
A decisive advantage of the water measuring trolley lies in Possibility to analyse data directly on site. The air-conditioned office area of the car offers all conveniences of a mobile offices and has enough space to conveniently study the piping plans, evaluate the measurement data and plan the next steps.
In addition, reflective elements and rotating beacons provide a safe environment for data evaluation, especially at night or on busy roads.

Equipment room
The entire equipment compartment is made of washable and robust material. High-quality aluminium shelves offer sufficient space for all the leak detection equipment. Thanks to the mains sockets, the instruments can be charged immediately in the equipment room.

Optional equipment options

Built-in water circuit
The water measuring trolley has a built-in water circuit with flow and pressure measuring device.
The water from the mains can be passed through this circuit. This allows both pressure and also measure flow rate on site. The total measured pressure and flow data are stored in a data logger, which can be read from the mobile office via radio communication.

Built-in water circuit with booster pump
In areas of the water network where pressure is low, leak detection is difficult.
This problem can be solved by a water circuit with built-in booster pump, which is able to temporarily increase the pressure in the network. This causes leakage noises to become louder and e.g. Correlators and floor microphones are easier to locate.

Energy Management System
The energy management system is particularly recommended when the water circuit is installed. It ensures that longer pressure and flow measurements can be carried out on site without supply problems. The batteries of the system are automatically charged while driving and can be supply all leak detection devices - the devices in the office area and the lamps in the car - with electricity.

Power generator
If the built-in water circuit is equipped with a booster pump, an underfloor generator necessary for the supply. For trolleys without booster pump a conventional built-in generator is sufficient.

Data management	
Product description	**Order number**
PocketServer 3	
Tablet Samsung Outdoor Active	1008357
Seba USB Stick 4GB	90024013
Hard case incl. Foam inlay	90024324
LOG RI-Plus-Set (868 MHz)	1003877
USB cable 1 m, Mini-B to Mini-B connector ***USB cable required in addition to RI+**	90022125

Noise Logger Networks	
N-3 Network	
Sebalog RI Radio interface	820025783
Sebalog RI+ Radio interface with extended range	1003877
LOG EA58 -TNC Antenna for Sebalog N-3-TNC	820016711
Neodymium magnet (LOG EA 58)	820015167
Aerial with magnetic holder	122010060
Adapter angle with inlaid magnet	118303355
Mechanical pipe adapter	820001658
Leg spring	820000929
Cable ties	820014236
Lithium Cell 3.6V, LSH-20 Size D	820007318
LOG EA160, External Antenna LOG N-TNC/-3-US	138316432
Carrying bag for Commander 3	820025752
Transport box Repeater-3	820026366
Foam inlay below for Repeater-3 (TB-290)	820026182
Foam inlay on top for LOG N-3	820026183
Foamed transport box Sebalog N-3	128315009

Transmitter-3	
Product description	**Order number**
Commander-3-1	
GPS module	118303791
Antenna extension	820005315
Antenna 868 MHz TNC Connection	122010014
Slide adapter 20 mm	810000357
Slide adapter 42 mm	810000358
Leg spring	820000929
Adapter angle with inlaid magnet	118303355
Tube adapter for non-magnetic tubes (20-25 mm)	820001658
Nylon braided cord	304035025

Transmitter-Serie	
GT-3-1	
SMA Adapter angle for GSM Antenna	90008232
Adapter for Magnet M8/M6	90008233
Long GSM Antenna for GSM Transmitter	2004816
Magnetic adapter angle Sebalog	118303355
Magnetic adapter	820015167
Foamed transport box Sebalog N-3	128315009
Ring bolt (short)	128309062

ACCESSORIES

Pressure and Flow meters	
Product description	**Order number**
Sebalog D-3	
VK 75, Connection cable for Sensors (Socket IN)	820012449
VK 76, Connection cable Sebalog D	820012450
VK 84, Connection cable Sebalog D-UDM 300	820018168
VK 88, Connection cable Sebalog D-LOG D-EB	820020384
LOG RI, Radio interface	820025783
LOG RI+, Radio interface with extended range	1003877
LOG D-EB, External Battery	820020355
LG LOG D-EB, Charging unit	820021240
GSM-Antenna LOG D-3	820020888
Extension cable for VK 78 (3 m)	118308294
Connection box	820019262
GSM-Antenna, Step-Test	820020888
Hydraulic hose (2 m)	118304220
Sebalog P-3 / P-3-Mini	
LOG TB-290, Transport box N-3	118306257
Foam inlay for TB-240 Sebalog P-3	118307631
Adapter for UF-Hydrant, LOG P-3-mini	2007329
Adapter (VA) f. UF-Hydrant, LOG P-3-mini	2010272
Hydrant key adapter	108301741
Magnet adapter	820015167
Storz coupler Size B, 2" thread, PN 16	820026998
GEKA coupler 1.5" thread (external)	650010117
Reducing sleeve from 2" female threat to 1.5", Alu	820026184
Adapter for underground hydrants DN80 Rd 85x1/6" IG Alu	820026168
USB cable 2.5 m	820004240
Pressure hose, max. 35 bar, 0,54m (NW 5 quick fit to quick fit)	128310977
Pressure hose, max. 35 bar, 2 m (NW 5 quick fit to 1/4'' external thread)	118304220

ACCESSORIES

Flow measurement	
Product description	**Order number**
UDM 300	
Transmitter L (Lemo Connector)	1009281
1 MHz Sensor L (Lemo Connector)	1008790
2 MHz Sensor L (Lemo Connector)	1008791
0.5 MHz Sensor L (Lemo Connector)	1008792
0.2 MHz Sensor (UDM 500)	1012431
Chain 1 m	1008793
Chain 2 m	1008795
External Battery	1008637
Transmitter (TrimTrio Connector)	1006572
2 MHz Sensor (TrimTrio Connector)	1006573
1 MHz Sensor (TrimTrio Connector)	1006574
0.5 MHz Sensor (TrimTrio Connector)	1006575
Read out cable	1006576
Coupling paste 100 ml (-30°C...200°C)	1007238
Connection cable Sebalog D	820018168
Set of textile tensioning straps 5 m	1007480
Typ VT-K Set of permanent coupling film (for K-Sensors)	1007396
Typ VT-M Set of permanent coupling film (for M-Sensors)	1007397
Ultrasonic measuring device for wall thickness	118304435
Sensor mounting rack 2 pcs. – for 1 & 2 MHz Sensors	1006399
Sensor mounting rack 2 pcs. – for 500 kHz Sensors	1010527
UDM 500	
0.2 MHz Sensor	1012431
0.5 MHz Sensor	1012796
4 MHz Sensor	810003528
Service-Adapter (terminal block + Socket)	1012797
Textile tensioning straps (5 mm x 25 mm)	1007480
Textile tensioning straps (7 mm x 25 mm)	1007481
VCM, Sensor mounting rack (for 2x 1 & 2 MHz Sensors)	1006399
VCK, Sensor mounting rack (for 2x 500 kHz Sensors)	1010527
UDM 501 / SebaFlow	
GSM Amplifier Antenna 5 m cabel	90028107
Antenna Adapter cable SMA-ODU, 0.8 m	2010316
Antenna-Extension cable 3 m	118308294
Antenna-Extension cable 5 m	90027986
Antenna-Extension cable 10 m	90027987
Antenna-Extension cable 15 m	90027988

Correlation	
Product description	**Order number**
Correlux C-3	
VK 100, Connection cable C-3-W2	118302742
LOG GPS, GPS module C-3 / CDR-3	118303791
VK 126, Adapter cabel	90018816
Correlux C-300	
Magnethaftantenne 380-435 MHz	820017951
GPS Antenna	820013945
Correlux C-3 / C-300	
PAM W-2 Set	1009211
Wind-protected ground microphone	
Connection cable	
Carrying handle	
Tripod Adapter	
VK 100, Connection cable	
PAM HYDRO-3 Set	1007009
PAM HYDRO-3, Piezo hydrophone	
Adapter UF Hydrant	
ES HYDRO-2, Venting hose	
VK 114, Connection cable	
Storz coupler Gr. C female threat G1 1.5"	
GEKA coupler with female threat G1 1.5"	
STK 2, Transport box	
Accessories	
Correlux Multi-sensor	1004815
AD-S-20, Slide adapter 20mm	810000357
AD-S-42, Slide adapter 42mm	810000358
TX A/B High temperature sensor -130°C (2 pcs. needed)	1007108
VK 98, PAM CORR (2.5 m)	108301284
Tripod adapter for Sebalog Corr	128309877
Nylon braided cord 3mm (2 m)	304035025
Magnetic angled adaptor	2007392
Label set COR C-3 (1 - 8)	2007321
Mounting kit	2007393
Charging unit for CPK 3 /CMK 3	1006646
Car charging adapter 3.5m	810000006
Charging station for COR MS-3	2005511

Acoustic Series	
Product description	**Order number**
HL 7000	
PAM T-7, Feeler rod microphone	1010396
VST T-7, Extension rod	90029964
PAM T-7/ PAM T-3, Foot traverse	820018811
PAM h-/, Tracer Gas Sensor	1010671
PAM CORR (2.5m), Universal microphone	820019615
PAM CORR (1.5m), Universal microphone	1012410
HL 50-BT	
PAM B-2 Set PAM B-2 + Tripod adapter	1009209
PAM W-2 Set PAM W-2, Connection cable, Carrying handle, Tripod Adapter	1009211
C-3 HL	
Feeler rod	1003846
Adapter cabel COR C3 - PAM T-3-1	90018816
Active universal microphone	820019615
Extension rod for PAM T-2/U	810000103
Magnetic adapter SAMARIUM-KOBALT	110030010
Tripod adapter for Sebalog Corr	128309877

ACCESSORIES

International sales

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