MEMO SENS

Memosens 2.0
For simple, safe and connected liquid analysis

Endress+Hauser [EH]

People for Process Automation

The digital revolution in the world of process analysis continues

Memosens 2.0 is leading Memosens technology into the future. The extended sensor electronics offer:

- Perfect basis for IIoT connectivity: You always have the relevant information on your measuring point close to hand using the right app.
- Predictive maintenance 2.0: The storage capacity for up to 8 times more relevant data is an excellent basis for predicting maintenance requirements and planning maintenance cycles. This ensures more accurate process management and enhanced plant management.
- Increased flexibility when configuring the measuring point even in hazardous areas: Any Ex-approved Memosens 2.0 sensor can be connected to any Ex-approved Liquiline transmitter.

Furthermore, Memosens 2.0 offers all of the advantages of Memosens technology:

- 100% reliable thanks to digital data transmission via an inductive, corrosion-free plug-in head.
- Reduction in process downtime thanks to plug & play system with precalibrated sensors
- More accurate measured values as calibration takes place under optimum conditions in the laboratory
- Sensor regeneration results in an up to 30% increase in sensor operating life

Memosens 2.0 collects networked data

The new functions help you to make the most of your measured values

Memosens 2.0 takes maintenance strategies to a new level

The extended electronics unit means that the new sensors can store eight times more calibration data. The customers thus have more data available to them to develop a specific maintenance strategy for their measuring points, e.g. with Heartbeat Technology, and extend the service life of the sensors as a result.

By exchanging, cleaning and calibrating them regularly, Memosens sensors can live up to 30% longer – even in harsh conditions. If customers wish to analyze and optimize their measuring points even further, they can supplement Memosens 2.0 with the Memobase Plus software, which enables full tracking of all sensors.

Memosens 2.0 is an excellent foundation for IIoT applications, enabling convenient remote access to your measuring points.

Memosens 2.0 provides the foundation for IIoT connectivity

The sensors' digital data can be transferred directly to the Netilion cloud and used for IIoT applications such as Netilion Health or Value. Netilion Health allows you to query the sensor's health status from anywhere via smartphone, tablet or laptop and respond quickly to an unexpected event.

Netilion Value allows you to access your measured values at any time and from anywhere so you always know exactly what is happening in your plant. Digital access to this information means that you can manage the quality of your operating processes accurately – even remotely.
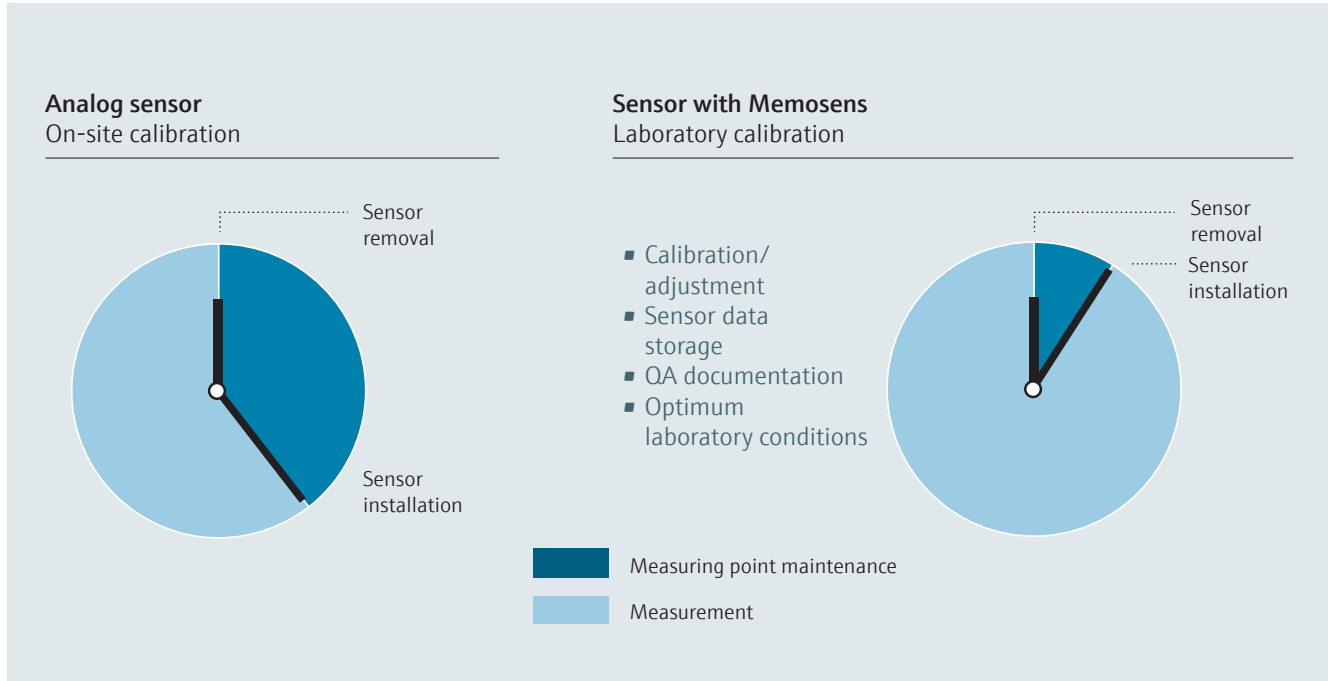

Netilion Value allows you to access your measured values at any time and from anywhere.

Memosens 2.0 is easy to use

Get to the next level in liquid analysis. Memosens 2.0 is exceptionally reliable, user-friendly and practical.

Analog sensor
On-site calibration

Sensor removal

Sensor installation

Sensor with Memosens
Laboratory calibration

- Calibration/ adjustment
- Sensor data storage
- QA documentation
- Optimum laboratory conditions

Sensor removal

Sensor installation

■ Measuring point maintenance
■ Measurement

"I used to carry all my cleaning stuff around just to calibrate one pH sensor. Now I can calibrate the sensor inside the laboratory."

Hassan Maati B AlHarbi, Analyzer Supervisor, Saudi Kayan, SABIC Saudi Arabia about Memosens

Memosens 2.0 is synonymous with ultimate user-friendliness

User-friendliness starts with the bayonet lock of the plug-in head that can be easily opened and closed without twisting the cable.

It continues with real plug & play: Every Memosens sensor is automatically recognized and identified by the transmitter.

Sensor and process-specific data are stored directly in the sensor head. Personnel no longer need to worry if they have everything they need for calibration when they are out in the field – they simply take a precalibrated sensor and exchange it on-site. Calibration is performed in the comfort of the laboratory where harsh weather conditions and difficult access to measuring points do not cause complications.

Needless to say, quick exchange of the sensor in the plant reduces the time required for maintenance and thus plant operating costs.

Memosens 2.0 guarantees reliability

Increase the availability of your measuring points and trust your measured values.

Memosens 2.0 delivers on the reliability you are accustomed to

Memosens technology digitizes the measuring signal in the sensor and transmits it to the transmitter via an inductive, non-contact connection. This makes the measurements completely resistant to environmental influences such as moisture, corrosion and salt bridges. The galvanic isolation of sensor and transmitter eliminates interference signals. The digital measured value transmission automatically results in an error message if the signal flow is interrupted: this increases the reliability and availability of the measuring point dramatically.

Memosens 2.0 offers maximum flexibility even when setting up a measuring point in hazardous areas

Select the transmitter that best suits your measurement requirements; from a multiparameter and multichannel Liquiline transmitter with cCSAus approval to the Ex-approved Liquiline CM42 transmitter or Liquiline Compact CM72/CM82 with Ex approval, the smallest transmitters for Memosens 2.0 sensors. It doesn't matter if you need a field device, panel mounting or compact transmitter, your compliance with the requirements for hazardous areas is always guaranteed and you need not worry about compatibility. This makes the plant planning stage easier and faster and also increases safety.

"With Memosens, there is no need to stay in the field for the pH electrode calibration. This is a huge improvement for safety."

Reijo Mämmioja, Senior Instrumentation Engineer, Agnico Eagle about Memosens

Memosens 2.0 also values partnership

Our Memosens technology has also won over other manufacturers, such as Knick, Hamilton Bonaduz and SI Analytics. We share our knowledge with them to develop a joint platform for inductive, non-contact connection systems for the benefit of all users. Your second source is guaranteed.

Memosens 2.0 is part of an entire ecosystem

A powerful technology needs space to be effective. Memosens 2.0 integrates all of the devices in the Liquiline platform and is thus the most comprehensive technology in liquid analysis.

Memosens sensors can be connected to the whole range of Liquiline transmitters, Liquiline System analyzers and Liquistation and Liquiport samplers.

Liquiline platform This platform offers the appropriate transmitter whatever the measurement requirements; whether a field device, top-hat rail or ultracompact version. This simplifies the engineering process and makes it faster. All Liquiline transmitters operate on the digital Memosens protocol and use the same calculation technology and menu guidance. This harmonizes and simplifies the handling of your measuring points and reduces operating errors.

Transmitters, analyzers and samplers in the Memosens family
- 2-wire transmitter Liquiline M CM42
- 4-wire multiparameter transmitter Liquiline CM44x for up to 8 sensors as a field device or DIN-rail device
- 4-wire transmitter Liquiline CM14 for pH/ORP, conductivity or dissolved oxygen as a panel-mounted device
- Compact transmitter Liquiline Compact CM82/72
- Stationary sampler Liquistation CSF48
- Portable sampler Liquiport 2010 CSP44
- Colorimetric analyzers Liquiline System CA80

Check your Memosens measuring point In the event of drifting measured values, Memocheck establishes if factors other than the sensor are the cause, such as the cable and coupling, the connection to the process control system or transmitter. With the Memocheck Sim handheld, you can define the values freely and simulate all sensors "speaking" Memosens protocol. Memocheck simulates defined measured values of the pH/ORP, oxygen, conductivity or chlorine parameters and a measurement error. This allows you to check your measuring point quickly and directly on-site. Validation and troubleshooting made easy.
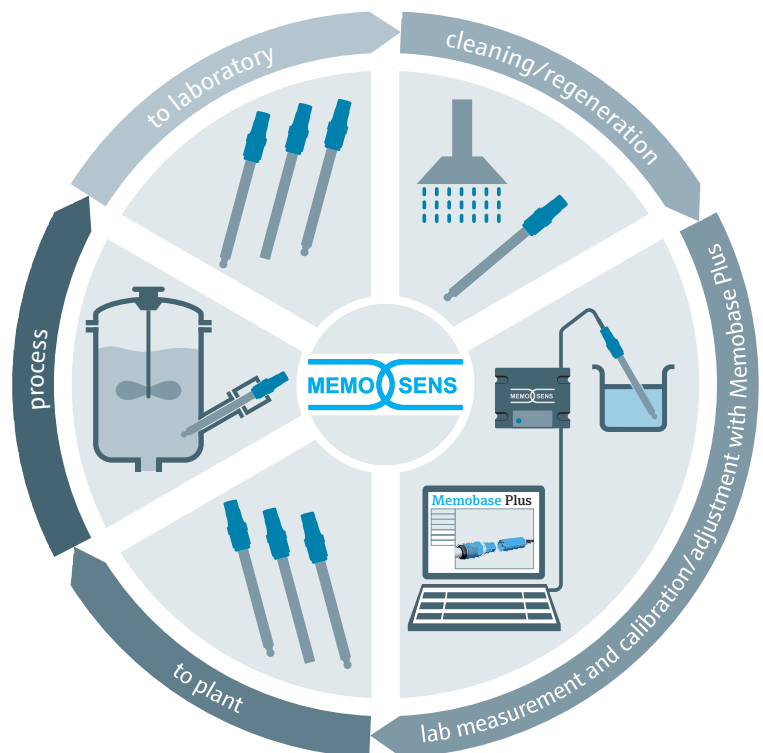
Service tools for the Memosens measuring point: Memocheck Plus and Memocheck Sim

With Memobase Plus, you can calibrate every Memosens sensor and keep track of your process analysis history.

Measure, calibrate and document with Memobase Plus Memobase Plus is the all-in-one sensor management tool. With the software, you can not only calibrate the sensor and read out sensor data but also generate reports on sensor history and status: measurement data, calibration data and sensor life cycle are fully transparent and trackable.

- Time savings and flexibility with up to 4 Memosens sensors at the same time.
- Optimum ambient conditions and multipoint calibrations guarantee high-precision measured values.
- Improved quality management thanks to full traceability of sensors and availability of all the relevant data for predictive maintenance.
- Identical measurement and sensor technology in the process and laboratory means 100% consistency between measurements.
- Convenient buffer management: Using a scanner, you import the batch number, expiry date etc. from our buffers directly into Memobase Plus. This makes it easy to track which sensor was calibrated with which buffer.

The sensor calibration cycle with Memobase Plus

The information you need - any time, any place

The Liquiline Mobile CML18 multiparameter handheld measures pH/ORP, conductivity and oxygen with 100% signal integrity. Use it at any measuring point in your plant, and establish immediately what is happening in your process. Liquiline Mobile CML18 can be easily operated using the intuitive SmartBlue app. Measured values and sensor data are transferred via a secure Bluetooth connection to the app on your smartphone or tablet. The app provides you with a convenient way to make settings and adjustments and to read out sensor values and measured values.

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