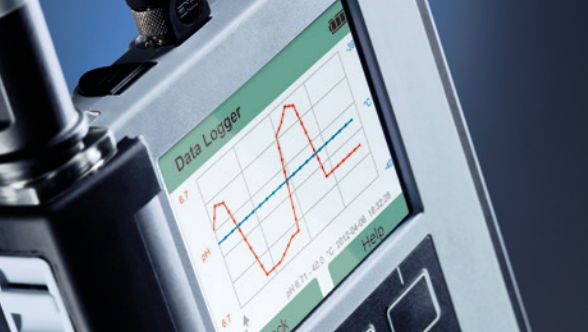


Portable multiparameter  
analyzer for the  
pharmaceutical and  
biotech industries

## Portavo 908 Multi





# Portavo 908 Multi

## Portable Multiparameter Analyzer

- Pharmaceuticals
- Biotechnology
- Food technology
- Beverages

Portavo 908 Multi is the first portable Memosens-based measuring device for the analysis of liquids with direct printer control.

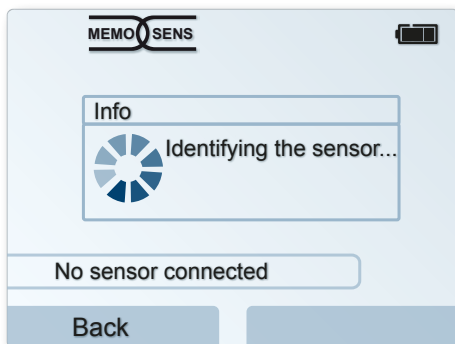
A printer for immediate printing of the calibration record (GLP compliant) can be directly connected to the micro USB port.

Many new features distinguish the Portavo 908 Multi for use in the pharmaceutical and biotech field. These include

- a new pH calibration procedure with a fixed process cycle
- multi-level user management with access control
- direct assignment of Memosens sensors to the device, which increases safety in operation.



[www.knick-international.com/portavo](http://www.knick-international.com/portavo)

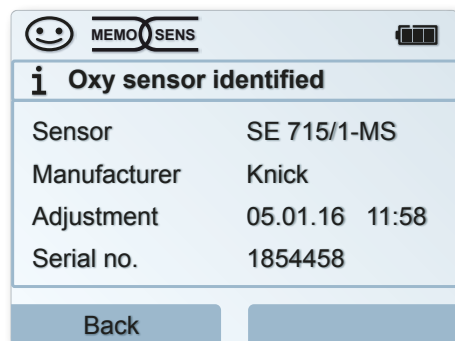


### Great Flexibility Thanks to Multiparameter Technology

Portavo 908 Multi enables versatile and flexible use. When combined with digital Memosens sensors, the following measurement parameters are supported:

- pH
- ORP
- conductive conductivity
- inductive conductivity
- amperometric oxygen
- optical oxygen
- temperature

As soon as the sensor is connected, the Portavo 908 Multi is set to the selected parameters. All relevant sensor data can be detected at a glance.



### Facts

- Multiparameter
  - pH
  - ORP
  - conductive conductivity
  - inductive conductivity
  - amperometric oxygen
  - optical oxygen
  - temperature
- GLP compliance
- Direct printer control
- User management
- pH calibration with a fixed process cycle
- Digital Memosens sensors
- Concentration measurement with toroidal conductivity sensors
- Robust, practical, ergonomic
- Li-ion battery — charged directly via USB

# For Measuring pH, ORP, Conductivity and Oxygen



## GLP Compliant

A micro USB port allows a local printer to be connected for direct printout of the sensor calibration record.

The record contains

- date and time stamp
- device information
- sensor information
- calibration data

The unique assignment of all relevant data is ensured and mix-ups are eliminated.

Complete documentation of calibration and test data guarantees that SOP guidelines are met.

Portavo 908 Multi fulfills the GLP documentation requirement and thus improves quality management according to ISO 9001.

An Inspection Certificate 3.1 to confirm the device specifications on the basis of national and international measuring standards rounds out the package.

Calibration record		
Date	11/26/2015	11:41
Device information		
Manufacturer	Knick	
Serial no.	0003792	
Model	908 Multi	
SW version	1.5.0.Build 10904	
Sensor information	Memosens	
Sensor type	pH	
Manufacturer	Knick	
Order no.	SE 555X/1-NMSN	
Serial no.	2180694	
Software ver.	1.0.6	
Hardware ver.	1.5.2	
TAG	ABC 11-13-12_wo	
Temp. offset	0.0 K	
Operating time	50 h	
Wear	0 %	
SIP	0	
Calibration data		
Date	06/14/2015	09:48
Zero	pH 7.201	11.8 mV
Slope	99.154 %	58.7 mV
Buffer 1	pH 4.005	
Buffer 2	pH 6.996	

# Portavo 908 Multi

## Tailor-Made pH Calibration

### SOP Cal

pH sensors can be tested using the new SOP calibration procedure with up to 3 calibration points. A further buffer is used as a verification buffer. You can pick and choose the buffer set for each calibration point and also set the sequence.

You can use your own buffer solutions or choose from a list of commercially available buffer sets, e.g., CaliMat, NIST and DIN. For the verification buffer, a maximum permitted deviation (delta pH) is entered.

### This Calibration Procedure is Sure to Impress!

- The fixed pH calibration procedure reduces potential errors
- Automatic error detection if set limits are exceeded
- Qualified assessment of pH sensors

## Temperature Under Control

Besides the usual calibration of the sensor, the integrated temperature detector can also be adjusted by a separate 1-point calibration. This is particularly relevant after the SIP cycle (sterilization-in-place). Thanks to this feature, greater sensor precision can be achieved and the SOP guidelines fulfilled more simply.

## Security Package Included

### User Management

The Portavo 908 Multi's professional user management regulates access to the device and the sensor.

- Increased security for configuration, calibration and measurement data
- No unauthorized interventions during the operating cycle
- Up to 4 user profiles can be entered
- Different access rights can be established

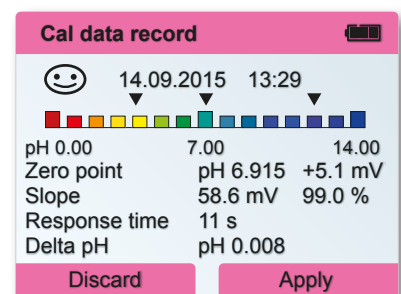
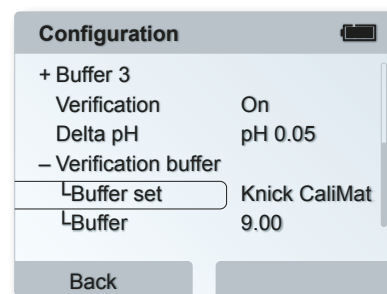
Depending on user experience, the role profile can be selectively defined for configuring the device and sensor as well as for calibrating the sensor. The risk of changing settings inadvertently is clearly minimized in this way.

## More Safety During Operation

Memosens sensors can be assigned directly to the Portavo 908 Multi. As such, data saved in the sensor can be consulted, including

- sensor type
- TAG
- group

Unique sensor-to-device assignment reduces potential errors. This ensures that only the right sensors for the selected measuring points are used.



# For Measuring pH, ORP, Conductivity and Oxygen



[www.knick-international.com/memosens](http://www.knick-international.com/memosens)

## Memosens

Digital Memosens sensors for pH, ORP, conductivity and oxygen are ideal for the analysis of liquids especially in industries such as pharmaceuticals and biotech but also in the food and beverage sectors.

Memosens sensors are automatically detected as soon as they are connected to the Portavo 908 Multi.

## MemoSuite Advanced

All of the sensor calibration data saved in the Portavo 908 Multi can be transferred easily and directly to the database by the MemoSuite Advanced software. The database meets the requirements of GMP and FDA CFR 21 Part 11.

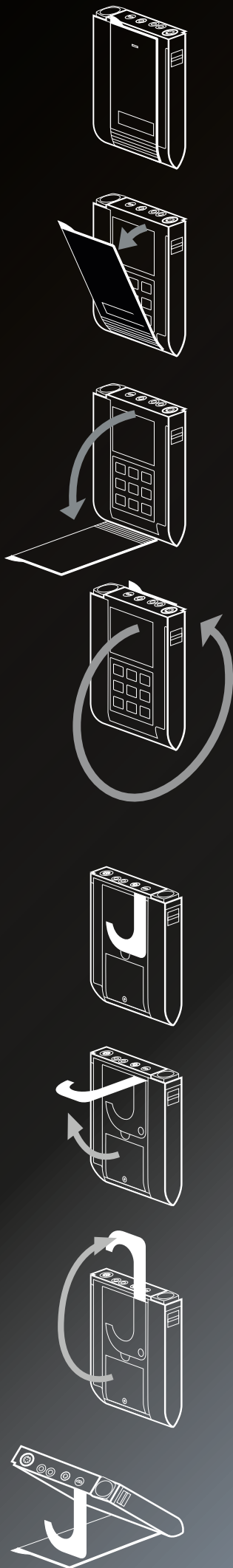
## The benefits speak for themselves:

- **Interference-free coupling**
  - Contactless energy transfer
  - Humidity, dirt or interference have no effect
- **Always ready to use**
  - Plug & measure – sensor replacement in seconds
  - Pre-calibrated sensors are always available
- **Intelligent diagnostics**

Predictive maintenance extends sensor service life. Information about

  - sensor service life
  - calibration and adjustment data
  - sensor wear
  - SIP, CIP and autoclaving counter
  - remaining service life

# Portavo 908 Multi



## Robust, Practical, Ergonomic

The robust and versatile housing design of the Portavo 908 Multi allows it to be used outdoors.

- Scratch-resistant, high-resolution color graphic display
- IP 66/67
- Unique graphic symbols for intuitive menu control
- Li-ion battery — charged directly via USB

With the fold-out hook, the device can easily be suspended so that you have your hands free to handle the sensors.

Portavo 908 Multi is perfect for portable use. The integrated quiver protects the sensor during transport and storage.

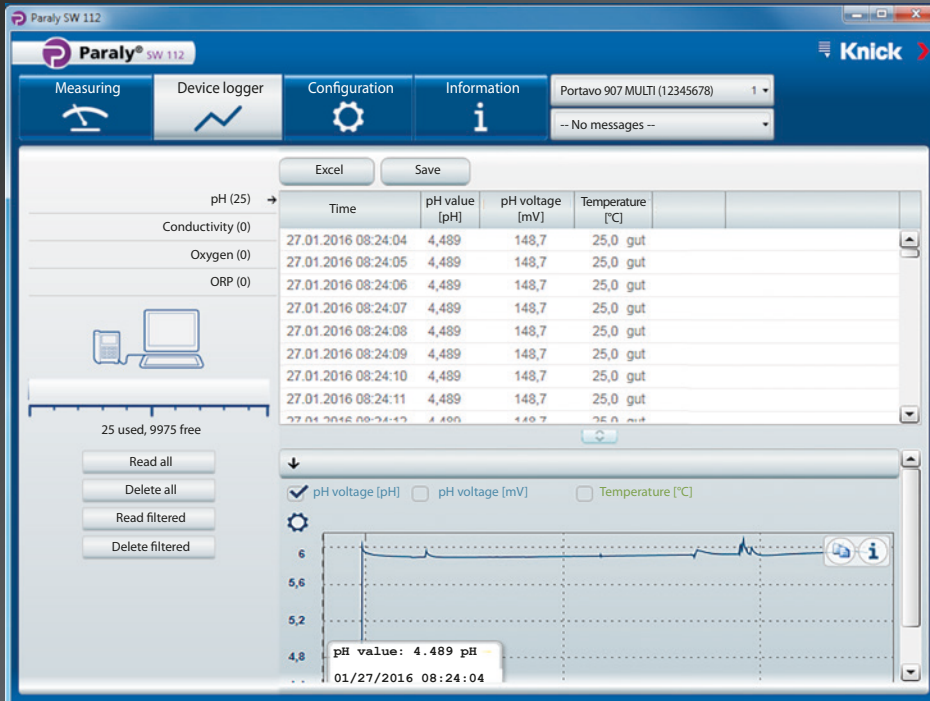
## Concentration Measurement

When conductivity sensors are connected, concentrations of NaCl, HCl, NaOH, H<sub>2</sub>SO<sub>4</sub> and HNO<sub>3</sub> can be measured. Toroidal conductivity sensors are ideal for measuring high concentrations with up to 100% by weight.



SE 680 digital toroidal conductivity sensor

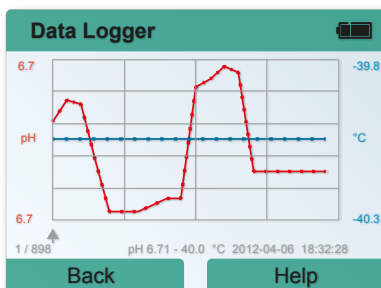
# For Measuring pH, ORP, Conductivity and Oxygen



## Complete Documentation

The powerful data logger is extremely rare in devices of this type. Different logger types can be selected:

- manually for rapid recording
- time-controlled with a fixed interval
- signal-controlled according to process variable, temperature and much more.



## Paraly SW 112

The Paraly SW 112 software offers ergonomic device configuration as well as management of recorded data.

The standard USB interface allows the Portavo 908 Multi to be connected to a PC.

Using the integrated export function, the logger data can be easily transferred to Microsoft Excel for further processing.

## Paraly SW 112 is sure to impress:

- Ergonomic management of measurement data
- Direct analysis of the data logger
- Easy configuration and management of several measuring devices
- Intuitive Windows user interface
- Updating of device software
- Display of device and sensor information



Interface Technology

Indicators

Process Analytics

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Laboratory

Sensors

Fittings

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