Portavo 904 pH

Portable and robust analyzer for pH and ORP measurement

Up to 5,000 values can be recorded using the integrated data logger. Using the USB port and the Paraly SW 112 software, the logger data can be easily transferred to a PC for analysis.

Tailor-Made pH Calibration
Cal SOP

pH sensors can be tested using the SOP calibration procedure with up to 3 calibration points. The third 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.

Security Package Included
User management

The 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 are used for the selected measuring point.

Thermo Fisher
S C I E N T I F I C

Facts and Features

- Memosens sensors or analog sensors for pH or ORP measurement can be used on one device.
- A sensor quiver protects the sensor from damage and drying out
- Robust housing with IP66/67, also for outdoor use
- Li-ion battery – charged directly via USB
- Data logger with 5,000 values
- Micro USB port and Paraly SW 112 software
- Tailor-made pH calibration Cal SOP
- User management for access control
- Sensor check for clear sensor-to-device assignment via sensor type, TAG or "Group"
- Temperature probe adjustment in the Memosens sensor (offset correction)

3-year warranty!

MEMO SENS

Specifications

pH/mV input (analog)	pH socket, DIN 19 262 (13/4 mm)	
	pH range	−2 ... 16
	Decimal places*)	2 or 3
	Input resistance	1 x 10^{12} Ω (0 ... 35 °C / 32 ... 86 °F)
	Input current	1 x 10^{-12} A (at RT, doubles every 10 K)
	Measuring cycle	Approx. 1 s
	Measurement error[1,2,3]	< 0.01 pH TC < 0.001 pH/K
	mV range	−1300 ... 1300 mV
	Measuring cycle	Approx. 1 s
	Measurement error[1,2,3]	< 0.1% meas.val + 0.3 mV TC < 0.03 mV/K
Temperature input	2 x 4 mm dia. for integrated or separate temperature detector	
	Measuring ranges	NTC 30 kΩ −20 ... 120 °C / −4 ... 248 °F Pt1000 −40 ... 250 °C / −40 ... 482 °F
	Measuring cycle	Approx. 1 s
	Measurement error[1,2,3]	< 0.2 K (Tamb = 23 °C / 73.4 °F); TC < 25 ppm/K
Memosens pH, ISFET input	M8 socket, 4 pins, for Memosens lab cable	
	Display ranges[4]	pH −2.000 ... 16.000 mV −2000 ... 2000 mV Temperature −50 ... 250 °C / −58 ... 482 °F
Sensor standardization*)	pH calibration	
Operating modes*)	Calimatic	Calibration with automatic buffer recognition
	Manual	Manual calibration with entry of individual buffer values
	Data entry	Data entry of zero and slope
	Cal-SOP (TAN option)	Software option SW-P001: Defining the pH buffers and the sequence of the calibration steps; defining the delta deviation for the verification buffer
	Temperature calibration (TAN option)	Software option SW-P002 for temperature probe adjustment in the Memosens sensor (offset correction)
Calimatic buffer sets*)	−01− Mettler-Toledo −02− Knick CaliMat −03− Ciba (94) −04− NIST technical −05− NIST standard −06− HACH −07− WTW techn. buffers −08− Hamilton −09− Reagecon −10− DIN 19267 −U1− (User)	2.00/4.01/7.00/9.21 2.00/4.00/7.00/9.00/12.00 2.06/4.00/7.00/10.00 1.68/4.00/7.00/10.01/12.46 1.679/4.006/6.865/9.180 4.01/7.00/10.01/12.00 2.00/4.01/7.00/10.00 2.00/4.01/7.00/10.01/12.00 2.00/4.00/7.00/9.00/12.00 1.09/4.65/6.79/9.23/12.75 loadable via Paraly SW 112
Permissible calibration range	Zero point Slope	6 ... 8 pH Approx. 74 ... 104 %
	Calibration timer*)	Interval 1 ... 99 days, can be switched off
	Sensoface	Provides information on the sensor condition
	Evaluation of	zero/slope, response, calibration interval

Specifications

Memosens ORP input	M8 socket, 4 pins, for Memosens lab cable		
	Display ranges[4]	mV	−2000 ... 2000 mV
		Temperature	−50 ... 250 °C / −58 ... 482 °F
Sensor standardization*)	ORP calibration (zero adjustment)		
	Permissible cal. range	ΔmV (offset)	−700 ... 700 mV
	Temperature calibration (TAN option)	Software option SW-P002 for temperature probe adjustment in the Memosens sensor (offset correction)	
Connections	2 x socket, 4 mm dia., for separate temperature probe 1 x M8 socket, 4 pins, for Memosens lab cable 1 x micro USB-B for data transmission to PC 1 x pH socket, to DIN 19262		
Display	LCD STN 7-segment display with 3 lines and icons		
	Status indicators	For battery power level, logger	
	Notices	Hourglass	
Keypad	[on/off], [cal], [meas], [set], [▲], [▼], [STO], [RCL], [clock]		
Data logger	5,000 memory locations		
	Recording	Manual, interval- or event-controlled	
MemoLog calibration data logger (Memosens only)	Up to 100 Memosens calibration records can be saved		
	Recording	Directly retrievable via MemoSuite or Paraly SW 112 (USB)	
	Viewable on the display	Manufacturer, sensor type, serial no., zero, slope, calibration date	
Communication	USB 2.0		
	Profile	HID, driverless installation	
	Usage	Data exchange and configuration via Paraly SW 112 software	
Diagnostic functions	Sensor data (Memosens only)	Manufacturer, sensor type, serial number, operating time	
	Calibration data	Calibration date; zero and slope	
	Device self-test	Automatic memory test (FLASH, EEPROM, RAM)	
	Device data	Device type, software version, hardware version	
Data retention	Parameters, calibration data > 10 years		
EMC	EN 61326-1 (General Requirements)		
	Emitted interference	Class B (residential environment)	
	Immunity to interference	Industrial applications	
	EN 61326-2-3		
RoHS conformity	According to directive 2011/65/EU		
Power supply	4 x AA alkaline batteries 4 x AA NiMH battery or 1 x Li-ion battery, USB chargeable		
	Operating time	Approx. 1000 h (alkaline)	
Nominal operating conditions	Ambient temperature	−10 ... 55 °C / 14 ... 131 °F	
	Transport/Storage temp.	−25 ... 70 °C / −13 ... 158 °F	
	Relative humidity	0 ... 95 %, short-term condensing allowed	
Housing	Material	PA12 GF30 + TPE	
	Protection	IP 66/67 with pressure compensation	
	Dimensions	Approx. 132 x 156 x 30 mm / 5.2 x 6.14 x 1.18 inches	
	Weight	Approx. 500 g / 1.10 lbs	

* user-defined
1) at nominal operating conditions
2) ± 1 count
3) plus sensor error
4) ranges depending on Memosens sensor