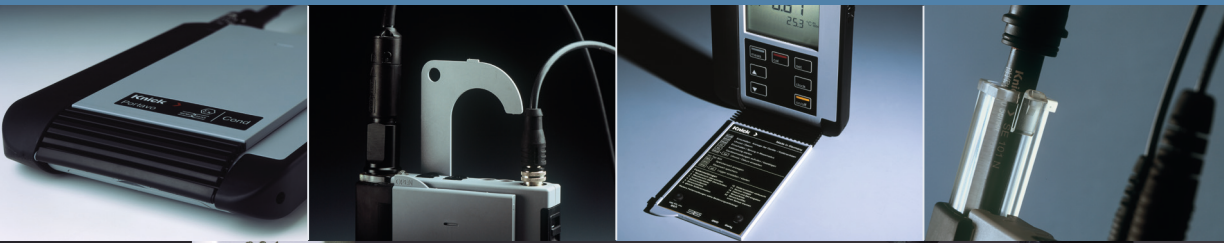## Portavo 902 pH

The portable analyzer for Memosens and analog pH and ORP sensors.

Robust, intuitive portable analyzer for routine daily measurements in laboratories and processes.

Facts and Features

– Memosens sensors and analog pH/ORP sensors can be used on one device

– A sensor quiver protects the sensor from drying out or being damaged in daily use.

– Robust housing with IP66/67, also for outdoor use

– The mineral glass display is perfectly readable even after years

– Temperature probe adjustment in the Memosens sensor (offset correction)

061

pH **5.90**
25.7 °C Pt 1000

meas cal set

▲

clock

▼

on/off

MEMO SENS

3-year warranty!

Original size

Specifications

pH/mV input (analog)	pH socket, DIN 19 262 (13/4 mm)	
	pH range	−2 … 16
	Decimal places*)	2 or 3
	Input resistance	$1 \times 10^{12} \, \Omega$ (0 … 35 °C / 32 ... 86 °F)
	Input current	1×10^{-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 input (also ISFET)	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
	Temperature calibration (TAN option)	Software option SW-P002 for temperature probe adjustment in the Memosens sensor (offset correction)

Calimatic buffer sets*)	−01− Mettler-Toledo	2.00/4.01/7.00/9.21	
	−02− Knick CaliMat	2.00/4.00/7.00/9.00/12.00	
	−03− Ciba (94)	2.06/4.00/7.00/10.00	
	−04− NIST technical	1.68/4.00/7.00/10.01/12.46	
	−05− NIST standard	1.679/4.006/6.865/9.180	
	−06− HACH	4.01/7.00/10.01/12.00	
	−07− WTW techn. buffers	2.00/4.01/7.00/10.00	
	−08− Hamilton	2.00/4.01/7.00/10.01/12.00	
	−09− Reagecon	2.00/4.00/7.00/9.00/12.00	
	−10− DIN 19267	1.09/4.65/6.79/9.23/12.75	
	Permissible calibration range	Zero point	6 ... 8 pH
	With ISFET:	−750 ... 750 mV	Operating point (asymmetry)
	Slope	Approx. 74 ... 104 %	

Knick

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 calibration range	ΔmV (offset)	−700 ... 700 mV
	Temperature calibration (TAN option)	Software option SW-P002 for temperature probe adjustment in the Memosens sensor (offset correction)

Calibration timer*[)]	Interval	1 ... 99 days, can be switched off
Sensoface	Provides information on the sensor condition Evaluation of zero/slope, response, calibration interval	
Connections	2 x socket, 4 mm dia., for separate temperature probe 1 x M8 socket, 4 pins, for Memosens lab cable 1 x pH socket, to DIN 19262	
Display	LCD STN 7-segment display with 3 lines and icons	
	Sensoface	Status indication (friendly, neutral, sad)
	Status indicators	for battery power level
	Notices	Hourglass
Keypad	[on/off], [cal], [meas], [set], [▲], [▼], [clock]	
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 EN 61326-2-3	Industrial applications
RoHS conformity	According to directive 2011/65/EU	
Power supply	4 x AA alkaline or lithium batteries	
	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 (silver gray RAL 7001) + TPE (black)
	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