

Distribué par :

LABORATOIRES HUMEAU

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Product Line
Specifications
English

Portavo® 902 PH



Latest Product Information: www.knick.de

Sensors

Analog pH-sensors

	Order No.
pH/Pt1000 sensor (plastic body, length 120 mm)	SE 101 N
pH/Pt1000 sensor (plastic body, length 110 mm)	SE 102 N
pH puncture sensor (plastic body, length 65/25 mm)	SE 104 N
pH/Pt1000 sensor for measurements in hazardous areas Zone 0, incl. equipotential bonding cable	ZU 6979
Pt1000 temperature detector	ZU 6959
Pt 1000 temperature detector with tilted tip	ZU 0156

Digital pH sensors

	Order No.
pH/NTC 30k sensor (plastic body, length 120 mm)	SE 101 NMS
pH/NTC 30k sensor (glass body, length 110 mm)	SE 102 NMS

Memosens sensors have a **cable coupling**, which allows convenient replacement of sensors while the cable remains connected to the meter.



Knick CaliMat Buffer Solutions

Ready-to-use quality pH buffer solutions

pH value (20 °C)	Quantity	Order No.
2.00 ± 0.02	250 ml	CS-P0200/250
4.00 ± 0.02	250 ml	CS-P0400/250
	1000 ml	CS-P0400/1000
	3000 ml	CS-P0400/3000
9.00 ± 0.02	250 ml	CS-P0900/250
	1000 ml	CS-P0900/1000
	3000 ml	CS-P0900/3000
12.00 ± 0.05	250 ml	CS-P1200/250

Buffer sets

Set 4.00	3 x 250 ml	CS-PSET4
Set 7.00	3 x 250 ml	CS-PSET7
Set 9.00	3 x 250 ml	CS-PSET9
Set 4.00, 7.00, 9.00	Approx. 250 ml each	CS-PSET479

Accessories

Item	Order No.
Robust field case (for meter, sensor, various small parts and user manual)	ZU 0934
Adapter for BNC pH sensors to DIN socket	ZU1190
Replacement quiver (5 units)	ZU 0929
Memosens lab cable, M8, 4 pins	CA/MS-001XFA

Please visit our website for more information on our product range: www.knick.de.

pH/mV input	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)
	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	NTC30 temp detector	-20 ... +120 °C
	Pt1000 temp detector	-40 ... +250 °C
Measuring cycle	Approx. 1 s	
Measurement error ^{1,2,3)}	< 0.2 K (Tamb = 23 °C); TC < 25 ppm/K	
Memosens pH input	M8 socket, 4 pins, for Memosens lab cable	
Display ranges ⁴⁾	pH	-2.00 ... +16.00
	mV	-2000 ... +2000 mV
	Temperature	-50 ... +250 °C
Memosens pH input	M8 socket, 4 pins, for Memosens lab cable	
ISFET		
Display ranges ⁴⁾	pH	-2.00 ... +16.00
	mV	-2000 ... +2000 mV
	Temperature	-50 ... +250 °C
Memosens ORP input	M8 socket, 4 pins, for Memosens lab cable	
Display ranges ⁴⁾	mV	-2000 ... +2000 mV
	Temperature	-50 ... +250 °C
Sensor standardization ^{*)}	ORP calibration (zero adjustment)	
Permissible calibration range	ΔmV (offset)	-700 ... +700 mV

*) User-defined

1) According to EN 60746-1,
at nominal operating conditions

2) ± 1 count

3) Plus sensor error

4) Ranges depending on Memosens sensor

Sensor standardization *)	pH calibration	
Operating modes *)	CALIMATIC	Calibration with automatic buffer recognition
	MANUAL	Manual calibration with entry of individual buffer values
	DATA INPUT	Data entry of zero and slope
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	pH 6 ... 8
	With ISFET:	-750 ... +750 mV
	Operating point (asymmetry)	
	Slope (possibly restricting notes from Sensoface)	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	

*) User-defined

Connections	1 x pH socket, DIN 19 262 2 x 4-mm socket for separate temperature detector 1 x M8 socket, 4 pins, for Memosens lab cable
Display	LCD STN 7-segment display with 3 lines and icons
Sensoface	Status indication (friendly, neutral, sad)
Status indicators	Battery power level
Notices	Hourglass
Keypad	[on/off], [cal], [meas], [set], [▲], [▼], [clock]
Diagnostics functions	
Sensor data	Manufacturer, sensor type, serial number, operating time
(Memosens only)	
Calibration data	Calibration date, zero, 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 area)
Immunity to interference	Industry EN 61326-2-3 (Particular Requirements for Transmitters)
RoHS conformity	According to directive 2011/65/EC
Power supply	
Portavo 902	4 x AA alkaline batteries
Operating time	Approx. 1000 h (alkaline)
Nominal operating conditions	
Ambient temperature	-10 ... +55 °C
Transport/	-25 ... +70 °C
Storage temperature	
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
Weight	Approx. 500 g

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