



## Portavo 904 X Cond

**The world's only portable device for conductivity measurement with ATEX approval for measurements up to zone 0/1. Ideal for applications in the process industry.**

For the first time, Portavo enables direct on-site testing of process measuring points. It is compatible with almost all analog and Memosens process sensors.



The new MemoLog function allows the user to log calibration data from various Memosens measuring points, which can then be easily transferred to a computer via the standard USB connection. The Paraly SW 112 software enables user-friendly management of all recorded data.

### Facts

- A sensor quiver protects the sensor from damage
- The high-performance polymer housing ensures low water consumption and high impact resistance
- Over 1,000 hours of measurement with a single set of batteries (4x AA)
- Data logger with 5,000 values
- Micro USB port and Paraly SW 112 software
- Memosens sensors and analog conductivity sensors can be used on one device.
- The mineral glass display is perfectly readable even after years
- Application in hazardous locations for measurements up to Zone 0/1 (cCSAus planned)
- The world's only portable device for liquid analysis in hazardous locations
- Ideal for applications in the process industry



MEMO SENS

3 years warranty!

**Specifications**

Conductivity input, analog	Multi-contact for 2-/4-electrode sensors with integrated temp detector
	Measuring ranges
	SE 202 sensor: 0.01 ... 200 $\mu\text{S}/\text{cm}$
	SE 204 sensor: 0.05 to 500 $\text{mS}/\text{cm}$
	2-electrode sensors: $0.1 \mu\text{S} \cdot \text{cm} \dots 200 \text{mS} \cdot \text{cm}^5$
	4-electrode sensors: $0.1 \mu\text{S} \cdot \text{cm} \dots 1000 \text{mS} \cdot \text{cm}^5$
	Permissible cell constant 0.005 ... 200.0 $\text{cm}^{-1}$ (adjustable)
	Measurement error <sup>1,2,3)</sup> < 0.5 % meas.val. + 0.4 $\mu\text{S} \cdot \text{cm}^5$
Temperature input	2 x 4 mm dia. for integrated or separate temperature detector
	Measuring ranges
	NTC 30 k $\Omega$ -20 ... +120 °C
	Pt 1000 -40 ... +250 °C
	Measuring cycle Approx. 1 s
	Measurement error <sup>1,2,3)</sup> < 0.2 K (Tamb = 23 °C); TC < 25 ppm/K
Conductivity input, Memosens	M8 socket, 4 pins, for Memosens lab cable
	Measuring range SE 215 MS sensor 10 $\mu\text{S}/\text{cm}$ ... 20 $\text{mS}/\text{cm}$
Conductivity input	Measuring cycle Approx. 1 s
	Temperature compensation Linear 0 ... 20 %/K, reference temp. adjustable
	nLF: 0 ... 120 °C
	NaCl
	HCl (ultrapure water with traces)
	NH3 (ultrapure water with traces)
	NaOH (ultrapure water with traces)
Display resolution <sup>5)</sup> (autoranging)	Conductivity
	0.001 $\mu\text{S}/\text{cm}$ ( $c < 0.05 \text{cm}^{-1}$ )
	0.01 $\mu\text{S}/\text{cm}$ ( $c = 0.05 \dots 0.2 \text{cm}^{-1}$ )
	0.1 $\mu\text{S}/\text{cm}$ ( $c > 0.2 \text{cm}^{-1}$ )
	Resistivity 00.00 ... 99.99 $\text{M}\Omega \cdot \text{cm}$
	Salinity 0.0 ... 45.0 g/kg (0 ... 30 °C)
	TDS 0 ... 1999 mg/l (10 ... 40 °C)
	Concentration 0.00 ... 9.99 % by wt
Concentration determination	NaCl 0.00 ... 9.99 % by wt (0 ... 60 °C)
	HCl 0.00 ... 9.99 % by wt (-20 ... 50 °C)
	NaOH 0.00 ... 9.99 % by wt (0 ... 100 °C)
	H2SO4 0.00 ... 9.99 % by wt (-17 ... 110 °C)
	HNO3 0.00 ... 9.99 % by wt (-17 ... 50 °C)
Sensor standardization	Cell constant Input of cell constant with simultaneous display of conductivity value and temperature
	Input of solution Input of conductivity of the calibration solution with simultaneous display of cell constant and temperature
	Auto Automatic determination of the cell constant with KCl solution or NaCl solution
Connections	2x socket, 4 mm dia., for separate temp. detector
	1x M8 socket, 4 pins, for Memosens lab cable
	1x micro USB-B for data transmission to PC
	1x multi-contact socket for 2- and 4-electrode sensors
Display	LCD STN 7-segment display with 3 lines and icons
	Sensoface provides information on the sensor condition
	Status indicators for battery power level, logger
	Notices Hourglass

## Specifications

Keypad	[on/off], [cal], [meas], [set], [▲], [▼], [STO], [RCL], [clock]
Data logger	5,000 memory locations
	Recording Manual, interval- and/or event-controlled
MemoLog calibration data logger (Memosens only)	Up to 100 Memosens calibration records can be saved – directly retrievable via MemoSuite (USB) 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
Diagnostics functions	Sensor data (only Memosens) Manufacturer, sensor type, serial number, operating time Calibration data Calibration date; cell constant 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)
Explosion protection	Global IECEx Ex ia IIC T4/T3 Ga Europe ATEX II 1 G Ex ia IIC T4/T3 Ga USA, Canada IS Class I, Division 1, Groups A,B,C,D, T4/T3, Ta = 40 °C / 50 °C; Entity; Type 4X IS Class I, Zone 0, AEx ia IIC T4 / T3, Ta = 40 °C / 50 °C; Entity; Type 4X
RoHS conformity	According to directive 2011/65/EU
Power supply	4x AA batteries Operating time Approx. 1000 h (alkaline)
Nominal operating conditions	Ambient temperature $-10\text{ °C} \leq T_a \leq +40\text{ °C}$ T4 $-10\text{ °C} \leq T_a \leq +50\text{ °C}$ T3 Transport/Storage temp. $-25 \dots +70\text{ °C}$ Relative humidity 0 ... 95 %, short-term condensing allowed
Housing	Material PA12 GF30 + TPE Ingress protection IP66/67 with pressure compensation Dimensions Approx. (132 x 156 x 30) mm Weight Approx. 500 g

\*) user-defined

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

2)  $\pm 1$  count

3) Plus sensor error

5) c = cell constant