



DOSA*Sens* WP10.1 hydrogen peroxide sensor

Sensor for all types of water treatment, including seawater, especially for high H₂O₂ concentrations. The membrane system is mechanically robust. The membrane system is largely resistant to surfactants.



Product description:

- Measured variable(s): Hydrogen peroxide
- Calibration:
 - DIN 38409-15 "Determination of hydrogen peroxide"
 - ISO/DIS 7157 "Determination of hydrogen peroxide content – Titrimetric method"
- Interferences:
 - Cl₂: must not be present
 - PES: must not be present
 - O₃: must not be present
 - Sulfides: poison the measuring system
 - Phenol: aqueous solution >3% phenol destroys the membrane system
 - pH-range: 2 ... 11
- Pressure range:
 - Operation without retaining ring: 0 ... 0.5 bar, no pressure surges and/or vibrations
 - Operation with retaining ring: 1.0 bar, no pressure surges and/or vibrations
- Temperature range: 0 ... 45 °C, no ice crystals in the measuring water
- Maximum temperature change: 5 °C per hour, temperature jumps must be avoided
- Ambient temperature: 0 ... +55 °C
- Automatic temperature compensation integrated
- Analog version: electronics not galvanically isolated
- Digital version: electronics fully galvanically isolated
- Run-in time during first commissioning: approx. 60 min.
- Response time: T₉₀ approx. 12 min.
- Zero adjustment: not required
- Absence of disinfectant: max. 24 h
- Flow rate: approx. 15–30 l/h (15–30 cm/s), slight flow dependency present
- Diameter: approx. 25 mm
- Shaft length:
 - mV version: approx. 190 mm (analog signal processing), approx. 205 mm (digital signal processing)
 - Modbus version: approx. 205 mm
 - 4–20 mA version: approx. 220 mm (2-pole terminal), approx. 190 mm (5-pole M12)
- Connection: 5-pole M12 screw connector (mV, mA, Modbus RTU versions)
- 2-pole terminal (mA version)
- Protection class: M12 flange connector IP68, 2-pole terminal with mA housing IP65
- Max. sensor cable length: Analog < 30 m, digital > 30 m permitted. Maximum cable length depends on application
- EMC tested / ROHS compliant
- Materials: elastomer membrane, PVC-U, stainless steel 1.4571

Areas of application:

- All types of water treatment (e.g., CIP systems, rinsers), including seawater, especially for high H₂O₂ concentrations.
- The membrane system is largely resistant to surfactants

Scope of supply

- DOSA*Sens* WP10.1 Sensor, membrane cap, electrolyte, operating instructions



Ordering data:

Model:	Measuring range: ppm	Resolution: ppm	Output signal:	Power supply:	Item No.:
WP10.1H-M12	0,5 ... 200	0,1	0 ... -2000 mV 1 kΩ	±5 ... ±15 VDC 10 mA	3226140
WP10.1N-M12	5 ... 2000	1,0			3226141
WP10.1L-M12	0,005 ... 2% (20000)	0,001% (10)			3226142
WP10.1-20%-M12	0,05 ... 20% (200000)	0,01% (100)			3226143
WP10.1H-An-M12	0,5...200	0,1	analog 0...-2 V (max. -2,5 V) 1 kΩ	9-30 VDC ca. 7-30 mA	3226150
WP10.1N-An-M12	5...2000	1,0			3226151
WP10.1L-An-M12	0,005...2% (20000)	0,001% (10)			3226152
WP10.1-20%-An-M12	0,05...20% (200000)	0,01% (100)			3226153
WP10.1H-M0c	0,5...200	0,1	Modbus RTU	9-30 VDC ca. 7-30 mA	3226160
WP10.1N-M0c	5...2000	1,0			3226161
WP10.1L-M0c	0,005...2% (20000)	0,001% (10)			3226162
WP10.1-20%-M0c	0,05...20% (200000)	0,01% (100)			3226163
WP10.1MA-200	0,5...200	0,1	4...20 mA unkalibriert	12...30 VDC RL 50Ω...RL 900Ω	3226180
WP10.1MA-500	5...500	1			3226181
WP10.1MA-2000	5...2000	1			3226182
WP10.1MA-2%	0,005...2% (20.000 ppm)	0,001% (10 ppm)			3226183
WP10.1MA-5%	0,05...5% (50.000 ppm)	0,01% (100 ppm)			3226184
WP10.1MA-20%	0,05...20% (200.000 ppm)	0,01% (100 ppm)			3226185
WP10.1MA-200-M12	0,5...200	0,1			3226170
WP10.1MA-500 M12	5...500	1,0			3226171
WP10.1MA-2000 M12	5...2000	1,0			3226172
WP10.1MA-2% M12	0,005...2% (20.000 ppm)	0,001% (10)			3226173
WP10.1MA-5% M12	0,05...5% (50.000 ppm)	0,01% (100)			3226174
WP10.1MA-20% M12	0,05...20% (200.000 ppm)	0,01% (100)			3226175

Additional technical data:

Model:	Nominal slope: (at pH 7,2)	Connection: Allocation at sensor	Special characteristics:
WP10.1H-M12	-10 mV/ppm	5 pole M12 threaded coupling connector PIN1: measurement signal PIN2: +U PIN3: -U PIN4: signal GND PIN5: n. c.	Only connect to a controller with electrically isolated power supply.
WP10.1N-M12	-1 mV/ppm		
WP10.1L-M12	-1000 mV/% (-0,1 mV/ppm)		
WP10.1-20%-M12	-100 mV/% (-0,01 mV/ppm)		
WP10.1H-An-M12	-10 mV/ppm	5 pole M12 threaded coupling connector PIN1: reserved PIN2: +U PIN3: voltage GND PIN4: RS485-B PIN5: RS485-A.	-
WP10.1N-An-M12	-1 mV/ppm		
WP10.1L-An-M12	-1000 mV/% (-0,1 mV/ppm)		
WP10.1-20%-An-M12	-100 mV/% (-0,01 mV/ppm)		
WP10.1H-M0c	Modbus RTU	5 pole M12 threaded coupling connector PIN1: reserved PIN2: +U PIN3: voltage GND PIN4: RS485-B PIN5: RS485-A.	-
WP10.1N-M0c			
WP10.1L-M0c			
WP10.1-20%-M0c			



Additional technical data:

Model:	Nominal slope: (at pH 7,2)	Connection: Allocation at sensor	Special characteristics:	
WP10.1MA-200	0,08 mA/ppm	2-pole terminal Recommendation: round cable Ø 4 mm. 2 x 0.34 mm2	Only connect to a controller with electrically isolated power supply.	
WP10.1MA-500	0,032 mA/ppm			
WP10.1MA-2000	0,008 mA/ppm			
WP10.1MA-2%	8 mA/% (0,0008 mA/ppm)			
WP10.1MA-5%	3,2 mA/% (0,00032 mA/ppm)			
WP10.1MA-20%	0,8 mA/% (0,00008 mA/ppm)			
WP10.1MA-200-M12	0,08 mA/ppm	5 pole M12 threaded coupling		
WP10.1MA-500 M12	0,032 mA/ppm	connector		
WP10.1MA-2000 M12	0,008 mA/ppm	PIN1: n. c.		
WP10.1MA-2% M12	8 mA/% (0,0008 mA/ppm)	PIN2: +U		
WP10.1MA-5% M12	3,2 mA/% (0,00032 mA/ppm)	PIN3: –U		
WP10.1MA-20% M12	0,8 mA/% (0,00008 mA/ppm)	PIN4: n. c. PIN5: n. c		

Information on the measuring range:

- The actual slope of the measuring cell can vary between 65% and 150% of the specified nominal slope due to the manufacturing process
- Note: If the slope is >100%, the measuring range is reduced accordingly. (Example: 150% slope -> 67% of the specified measuring range)

Maintenance:

- Regular check of the measurement signal at least once a week
- The following replacement frequencies depend on the water quality
- Changing the membrane cap: once a year
- Electrolyte replacement: every 3 to 6 months

Spare parts:

Spare part:	for sensor:	Item No.:
Membrane cap M10.3N	Alle WP10.1	9026028
Elektrolyte EWP7/W, 100 ml	Alle WP10.1	9026062
Sand paper S2	Alle WP10.1	9026104
O-Ring 20 x 1,5 Silikon	Alle WP10.1	9026153

Transport and storage:

- Sensor, electrolyte: 5 ... 50 °C
- The sensor can be stored indefinitely if dry and without electrolyte at 5 ... 40 °C
- The electrolyte, in the original bottle, protected from sunlight, at between 5 and 35 °C, can be stored for at least 1 year or until the EXP date shown on the original bottle.

Accessories:

Model:	for Sensor:	Artikelnummer:
DOSA <i>Sens</i> SIM11.1n sensor simulator	0 mV, -100 mV, -1000mV	9026205
DOSA <i>Sens</i> mV simulator and mA tester	All sensors with mV signal or mA signal	21131105