


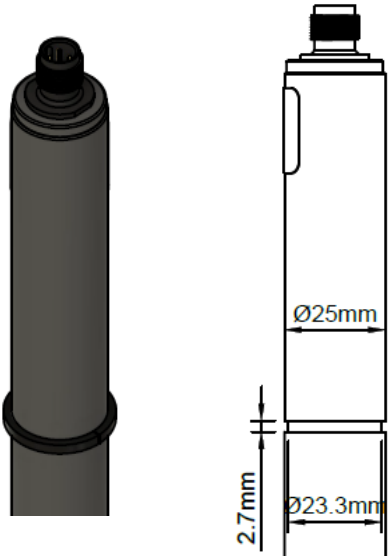
	<h1>TARAtec WP10</h1>
indicator	Hydrogen peroxide
Application	All kinds of water treatment, also sea water, especially for high H ₂ O ₂ -concentrations. The membrane system is mechanical resistant. The membrane system is highly resistant to surfactants (tensides).
Measuring system	Membrane covered, amperometric 2-electrode system.
Electronic	Analog version: <ul style="list-style-type: none"> - voltage output - not galvanically isolated electronics - analog internal data processing - output signal: analog (analog-out/analog) Digital version: <ul style="list-style-type: none"> - electronic is completely galvanically isolated - digital internal data processing - output signal: analog (analog-out/digital) or digital (digital-out/digital) mA-version: <ul style="list-style-type: none"> - current output analog - not galvanically isolated electronics - output signal: analog (analog-out/analog)
Information about the measuring range	The actual slope of a sensor can vary production-related between 65% and 150% of the nominal slope Note: With a slope > 100% the measuring range is reduced accordingly. (Ex.: 150% slope → 67% of the specified measuring range)
Working temperature	Measuring water temperature: 0 ... +45 °C (no ice crystals in the measuring water)
	Ambient temperature: 0 ... +55 °C
Temperature compensation	Automatically, by an integrated temperature sensor Response time t ₉₀ = approx. 8 min. Max. change in temperature: 5 °C per hour, sudden temperature changes must be avoided
Max. allowed working pressure	Operation without retaining ring: <ul style="list-style-type: none"> - 0.5 bar - no pressure impulses and/or vibrations
	Operation with retaining ring in TARAflow FLC: <ul style="list-style-type: none"> - 1.0 bar, - no pressure impulses and/or vibrations (see option 1)
Flow rate (Incoming flow velocity)	approx. 15-30 l/h (33 – 66 cm/s) in TARAflow FLC, small flow rate dependence is given
pH-range	pH 2 – pH 11


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Run-in time	First start-up approx. 5 h	
Response time	T ₉₀ : approx. 8 min.	
Accuracy after calibration at repeatability conditions (25°C, pH 7.2 in drinking water) of the upper full scale	<ul style="list-style-type: none"> – Measuring range 200 ppm: at 40 ppm <2% at 160 ppm <2% – Measuring range 2000 ppm: at 400 ppm <0,5% at 1600 ppm <2% 	
Zero point adjustment	Not necessary	
calibration	At the device, by analytical determination	
interferences	Cl ₂ : must not be present PAA: must not be present O ₃ : must not be present Sulfides: contaminate the measuring system Phenol: aqueous solution >3 % phenol, destroys the membrane system	
Absence of the disinfectant	Max. 24 h	
Connection	mV version: 5-pole M12, plug-on flange Modbus version: 5-pole M12, plug-on flange 4-20 mA version: 2-pole terminal or 5-pole M12, plug-on flange	
max. length of sensor cable (depending on internal signal processing)	analog	< 30 m
	digital	> 30 m are permissible Maximum cable length depends on application
Protection type	5-pole M12 plug-on flange: IP68 2-pole terminal with mA-hood: IP65	
material	Elastomer membrane, PVC-U, stainless steel 1.4571	
Size	diameter: approx. 25 mm 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)	
Transport	+5 ... +50 °C (Sensor, electrolyte, membrane cap)	
storage	Sensor: dry and without electrolyte no limit at +5 ... +40 °C	
	Electrolyte: in original bottle protected from sunlight at +5 ... +35 °C min. 1 year or until specified EXP-Date	
	Membrane cap: in original packing no limit at +5 ... +40 °C (used membrane caps can not be stored)	

	<h1>TARAtec WP10</h1>
<p>maintenance</p>	<p>Regularly control of the measuring signal, min. once a week The following specifications highly depend on the water quality: Change of the membrane cap: once a year Change of the electrolyte: every 3 - 6 months</p>
	<p>EMC tested RoHS compliant</p>

<p>Option 1: Retaining ring</p>	<ul style="list-style-type: none"> - When operating with pressures >0.5 bar in TARAflow FLC - Dimensions retaining ring 29 x 23.4 x 2.5 mm, slitted, PETP - Different positions for groove selectable (on request) 	
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Technical Data
1. WP10 (Analog output, analog internal signal processing)

A potential-free electrical connection is necessary as the sensor electronic is not equipped with a galvanical isolation.


	Measuring range	resolution	Output Output resistance	Nominal slope	Voltage supply	Connection
WP10H-M12	0.5...200 ppm	0.1 ppm	0...-2000 mV 1 kΩ	-10 mV/ppm	±5 - ±15 VDC 10 mA	5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: -U PIN4: signal GND PIN5: n. c.
WP10N-M12	5...2000 ppm	1 ppm		-1 mV/ppm		
WP10L-M12	0.005...2 % (20000 ppm)	0.001 % (10 ppm)		-1000mV/% (-0.1 mV/ppm)		
WP10-20%-M12	0.05... 20% (200000 ppm)	0.01 % (100 ppm)		-100 mV/% (-0.01 mV/ppm)		

(Subject to technical changes!)

2. WP10 (analog output, digital signal processing)

Analog-out / digital


The power supply is galvanically isolated inside of the sensor.
 The output signal is galvanically isolated too, that means potential-free.

	Measuring range	Resolution	Output Output resistance	Nominal Slope	Power supply	Connection		
WP10H-An-M12	0.5... 200.0 ppm	0.1 ppm	analog 0...-2 V (max. -2.5 V) 1 kΩ	-10 mV/ppm	9-30 VDC approx. 20-56 mA	5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: power GND PIN4: signal GND PIN5: n. c.		
WP10N-An-M12	.50... 2000 ppm	1 ppm		-1 mV/ppm				
WP10L-An-M12	0.005... 2 % (20000 ppm)	0.001 % (10 ppm)		-1000 mV/% (-0.1 mV/ppm)				
WP10-20%-An-M12	0.05... 20 % (200000 ppm)	0.01 % (100 ppm)		-100 mV/% (-0.01 mV/ppm)				
WP10H-Ap-M12	0.5... 200.0 ppm	0.1 ppm	analog 0...+2 V (max. +2.5 V) 1 kΩ	+10 mV/ppm			9-30 VDC approx. 20-56 mA	5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: power GND PIN4: signal GND PIN5: n. c.
WP10N-Ap-M12	5... 2000 ppm	1 ppm		+1 mV/ppm				
WP10L-Ap-M12	0.005... 2 % (20000 ppm)	0.001 % (10 ppm)		+1000 mV/% (+0.1 mV/ppm)				
WP10-20%-Ap-M12	0.05... 20 % (200000 ppm)	0.01 % (100 ppm)		+100 mV/% (+0.01 mV/ppm)				

(Subject to technical changes!)

3. WP10 (digital output, digital signal processing)

The power supply is galvanically isolated inside of the sensor.
 The output signal is galvanically isolated too, that means potential-free.


	Measuring range	Resolution	Output Output resistance	Power supply	Connection
WP10H-M0c	0.5... 200.0 ppm	0.1 ppm	Modbus RTU There are no terminating resistors in the sensor.	9-30 VDC approx. 20-56 mA	5-pole M12 plug-on flange Function of wires: PIN1: reserved PIN2: +U PIN3: power GND PIN4: RS485B PIN5: RS485A
WP10N-M0c	5... 2000 ppm	1 ppm			
WP10L-M0c	0.005... 2 % (20000 ppm)	0.001 % (10 ppm)			
WP10-20%-M0c	0.05... 20 % (200000 ppm)	0.01 % (100 ppm)			

(Subject to technical changes!)

4. WP10 4-20 mA (analog output, analog internal signal processing)


A potential-free electrical connection is necessary as the sensor electronic is not equipped with a galvanical isolation.

4.1 Electrical connection: 2 pole terminal clamp

	Measuring range	resolution	Output Output resistance	Nominal slope	Voltage supply	Connection
WP10MA-200	0.5... 200.0 ppm	0.1 ppm	4...20 mA uncalibrated	0.08 mA/ppm	12...30 VDC R _L 50Ω...R _L 900Ω	2-pole terminal (2 x 1 mm ²) Recommended: Round cable ∅ 4 mm 2 x 0.34 mm ²
WP10MA-2000	5... 2000 ppm	1 ppm		0.008 mA/ppm		
WP10MA-2%	0.005... 2 % (20000 ppm)	0.001 % (10 ppm)		8 mA/% (0.0008 mA/ppm)		
WP10MA-5%	0.05... 5 % (50000 ppm)	0.01 % (100 ppm)		3.2 mA/% (0.00032 mA/ppm)		
WP10MA-10%	0.05... 10 % (100000 ppm)	0.01 % (100 ppm)		1.6 mA/% (0.00016 mA/ppm)		
WP10MA-20%	0.05... 20 % (200000 ppm)	0.01 % (100 ppm)		0.8 mA/% (0.00008 mA/ppm)		

(Subject to technical changes!)

4.2 Electrical connection: 5 pole M12 plug-on flange

	Measuring range	resolution	Output Output resistance	Nominal slope	Voltage supply	Connection
WP10MA-200-M12	0.5... 200.0 ppm	0.1 ppm	4...20 mA uncalibrated	0.08 mA/ppm	12...30 VDC R _L 50Ω...R _L 900Ω	5-pole M12 plug-on flange Function of wires: PIN1: n. c. PIN2: +U PIN3: -U PIN4: n. c. PIN5: n. c.
WP10MA-2000-M12	5... 2000 ppm	1 ppm		0.008 mA/ppm		
WP10MA-2%-M12	0.005... 2 % (20000 ppm)	0.001 % (10 ppm)		8 mA/% (0.0008 mA/ppm)		
WP10MA-5%-M12	0.05... 5 % (50000 ppm)	0.01 % (100 ppm)		3.2 mA/% (0.00032 mA/ppm)		
WP10MA-10%-M12	0.05... 10 % (100000 ppm)	0.01 % (100 ppm)		1.6 mA/% (0.00016 mA/ppm)		
WP10MA-20%-M12	0.05... 20 % (200000 ppm)	0.01 % (100 ppm)		0.8 mA/% (0.00008 mA/ppm)		

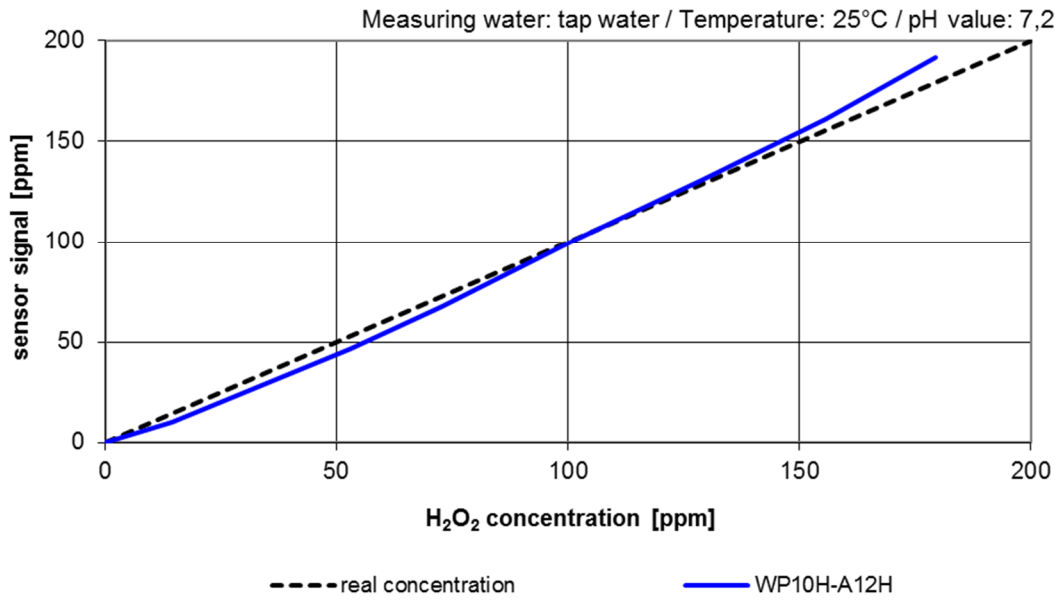
(Subject to technical changes!)

Spare Parts

Type	Membrane cap	Electrolyte	Emery	O-ring
All WP10H	M10.1H with G-holder Art. no. 11045.1	EWP7/W, 100 ml Art. no. 11201	S2 Art. no. 11906	20 x 1.5 silicone Art. no. 11803
All WP10N				
All WP10L	M10.1D with G-holder Art. no. 11041.1			
All WP10-20%				
All WP10MA-200	M10.1H with G-holder Art. no. 11045.1			
All WP10MA-2000				
All WP10MA-2%	M10.1D with G-holder Art. no. 11041.1			
All WP10MA-5%				
All WP10MA-10%				
All WP10MA-20%				

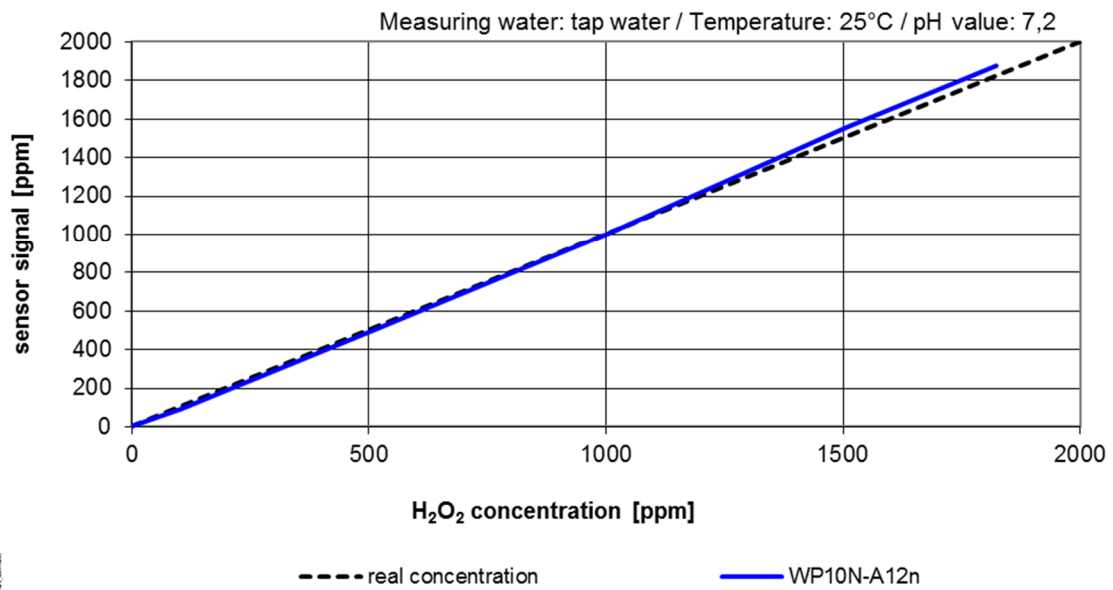
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Linearity of WP10H-A12n
Measurement range 200 ppm



WP10H.A12

Linearity of WP10N-A12n
Measurement range 2000 ppm



WP10N.A12