

March 2022 (EN) V12

	TARAtec WP7					
indicator	Hydrogen peroxide					
Application	All kinds of water treatment, also sea water (e. g. bottle washing machine, CIP-plants) The membrane system is mechanical resistant. Surfactants (tensides) are partially tolerated.					
Measuring system	Membrane covered, amperometric 2-electrode system					
Electronic	Analog version:       - voltage output         - not galvanically isolated electronics         - analog internal data processing         - output signal: analog (analog-out/analog)         Digital version:       - electronic is completely galvanically isolated         - digital internal data processing         - output signal:       analog (analog-out/analog)         Or       - digital internal data processing         - output signal:       analog (analog-out/digital)         or       - digital (digital-out/digital)         or       - digital (digital-out/digital)         or       - output analog         - not galvanically isolated electronics					
Information about the measuring range	$\begin{array}{c} - \mbox{ output signal: analog (analog-out/analog)} \\ \hline \mbox{The actual slope of a sensor can vary production-related between 65% and 150% of the nominal slope} \\ \hline \mbox{Note:} \qquad \mbox{With a slope > 100% the measuring range is reduced accordingly.} \\ \hline (Ex.: 150% slope $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$					
Working temperature	Measuring water temperature: 0 +45 °C (no ice crystals in the measuring water)					
Temperature compensation	Ambient temperature:       0 +55 °C         Automatically, by an integrated temperature sensor         Max. change in temperature:       5 °C per hour, sudden temperature changes must be avoided					
Max. allowed working pressure	Operation without retaining ring:         -       0.5 bar         -       no pressure impulses and/or vibrations         Operation with retaining ring in TARAflow FLC:         -       1.0 bar,         -       no pressure impulses and/or vibrations         (see option 1)					
Flow rate (Incoming flow velocity)	approx. 15-30L/h (33 – 66 cm/s) in TARAflow FLC, small flow rate dependence is given					



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pH-range	pH 2 – pH 11				
Run-in time	First start-up approx. 5 h				
Response time	T <sub>90</sub> : approx. 5 … 10 min.				
Zero point adjustment	Not necessary				
calibration	At the device, by analytical determination				
interferences	Cl <sub>2</sub> :       must not be present         PAA:       must not be present         O <sub>3</sub> :       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 flangeModbus version:5-pole M12, plug-on flange4-20 mA version:2-pole terminalor5-pole M12, plug-on flange				
max. length of sensor cable (depending on internal signal processing)	analog < 30 m digital > 30 m are permissible				
Protection type	Original       Maximum cable length depends on application         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 mmLength:mV versionapprox.190 mm (analog signal processing) approx.Modbus versionapprox.205 mm (digital signal processing) approx.4-20 mA versionapprox.220 mm (2-pole-terminal) approx.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 °CElectrolyte:in original bottle protected from sunlight at +5 +35 °C min. 1 year or until specified EXP-DateMembrane cap:in original packing no limit at +5 +40 °C (used membrane caps can not be stored)				



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maintenance	Regularly control of the measuring signal, min. once a week The following specifications depend on the water quality: Change of the membrane cap: once a year Change of the electrolyte: every 3 - 6 months
CE	EMC tested RoHS compliant

Option 1: Retaining ring	<ul> <li>When operating with pressures &gt;0.5 bar in TARAflow FLC</li> <li>Dimensions retaining ring 29 x 23.4 x 2.5 mm, slitted, PETP</li> <li>Different positions for groove selectable (on request)</li> </ul>		Ø25mm Ø23.3mm
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# **Technical Data**

### 1. WP7 (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 in ppm	Resolution in ppm	Output Output resistance	Nominal slope in mV/ppm	Voltage supply	Connection
WP7H-M12	0.5200.0	0.1	02000 mV	-10	±5 - ±15 VDC	5-pole M12 plug-on flange Function of wires:
WP7N-M12	52000	1	-1	-1	10 mA	PIN1: measuring signal PIN2: +U PIN3: -U PIN4: signal GND PIN5: n. c.
WP7Up-M12	52000	1	0+2000 mV 1 kΩ	+1	10 – 30 VDC 10 mA	5-pole M12 plug-on flange Function of wires: PIN1: measuring signal PIN2: +U PIN3: power GND PIN4: signal GND PIN5: n. c.

(Subject to technical changes!)

2. WP7 (analog output, digital internal 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 in ppm	Resolution in ppm	Output Output resistance	Nominal slope in mV/ppm	Power supply	Connection
WP7H-An-M12	0.5 200.0	0.1	analog 02 V (max2.5 V)	-10		5-pole M12 plug-on flange
WP7N-An-M12	5 2000	1	1 kΩ	-1	9-30 VDC	Function of wires:
WP7H-Ap-M12	0.5 200.0	0.1	analog 0+2 V (max. +2.5 V)	+10	approx. 20-56 mA	PIN1: measuring signal PIN2: +U PIN3: power GND
WP7N-Ap-M12	5 2000	1	1 kΩ	+1		PIN4: signal GND PIN5: n. c.

(Subject to technical changes!)



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3. WP7 (digital output, digital internal 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 in ppm	Output Output resistance	Power supply	Connection
WP7H-M0c	0.5 200.0	0.1	Modbus RTU	9-30 VDC	5-pole M12 plug- on flange Function of wires:
WP7N-M0c	5 2000	1	There are no terminating resistors in the sensor.	approx. 20-56 mA	PIN1: reserved PIN2: +U PIN3: power GND PIN4: RS485B PIN5: RS485A

(Subject to technical changes!)

#### 4. WP7 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
WP7MA-CC	0.5200.0 ppm	0.1 ppm		0.08 mA/ppm		2-pole terminal (2 x 1 mm <sup>2</sup> )
WP7MA-D	5.0500.0 ppm	0.1 ppm	420 mA	0.032 mA/ppm	1230 VDC	( ,
WP7MA-MM	52000 ppm	1 ppm	uncalibrated	0.008 mA/ppm	RL 50ΩRL 900Ω	Recommended: Round cable
WP7MA-XM	0.0051% (10000 ppm)	0.001 % (10 ppm)		16 mA/% (0.0016 mA/ppm)		$\oslash$ 4 mm 2 x 0.34 mm <sup>2</sup>

(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		
WP7MA-CC-M12	0.5200.0 ppm	0.1 ppm		0.08 mA/ppm		5-pole M12 plug-on flange		
WP7MA-D-M12	5.0500.0 ppm	0.1 ppm	420 mA	4_20 m∆	4 20 mA	0.032 mA/ppm	1230	Function of
WP7MA-MM-M12	52000 ppm	1 ppm 0.00		0.008 mA/ppm	VDC RL 50ΩRL 900Ω	wires: PIN1: n. c. PIN2: +U PIN3: -U PIN4: n c. PIN5: n. c.		
WP7MA-XM-M12	0.0051% (10000 ppm)	0.001 % (10 ppm)		16 mA/% (0.0016 mA/ppm)				

(Subject to technical changes!)

# **Spare Parts**

Туре	Membrane cap	Electrolyte	Emery	O-ring
WP7H				
WP7HUn	_			
WP7N		EWP7/W, 100 ml Art. no. 11201	S2 Art. no. 11906	14 x 1.8 NBR Art. no. 11806
WP7Un	M7.1N			
WP7Up	Art. No. 11014.1			
WP7MA-CC	_			
WP7MA-D	M7.1D Art. no. 11015.1			
WP7MA-MM				
WP7MA-XM				

(Subject to technical changes!)

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