



TpH

80S1000X0



Digital pH sensor TpH

TpH is a robust digital pH sensor for operation on TriBox controllers. Digital communication ensures safe and interference-free signal transmission from the sensor to the controller.

The high-quality gel pH electrode has a perforated diaphragm and is insensitive to dirt. This sensor is therefore well suited for wastewater applications.

Advantages

- High-quality combination electrode with perforated diaphragm and polymerised solid electrolyte
- Low maintenance requirements
- "plug & play" with TriBox controllers
- Delay-free

Applications

- Waste water
- Coagulation and flocculation
- Process monitoring and control
- Acid / base neutralization systems

Technical specifications

TpH

Measurement technology		pH electrode	
Measurement principle		Potentiometry	
Parameters		pH value, temperature	
Measurement range	pH	0...14 pH	
	Temperature	0...+65 °C	~ +32 to +149 °F
pH resolution	pH	0.01 pH	
	Temperature	0,1 °C	~ +32.2 °F
Measurement accuracy	pH	± 0.06 pH	
	temperature	± 0,5 °C	± +32.9 °F

Intrinsic deviation	pH1	± 0.05 pH
	pH7	± 0.05 pH
	pH13	± 0.35 pH
Linearity measurement error		± 0.1 pH

Repeatability	pH1	± 0.1 pH
	pH7	± 0.05 pH
	pH13	± 0.1 pH
Output signal fluctuation	pH7	± 0.025 pH
	pH4	± 0.05 pH
Warm-up time		< 5 min
Drift	Short-term drift 24 h	≤ 0.03 pH
	Long-term drift 1 week	≤ 0.05 pH
10 % time and 90 % time	T10 ascending	< 2 s
	T10 falling	< 2 s
	T90 ascending	≤ 5 s
	T90 falling	≤ 5 s
Temperature compensation		Pt1000
Measurement interval		2 s

Housing material	PPS / PET / NBR	
Dimensions (L x Ø)	~ 180 x 27 mm	~ 7.1" x 1.1"
Weight	110 g	~ 0.2 lbs

Interface	RS-485, Modbus RTU	
Power consumption	0.2 W	

Power supply	12 - 24 VDC (± 10 %)	
Connection	8pin M12 plug	

Sensor cable		2 m and 10 m	
Maintenance effort		≤ 0.5 h/month typical	
Calibration / maintenance interval		Typically, 4 weeks	
System compatibility		Modbus RTU	
Warranty		1 year (EU & USA 2 years) on electronics; wearing parts are excluded from the warranty	
Max. pressure	with fixed cable	3 bar	~ 43.5 psi
	in FlowCell	1 bar, 2...4 L/min	~ 14.5 psi, 0.5 to 1 gpm
Degree of protection		IP68	
Sample temperature		+2...+40 °C	~ +36 to +104 °F
Ambient temperature		-5...+55 °C	~ +23 to +131 °F
Storage temperature		0...+40 °C*	~ +32 to +176 °F
Inflow velocity		0...3 m/s	~ 0 to 10 fps

Recommendation from TriOS: Storage at +5...+15 °C (+41 to +59 °F) for longer shelf life