pyroscience
sensor technology

Specifications
pH Minisensor

1 PH MINISENSOR SPECIFICATIONS

Only valid in **physiological solutions (ionic strength = 150mM)** at 25°C for **2-point calibrated** sensors. Specifications are valid for fixed fiber pH minisensors (item no.: **PHF-PKx**) and for the insertable pH mini probe (item no.: **PHIMP500-PK6.5**).

1.1 General Characteristics

Response Time (t_{90}) at 25°C*	<10 sec
Temperature Range	-1°C (30°F) to 50°C (122°F)
Influence of Salinity	Specified for measurements between 20-500 mM ionic strength. Response time and accuracy at lower or higher salinities are not specified. Rough compensation is enabled in the software.
Calibration Modes	2-point calibration
Calibration Solution	**PyroScience buffer capsules** or a self-made buffer (details on request) must be used
Background Fluorescence	Minimized due to **REDFLASH technology**
Optical Isolation	The sensor is NOT equipped with an optical isolation. The sensor tip has to be protected from direct light.
Sensor Dimensions Length without cable (ca.) Sensor tip diameter (ca.) Cable length (ca.)	**PHF-PKx** / **PHIMP500-PK6.5** 10 cm / - 500 µm / 500 µm 2 m / 1 m
Application Areas	Laboratory, industry, research. **NOT** for medical or any safety-critical application. **NOT** for application in humans. **NOT** for application in food intended for human consumption.

* time for 90% of the total sensor signal change in stirred media

1.2 Specifications

PK6.5 - Version

Specifications	
Item No.	**PHF-PK6.5**, **PHIMP500-PK6.5**
Measuring Range Optimum Maximum	 5.5 – 7.5 5.0 -8.0
Accuracy at pH 6.5	± 0.1 after 2-point calibration
Resolution at pH 6.5	0.003
Drift at pH 6.5	< 0.02 / day at 25°C

PK8 - Version

Specifications	
Item No.	**PHF-PK8**
Measuring Range Optimum Maximum	 7.0 – 9.0 6.5 – 9.5
Accuracy at pH 8.0	± 0.1 after 2-point calibration
Resolution at pH 8.0	0.003
Drift at pH 8.0	< 0.02 / day at 25°C

2 APPLICABILITY AND CROSS-SENSITIVITY

	Applicability	Cross-Sensitivity	NO Cross-Sensitivity
Water/Aqueous solutions	X		
Hydrogen peroxide (H_2O_2)		X	
Chlorinated Water		X	
Diluted Ethanol (<5%)	short-term		
Other organic solvents		X	
Charged surfactants (e.g. sodium dodecyl sulfate)		X	
Calibration buffers for pH electrodes		X	
Certified Reference Materials (CRMs)*		X	
Uncharged antifoam agents (e.g. polyethylene glycol, Tween80)			X
Phenol red			X
Ammonium > 25 mM		X	
pH 2-11			X

Do not use in solid or semisolid samples like sediments.

* except TRIS buffer solution in synthetic seawater (Dr. A. Dickson)

3 CLEANING & STORAGE

Cleaning	Deionized water
Sterilization	• 2% glutaraldehyde solution • ethylene oxid (EtO, EO) sterilization
Storage	Original packaging (unpacked): 6 months at room temperature

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