

Specifications

pH Sensors

1 PH SENSOR SPECIFICATIONS

Only valid in physiological solutions (ionic strength = 150mM) at 25°C for 2-point calibrated sensors. Specifications are valid for pH sensor spots (item no.: **PHSP5-PKx**), self-adhesive sensor spots (item no.: **PHSP5-PKx-ADH**), sterilized self-adhesive sensor spots (item no.: **PHSP5-PK7-ADH-STER**), pH sensor of pH sensor vials (item no.: **PHVIAL20-PKx**, **PHTVIAL20-PKx**, **PHTOVIAL20-PKx**), robust screw cap probes (item no.: **PHROBSC-PKx**), including underwater versions (option **-SUB**) and pH cap probes (item no.: **PHCAP-PKx-SUB**).

1.1 General Characteristics

Response Time (t_{90}) at 25°C*	<60 sec
Temperature Range	-1°C (30°F) to 50°C (122°F)
Influence of Salinity‡	Specified for measurements between 20-500 mM ionic strength (all materials except PK8T). PK8T sensors are specified between 20 and 40 PSU. Response time and accuracy at lower or higher salinities are not specified. Rough compensation is enabled in the software.
Calibration Modes	1-point calibration or 2-point calibration (recommended)
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 equipped with an optical isolation to minimize interference from strong external illumination and light-sensitive / fluorescent samples.
Sensor Dimensions Length without cable (ca.) Shaft diameter (ca.)	PHROBSC-PKx 100 mm 3 -4 mm (tapered)

Sensor tip diameter (ca.) Cable length (ca.)	4 mm 2 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

‡ PK8T versions are specified for measurements between PSU 30-40

1.2 Specifications

PK5 - Version

Specifications	
Item No.	PHSP5-PK5, PHSP5-PK5-ADH, PHROBSC-PK5
Measuring Range	4.0 - 6.0
Accuracy at pH 5.0	± 0.05 after 2-point calibration
Resolution at pH 5.0	0.003
Drift at pH 5.0	< 0.005 / day at 25°C

PK6 - Version

Specifications	
Item No.	PHSP5-PK6, PHSP5-PK6-ADH, PHROBSC-PK6
Measuring Range	5.0 - 7.0
Accuracy at pH 6.0	± 0.05 after 2-point calibration
Resolution at pH 6.0	0.003
Drift at pH 6.0	< 0.005 / day at 25°C

PK7 - Version

Specifications	
Item No.	PHSP5-PK7, PHSP5-PK7-ADH, PHSP5-PK7-ADH-STER, PHROBSC-PK7(-SUB), PHVIAL-PK7, PHCAP-PK7-SUB
Measuring Range	6.0 - 8.0
Accuracy at pH 7.0	± 0.05 after 2-point calibration
Resolution at pH 7.0	0.003
Drift at pH 7.0	< 0.005 / day at 25°C

PK8 - Version

Specifications	
Item No.	PHSP5-PK8, PHSP5-PK8-ADH, PHROBSC-PK8(-SUB), PHVIAL-PK8, PHCAP-PK8-SUB
Measuring Range	7.0 - 9.0
Accuracy at pH 8.0	± 0.05 after 2-point calibration
Resolution at pH 8.0	0.003
Drift at pH 8.0	< 0.005 / day at 25°C

PK8T - Version

Specifications	
Item No.	PHSP5-PK8T, PHSP5-PK8T-ADH, PHROBSC-PK8T(-SUB), PHCAP-PK8T-SUB
pH Scale	Factory calibrated on pH total scale
Measuring Range	7.0 - 9.0
Accuracy at pH _T 8.0	± 0.05 after 2-point calibration
Resolution at pH _T 8.0	0.003
Drift at pH _T 8.0	< 0.005 / day at 25°C
Influence of Salinity	Negligible between PSU 30 and 40

2 APPLICABILITY AND CROSS-SENSITIVITY

	Applicability	Cross-Sensitivity	NO Cross-Sensitivity
Water/Aqueous solutions	X		
Diluted Ethanol (<5%)	short-term		
Other organic solvents		X	
Charged surfactants (e.g. sodium dodecyl sulfate)		X	
Calibration buffers for pH electrodes		X	
Uncharged antifoam agents (e.g. polyethylene glycol, Tween80)			X
Phenol red			X

3 CLEANING & STORAGE

Cleaning	Distilled water
Sterilization	<ul style="list-style-type: none"> • 2% glutaraldehyde solution • autoclave sterilisation is possible for the following types: PHSP5, PHSP5-ADH, PHSC (details on request) • beta or gamma sterilisation is not possible (pre-sterilized products are available)
Storage	Original packaging (unpacked): 12 months at room temperature

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