Technical Specifications - pH

Measurement Range

DOTSFCPH57	5 – 7 pH (pKa 6)
DOTSFCPH68	6 – 8 pH (pKa 7)
DOTSFCPH79	7 – 9 pH (pKa 8)

Housing Material	Nylon
Sterilization	Beta irradiated at 25 kGy

Response time (t90)[1]

Flow > 10 mL/min	< 90 seconds
Flow < 10 mL/min	< 120 seconds

Accuracy	± 0.05 **After a 2-point calibration using DOTS Cal Caps at pH 2 and pH 11*
Resolution (at pKa value)	0.003 pH
Drift	< 0.005 pH per day at 25 °C
Shelf Life	1 year in original packaging
Storage Conditions	Dry, dark, and at room temperature
Cross Sensitivities	Organic solvents at high concentrations, charged surfactants
Calibration	Factory-calibrated 2-point calibration under experimental conditions[2]
Cable Length	Standard length: 1m **Custom lengths can be ordered*
Inner Diameter	3.6mm (0.14in)

1 Time for 90% of the total sensor signal change in circulated media

2 Each 2-point calibration may be used for all sensors within the same production batch (as indicated by the sensor code on the DOTS Flow Cell packaging)

DOTS
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FLOW CELLS

Online pH and Dissolved Oxygen Monitoring in Flow Lines

Technical Specifications - Dissolved Oxygen (DO)

Measurement Range	0 – 250% air saturation (approximately 50% DO)
Housing Material	Nylon
Sterilization	Beta irradiated at 25 kGy
Response time (t90)[1]	
Flow > 10 mL/min	< 20 seconds
Flow < 10 mL/min	< 30 seconds
Accuracy	
5% air saturation	± 0.1%
95% air saturation	± 1%
Resolution	
5% air saturation	± 0.05%
95% air saturation	± 0.25%
Lifetime	10 million data points
Shelf Life	3 years in original packaging
Storage Conditions	Dry, dark, and at room temperature
Cross Sensitivities	Organic solvents at high concentrations, bleach
Calibration	Factory-calibrated 2-point calibration under experimental conditions[2]
Cable Length	Standard length: 1m **Custom lengths can be ordered*
Inner Diameter	3.6mm (0.14in)

1 Time for 90% of the total sensor signal change in circulated media

2 Each 2-point calibration may be used for all sensors within the same production batch (as indicated by the sensor code on the DOTS Flow Cell packaging)

Recommended Operating Conditions - Flow Cells

Temperature	0 – 50 °C
Pressure	0 – 2 bars
Flow rate	1 – 500 mL/min

Recommended Operating Conditions - Sensors and Cables

Temperature	15 – 45 °C
Humidity	0 – 80% (non-condensing)
Input Voltage	5 VDC ± 5%
Cable Minimum Bend Radius	80 mm