

# SeaFET™

OCEAN pH SENSOR



## Overview

The SeaFET Ocean pH Sensor is an ion selective field effect transistor (ISFET) type sensor for accurate long-term pH measurements in salt water.

## Features

- Solid state ISFET sensor
- AgCl external reference electrode
- Calibrated using natural seawater
- Internal logging and scheduling
- Internal battery pack

## Applications

- Ocean Acidification research
- Coral reef physiology and sensitivity analyses
- Near-shore biological research
- Environmental monitoring

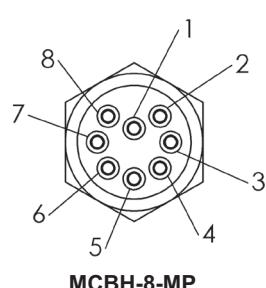
## Flexible Operating Modes

- Continuous mode – samples at up to 10 Hz
- Scheduled mode – operates on internally stored schedule
- Polled mode – responds to data logger commands
- Sample averaging – calculates mean of 1 – 100 samples

Optical	
Measurement Range	6.5 to 9.0 pH
Initial Accuracy	± 0.05 pH
Precision	0.004 pH
Stability	0.003 pH/month
Electrical	
Supply Voltage Range	6 to 18 VDC
Power Consumption: Sampling	340-400 mW
Power Consumption: Sleep	1.1mA (max)
Batteries	12 x 1.5 V alkaline D-cells
Mechanical	
Dimension: Housing	508 mm L x 114 mm D (20.00 in x 4.48 in)
Dimension: Overall	549 mm L x 114 mm D (21.63 in x 4.48 in)
Weight in air	5.4 kg (w/batteries)
Weight in water	0.1 kg (w/batteries)
Displacement	5300 cm <sup>3</sup>
Materials	PVC
Communication	
External Connectors	MCBH8M
Administration	RS-232, USB
Telemetry	RS-232, USB
Storage	4 GB
Data Frame Rate (max)	10 Hz
Environmental	
Operating Temperature Range	0 to 50 °C
Storage Temperature Range	2 to 55 °C
Salinity Range	20 to 40 psu
Depth Range	50 m

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SeaFET V2 Connector

Pin	Signal
1	Voltage in
2	Ground
3	No connect
4	CTD/pump V out
5	TXD/D+
6	RXD/D-
7	CTD TXD
8	CTD RXD