



**PS3100**  
**Pressure Sensor**



## Description

The Greenspan PS3100 Depth Sensor provides a complete self contained measurement and data logging system for a wide range of environmental water monitoring applications. The sensor utilises a robust ceramic capacitance transducer for long term reliable pressure/depth sensing and a highly accurate thermistor for Temperature measurement.. Multi-point linearity and temperature calibration over the full operating ranges of Pressure and Temperature ensures stable, repeatable and accurate readings in the field.

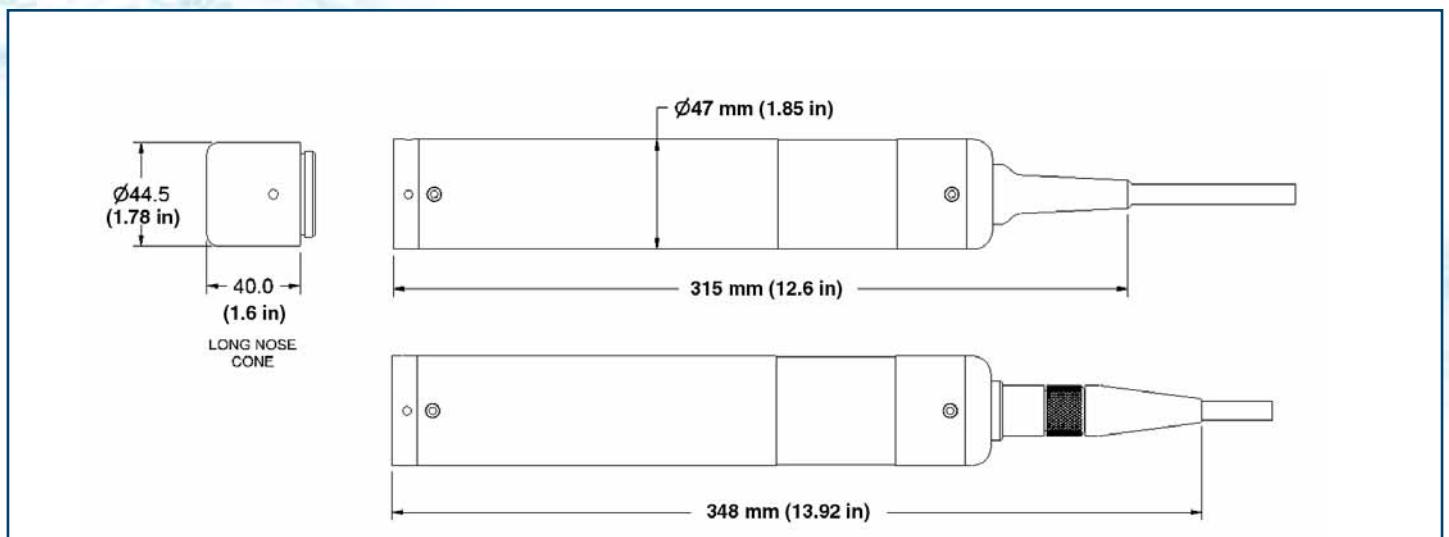
The internal data logger allows long term data collection at remote sites, as well as options for remote telemetry connection. The sensor can be fitted with an external cable, or with an on-board battery pack for true stand alone operation. Other cable options can provide serial output in SDI12 format for connection to external data logger or process controller.

A durable corrosion resistant body, rugged construction utilising double "O Ring" ensures suitability for harsh environments. The sensor comes fitted with a fully moulded polyurethane cable as standard. Other cable options are also supported.

The sensor can be supplied in various ranges as either a gauge (vented) or absolute (non vented) sensor. Gauge sensors utilise the closed vent system (CVS) to provide barometric pressure venting with minimal maintenance. The PS3100 is ideal for use in hydrographic and environmental water monitoring applications, including tidal and estuary monitoring.

The PS3100 sensor is easy to configure and operate using the supplied Smartcom software.

## Dimensions



## Features

- Pressure Measurement via Ceramic Capacitance Sensor
- Temperature measurement via thermistor
- Low power usage enables long term remote operation
- Internal data logger for collection of data during critical events
- Telemetry options via mobile phone, radio and satellite
- SDI12 cable adaptor unit for connection into data logger or controller.

## Benefits

- Can be installed in active waters (acidic or salty conditions)
- Reliable and robust sensor ensures minimal servicing visits
- Suitable for marine applications and waterways with high sediment loads
- Easy to configure logger – quick retrieval of data using Smartcom software
- Graphical and tabular display – export to spreadsheet format.
- Stand alone operation with on board Battery Pack
- Various cable options for telemetry and integration applications.

## Applications

- Monitoring of streams and rivers, lakes and urban waterways
- Groundwater and Surface water hydrographic data collection
- Water supply storages, Runoff Studies, Flood Warning
- Tidal, estuary and oceanographic monitoring.

## PS3100 Specification

Measurement technique		Pressure 1/2" Ceramic Capacitance Sensor Temp - integrated precision thermistor
Operating Ranges		Temperature -0-50°C Pressure - Max Over Range - 4 times Full Scale range
Standard Pressure ranges available	Gauge	2.5, 5, 10, 20, 40, 75, 100m
	Absolute	20, 40, 75, 100m
Other Ranges available		Yes - Calibration charge may apply - refer sales office
Sensor Outputs		Internal Data Logger - serial data via Smartcom software Optional adaptor provides SDI12 serial output (3 wire)
Overall Accuracy (combined linearity, hysteresis and repeatability)		Pressure +/- 0.1 % full scale range, Temperature +/- 0.2°C
Long term stability		0.2% full scale per annum
Resolution		Depth - 0.001m, Temp - 0-50°C
Storage Temperature		-5°C - +60°C
Cable type		Polyurethane sheathed cable, OD 8mm, with 3mm vent tube, moulded entry, HS7 connector for serial connection.
Cable lengths		10, 20, 30, 50, 100, 150m (32, 65, 100, 165, 325, 490 ft)
Power supply		8 to 30Vdc (at sensor), or on-board battery pack (option)
Power ESD protection		2000 volts
Current consumption		Sleep <0.2mA, logging 20mA. communicating 30mA
Sensor warm up time		1 second
On-board battery pack (option)		Housing screws to sensor size (OD x L) 47mm x 250mm
Battery capacity		9 x Lithium AA (3.6Volt) - Total capacity 5.2Ah @ 10.8v
Typical field life (battery pack)		Over 12 months remote operation @ 15 minute data logging.
Internal data logger		Non-volatile, battery backed RAM with real time clock
Memory size		2Mb capacity, with user selectable wrap function
Measuring units		User definable (Metric and Imperial US units)
Data storage		250,000 readings. (Typically 5 minute data for >12 months)
Logging frequency		User selectable from 1 second up to once per day
Dimensions (L x OD)		355mm x 47mm (14" x 1.78")
Weight		550g plus cable weight (665g per 10m length)
Wetted materials		Acetal, ceramic, 316 passivated stainless steel, polyurethane, viton

## Optional Extras and Accessories

- For all Gauge (vented) Sensors, a Closed Vent System must also be fitted. (each CVS unit can handle up to 70m of vented cable)
- Sensors are normally supplied with a moulded cable pre cut to required length. Detachable cable options may be available\*
- BSP Pressure Adaptor (Part No 492-0238) for process connection for pressure monitoring. (Gas Bubbler, Pipelines, Tanks)\*
- Protective Copper Nose Cone (Part No 492-0241) - prevents marine and biological growth on sensor face\*
- SDI12 Adaptor Unit –(Part No 7SDI-1000) provides 3 wire SDI12 serial output for Data Logger \*

## How to Order

The following information will be required:

- Sensor type (Gauge or Absolute)
- Sensor full scale range (specify range in m)
- Moulded cable length (specify length in m)
- Specify battery pack or any other options
- Accessories (Nose cone, Breakout box, SDI12 box)\*

\* Consult your Greenspan sales representative for further details.



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