

SMS Pressure™

Wireless pressure or pressure differential monitoring



Technical Data Sheet

SMS Pressure™ is an autonomous subsea sensor and data logger for monitoring of pressure or pressure differentials. The sensor housing is pressure rated to 3000 meter water depth, while the pressure rating of the sensor unit can go up to 1000 bar. SMS Pressure™ has extremely low power consumption and can log pressure at up to 5 Hz sampling frequency for more than 360 days. The sensor can be combined with SMS Gyro™ in the same housing.

Wireless Configuration and Data Transfer

The sensor can be configured via the SMS Magic Hand™ optical modem during mobilisation. Raw data and statistical data can easily be transferred to a topside computer during a logging campaign by letting an ROV hold the SMS Magic Hand™ modem in front of a sensor.

Retrofit Solution

There is easy installation by ROV and easy retrieval of sensors to topside if service and/or memory card download is necessary.

Sensors in Network

Two or more sensors can be connected by cable on the proprietary RS485-based SenseBus, facilitating synchronised data sampling and logging. One sensor is configured as BusMaster, and a topside computer can via a ROV-carried SMS Magic Hand™ download data, reconfigure the sensor, or upgrade firmware. Any sensor on the bus can be reached from one single access point, the BusMaster.

Sensor Quality

Sensor accuracy is 0.25% of full scale, including linearity, hysteresis, and repeatability. Each pressure transducer is subjected to comprehensive tests as to its pressure response and temperature characteristic, and is delivered with an individual calibration certificate stating the characteristics as well as the results of all tests which were performed.

Differential Pressure Sensor

Full Scale (FS) Range **5, 10, or 20 bar**
Line Pressure (both ports) **<200 bar**
Accuracy **0.25% FS (typical), 0.5% (max)**
Material **Stainless steel 316L**

Absolute Pressure Sensor

Full Scale (FS) Range **50, 100, 200, 400, 600, or 1000 bar**
Accuracy **0.25% FS (typical), 0.5% (max)**
Material **Stainless steel 316L**

4Subsea helps operators reduce cost of operations and maximise life of assets using autonomous sensors in combination with data analytics and specialist engineering competence. Products in the Smart Monitoring Sensors (SMS) range are **SMS Gyro™**, **SMS Vibration™**, **SMS Strain™**, **SMS Magic Hand™**, **SMS Gateway™**, **SMS Pressure™**, and **SMS Satellite™**. Technology applications include monitoring of wellhead integrity, risers, mooring lines, subsea spools and manifolds, as well as monitoring of pipelines and subsea structures.

Optical Communication Port

Use [Configuration, setup, data transfer via ROV](#)
Optical modem **SMS Magic Hand™**
Range **0.5m to 1.0m in water (6m in air)**
Baud rate **115200**
Mode of operation **Half duplex**
Wavelength **890 nm**
Eye safety **Class 1 (IEC60825-1), i.e. eye-safe under all operating conditions**

Topside Communication Port (optional)

Use [Configuration, setup, data transfer \(via hot stab\)](#)
Type **RS485, half duplex (two signal wires)**
Baud rate **Max 115200**
Power input **+5.0V to +26V**

LED Indicator

Type **Red LED heartbeat indicator**

Environmental

Operating temperature **0° C to 30° C**
Storage temperature **-5° C to 50° C**
Pressure rating **3000m water depth**



SMS Pressure™. A funnel-shaped receptacle allows for precise and repeated placement by ROV.

SenseBus Communication Port

Use [Communication with other sensors & modules](#) Type **RS485, half duplex (two signal wires)**
Baud rate **115200**
Power input **+3.6V**

Housing

Material **Stainless steel 316L**
Length **393 mm**
Diameter **114 mm (top section)**
Weight in air **9.4 kg (with two batteries)**
Weight in water **7.4 kg (with two batteries)**
Sealing **2 x O-rings (axial)**
Optical window **Polycarbonate**
Safety **No risk of building up dangerous pressure**

Battery Operation

Stand batteries **2 x double D-cell 3.6V Lithium - can operate with one battery**
Battery capacity **68000mAh (nominal at 25° C and 10mA)**
Battery capacity **52000mAh (nominal at 0° C and 10mA)**
Current consumption **< 6mA**
Typical service life **12 months (2° C)**
Optional battery pack **6 x double D-cell**



4Subsea is a leading provider of technology and services that help operators maintain production from subsea oil and gas fields and offshore wind farms. By combining expert engineering competence, practical experience and a digital service, we ensure the integrity of assets all the way from reservoir to deck.

We deliver solutions on a unique digital platform, aiming to be in the forefront of digitising oil, gas and offshore wind operations worldwide. The company was established in 2007, and clients include all the major oil and gas operators as well as the large suppliers of subsea equipment.

Click [here](#) to view a short video of our solutions and offerings.

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