



Seadraulics
Subsea Fluid Mechanics

DIFFERENTIAL PRESSURE SENSOR



DESCRIPTION

The Seadraulics Differential pressure sensor Model 1182 uses two absolute pressure sensors to take the differential pressure measurement indirectly, rather than measuring directly. As well as reducing costs, this differential pressure transmitter is also more robust in relation to unbalanced (one-sided) overloading.

In applications where the differential pressure is more than 5% of the maximum standard pressure range, the Seadraulics measurement with two absolute pressure sensors offers major advantages over conventional methods of differential pressure measurement.

In order to ensure that differential pressure can still be measured exactly if the standard subsea pressure range/differential pressure ratio is high, this series also features the tried-and-tested micro-processor based technology that is used in Keller-Druck sensors. All reproducible subsea pressure sensor errors (i.e., non-linearities and temperature dependencies) are entirely eliminated thanks to mathematical error compensation.



Seadraulics Pty Ltd

4/11 Anvil Way

Welshpool WA 6106 AUSTRALIA

Phone: +61 427 080 404

Email: info@seadraulics.com

Web: www.seadraulics.com



Differential Pressure Sensor

FEATURES

- The transmitters have a bus-compatible two-wire RS485 half-duplex.
- Interface offers the following capabilities:
 - * Readout of pressure and temperature values for both sensors. This allows readout of the differential pressure as well as the two standard pressure ranges.
 - * Calibration of zero points and amplification.
 - * Scaling of the analogue output to different pressure ranges or units.
 - * The system differential output will show zero when at depth with no test pressure applied
 - * OR – The system can display the difference between 2 subsea pressures.
 - * Configuration settings such as measurement rate, low-pass (LP) filter, bus address, etc.
 - * Readout of information such as serial number, compensated pressure and temperature ranges, etc
- Sensing parameters are: P1—test pressure 1
T1—temp at sensor 1
P2—ambient depth or a 2nd pressure
T2—temp at sensor 2
- Outputs: P1, T1, P2, T2 also (P1-P2 = CH0)
- Pressure or back seal testing can be measured against the depth i.e. CH0 will display Zero at start of test. Or two pressures can be compared.



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