Measure...Improve

ROBUST AND STABLE SAPPHIRE-BASED FIBER OPTIC PRESSURE AND TEMPERATURE SENSOR FOR ACCURATE MEASUREMENTS IN EXTREME TEMPERATURE (UP TO 300 °C)

Compatible with Opsens WellSens Gen II WLPI series of signal conditioners

Key Features

- High operating temperature (+300 °C)
- Excellent accuracy and long term stability
- High resistance in hydrogen rich environments
- High resistance in corrosive environments
- EMI/RFI immunity and intrinsically safe
- Robust packaging, low thermal sensitivity

Applications

- Downhole oil & gas pressure & temperature monitoring in extreme harsh environments
- High temperature environments
- Industrial process-control and monitoring applications
- Hazardous and strong EMI/RFI/MRI environments

Description

The OPP-W is a revolutionary fiber optic pressure and temperature sensor† resulting from OPSENS advanced and market leading expertise in both fiber optic and pressure sensor technologies. The OPP-W, which is based on an optical sensing element made of monocrystalline sapphire, offers superior performances, robustness, durability, and hydrogen and corrosion resistance compared to conventional sensors.

The blending of Opsens WLPI signal conditioning technology†† with its all-sapphire optical sensing technology delivers long term accuracy, durability, low drift and high fidelity pressure and temperature measurements in the harshest applications such as high temperature & hydrogen rich downhole oil and gas, EMI, RFI, high voltage, combustive and explosive environments.

The OPP-W is a Fabry-Perot interferometer based, fiber optic pressure and temperature sensor constructed from highly durable and corrosion resistant sapphire material. Designed especially for demanding hazardous environments, it is encased in robust inconel-718 housing for applications requiring a rugged sensor. The OPP-W delivers in-situ and continuous monitoring of both downhole pressure and temperature.

The OPP-W pressure and temperature sensor is used in conjunction with Opsens' WellSens signal conditioner surface unit and can be offered with a variety of connectors and cable options to suit your specific application.

† Patent pending

†† US patent 7,259,862. Patents pending in other countries.

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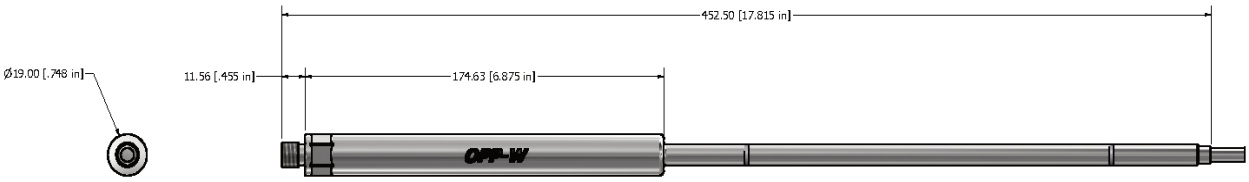

Specifications

Pressure range (absolute)	0 – 5000 kPa (0 - 750 psi). [up to 10000 kPa (1450 psi) Upon request]
Temperature range	- 40 to 300 °C (higher temperature available upon request)
Pressure accuracy	± 0.2 % F.S.
Pressure resolution	0.002% F.S. or better
Long term pressure stability	0.5 % F.S. per annum at 300 °C
Compensated operating temperature range	0 to 300 °C.
Proof pressure	200% F.S.
Temperature accuracy	± 0.7 °C
Temperature resolution	0.1 °C or better
EM/RF/MR/MW susceptibility	Complete immunity

All specifications are subject to change without prior notification

IMP0125 WLSS Rev 7.0 Printed in Canada