



### **MEMS-BASED FIBER OPTIC PRESSURE SENSOR AND PIEZOMETER FOR THE HARSHTEST ENVIRONMENTS**

Compatible with Opsens' WLPI series signal conditioners

#### **Key Features**

- Compact and ultra-robust
- 100 to 1000 PSI range
- Excellent accuracy (0.1%)
- Completely sealed for immersed applications
- EMI/RFI/Lightning immunity; intrinsically safe
- Rugged stainless steel body
- Long term reliability

#### **Applications**

- Geotechnical applications
- In-situ process monitoring
- Harsh subsurface monitoring equipment
- High temperature environment with corrosive chemicals.
- Groudwater elevation surveillance in wells and streams
- Pressure monitoring in pumping stations
- Hazardous environments
- Static or dynamic pressure measurements conducted in confined spaces, hazardous or strong EMI/RFI/MRI environments

#### **Description**

Opsens' OPP-C, MEMS-based fiber-optic pressure sensor, is perfectly tailored to meet the challenges of pressure monitoring applications in submerged and/or harsh environments.

The OPP-C sensor delivers long term accuracy, durability and high fidelity pressure measurements with a pressure operating range of up to 7000 kPa.

The model is ideal for geotechnical applications. Completely sealed, with a stainless steel body and diaphragm, the OPP-C is designed to work in adverse conditions of temperature, pressure, and toxic or corrosive atmospheres.

With the inherent advantages of fiber optic, it is not subject to interference from electromagnetic interference, vibrations and lightning that may be present in the sensing environment.

The OPP-C pressure sensor is compatible with all Opsens' WLPI (Patent #7,259,862) signal conditioners. This compact and very robust probe can be customized to specific customer requirements. The fiber optic extension cable can be a maximum length of 1 kilometer.

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### Preliminary specifications

Pressure range	50 PSI (345 kPa)    100 PSI (690 kPa)    500 PSI (3500 kPa)    1000 PSI (7000 kPa)
Resolution	< 0.02 % F.S. (Range dependant)
Precision	± 0.1% F.S.*
Thermal coefficient of Zero	< 0.03% F.S / °C
Proof pressure	200% F.S.
Operating temperature	-20 to +85 °C
EMI/RF/Lightning	Complete immunity
Housing	Stainless steel (113 mm x 9.5 mm)
Mass	0.03 Kg
Optical connector	SC standard
Cable sheath	4 mm O.D. rugged tight-buffered fiber optic cable with aramid strength member and polyurethane jacket
Cable length	Up to 1 kilometer
Signal conditioner compatibility	All Opsens WLPI signal conditioners

\* Excluding thermal effect

*Product specifications are subject to change without prior notice*