

# FIBER OPTIC PRESSURE SENSOR

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



### KEY FEATURES

- Robust design
- No drift over time, reliable results during years
- Intrinsically safe
- Can be located 3 km from the readout unit
- Immune to EMI, lightning
- Small size
- Low thermal shift

## OPP-B Reliable - Robust - Easy to install

### DESCRIPTION

Opsens Solutions' OPP-B, Optical MEMS-based designed for demanding applications. The OPP-B model is a bare fiber optic pressure sensor (**no metal housing**) for applications requiring minimally invasive in-situ pressure measurement.

The OPP-B pressure sensor is compatible with all Opsens Solutions' WLPI (Patent #7,259,862) signal conditioners. 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-B sensor delivers **long term accuracy, durability, low drift and high fidelity pressure measurements** in the harshest environments such as **EMI, RFI, high voltage, combusive/explosive and high temperature.**

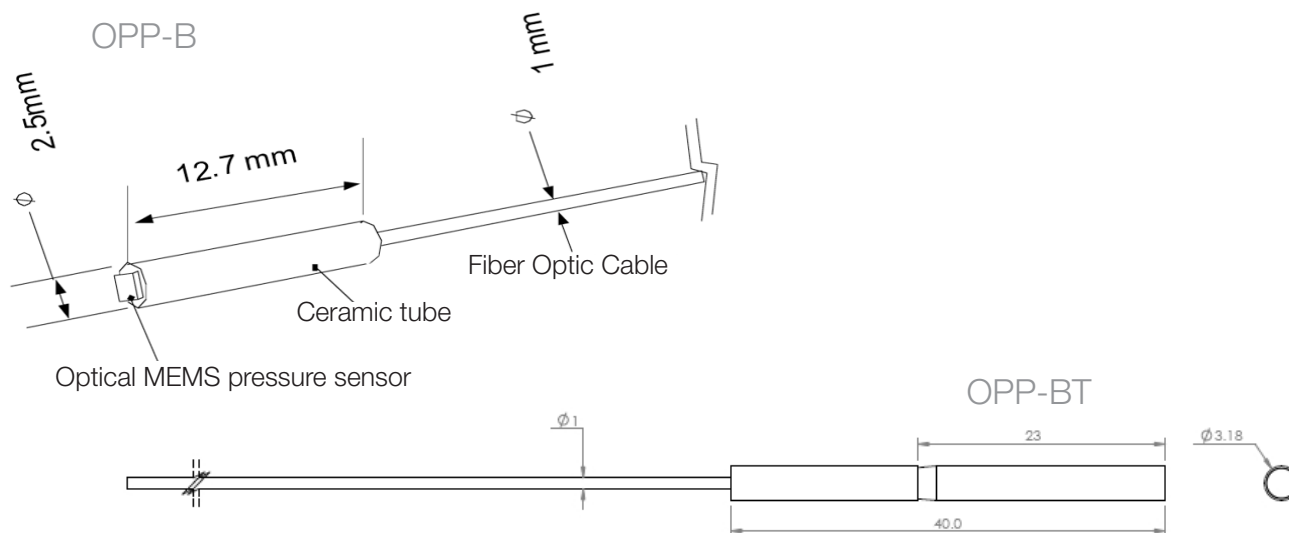
This compact and very robust probe can be customized to specific customer requirements. The fiber optic extension cable can be as long as 3 kilometers.

### APPLICATIONS

- Geotechnical applications
- In-situ pressure monitoring in food processing
- Harsh subsurface monitoring equipment
- Aerospace and Defense
- Static or dynamic pressure measurements conducted in confined spaces
- Pressure monitoring in pumping stations
- Hazardous and nuclear environments
- High temperature environments

# OPP-B

## MEMS-BASED FIBER OPTIC PRESSURE SENSOR



### SPECIFICATIONS

MEASURING RANGE (other ranges available on request)	25 PSI (172 kPa)	50 PSI (345 kPa)	100 PSI (690 kPa)	500 PSI (3500 kPa)	1 000 PSI (7000 kPa)
PRECISION (Excluding thermal effect)	± 0.5 % F.S.	± 0.2 % F.S.	± 0.2 % F.S.	± 0.2 % F.S.	± 0.2 % F.S.
THERMAL COEFFICIENT OF ZERO - (% F.S. / °C)	< 0.04	< 0.04	< 0.03	< 0.01	< 0.01
RESOLUTION	< 0.01 % F.S. (Range dependant)				
PROOF PRESSURE	200 % F.S.				
TEMPERATURE OPERATING RANGE	up to 100°C (other temperatures available upon request)				
EMI/RFI LIGHTNING	Complete immunity				
HOUSING	Depending the Sensor OPP-B or OPP-BT				
WEIGHT	OPP-B = 0.5 gram and OPP-BT = 2 grams				
CABLE LENGTH	Up to 3 km (Sampling rate dependent, consult factory for more details)				
OPTICAL CONNECTOR	LCA or SCA (Standard), other connector available on request				
CABLE SHEATHING	From ruggedized flexible outdoor cable to robust stainless steel cable				
SIGNAL CONDITIONER COMPATIBILITY	All Opsens Solutions' WLPI signal conditioners				