

## MEMS-Based Fiber Optic Pressure Sensor and Piezometer for the Harshest Environments



Reliable - Robust - Easy to install

The OPP-C pressure sensor is compatible with all Opsens Solutions' WLPI (Patent #7,259,862) signal conditioners. This compact and very robust probe can be customised to specific customer requirements. This fiber optic extension cable can be a maximum length of 3 kilometers.

Opsens Solutions' 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 70bar.

It's the perfect piezometer: 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. It can be grouted in place if needed.

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.

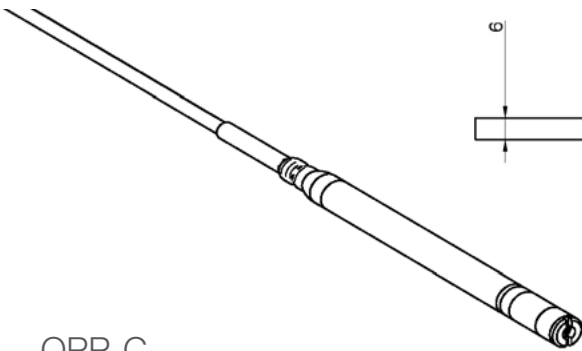
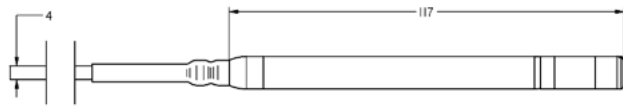
### KEY FEATURES

- Maintenance free
- No drift over time, reliable results during years
- Intrinsically safe
- Robust design
- Can be located 3 km from the readout unit
- Immune to EMI, lighting
- Embedded temperature sensor

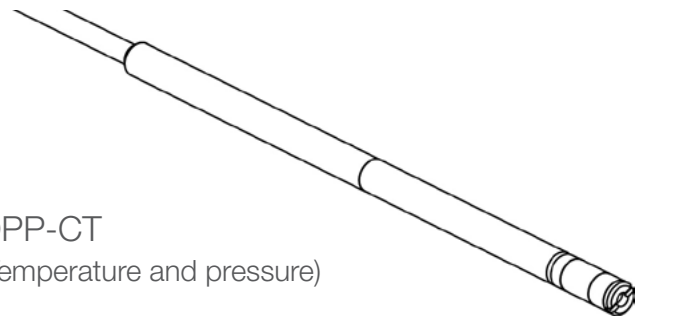
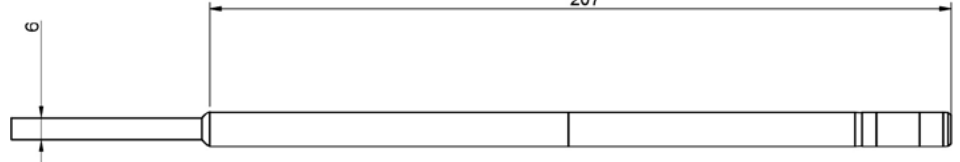
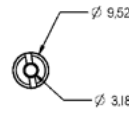
### APPLICATIONS

- Geotechnical applications
- In-situ pressure monitoring for food processing
- Harsh subsurface monitoring equipment
- Hydrostatic pressure measurements with corrosive chemicals
- Groundwater elevation surveillance in wells and streams
- Pressure monitoring in pumping stations
- Hazardous and nuclear environments
- Offshore platform and refineries

# OPP-C & OPP-CT FIBER OPTIC PRESSURE SENSORS



OPP-C  
(Pressure only)



OPP-CT  
(Temperature and pressure)

## SPECIFICATIONS (PRESSURE)

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.
RESOLUTION	< 0.02 % F.S. (Range dependant)				
THERMAL COEFFICIENT OF ZERO	< 0.03 % F.S / °C				
PROOF PRESSURE	200 % F.S.				
TEMPERATURE OPERATING RANGE	-20°C to +85°C (other temperatures available upon request)				
EMI/RFI LIGHTNING	Complete immunity				
HOUSING	Stainless steel (117 mm x 9.5 mm)				
MASS	0.06 Kg				
CABLE LENGTH	Up to 3 km (Sampling rate dependent, consult factory for more details)				
OPTICAL CONNECTOR	SCA (Standard), SC (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				

## SPECIFICATIONS (TEMP) FOR OPP-CT ONLY

RESOLUTION	0.1 °C
ACCURACY	±1.0 °C @ ±3.3 sigma limit (99.9% confidence level)