

FIBER OPTIC TEMPERATURE SENSOR

FOR DEMANDING APPLICATIONS AND ROUGH HANDLING USAGE



KEY FEATURES

- Robust design
- Good accuracy
- Outstanding repeatability
- EMI/RFI/RFI and microwave immune
- Intrinsically safe
- -40 °C to +250 °C temperature range
- Can be deployed as a standard thermocouple

OTP-P Compatible with Opsens Solutions' WLPI signal conditioners

DESCRIPTION

Opsens Solutions' OTP-P fiber optic temperature sensor is encapsulated in a rugged stainless steel tube (ceramic tube also available for microwave environment) for maximum protection offers the highest performances in the industry. The OTP-P sensor uses the temperature-dependent birefringence of specially selected crystal as the temperature transduction mechanism. Because of the pure monocrystalline material used, the OTP-P does not show thermal creeping or aging as with other fiber optic sensors based on the thermal dilatation of glass optical fibers.

Combined with Opsens' WLPI signal conditioning technology (patent # 7, 259, 862) and with the inherent advantages of fiber optics, the OTP-P delivers unprecedented repeatability and reliability in the most adverse conditions such as high level of EM, RF, MR and microwave fields environments as well as with high voltage and rapid temperature cycling conditions.

The standard operating range of the OTP-P is from -40 °C to +250 °C.

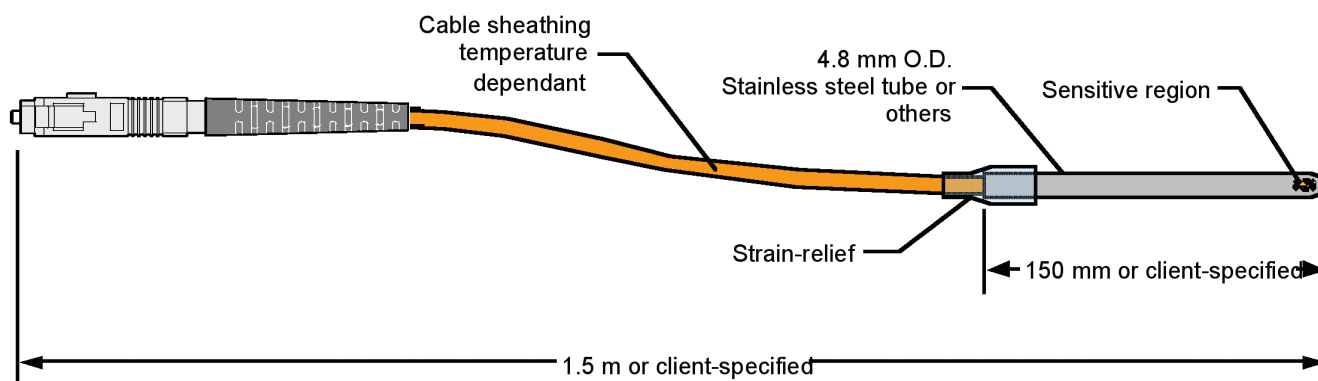
The OTP-P is compatible with all Opsens' WLPI signal conditioners. This robust fiber optic temperature sensor, available in different cables and sheath options, is customizable according to customer specific applications or for OEM-type applications.

APPLICATIONS

- EM, RF and microwave environments
- Sterilization applications
- Pressurized systems
- Nuclear and hazardous environments
- Civil engineering and geotechnical applications
- Power substation and transformer ambient temperature monitoring.

OTP-P

FIBER OPTIC TEMPERATURE SENSOR



SPECIFICATIONS

TEMPERATURE OPERATING AND CALIBRATED RANGE	-40 °C to +250 °C (other ranges available upon request)
ACCURACY	±1.0 °C @ ±3.3 sigma limit (99.9% confidence level)
THERMOWELL MATERIAL	Stainless steel (Ceramic or other materials available as an option)
OPERATING HUMIDITY RANGE	0-100 %
EMI/RFI SUSCEPTIBILITY	Complete immunity
CALIBRATION	NIST traceable
CABLE LENGTH	1.5 meters standard (other lengths available)
OPTICAL CONNECTOR	LCA, SC standard
CABLE SHEATHING	Operating temperature dependant (contact factory)
SIGNAL CONDITIONER COMPATIBILITY	All Opsens Solutions' WLPI signal conditioners