Fiber Optic Temperature Sensor

Applications

The Model FP4700 Fiber Optic Temperature Sensor is designed to measure temperatures wherever high accuracy is required. They are particularly suitable for use in or on…

- **Concrete**
- **Steel structures**
- **Nuclear or hazardous environments**

Model FP4700 Fiber Optic Temperature Sensor.

Operating Principle

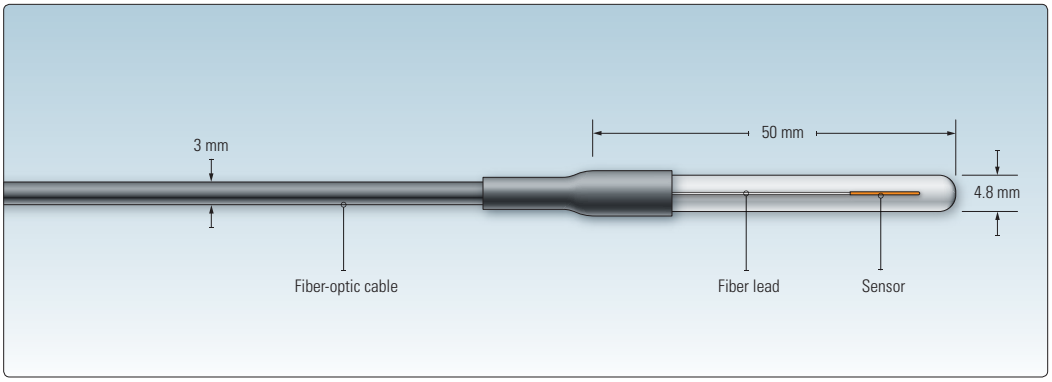
The **GEOKON®** fiber optic temperature sensors are designed for use in environments where high levels of electrical interference exist or where intrinsic safety is an issue.

The FP4700 uses the temperature-dependent birefringence of a specially selected crystal as the temperature transduction mechanism. This crystal does not show thermal creep or aging as with some other fiber optic sensors.

Advantages and Limitations

The available operating range is from –40 °C to +250 °C and is dependent on cable type (please contact **GEOKON** with temperature parameters).

Other advantages include: EMI/RFI immunity; intrinsically safe; transmission over long cables; and high voltage immunity.



● *The Model FP4700 components and dimensions.*

Technical Specifications

Temperature Range[1]	–40 °C to +250 °C
Resolution	0.1 °C
Accuracy[2]	±1.0 °C
Response Time	1.5 s typical
Operating Humidity Range	0-100%
EMI/RFI Susceptibility	complete immunity
Calibration	NIST traceable
Cable Length[3]	1.5 m (standard)
Optical Connector	SC (standard)
Cable Sheathing	depends on temperature range
Signal Conditioner Compatibility	all Opsens WLPI signal conditioners
Length × Diameter	50 × 4.8 mm (sensor)

*[1]The available operating range is dependent on cable type (please contact **GEOKON** with temperature parameters).*
[2]Total accuracy over the full range including both signal conditioner and sensor errors. Higher accuracy available on request.
[3]Other cable lengths available on request.

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