

# PRB-242

## Fiber Optic Temperature Probe

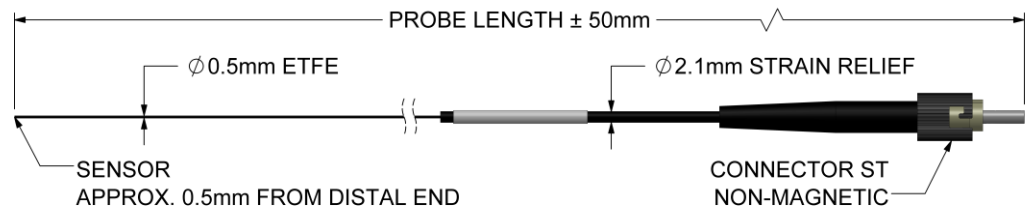
### MRI and Cryogenic Temperature Sensing

#### Non-magnetic, Non-Conducting, Optical Fiber Probes with Exceptional Precision

OSENSA's fast response PRB-242 contact temperature probes provide accurate and reliable temperature sensing for a variety of life sciences, microwave and laboratory research applications requiring immunity to high intensity electro-magnetic fields and RF energy. These probes are constructed with the sensing element near the tip for contact sensing of MRI electrodes, cryogenic tissues, or electronic components. They can handle temperatures from -200°C up to 150°C while providing extremely fast response times. The small sensing element minimizes image artifacts in MRI environments up to 16 Tesla.

### Product Specifications

#### PRB-242-2M-STM-MRI



System Specifications	PRB-242-2M-STM-MRI	PRB-242-2M-STM-CRYO
Calibrated Accuracy <sup>1</sup> (20°C to 60°C)	± 0.10°C	± 0.10°C
Stability (15min)	± 0.02°C	± 0.02°C
Noise (1 second averaging)	± 0.01°C	± 0.02°C
Measurement Range	-40°C to 150°C	-200°C to 150°C
Immersion Response Time Constant	180ms	180ms
Tip Diameter	500µm	500µm
Minimum Bend Radius	16mm	16mm
Probe Materials	ETFE	ETFE

#### Notes:

1. Calibrated accuracy is valid within ± 20°C of calibration point. A custom calibration is required for accuracy to be valid across the full sensing range.
2. Compatible with OSENSA's FTX-300-LUX+ series fiber optic signal conditioners.
3. Probe lengths can be specified from 0.5m to 10m.
4. For longer distances add extension cable EXT-400-10M-STM-STM, in lengths from 2m to 20m.
5. Temperatures below -110°C require FTX-300-LUX+CRYO

#### TECHNICAL SUPPORT

OSENSA Innovations offers on-site support, commissioning, and training for all of its products. For immediate assistance with any technical issue, please contact [support@osensa.com](mailto:support@osensa.com) or call 1-888-732-0016.

#### WARRANTY INFORMATION

OSENSA Innovations stands behind its products and services. All fiber optic temperature probes and signal conditioners ship with a full one year repair or replacement warranty. You may also purchase an extended five year warranty. Some conditions apply.

#### CUSTOM OEM SOLUTIONS

OSENSA offers cost-effective design and consulting services at discounted rates for high-volume OEM customers. Let the engineering team at OSENSA Innovations help you rapidly develop custom probes for your research application. OSENSA's team has many years of experience designing fiber optic temperature probes for various laboratory environments.

#### FURTHER INFORMATION

For more information on any of our products or services please visit our website: [www.osensa.com](http://www.osensa.com) or email: [info@osensa.com](mailto:info@osensa.com).

