

Field proven high accuracy probe for measuring hot spot temperature

- Long term, drift-free survivability
- Does not require recalibration or complex input to operate
- Withstands kerosene desorption, heat runs, oil immersion and vibration
- Surpasses ASTM dielectric strength standards for use inside transformers

Product Summary

Description Robust, oil-permeable Neoptix T2[™] temperature probes for highly accurate measurement of power transformer temperatures. Installed within standard spacer or directly onto any other location inside transformer windings to directly measure 'hot spot' temperature.

Application For use inside oil-filled or dry-type electrical transformers. Compatible with QUALITROL® intelligent transformers monitors with direct winding. Sensitive area Material: GaAs Resistivity: 10⁷ Ω-m

Continuous longitudinal slit allowing perfect oil flow throughout probe length (patent pending)

Virgin PTFE Teflon⊚ sheath Dielectric strength: >18000 V/mm (ASTM D149) Dielectric constant: 2.1 @ 1 Mhz

Optical fiber glass/quartz fiber

glass/quartz fiber with 20µ polyimide coating Dielectric strength: >15000 V/mm Dielectric constant: > 3.5 @ 1 MHz

High performance epoxy Dielectric strength: > 17000 V/mm Dielectric constant: 3.01 @ 1kHz/25°C

PTFE Teflon_® spiral wrap reinforcement





QUALITROL[®] CAB-699 fiber optic temperature probe



Field proven high accuracy probe for measuring hot spot temperature	 Direct measurement inside transformer yields highly accurate temperature readings reducing risk of failure or unnecessary reduction in transformer life Thousands are currently installed and in service
Long term, drift-free survivability	 All materials have high dielectric and chemical resistant properties ST type connectors resist failure due to vibration
Does not require recalibration or complex input to operate	Galium arsenide (GaAs) measurement principle
Surpasses ASTM dielectric strength standards for use inside transformers	 Unique, patent-pending longitudinal slit enables uniform contact with transformer oil over entire probe length

TECHNICAL SPECIFICATION	HNICAL SPECIFIC	CATIONS
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Environmental	Certification	ASTM-D 149 and ASTM-D 2413
	Chemical resistance	Solvent and chemical resistant (kerosene, etc.)
	Measurement range	-40°F to 392°F (-40°C to 200°C)
	Survivability range	-328°F to 572°F (-200°C to 300°C)
	Probe permeability	Longitudinal continuous slit (patent pending) on cable insures uniform oil impregnation into sheath
Mechanical	Connector type	Standard fiber optic ST
	Probe material	Chemically resistant, inert and dielectric materials; quartz optical fiber
	Probe sensitive area	Direct point measurement with sensitive area of 400 microns O.D.
	Standard probe length	4, 6, 8, 10 meters (custom lengths available up to 25 meters upon request)
Specifications	Accuracy	± 1.8°F (± 1°C)
	Response time	500 milliseconds



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