

Article Overview

FISO, MicroComp Nordic AB, and NBG Fiber Optics are key Nordic suppliers of fiber optic cables and sensors for precise temperature measurement in industrial and research applications.

FISO

FISO is a leading developer of fiber optic sensors and signal conditioners used in energy, medical, and process control applications, including transformer monitoring and high-precision temperature measurement . Their Nortech Transformer Winding Hot Spot Temperature Monitoring System uses fiber optic probes to provide real-time, long-term temperature monitoring of power transformers. FISO's fiber optic cables are designed for harsh environments, with polyurethane sheathing, stainless steel connectors, and high-pressure and high-temperature resistance, making them suitable for Nordic industrial conditions .

MicroComp Nordic AB

MicroComp Nordic AB specializes in fiber optic components and subsystems, including RF over fiber and distributed sensing solutions . While their focus is broader, covering microwave and radar applications, they provide consultancy and product development for fiber optic systems in the Nordic countries (Sweden, Norway, Denmark, Finland, Estonia, Latvia, and Lithuania). They can support custom solutions for temperature measurement using fiber optic technology, particularly in research and industrial testing environments .

NBG Fiber Optics

NBG Fiber Optics manufactures cryogenic and high-temperature fiber optic cables suitable for distributed temperature sensing (DFOS) over long distances without electrical power at the measurement site . Their cables support Raman, Brillouin, Rayleigh, and FBG interrogation technologies, with operating temperatures ranging from -196°C to 150°C. NBG offers ultra-compact, single-armored, and double-armored fiber optic cables with high tensile strength and flexibility, making them ideal for harsh Nordic conditions and critical infrastructure monitoring .

Summary

For Nordic applications requiring high-precision temperature measurement via fiber optics, the following options are notable:

- o FISO: Specialized in transformer and industrial temperature monitoring with robust fiber optic probes and

cables .

- o MicroComp Nordic AB: Provides fiber optic components, consultancy, and custom solutions for industrial and research applications .

- o NBG Fiber Optics: Offers high-temperature and cryogenic fiber optic cables for distributed sensing over long distances . These manufacturers provide solutions compatible with Raman, Brillouin, Rayleigh, and FBG sensing technologies, ensuring flexibility for various industrial, energy, and research applications in the Nordic region.

Alongside their use in data transmission, optical fibers can also be used for measuring temperature, light, breakage, expansion,

2.5 Cable temperature monitoring method using optical fibre -DTS (Distributed Temperature Sensing) Distributed temperature

This section will look at two ways in which optical fibers and associated components can be used for temperature

A fiber optic temperature sensor is a temperature measurement device that uses optical fibers as the sensing medium. Unlike

Vi bruker fiberoptiske kabler for å måle temperatur, trykk, belastning, form, akustikk og kjemiske parameter. Målinger kan gjøres på;

High Speed Temperature Detectors The OS4000 series high speed industrial fiber optic infrared transmitters measure temperature

Measure temperature with fiber optic sensors for high-resolution distributed and multipoint monitoring in batteries, processes, and

Distributed Temperature Sensing (DTS) systems provide temperature information for accurate thermal monitoring, fire detection, and

With over 130 years in the cable industry, NKT collaborates closely with sensor system suppliers, such as

High-temperature measurements above 1000 °C are critical in harsh environments such as aerospace, metallurgy, fossil fuel, and

Using sensing technology that takes advantage of the characteristics of fiber optic cable, DTSX is a

temperature sensor that can be

Their wireless temperature monitoring modules using RF or Zigbee mesh are suitable for retrofit projects where

What is a Distributed Fiber Optic Temperature Sensor? Yokogawa's DTSX product family is engineered with a variety of fiber optic

Despite their advantages, Fiber Optic Temperature Sensors also have some drawbacks: Different types of optical temperature

Fiber optic sensor cables are the key enabler for real-time monitoring of temperature, strain, and acoustic signals across diverse and

Fiber Optics Introduction to Fiber Optics Temperature Measurement Fiber optics are essentially light pipes. The group of sensors

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