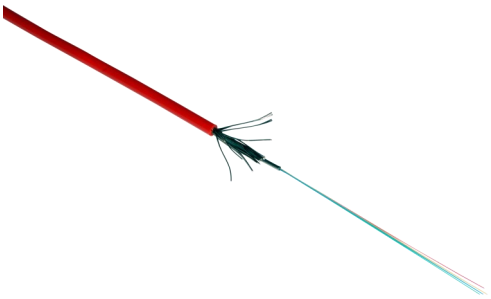
Ordinary Temperature Sensing Cable

DiTemp



DISTRIBUTED FIBER OPTIC TEMPERATURE SENSOR FOR CIVIL, GEOTECHNICAL MONITORING AND LEAK DETECTION

Reliable and versatile cable for easy installation.
Small size and fast reaction to temperature changes.

Description

The Ordinary Temperature Sensing cable is a unique sensor for the evaluation of distributed temperature over several kilometers, using DTS technology.

The Ordinary Temperature Sensing cable is used in a wide range of applications that require distributed temperature sensing, such as temperature monitoring of concrete in massive structures, leakage detection of pipelines, seepage monitoring in dams and levees, waste disposal sites, smart buildings, just to name a few .

The Ordinary Temperature Sensing cable is a small fiber optic cable, armored with stainless steel loose tube gel filled, stainless steel strength members and PA outer sheath. The central loose tube is hermetically sealed and contains 4 fibers with a dual layer acrylate coating for increased micro bending performance.

This sensor is particularly suitable for outdoors and harsh environment applications with different methodology of installation: direct burial in the ground or in concrete, clamped to a pipe, anchored or glued.

Thanks to the special package design the Ordinary Temperature Sensing cable offers high tensile strength, crush resistance, lateral water tightness, chemical and abrasion resistance, UV resistance and excellent rodent protection, while guaranteeing a fast response to temperature variations.

The Ordinary Temperature Sensing cables are delivered on spools and with all the necessary accessories such as gland nuts (IP65), pigtails and connectors (E-2000, FC-PC or other on request).

Key Features

- DiTemp compatible
- Fast temperature response
- High tensile strength
- High crush resistance
- Excellent rodent protection
- High chemical resistance
- Robust abrasion resistant cable sheath
- Laterally watertight
- Compact and flexible
- Halogen free
- UV resistance

Applications

- Pipeline leak detection
- Dam and Levee seepage monitoring
- Smart buildings
- Distributed temperature sensing

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Temperature range

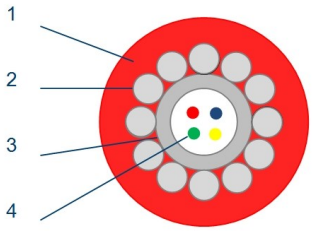
Operating temperature:	-40 °C to +85 °C
Storage temperature:	-40 °C to +85 °C
Installation temperature:	-10 °C to +50 °C
Short-term temperature (max 1 h):	-50°C to +150°C

Technical Data

Outer diameter:	3.8 mm
Weight:	26 kg/km
Max crush resistance:	800 N/cm
Max tensile strength:	1300 N (installation)
Max tensile strength:	900 N (operation)
Min bending radius:	80 mm (with tensile)
Min bending radius:	60 mm (without tensile)
Hydrostatic pressure:	300 kPa (bar)

Fiber Types

Fiber support:	MMF 50 / 125 µm ITU-T G.651 compliant
Fiber attenuation (cabled @ 20 °C):	≤ 3.0 dB @ 850 nm ≤ 1.0 dB @ 1300 nm
Number of fiber:	4



1 PA outer sheath
2 Stainless steel wires, 316L
3 Stainless steel loose tube, 316L
4 Bend insensitive optical fibers

Certification and compliance

CE Marking

Cable tests complying with IEC 60794-1-2

Accessories and ordering information

14.1410 DiTemp Ordinary Temperature Sensing Cable

Accessories:

- Cable termination with connectors
- Junction box
- Splice box

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