



## 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 Budget Temperature Sensing cable is a reliable budget sensor for the evaluation of distributed temperature over several kilometers. The Budget 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, waste disposal sites, on- and off-shore sites in gas and oil industry, hot spots, cold spots and leakage detection of flow lines and reservoirs, building installations, just to name a few.

The Budget Temperature Sensing cable is a small fiber optic cable, armored with different protective layers that includes a 2.2 mm Stainless Steel loose tube, a Kevlar reinforcing sheath, a Stainless Steel braiding sheath and an outer PE jacket. The central loose tube contains up to 4 fibers with acrylate coating.

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

Thanks to the multi layer package design the Budget Temperature Sensing cable offers high tensile strength, crush resistance, chemical and abrasion resistance and good rodent protection.

The Budget Temperature Sensing cable is fully compatible with the DiTemp® system and all its accessories.

### Key Features

---

- DiTemp compatible
- High tensile strength
- High crush resistance
- Good rodent protection
- Abrasion resistant cable sheath
- Flexible
- Fast temperature response

### Applications

---

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

### Temperature range

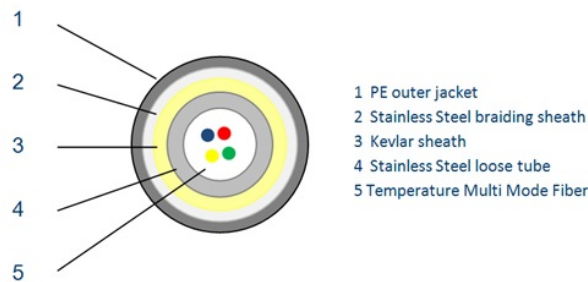
Operating temperature:	-55 °C to +85 °C
Storage temperature:	-55 °C to +85 °C
Installation temperature:	-10 °C to +50 °C

### Technical Data

Outer diameter:	5.0 mm
Weight:	38 kg/km
Max crush resistance:	3300 N/cm
Max tensile strength:	2000 N (installation)
Max tensile strength:	1100 N (operation)
Min bending radius:	1000 mm (with tensile)
Min bending radius:	75 mm (without tensile)

### Fiber Types

Fiber support:	MMF 50 / 125 µm ITU-T G.651 compliant
Fiber attenuation (cabled @ 20 °C):	≤ 3.5 dB @ 850 nm ≤ 1.5 dB @ 1300 nm
Number of fiber:	4



### Accessories and ordering information

14.1419 DiTemp Budget Temperature Sensing Cable

Accessories:

- Cable termination with connectors
- Junction box
- Splice box

Smartec SA

Via Pobietto 11  
CH-6928 Manno, Switzerland

Phone +41 91 610 18 00  
Fax. +41 91 610 18 01

Email info@smartec.ch  
Web www.smartec.ch

**NX** NOVA  
METRIX