

14.1411 DITEMP MEDIUM TEMPERATURE SENSING CABLE

For distributed temperature sensing



GENERAL DESCRIPTION

The DiTemp[®] Medium Temperature Sensing cable is a unique sensor for the evaluation of distributed temperature over several kilometers.

The DiTemp[®] Medium 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.

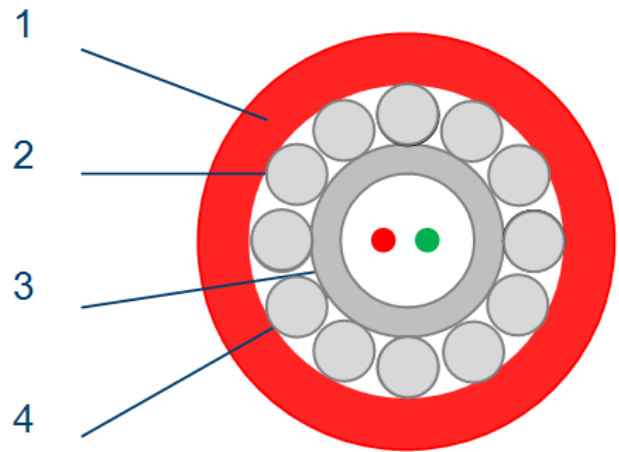
TECHNICAL DESCRIPTION

The DiTemp[®] Medium Temperature Sensing cable is a small fiber optic cable, armoured with stainless steel loose tube gel filled, stainless steel strength members and TPE outer sheath. The central loose tube, with optimized fiber excess length, is hermetically sealed and contains 2 mid temperature dual layer acrylate fibers 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 concrete, clamped to a pipe, anchored or glued.

Thanks to the special package design the DiTemp[®] Medium Temperature Sensing cable offers high tensile strength, crush resistance, lateral water tightness, chemical and abrasion resistance and excellent rodent protection.

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



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

FEATURES

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

TEMPERATURE RANGE

- Operating temperature -40 °C to +150 °C
- Storage temperature -40 °C to +150 °C
- Installation temperature -10 °C to +150 °C
- Short-term temperature (max 1 h) -50°C to +180°C

TECHNICAL DATA

- Outer diameter 3.8 mm
- Weight 28 kg/km
- Max crush resistance 900 N/cm
- Max tensile strength 1500 N (installation)
- Max tensile strength 1100 N (operation)
- Min bending radius 80 mm (with tensile)
- Min bending radius 60 mm (without tensile)
- Hydrostatic pressure 300 kPa (bar)

FIBER TYPOLOGY

- Fiber support MMF 50 / 125 μ m ITU-T G.651 compliant
- Fiber attenuation (cabled @ 20 °C) \leq 3.0 dB @ 850 nm
 \leq 1.0 dB @ 1300 nm
- Number of fiber 2

CERTIFICATION AND COMPLIANCE

Cable tests complying with IEC 60794-1-2

ACCESSORIES AND ORDERING INFORMATION

- Cable termination with connectors
- Junction box
- Splice box