

11.1060 DITEST/DITEMP HYDRO & GEO SENSING CABLE

For distributed strain & temperature sensing



GENERAL DESCRIPTION

The Hydro & Geo Sensing cable is a unique sensor for the evaluation of distributed strain and temperature over several kilometers.

The Hydro & Geo Sensing cable is used in a wide range of applications that require distributed strain and temperature sensing, such as temperature monitoring of concrete in massive structures, waste disposal sites, dams, hydro-structures, geotechnical areas and structures, mines, just to name a few.

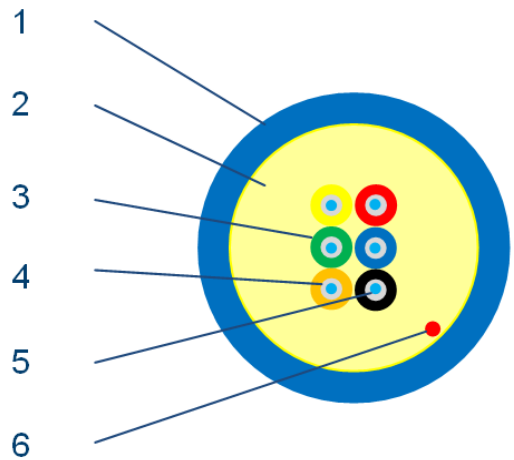
TECHNICAL DESCRIPTION

The Hydro & Geo Sensing cable is a small fiber optic cable, with a symmetric circular section protected by a dense member of aramid and an outer Low Smoke Zero Halogen – Non Corrosive jacket. The optical fibers are protected by means of Acrylate coating and an outer hard elastomeric tight buffer. The Hydro & Geo Sensing cable contains 4 Single Mode and 2 Multi Mode optical fibers, allowing the sensor to be used both with DiTeSt and DiTemp reading unit for distributed strain and temperature monitoring.

This sensor is particularly suitable for outdoors geotechnical applications with different methodology of installation: direct burial in the ground or concrete, integration into geo-textile fabric.

Thanks to the special package design, the Hydro & Geo Sensing cable offers high tensile strength, crush resistance, water tightness, chemical and abrasion resistance.

The Hydro & Geo Sensing cable is fully compatible with the DiTemp® system and all its accessories.



- 1 LSZH-NC outer jacket
- 2 Aramid yarn strength member
- 3 Hard elastomeric tight buffer
- 4 Acrylate coating
- 5 SM + MM optical fiber
- 6 Ripcord

FEATURES

- DiTeSt compatible
- DiTemp compatible
- High tensile strength
- High crush resistance
- High chemical resistance
- Low Smoke Zero Halogen outer jacket
- Watertight
- Compact and flexible
- Fast temperature response
- Good strain sensitivity

TEMPERATURE RANGE

- Operating temperature -20 °C to +70 °C
- Storage temperature -40 °C to +70 °C
- Installation temperature -10 °C to +50 °C

TECHNICAL DATA

- Outer diameter 6.5 mm
- Weight 28 kg/km
- Max crush resistance 1500 N/cm
- Max impact resistance 1000 impacts
- Max tensile strength 1200 N (installation)
- Max tensile strength 400 N (operation)
- Min bending radius 98 mm (installation)
- Min bending radius 65 mm (operation)

FIBER TYPOLOGY

- Fiber support 2 MMF 50 / 125 μ m OM2 ITU-T G.651 compliant
4 SMF 9 / 125 μ m ITU-T G.652.D compliant
- Fiber attenuation (cabled @ 20 °C) \leq 3.5 dB @ 850 nm MMF
 \leq 1.5 dB @ 1300 nm MMF
 \leq 0.5 dB @ 1550 nm SMF

ACCESSORIES AND ORDERING INFORMATION

- Cable termination with connectors
- Junction box
- Splice box