

11.1050 DITEST HDPE STRAIN SENSOR

For distributed strain sensing



GENERAL DESCRIPTION

The DiTeSt HDPE Strain sensor is a unique sensor for the evaluation of distributed strain over several kilometers.

The DiTeSt Medium Temperature Sensing cable is used in a wide range of applications that require distributed strain sensing, such as soil movement and ground monitoring just to name a few

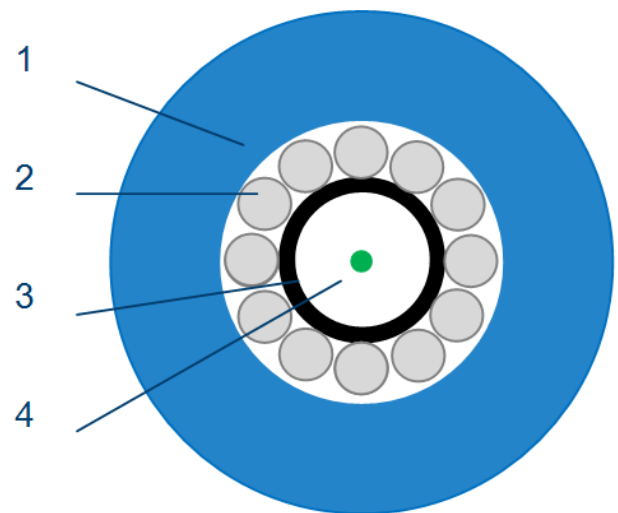
TECHNICAL DESCRIPTION

The DiTeSt HDPE Strain sensor is a small flexible mini armored fiber optic strain sensing cable with central metal tube, metallic armoring wires and HDPE outer sheath. The central metallic tube contains 1 optical fiber offering a strain range up to 1 %.

This sensor is particularly suitable for outdoors environment for direct burial applications, both ground and concrete.

Thanks to the special package design, the DiTeSt HDPE Strain sensor offers high tensile strength, crush resistance, longitudinal lateral water tightness, abrasion resistance with an optimized outer sheath to improve strain transfer and excellent rodent protection.

The DiTeSt HDPE strain sensor is fully compatible with the DiTeSt system and all its accessories.



- 1 HDPE outer sheath with interlocking system
- 2 Special grade SS 316L armoring
- 3 SS 316L metal tube for protection and hermetic seal
- 4 Special strain optical SMF

FEATURES

- DiTeSt compatible
- High tensile strength
- Excellent rodent protection
- Robust outer sheath
- Outer sheath optimized for better strain transfer
- Good strain sensitivity
- Longitudinally and laterally watertight
- Compact and flexible
- Small bending radius
- Halogen free

TEMPERATURE RANGE

- | | |
|----------------------------|------------------|
| • Operating temperature | -40 °C to +85 °C |
| • Storage temperature | -40 °C to +85 °C |
| • Installation temperature | -10 °C to +50 °C |

TECHNICAL DATA

- | | |
|------------------------|-------------------------|
| • Outer diameter | 3.5 mm |
| • Weight | 19 kg/km |
| • Max crush resistance | 800 N/cm |
| • Max tensile strength | 700 N (installation) |
| • Min bending radius | 70 mm (with tensile) |
| • Min bending radius | 53 mm (without tensile) |
| • Hydrostatic pressure | 300 kPa (bar) |

FIBER TYPOLOGY

- | | |
|--------------------------------------|---------------------------------|
| • Fiber support | SMF 9 / 125 μ m ITU-T G.657 |
| • Fiber attenuation (cabled @ 20 °C) | ≤ 0.4 dB @ 1550 nm |
| • Number of fiber | 1 |

CERTIFICATION AND COMPLIANCE

Cable tests complying with IEC 60794-1-2

ACCESSORIES AND ORDERING INFORMATION

- Cable termination with connectors
- Junction box
- Splice box