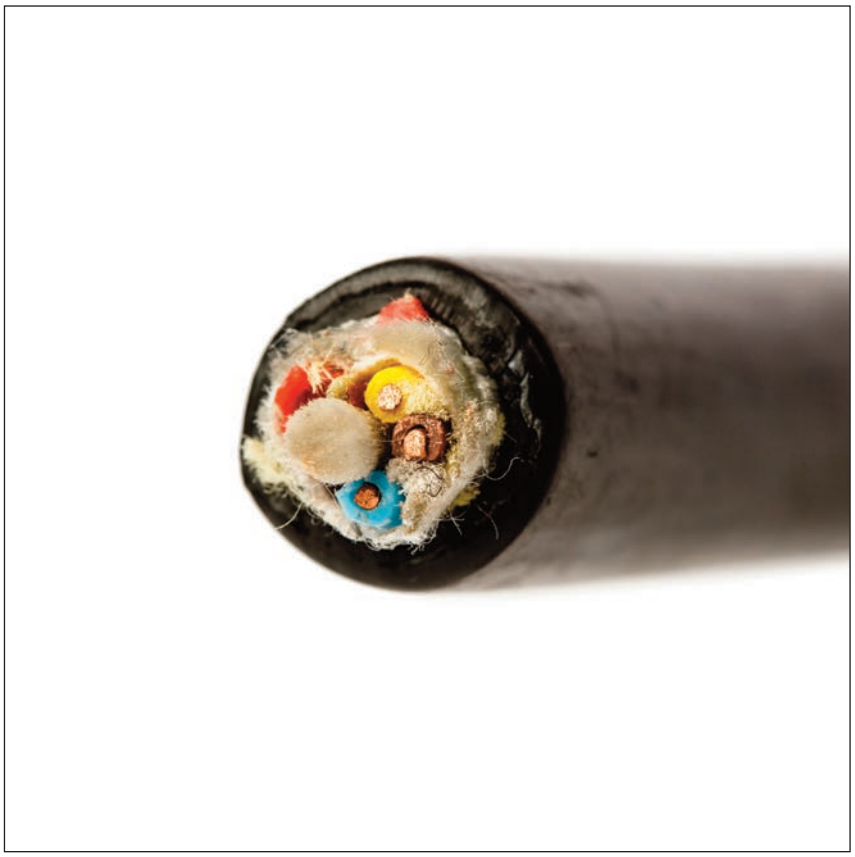
DATASHEET

Distributed Fibre Optic Temperature Sensing

GEO-001C - CABLE



The Geosense GEO-001C hybrid fibre optic cable is a robust wire armoured cable widely used for distributed temperature monitoring.

Temperature is measured by sending a short laser pulse (<10ns) down the optical fibre which is then analysed using Raman spectroscopy of the backscattered light. The temperature is calculated from the Stokes to anti-Stokes intensity ratio and the exact location of the measurement point is determined from a precise time measurement and the consideration of the propagation velocity in the optical fibre.
A temperature profile along the length of the optic fibre cable is therefore provided.

The robust nature makes it ideal for direct burial within conventional and RCC concrete dams.

Applications

- Curing temperature of concrete in conventional and RCC dams
- Leak detection in dams & dykes
- Seepage monitoring in dams and dykes
- Analysis of thermal stress in dams
- In-situ estimation of thermal parameters in concrete

Features

- Robust outer sheath
- Suitable for direct burial in RCC dams
- Proven record in RCC dams
- Rodent resistant
- RoHS compliant

GEOSENSE

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Specification	
Manufacturing standards	ISO/IEC 11801:2002, ITU-T G.652.D, IEC 60794-1-2-F5, EN50267-2-3, IEC 60794-1-2-E1, IEC 60794-1-2-F1
Cable class	Loose tube
Armour	Steel rib
Fibre class	G.652.D
Fibre type	Multi mode G50/125
Fibre/conductor diameter	E9/125µm
Number of fibres per core	6
Maximum tensile force	1500N
Minimum bending radius	95mm
Maximum transverse pressure	500 N/cm
Sheath	Polyethylene
Installation temperature	-5°C to +50°C
Operating temperature	-20°C to +70°C
Water penetration	Pass in accordance with IEC 60794-1-2-F5
Weight	115 kg/km
Outside diameter	9.5mm

GEOSENSE

Specifications may change without prior notice

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