

Clearfield®

Steel Armored Acoustic Sensing Cable



Application

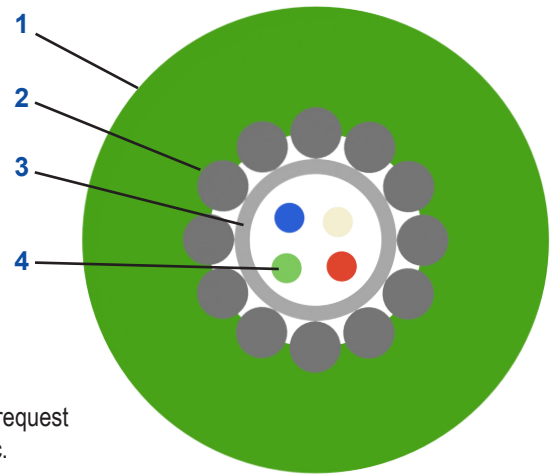
- Distributed acoustic sensing (DAS)
- Distributed Temperature Sensing (DTS) in hybrid cable variants
- Sensing technology: Rayleigh scattering, Raman
- Harsh environment, outdoors
- Deployment subsea, directly in the ground, attached to structures or in conduits

Description

Distributed Fiber-Optic Acoustic Sensing (DFOAS) cable with Fiber In Metal Tube (FIMT) encapsulated optical fibers, steel wire armoring, and a PA outer sheath

Construction

1. PA outer sheath
 2. Stainless steel wire armoring, 316L
 3. Gel-filled stainless steel loose tube, 316L
 4. Bend insensitive optical fibers
- Hermetically sealed tube
 - High tensile strength and crush resistance
 - High molecular gel for improved acoustic sensitivity
 - Special abrasion resistant outer PA sheath with acoustic interlocking system
 - High chemical resistance
 - Compact, high flexibility, small bending radius
 - Halogen-free



Customization Options and Services

- Standard cable marking with meter marks, special labeling of outer sheath upon request
- Accessories such as loops, fan-outs, connectors, mounting brackets, anchors etc. available
- Custom fiber types

Technical Specifications

Steel Armored Acoustic Sensing Cable	
Standard Optical Fiber	Singlemode fiber, Multimode fibers for hybrid DAS-DTS variants. Up to 4 optical fibers (*)
Standards	Cable tests complying with IEC 60794-1-2
Jacket color	Green, similar to RAL 6018
Operating temperature	-40 °C ... +85 °C
Storage temperature	-40 °C ... +85 °C
Installation temperature	-10 °C ... +50 °C

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Technical Data at 20°C

Type	Max. nb. of fibers	Cable ø mm	Weight kg/km	Max. Crush res. N/cm	Max. tensile strength - Installation N	Max. tensile strength - Operation N
3.8	4 (*)	3.8	26	600	1000	700
4.5	4 (*)	4.5	32	600	1000	700

(*) Please consult Clearfield for the maximum recommended fiber count, depending on your application.

Type	Min. Bending Radius With Tensile mm	Min. Bending Radius Without Tensile mm
3.8...4.0	20xD	15xD

Optical fiber data (cabled) at 20°C:

Fiber Type	Attenuation, dB/km 850 nm	Attenuation, dB/km 1300/1310 nm	Attenuation, dB/km 1550 nm
MMF 50/125	≤ 3.0	≤ 1.0	-
SMF (DTS, DAS)	≤ 3.5	≤ 1.0	-
SMF (DSS)	-	≤ 0.36	≤ 0.25