



Specialty Optical Fiber Sensing Cable (SOFSC)



LINKING THE OIL AND GAS INDUSTRY FROM END TO END

A brand of the
Prysmian
Group

Continuous, precise and cost-effective sensing

Accurate, long-range sensing

Specialty Optical Fiber Sensing Cable (SOFSC) is Draka's solution for distributed temperature sensing over the entire length of an oil / gas production field or pipeline system.

The SOFSC concept is simple: an optical signal is launched down a fiber cable up to 30 kilometers in length. Localized environmental changes (such as temperature, strain or pressure) create attenuation that reflects the light pulse. The reflected light produces a distinctive signature that gives both the location and nature of the conditions at the affected area.

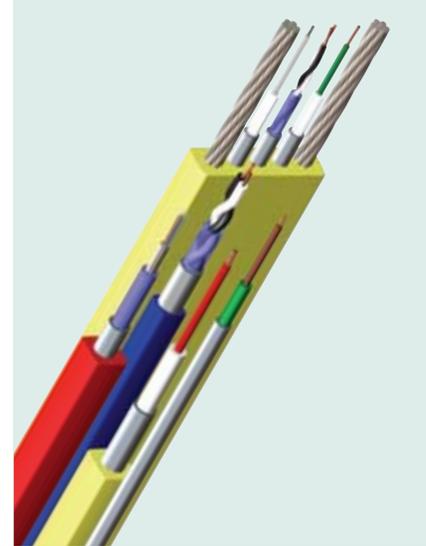
SOFSC sensing is immune to electromagnetic contamination and noise. Optical fiber can operate at higher temperatures than copper or aluminum conductors and over greater lengths (no voltage drop considerations).

SOFSC cable can be deployed in downhole, low and high temperature (-150° to 300°C) buried, surface or aerial environments. It can be used by itself or as part of an integrated cable solution.

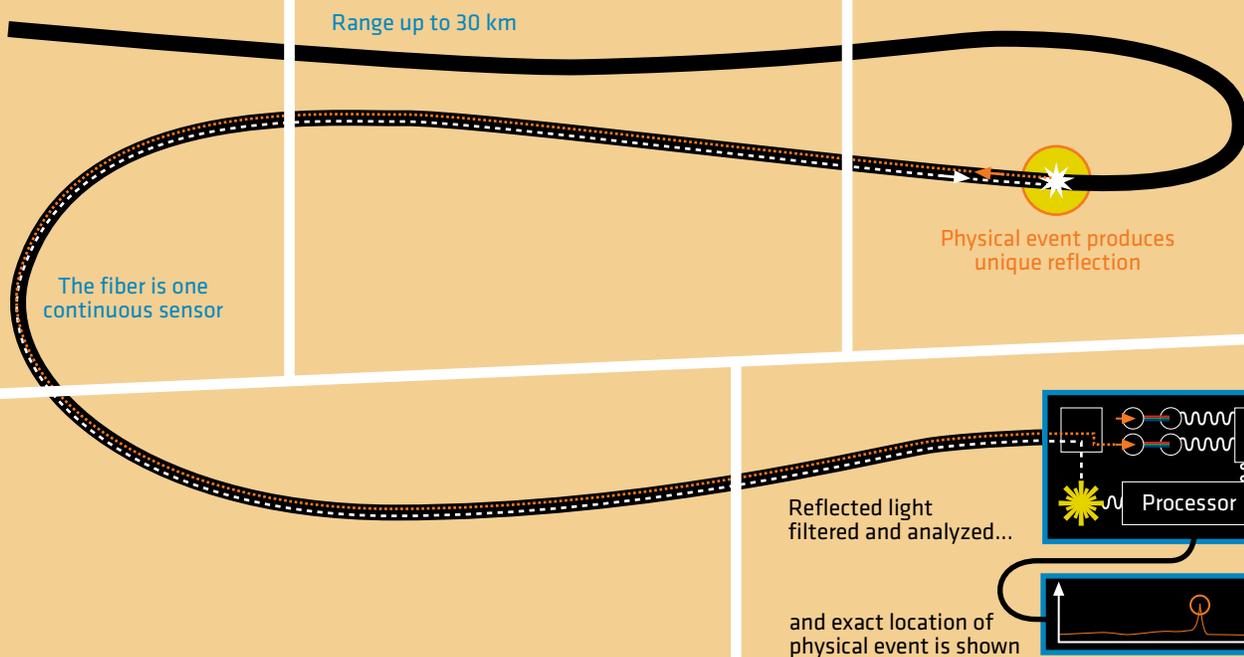
SOFSC offers several advantages over existing sensing technologies. Because the entire length of the fiber acts as one long sensor, the fiber can replace any number of individual sensors while providing continuous coverage over extended areas. Deploying a SOFSC network can result in significant cost advantages over point detection sensors.

Draka can tailor a SOFSC solution for any fiber sensing technique whether it be Raman scattering, Brillouin scattering or Fiber Bragg Grating (FBG).

Also, SOFSC optical signals are non-electrical and do not produce heat or sparks, making them perfect for monitoring hazardous environments such as LNG tanks or gas pipelines.



SOFSC fiber can be deployed by itself or incorporated into an integrated cable



SOFSC applications and fiber options

SOFSC cables can also be incorporated into numerous applications:

Downhole

SOFSC metal clad cables can be deployed downhole for monitoring temperatures either as DTS elements or as datacom links to sensors.



Pipeline

SOFSC cables can be attached to pipelines for distance/temperature data that's available on demand.



Power management

SOFSC cables can be deployed in power distribution networks to monitor performance of power cable systems.



Fire protection

SOFSC's temperature-sensing abilities provide instant warning of fire anywhere along the length of the cable, replacing any number of sensors.



As part of the Prysmian Group, Draka has global resources focused on the full development of fiber optic sensing technology. In-house resources, including production of our own optical fiber and the manufacture of a vast array of specialty cables, uniquely position Draka for delivery of cables that meet almost any application.

For our existing DTS products, SOFSC cabling options include:

Fibers

Single-mode

- Enhanced Single Mode Fiber (ESMF)
- High Strength ESMF (200 kpsi or higher tensile strength)
- BendBright-XS (Bend-Insensitive)
- BendBright-Elite (High Strength Ultra Bend-Insensitive)
- RadHard
- Photosensitive for Bragg Gratings

Multimode

- Standard 50 & 62.5 micron
- High Strength MMF (200 kpsi or higher tensile strength)
- HiCap and MaxCap (High bandwidth 50 & 62.5 micron MMF)
- Bend-Improved 50 micron (Bend-Insensitive)
- 50 micron Sensor Fiber (for operation from 850 nm to 1625 nm)
- RadHard

All fibers available with standard with 85° C acrylate coatings

Higher temperature coatings available:

- 150° C High Temperature Acrylate
- 200° C Silicone
- 300° C Polyimide

Fiber Bragg gratings can be applied per your application

Cables

FIMT (Fiber In Metal Tube):

- Diameters from 1.17 to 5.10 mm
- 304 or 316 stainless steel or Incoloy 825
- 1-96 fibers
- Steel wire armor over the tube (optional)
- HDPE jackets - other compounds available

Metal clad

- 3.18 to 9.53 mm diameter
- Multiple FIMT
- Insulated conductors for power / signaling and or FIMT
- 316 stainless steel and incoloy 825
- All-dielectric options available

Linking the oil and gas industry from end to end

Draka

111 Chimney Rock Road | Bridgewater, NJ 08807 | Tel +1-732-469-5902 | Fax +1-732-469-6363

For sales and technical information, contact: 1-866-786-8823 or 1-732-469-5902

www.prysmiangroup.com

Prysmian
Group