



## SC-MFLT4-FRNC Sensor Cable

FibroLaser™

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- Detects hot gases and radiant heat using linear temperature measurement
  - Flame Retardant and Non Corrosive sheath
  - Consistent sensitivity throughout the entire sensor cable length
  - Redundancy due to double optical fibers – for safety on the highest level
  - Infrared absorbing cable insulation (FRNC)
  - No electronic parts – immune to electromagnetic interferences
  - Robust construction – resistant to environmental influences
  - Easy installation
  - No maintenance required
  - High durability (up to 30 years)
  - VdS approval (G211076)

## Sensor cable setup

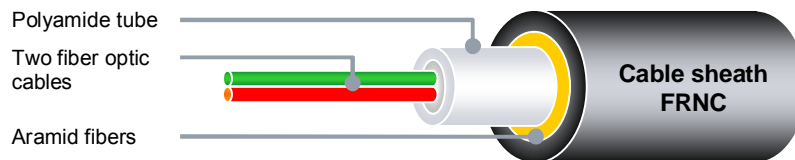
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The sensor cable comprises an infrared absorbing cable insulation FRNC (Flame Retardant Non Corrosive). FRNC is a halogen-free, flame-retardant material. During the combustion of FRNC, no acids are released.

The fiber optic cables are multimode waveguides with the gradient 62.5/125  $\mu\text{m}$  as well as international standard dimensions and properties.

## Cross-section through a sensor cable

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## Application-dependent advantages

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### Road tunnels:

- Early fire detection in spite of exhaust gases, dirt and moisture
- No operational interruptions for maintenance purposes
- No electromagnetic interferences

### Railway tunnels:

- Early fire detection in spite of dirt and moisture
- No operational interruptions for maintenance purposes
- No electromagnetic interferences

### Recycling facilities:

- No false alarms caused by dust and dirt

### Conveyor belts:

- Early fire detection even in changing climatic conditions

### Cable trays:

- Early fire detection by slowly increasing temperatures
- No electromagnetic interferences

## Optical fiber characteristics

Fiber type	graded index 62.5 / 125 $\mu\text{m}$
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The sensor cable complies with the manufacturer's guidelines of system calibration for the undisturbed operation as fire detection system.

## Mechanical characteristics

Cable diameter	4.0 mm
Outer sheath color	black
Outer sheath material	FRNC
Number of fibers	2
Cable weight	17 kg / 1000 m
Max. tensile strength long- / short term	400 N / 800 N
Min. bending radius without- / with tensile loading	40 mm / 50 mm
Repeating bending (5 windings / radius 40 mm)	3
Impact resistance (number impacts with 1,5 Nm)	3
Max. crush resistance	2000 N/dm
Max. distance between fixations / recommended	3 m / 1 m

## Temperature range

Storage and operating temperature	-40...+85 °C
Installation temperature	-5...50 °C
Short term temperature (max. 60 min)	-50...+150 °C

## Standards

Flame propagation	IEC 60332-1-2
Smoke density	IEC 61034-2
Content of halogen acid gas	IEC 60754-1, IEC 60754-2
Cable Standard	IEC 60794
Fiber Standard	IEC 60793
Additional Tests	IEC 60794-1-2, E10, F1, F5, G7; IEC 60794-2-50

## Ordering information

Designation	NKT Photonics part number
SC-MFLT4-FRNC	28030606

Transportation on cable drum (weight = 15 kg / width = 520 mm, diameter = 800 mm)

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