

# FibreOptic Sensor for Structural Health Monitoring

## Datasheet

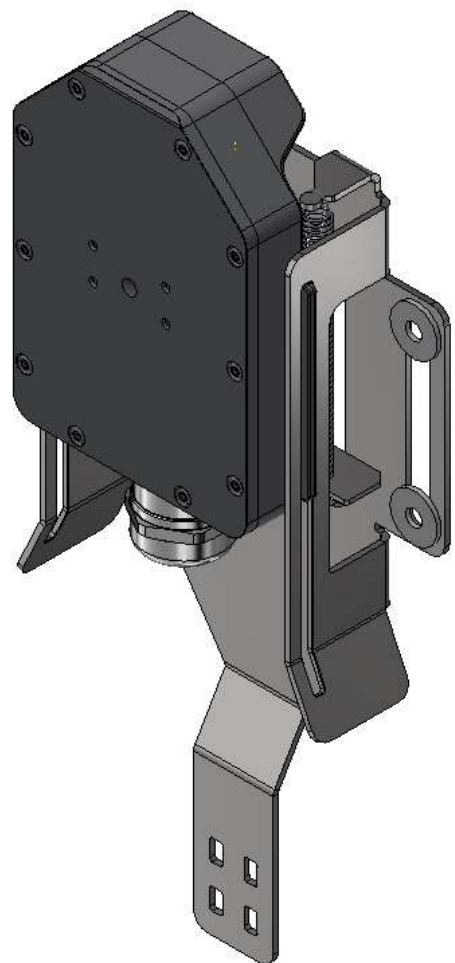
The monitoring of strategically important and valuable infrastructures requires solutions that provide for a smart interaction of sensor technology and monitoring activities.

The fibre-optic sensor is a passive module within a fibre-optic network so that it obviates the need of a metal cable to transmit measured values.

So, it is ideal for use in optical networks or also in the vicinity of strong electrical or electromagnetic fields.

Once activated, e.g. by opening a manhole cover or a building opening, the sensor shows a significant increase in optical attenuation in a glass fibre.

It can be detected by an optical monitoring system. A precisely accurate allocation of the events is possible while using a OTDR-based system.



## Technical Data Sensor Module:

Dimensions: (W H D) 160 x 90 x 40 mm

Weight: 220 g (without cable)

Optical fibre: 8 m E9/125G.652D  
terminated with an optical all-band reflector

Typical values of optical attenuation when activated: 8-12 dB

Black box principle: On the outside of the Sensor are no moving components that determinate the sensor function

Housing material of the Sensor module: LURAN S 778T (ASA)

Operating temperature range: -20 ... +75 °C [\*]

Protective system: IP68, Waterproof to 10 m water column up to 1 week [\*]

[\*].... currently in confirmation process

## Modules:

### 1. Sensor module

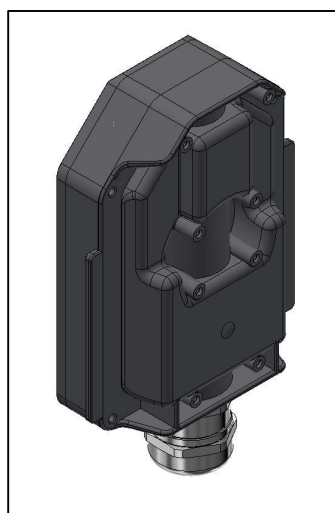
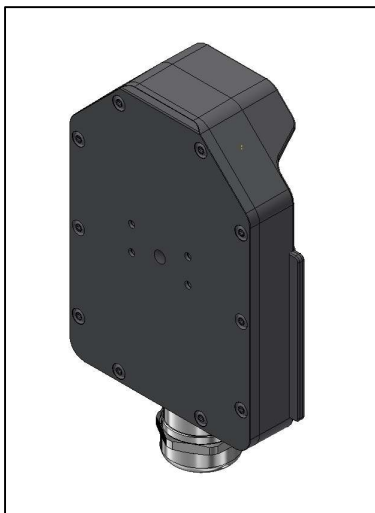
Order-No.: 301044

Dimensions: (W H D) 160 x 90 x 40 mm

Weight: 220 g (without cable)

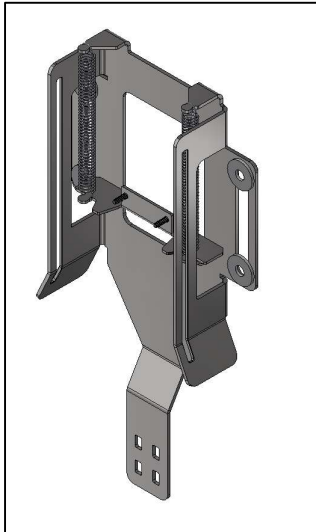
Housing material: LURAN S 778T (ASA)

Note: Available with wall mounting kit Option 1 or Option 2

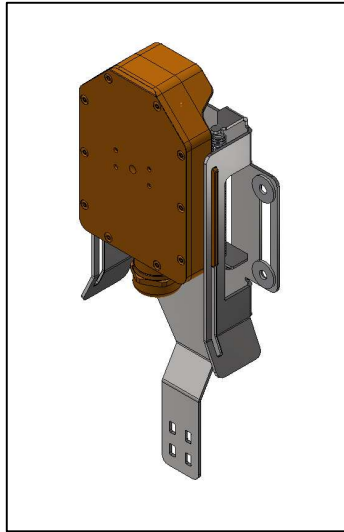


## 2. Wall mounting kit 1 (Option 1)

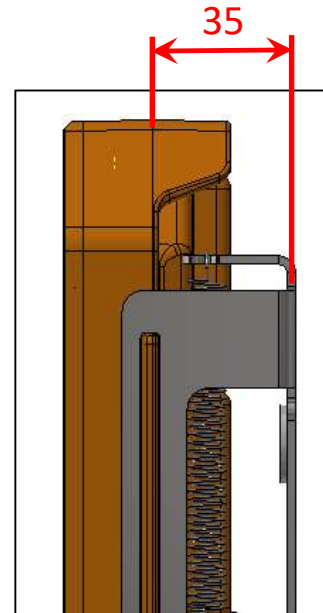
Order-No.:	301049
Dimensions: (W H D)	270 x 135 x 40 mm
Weight:	400 g (without sensor)
Sheet metal material:	1.4301 (X5CrNi18.10)



Wall mounting kit 1



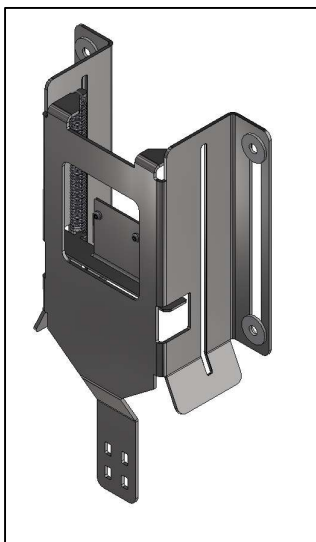
Wall mounting kit 1 with sensor



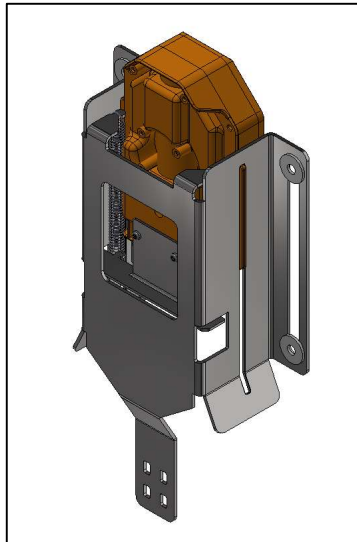
activation distance = 35 mm

## 3. Wall mounting kit 2 (Option 2)

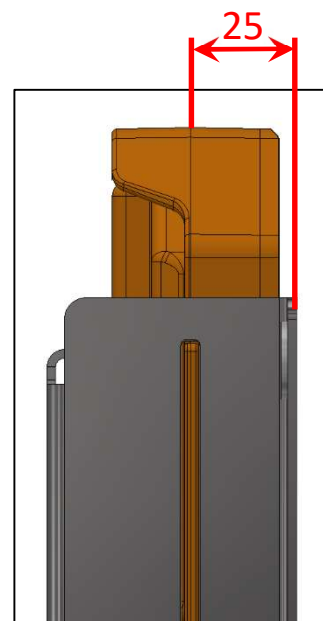
Order-No.:	301050
Dimensions: (W H D)	260 x 150 x 60 mm
Weight:	650 g (without sensor)
Sheet metal material:	1.4301 (X5CrNi18.10)



Wall mounting kit 2



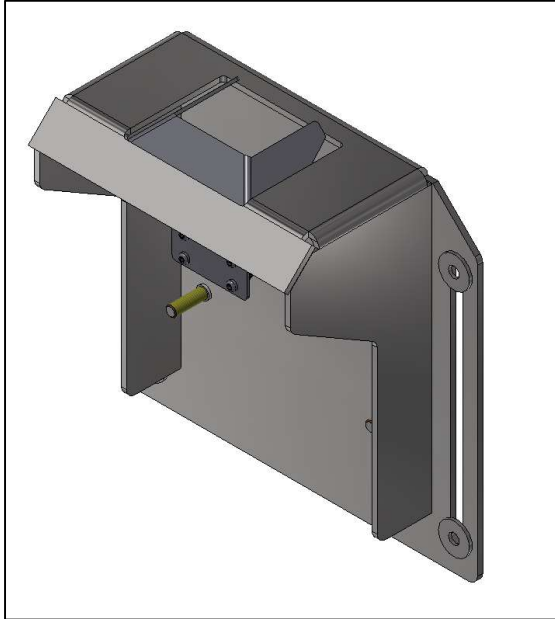
Wall mounting kit 2 with sensor



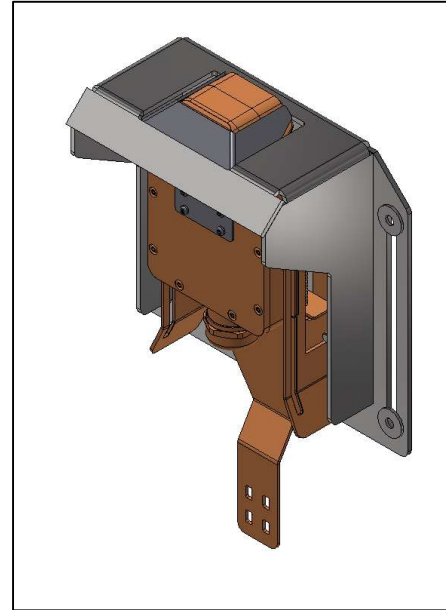
activation distance = 25 mm

#### 4. Console for step protection (Addition to 1. + 2.)

Order-No.:	301051
Dimensions: (W H D)	200 x 200 x 90 mm
Weight:	1500 g (without sensor and wall mounting kit)
Sheet metal material:	1.4301 (X5CrNi18.10)



Console for step protection



Console for step protection with wall mounting kit 1 and sensor

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