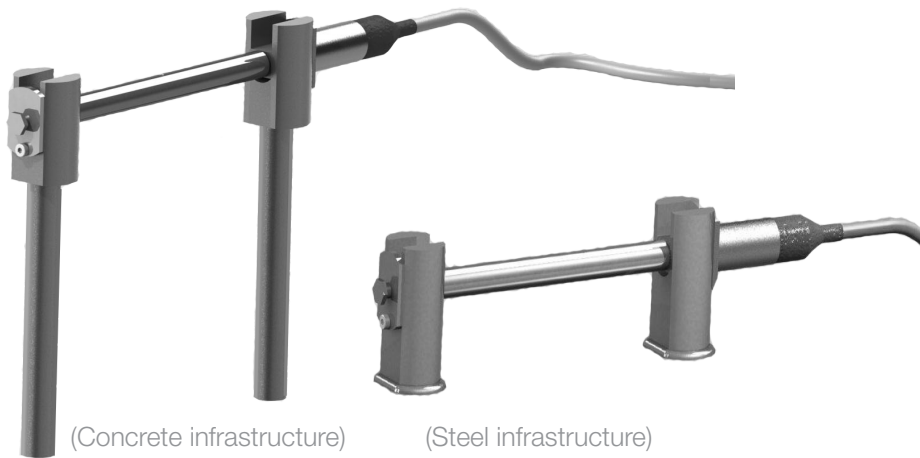


FIBER OPTIC EXTENSOMETER SENSOR WITH ANCHORS

FOR CONCRETE & STEEL STRUCTURES MONITORING



KEY FEATURES

- Maintenance free without drifting over time
- Outstanding repeatability
- No temperature compensation required
- Insensitive to transverse strains
- Intrinsically safe
- Easy to set-up and operate
- No Lag - No Latency

OEP-AC (CONCRETE) & OEP-SW (STEEL) Reliable - Robust

DESCRIPTION

Based on Opsens Solutions' unique WLPI signal conditioning technology (Patent # 7,259,862) and the inherent advantages of fiber optics strain sensor, the robust extensometer is designed to provide a **100% survivability**. The unique properties of the WLPI Technology makes it **insensitive to temperature variation** and an **outstanding repeatability**. Monitoring aging buildings or integrating smart instrumentation in critical infrastructure is common practice. Especially for concrete constructions, subject to cracking and material deterioration over time.

Built in **robust alloy**, these sensors can be used in demanding environment exposed to high voltage, radiation, or EMI. They can be packaged for marine environment, and even in applications where sensors are permanently exposed to sea conditions such as concrete dock, wharf, and offshore platform. Since **they don't drift over time** and **maintenance is not required**, they can be used in surveillance applications which last for decades.

The fiber optic extensometer can be used to monitor single crack or group of concrete fissures through its long base version. The span could reach meters if needed to optimize surveillance of grouped fissures. A version is also available to be welded on steel structure.

Intrinsically safe, these sensors are the obvious choice for hazardous environment such as those having explosive atmosphere and under ATEX directive.

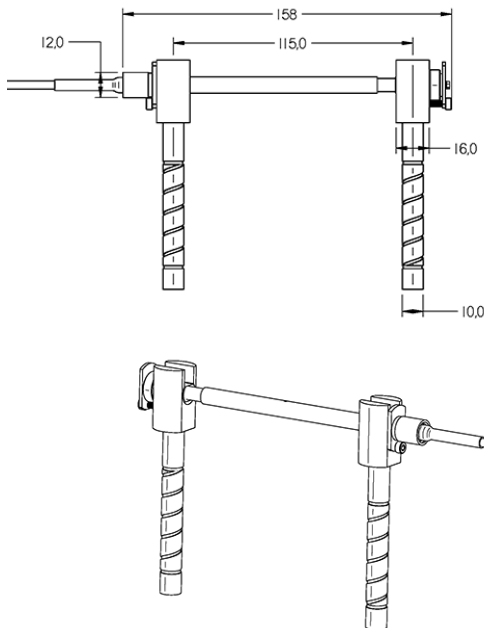
APPLICATIONS

- Civil engineering and geotechnical applications
- Marine and subsea conditions
- High voltage environments
- High temperature applications
- Nuclear and hazardous environments
- ATEX environment and zone exposed to explosive atmosphere

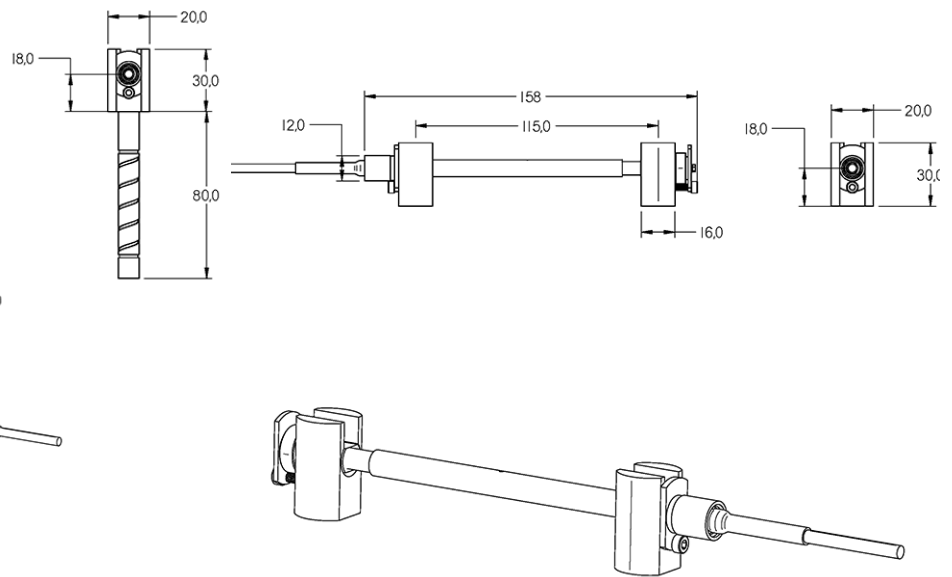
OEP-AC (CONCRETE) & OEP-SW (STEEL)

FIBER OPTIC EXTENSOMETER SENSOR WITH ANCHORS

OEP-AC



OEP-SW



SPECIFICATIONS

MEASURING RANGE (other ranges available on request)	-1 000 to +1 000 $\mu\epsilon$	-2 500 to +2 500 $\mu\epsilon$
RESOLUTION	0.15 $\mu\epsilon$	
TEMPERATURE SENSITIVITY	Technology requiring no temperature compensation	
TRANSVERSE STRAIN SENSITIVITY	Insensitive	
TEMPERATURES OPERATING RANGE	-40°C to +60°C (other temperatures available upon request)	
EMI/RFI SUSCEPTIBILITY	Complete immunity	
CABLE LENGTH	Up to 3 km (Sampling rate dependent, consult factory for more details)	
CABLE SHEATHING	From ruggedized flexible outdoor cable to robust stainless steel cable	
OPTICAL CONNECTOR	SCA (Standard), SC (Standard), other connector available on request	
SIGNAL CONDITIONER COMPATIBILITY	All Opsens Solutions' WLPI signal conditioners	
EXTERNAL CASING	Stainless Steel 316L	
LINEARITY, REPEATABILITY and HYSTERESIS ERROR (combined)	< 0.15%	
RETURN TO INITIAL STRAIN LEVEL (LAG & LATENCY)	Instantaneous	