

HIGH RESOLUTION FIBER OPTIC STRAIN GAUGE STATIC & DYNAMIC RESPONSE

Rugged, stainless steel construction and immune to EMI/RFI/lightning, the EFO fiber optic strain gauge is designed to be embedded in concrete.

Description

The **EFO** is a 70-mm long fiber optic strain gauge designed to be embedded in concrete. It consists of a stainless steel body, with two flanges for better adherence to concrete.

The sensor is based on Fabry-Perot interferometry. The strain gauge is bonded in a very small diameter longitudinal hole located in the center of the steel body.

Installation

The **EFO** embedded strain gauge can be installed into concrete structures in two different ways: it can be cast directly into the wet mix or encapsulated into a concrete briquette which is then cast into the wet mix. It is also possible to set the gauge into hardened concrete by grouting it or the briquette containing the **EFO** into a pre-drilled hole.

The sensor may be configured for use in special concretes, like high performance and powder reactive concretes.

Key Features

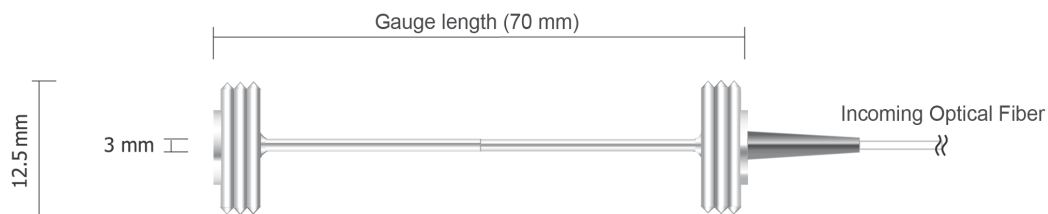
- Immune to EMI/RFI/Lightning
- Static/Dynamic response
- High resolution
- Long-term stability
- Signal transmitted over long distances
- No interference due to fiber cable bending

Applications

- Dams
- Bridges
- Tunnel linings
- Nuclear power plants
- Buildings
- High performance and reactive powder concrete
- Corrosive environment
- High EMI/RFI environment

Specifications

Range	±1500 $\mu\epsilon$ (other ranges available upon request)
Resolution	0.01% F.S.
Operating temperature	-40 to +55°C, operating temperature is fiber optic cable dependent
EMI/RFI susceptibility	Intrinsic immunity
Gauge dimensions	
Diameter	12.5 mm
Length	70 mm
Fiber optic cable	CFF-UD3-1F
Connector	ST



EFO Dimensions

Ordering Information

Please specify:

- Range
- Cable length (2 meters min.)
- Readout