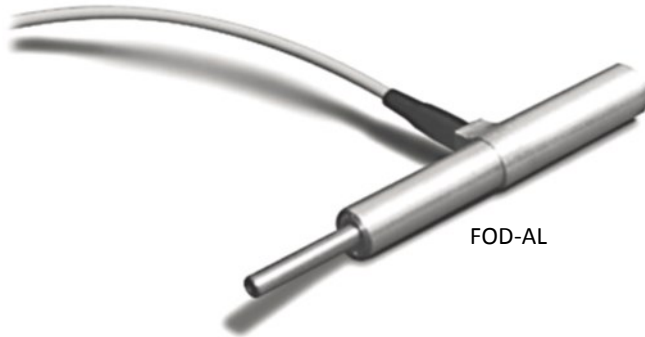




FOD Linear Position and Displacement Sensor

Industrial, Laboratories, Process, R&D



FOD-AL

Description

The FOD is a fiber optic linear position and displacement sensor that provides high accuracy, absolute measurements of position and displacement. The FOD is well suited for difficult to reach locations and hazardous environments such as those containing explosive materials.

Engineers may now improve process and product technology by monitoring the performance of specific properties over time that will provide accurate information on changes in displacement during the operation, the manufacturing process or throughout the lifetime of a product. The use of the FOD linear position and displacement sensor allows a complete analysis in the most challenging environments.

The FOD is an absolute position sensor and it is the fiber optic version of the well known Linear Variable Differential Transformer (LVDT). However, unlike its electrically activated counterpart, the FOD requires no energizing AC voltage or driving signal with the associated wiring. Thus, the FOD is completely immune to EMI and RFI and carries no risk of current leakage or ignition. The FOD can be packaged in a very compact form and can be located up to 5 km away from the signal conditioner.

Key Features

- Intrinsically safe
- Immune to EMI / RFI / MW oven
- Immune to lightning interference
- Cryogenic to 120°C
- High resolution, up to 0.002mm
- 0 to 20 mm linear stroke (40mm stroke available on request)
- Easy to use
- Aluminium, stainless steel or composite material housing
- Long range (up to 5 km)

Applications

- Microwave and RF environments
- Industrial *in-situ* process monitoring
- Harsh and hazardous environments
- High temperature environments
- Research and development
- Storage dome, silos & LNG tank . monitoring
- Civil structure monitoring

Specifications

Performance with **CLASSIC** conditioners (FTI-10, UMI)
EVOLUTION conditioners (FPI-HR-2X)

Linear stroke ¹	20 mm (spring loaded shaft) <i>(40 mm stroke available on request)</i>
Resolution	0.002 mm
Accuracy ¹	± 0.02 mm
Operating temperature	-20°C to 85°C ²
Storage temperature	-30°C to 80°C
Fiber optic cable minimum bend radius	2.5 cm (1")

1. Signal conditioner dependent

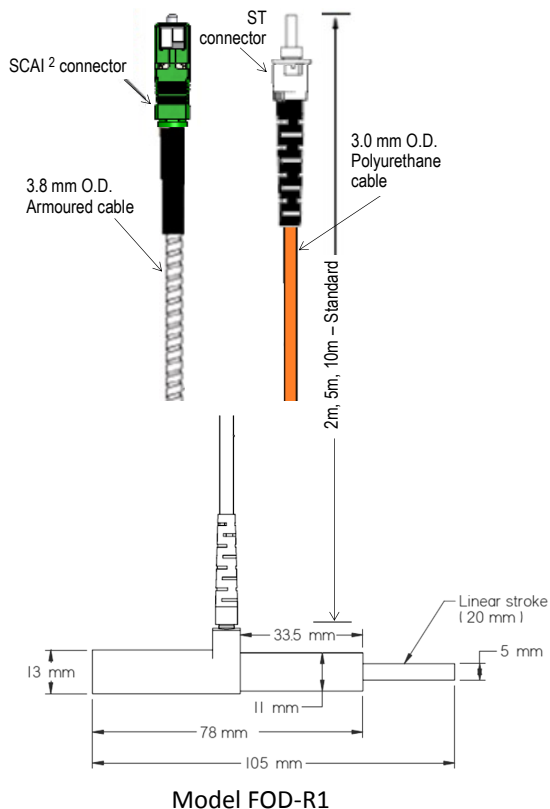
2. Lower or higher temperature available upon request



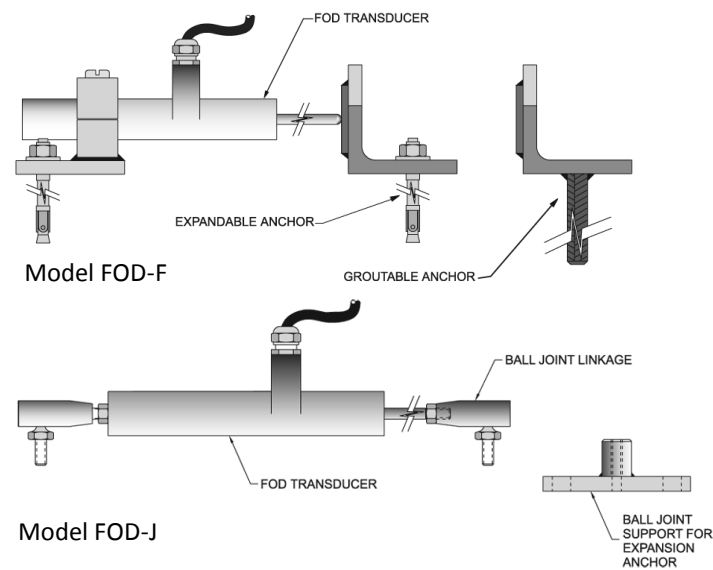
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Dimensions

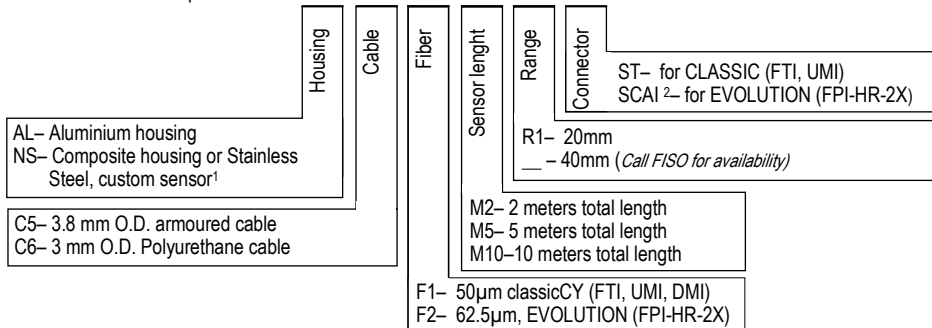


Possible anchors

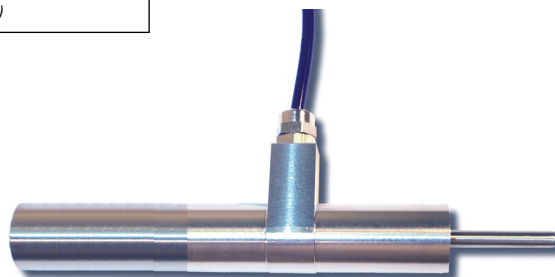


Ordering information

Example: FOD - AL - C5 - F1 - M2 - R1 - ST



Note 1. Other configurations may be possible, call FISO for availability
 Note 2. SCAI is a SCA connector with smart chip communicating calibration data to the signal conditioner module



FOD-NS (stainless steel)

