

Displacement Sensor D-02

Description

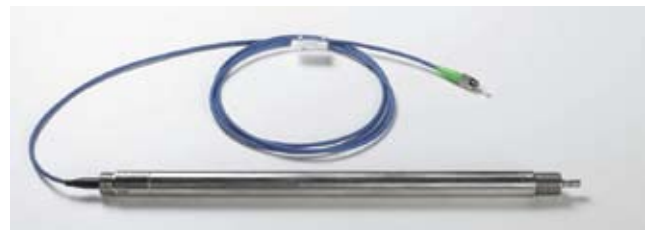
The displacement sensor D-02 makes use of the internal strain sensitivity of the FBG. The FBG is fixed inside a ruggedised stainless steel housing between two anchoring points. The housing is foreseen of a sliding mechanism that allows both ends to move freely relative to each other and an integrated spring mechanism that allows to slide over large distances without overstressing the FBG. In order to compensate for temperature influences, a temperature probe is integrated within the housing.

Features

The displacement sensor D-02 can measure displacement and temperature with a resolution of 0,05% Full Scale and 0,1 °C respectively and an accuracy of 1% Full Scale and 1 °C respectively. The displacement range can be chosen between 1 and 8 cm.

Applications

The displacement sensor D-02 can be applied for positioning measurements. The sensor can also be used with special packers in bore holes to determine geological settlements or can be surface mounted to detect movements between the anchoring points.



Standard specifications

Parameter	Unit	Value
Displacement range	mm	10-50
Displacement resolution	mm	0,05% FS
Displacement accuracy	mm	1% FS
Temperature resolution	°C	0,1
Temperature accuracy	°C	1
Temperature range	°C	0 - 85
Pigtail diameter	mm	3
Pigtail length	cm	On request
Connector type	-	FC/APC
Wavelength range	nm	1530-1570
Housing material		Stainless steel

Note: The reported resolution and accuracy values assume the use of a measurement unit with a resolution better than 1 µm and a relative wavelength accuracy better than 10 µm