

FBG Displacement Sensor DST-02

FBG Displacement Sensor DST-02 is a FBG technology based pull-rope displacement sensor, which is suitable for measuring the joint opening or boundary displacement between concrete blocks (such as the sinking tube of the segment meter), and can also test the change of the expansion joint at the beam end.

The product connects two components to be tested through a steel wire rope. When there is a relative displacement between the components, the steel wire rope is pulled out or retracted, and the displacement is converted into a stress on the internal fiber Bragg grating, thereby changing the wavelength output value of the FBG to achieve the purpose of testing. Built-in temperature FBG can be used for temperature measurement and temperature compensation for displacement gauge.

Key Features

- High precision, high stability & reliability
- Built-in temperature compensation
- All-optical measurement, intrinsically safe
- Easy to install, and connect with other sensors

Applications

- Bridge expansion displacement measurement
- Tunnel crack displacement measurement
- Slope slip displacement measurement



Specifications

Parameter	Unit	Value
Center Wavelength	nm	1460 ~ 1610
Displacement Range	mm	10 ~ 1000
Displacement Resolution	mm	0.1% F.S.
Displacement Accuracy	mm	0.5% F.S.
Temperature Compensation	--	Built-in
Material	--	SS316L
Dimension	mm	285x100x23
Installation	--	Mechanical fixation
Pigtail Length	m	Φ6mm armored cable, 1m single-ended dual-fiber, or customize
Optical Connector	--	FC/APC, or customize
Operating Temperature	°C	-20 ~ +80