

Description

The T520 is a high sensitivity sensor designed for monitoring the slow tilt / inclination of civil and geo structures. It is designed for mounting on walls or platforms.

The T520 optical sensor consists of two Fiber Bragg Grating (FBG) sensing elements embedded in a traditional industrial grade tilt sensor frame. Self temperature-compensation combined with tight dimensional and materials controls yield a new generation tilt sensor featuring excellent wavelength to angle linearity.

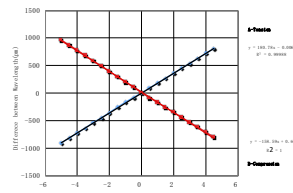
The T520 tilt sensor is designed to make handling and installation fast, easy and intuitive. It delivers the many advantages inherent to all FBG based sensors. The sensor's specifications listed herein represent the most popular configuration. The manufacturing process for the T520 allows for significant variations in sensor construction including other angle ranges, wavelengths, termination by other types of optical connectors, as well as cable availability in custom lengths. The sensors are shipped "mechanically locked" to ensure the sensitive angle measurement mechanism is not damaged during transport and installation.



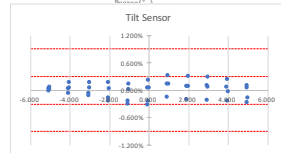
Sensor manufactured and sold by Technica under International License from EJ TECH Co. Ltd.

Key Features

Excellent linearity. The proven opto-mechanical design of the T5200 and the advanced fiber to steel bonding techniques used in producing this sensor yield a simple transducer configuration of high linearity and repeatability.

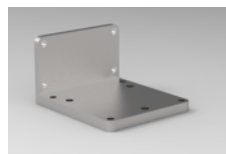


Tilt /inclination angle monitoring. Well suited for projects that include the need to monitor gradual tilt of structures. Produced in sizes to serve an expanding spectrum of applications.



Long-term monitoring. The FBG elements at the core of this sensor combined with the steel elements and frame create an ideal angle transfer mechanism from the test structure to the FBG core.

Easy deployment. The original sensor design and mounting plate eliminates the requirement for high precision alignment and diligent surface preparation of the structures to be monitored that is normally required of other tilt optical sensors.



Low cost and field proven. The T520 sensor construction focuses on demanding projects that require both low cost per sensing point and stable operation over the long-term. Extensively used in structural monitoring projects since 2009.

Parameter	Specifications
Angle / Tilt Range (1 Axis, near ZERO crossover)	+/- 5 Degrees
Sensitivity (at +/- 5° range)	200 pm / Degree
Resolution	0.001 Degree
Accuracy	+/- 0.3% F.S.
Wavelengths / Tolerance	1460 to 1620 nm, +/-0.5
FBG Length and SLSR	<10mm, >15 dB
Reflection BW (FWHM)	0.2 nm to 0.3 nm
Reflectivity %	>80%
Dimensions (drum)	75mm DIA x 190mm H
Dimensions (base)	150mm x150mm
Weight	2760 +/- 10 grams
Optical Pigtail & Diameter	SMF w 3mm armored cable
Optical Connector	FC/APC, or custom
Temperature Range (calibration file provided)	-20°C to +80°C

Applications in Buildings, Tunnels, Bridges, Dams, Roads, Runways, Railways, Structures

Technica undertakes a rigorous development process before products release. The company is also firmly committed to continuous improvements after release to insure performance to the highest standards, hence, specifications are subject to update without notice.