

Description

The T610 is an Accurate and Sensitive Single-Mode Fiber (SM) based Fiber Bragg Grating (FBG) based Packaged Pressure Sensor for operation to 14, 58, 100, 145, 290, 725, or 1450 PSI.

Available in a wide range of optical specifications. The patented novel transducer mechanism yields a reliable high sensitivity and absolute accuracy optical sensor. Ready for direct use in many applications. Calibration service available upon request. The T610 sensor handling and installation is fast, easy and intuitive. Delivers the advantages inherent to FBG sensors.

The T610 series Pressure Sensors are fabricated using licensed and proprietary state-of-the-art laser manufacturing technologies and product designs. The pressure sensor configuration specified herein is the most common configuration. Other pressure ranges are possible and can be customized under contract.

Key Features

Accurate and fast measurements in various pressure ranges.

The self-temperature compensated T610 uses precision made FBGs and a novel packaging architecture for producing a transducer configuration that enables measurements at a rate of up to 100Hz to 1500psi with accuracy below 1% FS, and resolution of 0.1%FS. Various standard pressure ranges available.

Excellent linearity. The proven opto-mechanical architecture of the T610 and the advanced processing techniques used in producing this sensor yield a simple transducer configuration with both high linearity and repeatability.

Two porous stone protection options. Depending on the application, the customer can choose between flat or cone-head M40 porous stone configurations for the filter installable on the pressure head.



Ready to be daisy chained. Well suited for projects that include the need to monitor pressures at one or many locations. Provided either single ended optical cable termination for star-architecture connectivity, or as double-ended cable termination, with both cables coming out at the same end, for daisy-chaining a number of sensors in series as ready to install arrays of various lengths and with a flexible number of sensors. Available with up to 6 pressure sensors per sensing array. Typical arrays include daisy chaining with other sensors including T210-215 vibration, T220-240 surface and embedded strain, T310-330 acceleration, T420-T430 displacement, T510-520 tilt, T810-T840 temperature, and other FBG sensors. Pressure Inlet Thread is G/1/8.

Reliability by design. Ruggedized for demanding projects requiring field proven technologies that yield accurate and stable operation for the long-term. Designed by Industrial and Civil Engineers for Industrial and Civil engineering applications. Suitable for operation in harsh environments. Rated IP67.



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Parameter	Specifications
Wavelengths and Tolerance	1510 to 1590 nm, +/-0.5 nm;
Reflection BW (FWHM)	~0.2nm, other options
Reflectivity %	50%, other options
SLSR	>15 dB, other options
Pressure Ranges	14.5, 58, 100, 145, 290, 725, and 1450psi (14.5psi = ~1Bar)
Accuracy	<1% FS (full scale)
Resolution	0.1% FS (full scale)
Precision	<0.5% FS (full scale)
Temperature Range	-20°C to +60°C
Humidity Range (operation)	0 - 95% Relative Humidity
Array Configuration	Up to 6 sensors / fiber
Sensor Pigtails (Length, DIA)	1 m, 3mm; other options Single or double ended configurations
Optical Connector	FC/APC
Housing Material	SS304
Dimensions (Length, DIA), Weight	121mm, 30mm 600g

Applications in Industrial, Civil Engineering, Geotechnical, and Energy

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.

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