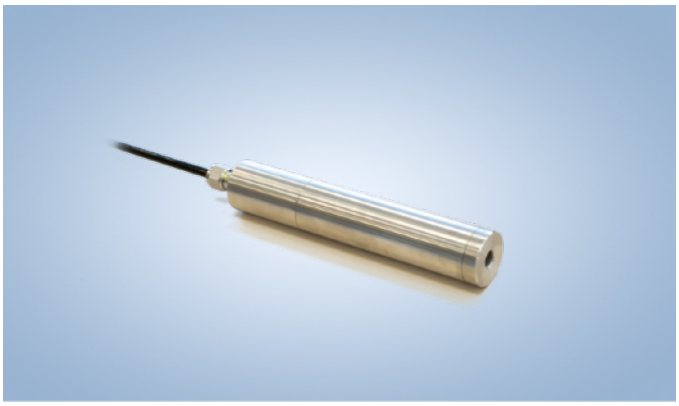
T615 / Liquid Pressure Atmospheric Referencing Sensor

Description

The T615 is an Accurate and Sensitive Single-Mode Fiber (SM) based Fiber Bragg Grating (FBG) based Packaged Pressure Sensor with integrated atmospheric pressure referencing for operation to 290psi (20 bar).

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 T615 sensor handling and installation is fast, easy and intuitive. Delivers the advantages inherent to FBG sensors.

The T615 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.



Manufactured and sold by Technica under International Licenses from United Technologies, Sylex, & Optics11

Key Features

Accurate and fast measurements in various pressure ranges. The T615 is self-temperature compensated and uses precision made FBGs in a novel packaging architecture for producing a transducer configuration that enables measurements at a rate of up to 100Hz to 290psi with accuracy below 1% FS, and resolution of 0.1%FS. The customer can select the pressure range from our available listed options and the sensor will be built accordingly.

Excellent linearity. The proven opto-mechanical architecture of the T615 and the advanced processing techniques used in producing this sensor yield a simple transducer configuration with both high linearity and repeatability.

Atmospheric referencing, porous stone filter on pressure head, ready to be daisy chained. The sensor-to-liquid-surface integrated air vent and single or dual optical fiber pigtails cabling system make the T615 well suited for projects that include the need to monitor liquid pressures at one or many locations. Flat or cone-head M40 porous stone configuration options for the filter installable on the pressure head. Up to 6 pressure sensors per sensing array. Suitable for daisy chaining with other types of Technica sensors including T1XX sensing cables, T2XX strain, vibration, torque sensors, T3XX accelerometers, T4XX displacement, T5XX tilt, and T8XX temperature sensors. G1/8 pressure Inlet thread.

Reliability for use in harsh environments 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 to monitor the height of the liquid level in rivers, lakes, and the sea, the pore water pressure in soil, the liquid level in industrial tanks, and other applications.

Parameter	Specifications
Wavelengths and Tolerance	1510 to 1590 nm, +/-0.5 nm;
Reflection BW (FWHM)	0.3 nm, other options
Reflectivity %	50%, other options
SLSR	>15 dB, other options
Selectable Liquid Pressure Ratings (upper pressure limit)	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 Pigtail (Length, DIA)	2m, 7mm reinforced optical cable with integrated air vent, custom length options
Optical Connector	FC/APC
Housing Material	SS304
Dimensions (Length, DIA), Weight	30x165mm, 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.

Technica Optical Components / 3657 Peachtree Rd, Suite 10A, Atlanta, 30319, USA, info@technicasa.com, www.technicasa.com