



Product main features

FISO Technologies is leading developer, manufacturer and marketer of high quality fiber optic sensors and instruments. Our commitment is to provide our customers with innovative and reliable solutions in the most challenging environments. We would like to build a long-term relationship that will be benefit each other.

Main advantages of our products:

- Fully immune to EMI, micro-waves and RFI;
- Available in 1, 2, 4, 8, 16 or 32 channels;
- Interchangeable sensors between all types of FISO's signal conditioners;
- Multiple types of measurement on the same signal conditioner;
- Distance between signal conditioner and sensor up to 5 Kilometers;
- Conventional outputs such as RS-232, analog voltage and 4-20 mA;
- Easy to use rugged sensors require no calibration.

FISO is specialized in fiber optic measurement systems with a distinct feature, allowing all of our sensors (in temperature, pressure, force & load, strain, refractive index and linear displacement) to be compatible with each of our signal conditioners.

Others important features include:

- **Absolute measurements** allow the user to disconnect the gauge, shut the system down, etc. while always keeping track of the actual value (i.e. there is no loss of reference).
- **Perfect linear response** achieved through absolute measurement of FPI cavity length.
- **Insensitivity to light loss** due to fiber bending, cable length, or light source fluctuations. The light signal detected by the CCD array may vary, but the position of the maximum is maintained.
- **Versatility of the technique** allows the user to perform various types of measurements with the same Fiber-Optic Sensor Instrument. FISO offers a wide range of FPI gauges for strain, force & load, temperature, pressure, refractive index, linear position & displacement applications.
- **Dynamic range** of 1:15 000.
- **Precision** better than 0.025%.
- **Resolution** of 0.01% or better.
- **50/125 μ m multimode fibers** used to make the gauges meet telecommunications standards. Connector installation and fiber splicing are easier to do with multimode fibers than with single-mode-type fibers.
- **Ease of use:** no tuning or calibration procedures. You connect the gauge to a FISO signal conditioner instrument (FISO's Universal Fiber-Optic-Sensor Instrument), enter the associated serial number, and you are ready to start taking measurements.

Through a firm and on-going commitment to excellence, accuracy, reliability and quality, FISO Technologies is dedicated to delivering equipment that meets the most exact needs and standards of its customers.



Why our products are unique

The main technology that distinguishes FISO from other solutions is its patented white-light cross-correlator (U.S. patent 5,392,117 and 5,202,939), offering a unique and powerful way to make absolute Fabry-Pérot cavity length measurements with astonishing accuracy and linearity, providing consistency time after time.

Fiber-optic sensors using FPI are currently highly-coveted on the market because of their great versatility, their high performance and their wide dynamical range. Our unique technique provides what is missing: accurate, stable and reliable measurements of the cavity length of FPI gauges. FISO Technologies makes use of a fully integrated optical cross-correlator based on the depositing of a shaped dielectric coating. The accuracy is guaranteed over a wide range of temperatures and for long periods of time.

FISO Technologies offers a complete range of innovative and reliable methods used in measuring physical parameters such as temperature, pressure, strain, displacement, force & load, deformation and refractive index. Chemical parameters can also be measures.

Other important unique characteristics of our fiber optic sensors are:

- **Small size:** most of our sensors are based on new nanotechnology (MEMs), which offer robustness, repeatability and small size.
- **Long distance measurements:** Due to use of patented cross-correlator, signal degradation over long-distance has little effect on the FISO's signal conditioning unit's ability to provide an accurate and stable measurement. This is possible even at distances up to 5 kilometers.
- **Extremely fast response:** New nanotechnology allows very tiny and low thermal sink effect temperature sensors. Response time for the temperature sensor can be less than 1 millisecond while signal conditioners are available with a sampling rate of up to 2 MHz.