GENERAL DESCRIPTION

The SOFO Starter / Educational Kit is the first off-the-shelf monitoring system designed for small monitoring projects and for educational demonstrations and tests. It includes all hardware and software components needed to implement a basic monitoring project or laboratory test without specific knowledge about fiber optic sensing.

Additional sensors and modules can be ordered separately.

TECHNICAL DESCRIPTION

The Kit includes:

- 1 Reading unit SOFO Lite
  - 12 channels
  - Integrated Data Processing
  - Control via Ethernet interface
- 1 software license for SDB View (advanced visualization and alerting)
- 4 SOFO Long Gauge Deformation Sensors of 2 m
- 4 pairs of “L” Bracket for installation on concrete
- 1 day system instruction at Smartec
- 1 Book entitled: *Fiber Optic Methods for Structural Health Monitoring*, by Branko Glišić and Daniele Inaudi, Smartec SA

FEATURES

- Reads SOFO sensors
- 12 Channels
- High resolution and accuracy
- No calibration required
- Integrated Data processing
- Control via Ethernet interface
- Easy networking
- Temperature self referenced
- Data analysis and display software
SOFO LITE FIBER OPTIC INTERROGATOR

The SOFO Lite reading unit is able to measure up to 10 or 12 SOFO (interferometric) sensors. SOFO sensors offer the best accuracy and temperature compensation performance for long-gauge sensing. The system is designed for static, long-term measurements and monitoring, in particular of civil structures. The SOFO Lite is integrated in a compact housing designed for installation in a cabinet or indoors. Thanks to the Ethernet interface, it is possible to address the unit remotely from a PC running the SDB software or network several SOFO Lite units to increase the channel count. The SOFO Lite reading unit allows to measure 10 or 12 channels. On each channel it is possible to connect a single SOFO sensor. The unit contains a processing unit that analyzes the optical signal to convert it to deformation measurements.

SOFO LONG GAUGE DEFORMATIONS SENSOR

For surface mounting or embedding in concrete and mortars. Ideal for long-term structural deformation monitoring. 20 year track record in field applications. The SOFO deformation sensors are the ideal transducers to monitor large civil structures. Their long-gauge and insensitivity to temperature variations, make them ideal for long-term monitoring of structural deformations. The sensors can be quickly and easily surface mounted or directly embedded in concrete and mortars.

“L” BRACKETS FOR SURFACE INSTALLATION

To install the sensor on the surface of existing structures, it is necessary to use the appropriate L-bracket adaptors (aluminum and stainless-steel L-brackets available). These adaptors can be fastened, glued or welded (in the case of steel L-bracket) onto the structure to be monitored or, onto special supports previously mounted onto the structure. These surface installation kits are easy to use and are highly durable.

FIBRE OPTIC METHODS FOR STRUCTURAL HEALTH MONITORING

Fibre Optic Methods for Structural Health Monitoring is organized as a step-by-step guide to implementing a monitoring system and includes examples of common structures and their most-frequently monitored parameters. Fibre Optic Methods for Structural Health Monitoring is an invaluable reference for practising engineers in the fields of civil, structural and geotechnical engineering. It will also be of interest to academics and undergraduate/graduate students studying civil and structural engineering.

SDB VIEW SOFTWARE

SDB View software is part of the SDB suite. It provides a simultaneous display, within the same window, of several different views on sensors chosen from the database over a defined monitoring period.