



DYNAMIC FIBER OPTIC INTERROGATOR READS FBG SENSORS

Reads MuST FBG Sensor dynamically at up to 1000 samples/second.

Description

The MuST VII Dynamic reading unit is able to measure MuST FBG (Fiber Bragg Grating) sensors. The system is designed for dynamic and long-term measurements. The MuST VII Dynamic RU is integrated in a compact steel housing designed for permanent installation in any structure that requires continuous monitoring.

The MuST VII Dynamic reading unit allows to measure 1, 4 or 8 channels. On each channel it is possible to connect up to 7 MuST deformation sensors, up to 12 MuST strain sensors (depending on sensor type, see sensor datasheets for details), or up to 25 MuST Temperature sensors. The unit contains a field PC that provides data logging and remote interfacing functionalities.

The main features of MuST VII Dynamic are: flexibility in the choice of the options allowing the customer to configure a system tailored to his needs in terms of sensing technology, data logging capability, communication and temperature range.

The MuST VII Dynamic has been designed for surface installation and for specific project requirements. The housing (IP 66, housing and door: e-coat primer, powder painted, RAL 7032 pebble grey) grants protection from water, rodents, accidental crashes and a key lock grants protection against vandalism.

Options

- 1, 4 or 8 channels option
- Heating and thermal isolation for use in rigid climates

Key Features

- Permanent instrumentation
- Compatible with all MuST FBG sensors (Strain, Deformation, Temperature)
- High resolution and precision
- No calibration required
- Integrated PC with SDB measurement engine software
- Compact size and modular design
- Automatic and remote control
- Ethernet interface for easy networking

Applications

- Bridge Structural Health Monitoring SHM
- Building monitoring
- Dam instrumentation
- Tunnel deformation monitoring
- Pipeline local deformation analysis

Performances

MuST FBG Sensor Measurement	
Measurement resolution:	5 pm
Linearity / Accuracy:	±10 pm
Sample rate:	1000 S/s
Measurement range:	100 nm (1500 to 1600 nm)
Sensors per channel:	Max 7 MuST (FBG) Deformation sensors Up to 12 Strain FBG sensors Up to 25 Temperature FBG sensors
Calibration:	NIST traceable wavelength reference
Optical Connectors:	E-2000 AC (8°)
Dynamic range:	>25 dB
Available channel count:	1, 4 or 8 channels

Specifications

AC power supply:	230 V 50 Hz / 110 V 60 Hz Auto detect
External connections:	Ethernet connection, 1 or 4 optical ports, power supply, display and screen (optional)
Dimensions:	~ 500 mm x 500 mm x 210 mm
Weight:	~ 25 kg
Operating temperature:	10°C to + 40°C - 40°C to + 40°C with heating option
Humidity:	90% non-condensed

Ordering information

12.2021 MuST VII Dynamic Reading Unit

Options:

- 1, 4 or 8 Channels