COMPLEX MODULAR INTERROGATION UNIT

The interrogation modular system allows the evaluation of large number of FBG (Fiber Bragg Grating) or FP (Fabry-Perot) optical sensors. The interrogation system contains the module with an optical source, module for the spectral analysis, optical multiplexer and integrated evaluation PC with management.

OPTICAL PROPERTIES	
Wavelength range	1535 - 1575 or 1525 - 1605 nm
Measurement range	40 nm or 80 nm
Scanning frequency	10 Hz
Wavelength band	C or C+L band
Number of physical channels*	1 - 32
Maximal number of sensors per channel**	20
Maximal number of sensors***	640
Resolution	1 pm
Absolute accuracy	± 5 pm
Laser Class (IEC 60825-1)	1
Dynamic range	> 30 dB
Optical connectors	LC/APC or optional

ELECTRICAL PROPERTIES	
Power supply	230 V AC / 50 Hz
Power consumption	Max. 200 W
Embedded PC	Industrial computer ADLINK cPCI-3615
Interface	2 x Ethernet, USB, VGA, COM, PS-2
Software	Customizable for specific application

PHYSICAL PROPERTIES	
Dimensions	19" chassis, 3U
Weight	13 kg
Operating temperature	0 °C – 40 °C

* Depending on multiplexer

** Depending on measurement range

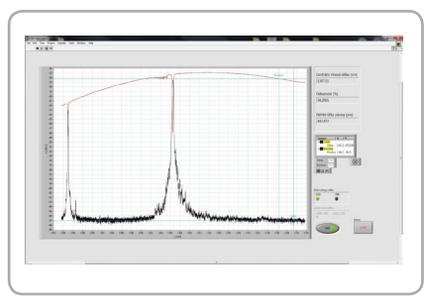
*** Depending on multiplexer and measurement range

Application:

- Evaluation of many non-electric quantities sensed by the FBG and FP sensors
- Sensing systems for civil structures (bridges, tunnels, dams, buildings etc.)
- Critical infrastructures (nuclear power plants, pipelines, wind turbines etc.)
- Structure Health Monitoring (SHM) systems
- Transport (roadways, railways, etc.)
- Compatible with our sensors of temperature, strain, stress, pressure, tilt, load, etc.

Key features:

- High accuracy, stability and reliability due to unique real-time referencing
- Up to 32 channels and 640 sensors
- Autonomous system with embedded industrial PC
- Data logging, web server, remote connection
- High dynamic range = long distance between sensors and evaluation unit



NETWORK group
SPECIAL FIBER OPTICS

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