

Measurement Device FBG-Scan X08 / X16

Fibre Bragg Gratings reinvented

Draw Tower Gratings (DTG[®]s) are produced during the drawing process of the fibre itself, before the primary coating is applied. This is a cost effective production process for high quality Fibre Bragg Gratings. This offers unique characteristics such as extremely high breaking strength, insensitivity to bending, spliceless array configurations and uniform coating coverage. FBG parameters and coating material can be selected based on customer needs.



Description

The FBG-Scan X08 / X16 series is an industrialised, high precision measurement device for static measurements of Fibre Bragg Grating (FBG) sensors in real field applications. It can monitor 8 or 16 different optical lines, each comprising multiple FBG-sensors. The device is controlled by an internal PC.

The input channel to be monitored is selected by means of an optical switch. The internal Optical Spectrum Analyzer (OSA) is capable of performing FBG-peak detection with high accuracy. In addition, the optical spectrum of each input channel can be displayed on a computer. Both the update rate of the OSA as well as the switching rate of the optical switch can be adjusted.

'ILLumiSense Pro' is included in the FBG-Scan X08 / X16 and provides for data acquisition, analysis and post processing. It is easy to use and offers an intuitive data display, data visualisation features and additional graphing. 'ILLumiSense Pro' is a combination of traditional sensor software and specific optical sensor system management.

Features

- Fibre optic measurement device for up to 16 optical lines
- Connection of a high number of sensors
- Embedded processing board with monitoring software
- High dynamic range
- Excellent wavelength precision

Laser Safety Information

This device is a Class 1 laser product according to IEC 60825-1 (2001).

**CLASS 1
LASER PRODUCT**



Standard Specification

Parameter	FBG-Scan			
	708	716	808	816
Optical				
Wavelength range	1525-1565 nm		1515-1590 nm	
Number of optical lines	8	16	8	16
Wavelength precision	± 1 pm			
Absolute EOL wavelength accuracy	± 30 pm		± 40 pm	
Dynamic range	30 dB with user selectable control			
Scan and report time	≤ 1 Hz			
Optical connector	FC/APC			
Lifetime optical switch	>10 ⁸ cycles			
Laser class (IEC 60825-1)	1			
Electrical				
Power supply	230 VAC			
Maximum power consumption	40 W			
Environmental				
Operating temperature	0 °C to +50 °C			
Operating humidity	0 % to 80 %, non-condensing			
Storage temperature	-10 °C to +60 °C			
Storage humidity	0 % to 95 %, non-condensing			
Mechanical				
Dimensions	41 mm x 424 mm x 369 mm (19 inch compatible)			
Embedded PC specifications				
Intel Atom Processor	1.6 GHz			
Memory	1 GB			
Hard disk (HDD 250GB SATA)	250 GB			
Communication	2x USB2.0 - 1x RS232 - Ethernet - 1x VGA			

* Higher absolute wavelength accuracy available on request.

Ordering information

Example:

F	B	G	-	S	C	A	N	-	X	X	X	708
												716
												808
												816

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