



os9200

Optical Pressure Sensors

Luna's os9200s are fiber Bragg grating (FBG) based high-accuracy pressure sensors, enabling rugged and stable monitoring systems that can be easily distributed over long distances.

The os9200 features a novel approach to pressure sensing for both liquid and gaseous environments, utilizing FBG technology to measure minute changes in pressure. The sensor features a pressure range of 0-100 bar and a resolution of down to 0.1% full scale.

Up to 96 os9200 sensors can be integrated on a single HYPERION interrogator platform, and can also be combined on the same optical network with other FBG sensors to simultaneously capture other parameters, such as temperature, strain, displacement, acceleration, tilt, etc.

The os9200 sensors are compatible with ENLIGHT Sensing Analysis Software, an integrated suite of tools for data acquisition, computation and analysis of optical sensor networks, as well as with the HYPERION's comprehensive Application Programming Interface (API) and examples written in LabVIEW, Python, Matlab, C++ and C#.

Key Features

Ease of installation, simple and repeatable

Rugged, multipoint monitoring; up to 96 sensors on a single HYPERION instrument

Ultra high resolution

Multiparameter, various physical parameters measurements coupled onto the same instrumentation platform

Internally temperature-compensated

Applications

Machine Monitoring

Power Generation

Tank Monitoring

Marine

Process Monitoring

Hydraulic Test Stands

Rugged, ultra high resolution, multipoint pressure measurements

Performance

Specifications		os9210
Measurement Type	Pressure, with integrated temperature compensation	
Measurement Range	0 to 100 bar	
Resolution	0.1% full scale	
Precision	<0.5% full scale	
Accuracy	<1% full scale	
Protection	IP 67	
Construction Material	SS 304	
Measurement Points	Up to 6 sensors per channel (up to 96 sensors with 16 channel si255 interrogator)	
Wavelength Options	6 standard wavelengths available, custom available by request (1460 to 1620 nm)	
Physical Properties		
Dimensions	Diameter	30 mm
	Length	121 mm
Operating Temperature	-20 to 60° C	
Operating Humidity	0 to 95% relative humidity	
Burst Pressure	Up to 150% full scale	
Weight	400 g	
Inlet Thread	G 1/8th	

Ordering Information

os9210-pppp/pppp-1xx-1yy

Example: os9210-1529/1532-1FC-1FC

pppp/pppp FBG Wavelengths
 Pressure/Pressure Wavelengths (+/- 1nm)
 Standard 1516/1519, 1529/1532, 1542/1545,
 1555/1558, 1568/1571, and 1581/1584

xx Termination Type
 1xx Cable 1, Length & Connector
 1 1 m Standard, Cable Length
 UT Underminated
 FC FC/APC Connector

yy Termination Type
 1yy Cable 2, Length & Connector
 1 1 m Standard, Cable Length
 UT Underminated
 FC FC/APC Connector