



**MULTI-CHANNEL, MULTI-PURPOSE  
SIGNAL CONDITIONER  
FOR LABORATORY APPLICATIONS**

Use with Opsens' WLPI fiber optic sensors — • Pressure • Temperature • Strain • Position

### Key Features

- 4 to 8 channels
- High linearity and precision
- Versatile and easy to use
- 20 Hz sampling rate
- $\pm 5$  Volts and RS-232 output interfaces
- Large LCD display
- Compatible with all Opsens' WLPI sensors
- OEM version available

### Applications

- General laboratory applications
- Microwave and food processing
- EMI, RFI and microwave environments
- High voltage environments
- Nuclear and hazardous environments
- Multi-point long-term monitoring

### Description

The MultiSens is a multi-channel, multi-purpose signal conditioner to be used with any of Opsens' interferometric fiber optic sensors, i.e. the WLPI fiber optic sensors, for temperature, pressure, strain, and position measurements. At the heart of the MultiSens is the Opsens' White Light Polarization Interferometry (WLPI) technology (patent # 7,259,862) which provides a mean for making accurate and absolute measurements of the path length difference of any type of interferometric fiber optic sensors, whose difference varies according to the measurand of interest.

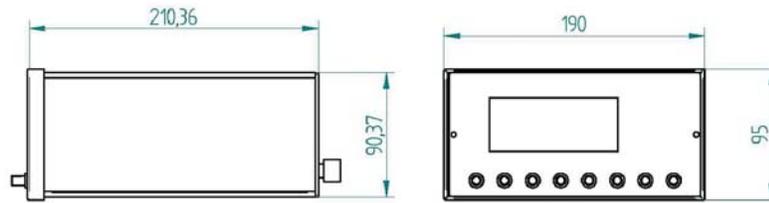
The MultiSens provides sequential readings over up to 8 measurement channels with a  $\pm 0.003\%$  full scale resolution and a  $\pm 0.01\%$  full scale precision. It comes with a standard  $\pm 5$  Volts output and a RS-232 communication port for real-time data acquisition. The MultiSens can be controlled directly using the front-panel keypad or remotely using the standard RS-232 interface.

Compatible with all Opsens WLPI sensors, the MultiSens delivers the performances needed for a wide range of critical measurement applications.

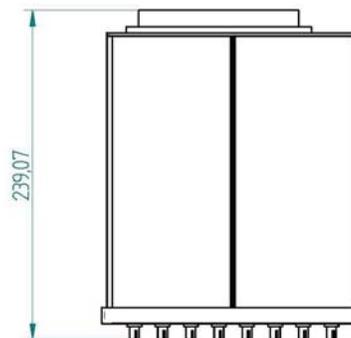
#### Opsens

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Dimensions in mm



## Specifications

Number of channels	4 or 8
Compatibility	All Opsens WLPI sensors
Full scale	30 000 nm (path length difference)
Resolution	±0.003 % of F.S. (no averaging)
Precision	±0.01 % of F.S. @ ±3.3 sigma limit (99.9 % confidence level)
Sampling rate	20 Hz standard (on one measurement channel)
Channel scan rate	6.67 Hz (channel-to-channel measurement time = 150 ms)
Output interface	± 5V and RS-232 (SCPI protocol supported)
Display	Front panel
Input power	9 to 24 VDC (AD/DC wall-transformer adapter included)
Consumption	2.5 Watt typical
Dimensions	95 mm (H) x 190 mm (W) x 220 mm (L)
Storage temperature	-40 °C to 65 °C
Operating temperature	0 °C to 45 °C
Humidity	95 % non condensing
Light source life span	40 000 hours MTBF

All specifications are subject to change without prior notifications