



## SINGLE CHANNEL, HANDHELD SIGNAL CONDITIONER FOR FIELD ACTIVITIES

Use with Opsens' WLPI fiber optic sensors

### Key Features

- Compact and rugged design
- Versatile and easy to use
- High linearity and precision
- 20 Hz sampling rate
- $\pm 5$  V and RS-232 output interfaces
- Large LCD display
- 9 V battery or wall transformer-operated
- Casing with rubber boot protection

### Applications

- High voltage environments
- EMI, RFI and microwave environments
- Microwave and food processing
- Nuclear and hazardous environments
- Civil engineering and geotechnical applications

### Description

The PicoSens is a compact and portable 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 PicoSens 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.

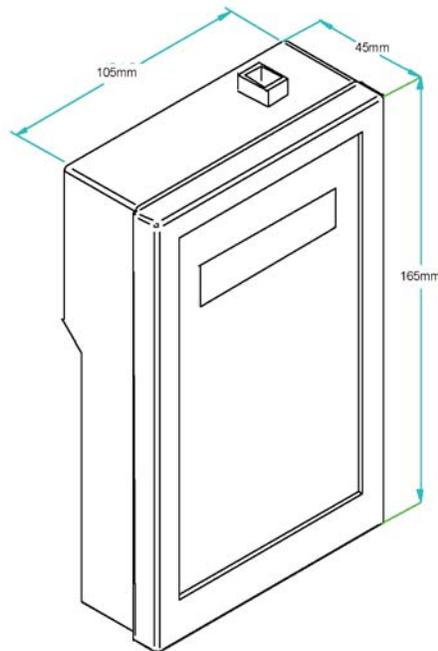
The PicoSens is equipped with a large visible LCD display and can be battery operated. It comes with a standard  $\pm 5$  V output and a RS-232 communication port for real-time data acquisition. The PicoSens can be controlled directly using the front-panel keypad or remotely using the standard RS-232 interface. A rugged casing with a removable rubber boot provides good mechanical protection against intensive handling in tough environments.

The PicoSens is compatible with all Opsens WLPI sensors hence providing a multi-purpose tool for measuring various parameters. With a 20 Hz sampling rate, a  $\pm 0.003$  % full scale resolution and a  $\pm 0.01$  % full scale precision the PicoSens delivers the performances needed for a wide range of critical measurement applications.

### Opsens

2014 Cyrille-Duquet Street  
Suite 125  
Quebec City QC  
G1N 4N6 Canada

☎ 1.418.682.9996  
☎ 1.418.682.9939  
✉ Info@opsens.com  
www.opsens.com



## Specifications

Number of channels	One
Compatibility	All Opsens WLPI fiber optic 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
Output interface	±5 V and RS-232 standard
Input power	9 to 24 VDC (AC/DC wall-transformer adapter included)
Consumption	1.8 W typical
Battery	9 V
Enclosure	Plastic casing with a removable rubber boot protection
Dimensions (without rubber boot protection)	45 mm (H) x 105 mm (W) x 165 mm (L)
Storage temperature	-40 °C to 70 °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