



MULTI-CHANNEL MULTI-PURPOSE SIGNAL CONDITIONER FOR FIELD APPLICATIONS

Compatible with Opsens' WLPI fiber optic sensors - Pressure • Temperature • Strain • Displacement

Key Features

- Up to 16 measurement channels
- High linearity and precision
- RS-232 and RS-485 serial output
- Tabletop and wall mount versions
- LCD screen display

Applications

- Multi-point long-term monitoring
- In-situ process monitoring
- Civil engineering and geotechnical applications
- High voltage environments
- EMI, RFI and microwave environments
- Nuclear and hazardous environments

Description

The FieldSens 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 displacement measurements.

At the heart of the FieldSens is the Opsens' White Light Polarization Interferometry (WLPI) technology (Patent #7,259,862) which provides a means for making accurate and absolute measurements of the path length difference of any type of interferometric fiber optic sensors.

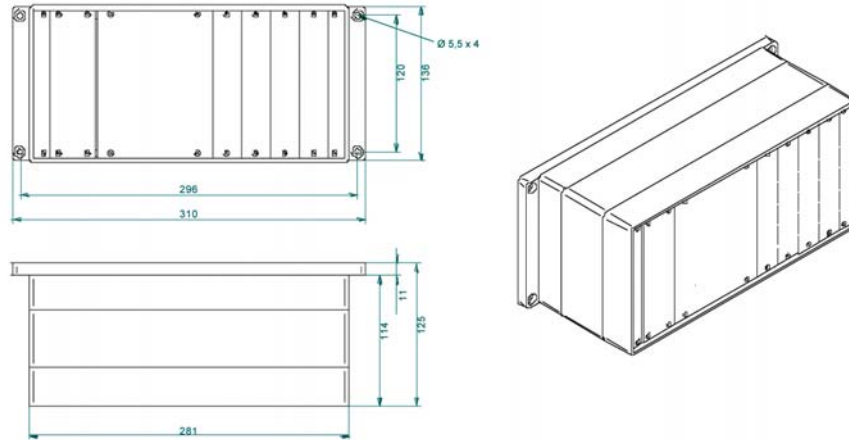
The FieldSens is offered in a tabletop version or a wall mounted version and comes standard with LCD screen display, RS-232 and RS-485 serial interface outputs. It provides sequential readings up to 16 measurement channels with a $\pm 0.01\%$ full scale precision.

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Dimensions in mm



Specifications

Number of channels	4, 8, 12 or 16
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 (rate given for a fixed channel)
Channel scanning rate	6.67 Hz maximum (channel-to-channel scan period = 150 ms)
Output interface	RS-232 and RS-485 serial output (SCPI protocol)
Display	LCD screen display standard Can be ordered without display
Input power	9 to 24 VDC (AD/DC wall-transformer adapter included)
Consumption	2.5 Watt typical
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

Product specifications are subject to change without prior notice