



MULTI-CHANNEL SIGNAL CONDITIONER FOR APPLICATIONS USING GAAS BASED FIBER OPTIC TEMPERATURE SENSORS

Use with Opsens' GaAs (SCBG) fiber optic temperature sensors

Key Features

- ± 0.3 °C total system accuracy
- 4 or 8 channels with large LCD display
- High linearity and repeatability
- 50 Hz sampling rate
- ± 5 V and RS-232 output interfaces
- OEM version available

Applications

- General laboratory applications
- Temperature monitoring in MR environment
- RF, ultrasound and electro surgery environments
- High voltage environments
- EMI, RFI and microwave environments
- Microwave and food processing
- Nuclear and hazardous environments
- Civil engineering and geotechnical applications

Description

The TempSens is a multi-channel and easy to operate signal conditioner that is used with any of Opsens' GaAs-based fiber optic temperature sensors.

At the heart of the TempSens is the Opsens' Semiconductor Band Gap (SCBG) technology which provides a mean for making accurate measurements of the temperature-dependent bandgap of GaAs crystal.

The TempSens is equipped with a large visible LCD and it comes with standard ± 5 V outputs and a RS-232 communication port for real-time data acquisition. The TempSens can be controlled directly using the front-panel keypad or remotely using the standard RS-232 interface.

The TempSens has a channel sampling rate of 50 Hz.

With a ± 0.3 °C accuracy or better (total accuracy including both signal conditioner and sensor errors from 20°C to 45°C) and 0.1 °C resolution, the TempSens delivers the performances needed for a wide range of critical measurement applications.

Opsens

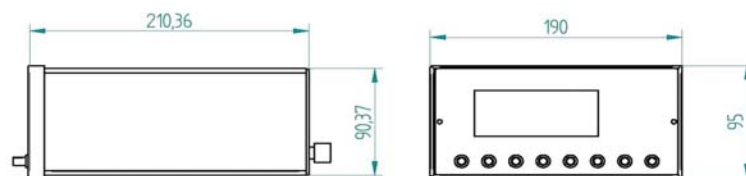
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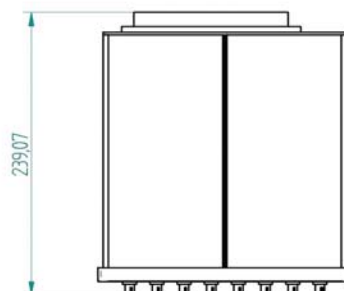
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Dimensions in mm



Specifications

Number of channels	4 or 8
Compatibility	All Opsens GaAs fiber optic sensors
Accuracy	± 0.3 °C or better (Total accuracy over the full range from 20°C to 45°C including both signal conditioner and sensor errors) ± 0.8 °C or better (Total accuracy over the full range -20°C to 250°C including both signal conditioner and sensor errors)
Resolution	0.1 °C (On display)
Sampling rate	50 Hz standard (rate given for a fixed channel)
Output interface	±5 V and RS-232 standard
Input power	9 to 24 VDC (AC/DC wall-transformer adapter included)
Consumption	2.5 W typical
Enclosure	Extruded aluminium
Storage temperature	-40 °C to 70 °C
Operating temperature	10 °C to 45 °C
Humidity	95 % non condensing
Light source life span	150 000 hours (> 17 years) MTBF

Product specifications are subject to change without prior notice