PSC-D
PROSENS PLATFORM DEDICATED FOR HIGH SPEED MIXED PARAMETERS MEASUREMENTS

PSR-100
GAAS-BASED TECHNOLOGY FOR HIGH SPEEDTEMPERATURE MEASUREMENTS

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

Key Features

- Modular platform accepting up to 8 modules
- High speed modules (1000 Hz sampling rate)
- High linearity, precision and resolution
- Ethernet and CAN Bus
- Individual ±5V analog outputs
- Host-independent graphical user interface (GUI)
- 6.5" Front panel touch-screen color display

Applications

- Electro-explosive device testing (RADHAZ and HERO applications)
- Static or dynamic temperature measurements conducted under confined space, hazardous and strong EMI/RFI/MRI environments
- High speed simultaneous temperature measure ments of temperature
- Automotive airbag igniters testing
- Hazardous environments
- Fast transient temperature measurements

Description

The RadSens is a polyvalent, scalable system that includes a PSC-D advanced control unit, modular signal conditioner units (PSR-100 modules), a comprehensive graphical user-interface environment and customizable OTG-R fiber optic temperature for fast response time temperature monitoring.

The RadSens PSC-D control unit houses a reliable, low power, Intel™ XScale processor based computer running under real time Windows CE™. System set-up, data collection and data storage are no longer a headache for the user with the most comprehensive graphical user interface. Through the Ethernet RJ-45 connection, the user can easily interface with a PC computer and get access to real time data with no loss of accuracy due to digital to analog, back to digital conversion.

With the 4 G internal memory capacity and internal current source option, user can locally store data during a test and perform sensor calibration at all time.

The RadSens scalable from 100 Hz to 1000 Hz, is a system specifically designed for HERO and RADHAZ applications such as electromagnetic compatibility testing and assessment of bridge-wire electro-explosive devices (EED).

Opsens

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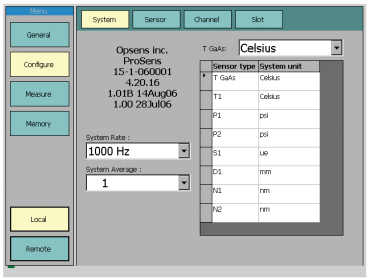
PSC-D RadSens Platform

The RadSens has been developed with cutting edge technologies to provide the user with the most flexible tool for performing temperature, pressure, strain or displacement measurements in the most adverse conditions. Both WLPI (interferometric) and SCBG (GaAs-based) fiber optic sensing technologies can be mixed together within the PCS-D RadSens chassis, then getting the most out of your measurement applications and future needs.

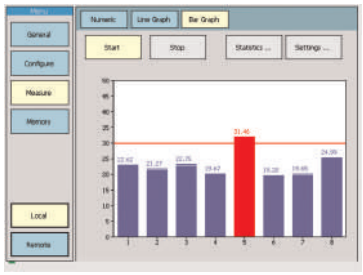
Control Unit with GUI Touch-Screen Display

The PSC-D RadSens chassis offers a Windows CE based single board computer with a graphical user interface 6.5" TFT color touch-screen display. This GUI is ideal for easy system control and set-up, fast data collection and storage.



SoftProSens user interface software

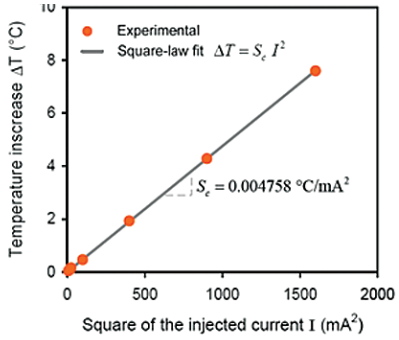
Opsens' SoftProSens software runs on a PC computer as a remote replicate of the ProSens graphical user interface (GUI). The user has the ability to control, display, acquire and save data in the same way as with the RadSens GUI.



Built-in Calibration Feature

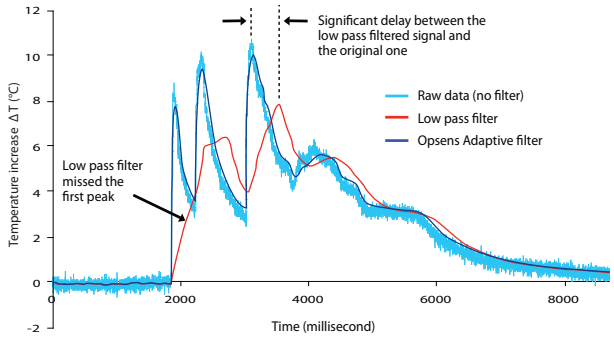
The RadSens offers a built-in automatic calibration feature. No more need for collecting and analyzing data manually.

The EED induced current sensitivity is automatically calculated using the software provided with the system. This unique feature can reduce calibration time by up to 90%.



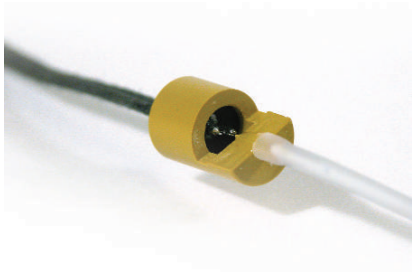
High Performance Adaptive Filter

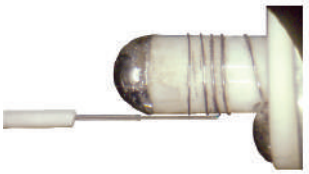
The RadSens system comes with a unique and innovative high performance adaptive filter for signal noise removal. Without any compromiseon response time, the filter remains very efficient even when faced with fast signal variations and this, with minimum attenuation of the signal high frequency components.splay, acquire and save data in the same way as with the RadSens GUI.



OTG-R sensor and assembly services

Opsens' OTG-R fiber optic temperature sensor is offered in different sheaths options and sizes deisgned to fit your application requirements. Opsens also offers sensor to EED installation services as part of our turn key solution to the HERO/RADHAZ group worldwide.





All specifications are subject to change without prior notifications

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RADSENS CHASSIS
DEDICATED FOR HIGH SPEED
TEMPERATURE MEASUREMENTS

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

Key Features

- Modular platform accepting up to 8 modules
- High speed modules (1000 Hz sampling rate)
- High linearity, precision and resolution
- Ethernet and CAN Bus
- Individual ±5V analog outputs
- Host-independent graphical user interface (GUI)
- 6.5" Front panel touch-screen color display

Applications

- Electro-explosive device testing (RADHAZ and HERO applications)
- Static or dynamic temperature measurements conducted under confined space, hazardous and strong EMI/RFI/MRI environments
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- Hazardous environments
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Description

The PSC-D is a 19¨ rackmount chassis, a control unit houses a reliable, low power, Intel™ XScale processor based computer running under real time Windows CE™.

It is capable to contain up to 8 optoelectronics modules with on computer for real time data acquisition and transfer.

System set-up, data collection and data storage are no longer a headache for the user with the most comprehensive graphical user interface. Through the Ethernet RJ-45 connection, the user can easily interface with a PC computer and get access to real time data with no loss of accuracy due to digital to analog, back to digital conversion.

Scalable from 100 Hz to 1000 Hz, thhe RadSens PSC-D ofefrs an internal 4 G memory function and an internal current source for easy sensor calibration.

The RadSens PSC-D also offer different user-selectable output measurement units in °C, relative temperature to auto-zero reference, mA, mW and dB.

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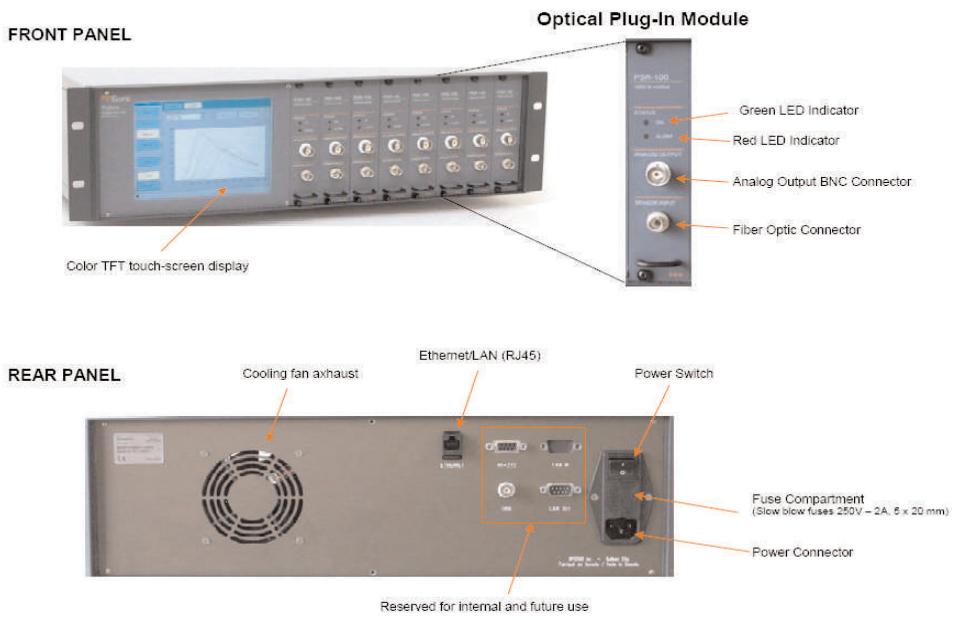

Specifications

Number of measuring slots	8
Compatibility	PSR-100 module
I/O interfaces	Ethernet 10/100 Base-T interface
Graphical user interface	TFT 6.5” Touch-screen color display
Internal data storage memory	Up to 4Gbytes
Input power	90 to 230 VAC
Internal current source	0.4 to 180mA, 0,4 to 800 mA
Dimension	19” rack mount, 3U
Power consumption	2W (excluding signal conditioner modules)
Storage temperature	- 40 °C to 70 °C
Operating temperature	10 °C to 35 °C
Humidity	95 % non condensing

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PSR-100
GAAS-BASED TECHNOLOGY FOR HIGH SPEED TEMPERATURE MEASUREMENTS

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

Key Features

- High speed modules (1000 Hz sampling rate)
- High linearity, precision and resolution
- No gauge factor entry
- Absolute temperature measurement
- Individual ±5V analog outputs

Applications

- Electro-explosive device testing (RADHAZ and HERO applications)
- Static or dynamic temperature measurements conducted under confined space, hazardous and strong EMI/RFI/MRI environments
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Description

The PSR-100 is a GaAs-based spectrophotometric module that measures the spectral position of the temperature-dependent bandgap of a GaAs crystal affix at the end of a 100 microns core optical fiber. This module is compatible with Opsens' SCBG (GaAs-based) fiber optic temperature sensors and hence, it requires no calibration factor.

The PSR-100 can be configured to sample measurements at rates varying from 100 Hz to 1000 Hz. The analog output scale and offset are adjustable, with a averaging capability for improved resolution.

The PSR-100 is dedicated solely to temperature measurements. With its advanced technology, the PSR-100 is reliable, repeatable experiences no signal degradation due to any external perturbations.

The PSR-100 is stable and consistant from module to module hence the OTG-R sensor is 100% interchangeable among systems and modules at all time.

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Specifications

Sensing Technology	SCBG: GaAs-based spectrophotometry
Sensor Compatibility	All of Opsens' GaAs-based temperature sensors with100 microns core optical fiber
Fiber optic core size	100 microns
Fiber Optic Connector	ST type
Analog output	±5 Volts output, BNC connector
Sampling rate	Adjustable from 100 Hz to 1000 Hz
Measuring range	-20°C to 250°C (other range available upon request)
Accuracy	± 1.5 °C (include sensor error)
Resolution	± 0.1 °C
Power consumption	2W
Light source life span	60 000 hours MTBF
Dimension	19" rack mount, 3U (140mm x 449mm x 316mm)
Storage temperature	-40 °C to 70 °C
Operating temperature	10 °C to 35 °C
Humidity	95 % non condensing

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IMP0048 RADSENS Rev 2.0 Printed in Canada