



SIGNAL CONDITIONER OPTIMIZED FOR MEASURING PHYSIOLOGICAL† PRESSURE

Optimized for Opsens' OPP-M fiber optic miniature physiological† pressure sensors

Key Features

- Compact and rugged design
- 250Hz sampling rate
- High resolution and precision
- Compatible with SCPROM Connector
- ± 5 V and RS-232 output interfaces
- Large LCD display
- 9V battery or wall-transformer operated
- Automatic atmospheric pressure correction
- OEM version available

Applications

- Physiological pressure monitoring:
 - Intra vascular blood pressure
 - Urodynamic
 - Intra cranial pressure
 - Intra uterine pressure
 - Intra ocular
 - Cardiac assist applications
- Customer specific catheter application
- Guidewire design (with 0.25 mm OD transducer)
- Pressure measurement under electro-surgery, MRI and MW/RF related practices

Description

The LifeSens is a compact signal conditioner specifically designed for measuring physiological† pressure. When combined with Opsens' OPP-M fiber optic sensors, the LifeSens delivers outstanding pressure measurements with all the features required for life science applications. The LifeSens benefits from Opsens' White Light Polarization Interferometry (WLPI) technology (Patent # 7,259,862), providing the most accurate and reliable absolute Fabry-Perot cavity length measurements.

The LifeSens delivers pressure measurements at a rate of 250 Hz. An internal manometer automatically corrects for atmospheric pressure change. The system accepts the Opsens' SCPROM connector that stores OPP-M sensor gauge factor. Upon mating the sensor, the gauge factor is seamlessly transmitted to the LifeSens conditioner.

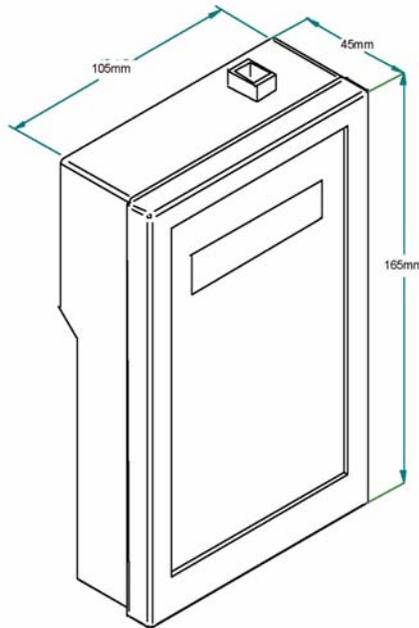
The LifeSens is equipped with a large visible LCD display and can be battery operated. It comes with a standard ± 5 V output and a RS-232 communication port for real-time data acquisition. The LifeSens can be controlled directly using the front-panel keypad or remotely using the standard RS-232 interface.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

Other relevant literature: IMP0006 OPP-M

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Specifications

Number of channels	One
Compatibility	Opsens' OPP-M fiber optic pressure sensor (other sensors upon request)
Full scale*	-50 mmHg to 300 mmHg relative to atm. (wider range also available)
Resolution*	0.5 mmHg (no averaging)
Precision*	1% FS or 1 mmHg (whichever is greater)
Sampling rate	250 Hz standard
Connector compatibility	SC connector (Opsens' SCPROM connector compatible)
Internal manometer	Included for automatic atmospheric pressure correction
Output interface	±5 V (1V/100mmHg) and RS-232 standard
Input power and consumption	9 to 24 VDC - 1.8 W (wall-transformer adapter included)
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

*Specifications include the effect of both the signal conditioner errors and the OPP-M sensor errors

† The LifeSens product is designed to be integrated into customer host system but is not approved by the FDA or by any applicable regulatory bodies. The compulsory approvals needed for the medical or clinical use of the LifeSens product are the customer's responsibility.