

Signal Conditioners

Opsens offers a full range of products dedicated to the Life Sciences and Medical industries.

- Internal manometer automatically corrects for atmospheric pressure change
- EEPROM SC connector available for read & write pressure sensor information
- System insensitive to temperature shift and drift or mechanical shock
- Self diagnostic to ensure system consistency, long term stability and reliability



OEM-MNP

The OEM-MNP is a 250 Hz OEM-type signal conditioner that offers the OEM customer a product designed for their specific needs. Its compact size and modular assembly give OEM's the best in design flexibility.



LIFESENS

The LifeSens is a 250 Hz compact full-featured signal conditioner specifically designed for life sciences research in laboratory environment or for OEM private labelling.



PROSENS

The ProSens system is a 1 KHz advanced data acquisition system that allows both pressure and temperature measurement. The ProSens chassis contains a small board computer that enable complete system and sensor management via the interactive front touch panel.

OUTSTANDING FIBER OPTIC PRESSURE MONITORING SOLUTIONS FOR LIFE SCIENCES AND MEDICAL DEVICES

KEY FEATURES

- Miniature size of 0.25mm OD and 0.40mm OD
- Optimal sensor packaging and integration ready
- Minimal temperature shift and moisture induced drift
- High fidelity and artifact-free pressure measurement
- Immunity to EMI, RFI, MRI and electro surgery environment
- Stable and reliable signal conditioners and OEM boards

« To know more
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Email us at info@opsens.com
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FIBER OPTIC PRESSURE SENSOR SYSTEM FOR LIFE SCIENCE AND MEDICAL DEVICES



opSens

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FIBER OPTIC PRESSURE SENSOR SYSTEM FOR LIFE SCIENCES AND MEDICAL DEVICES

Fiber optic pressure sensor has been attracting attention in the medical devices industry especially the growing segment focused on minimally invasive treatment and the increased demand for reliable pressure measurement.

Opsens OPP-M ultra-compact MEMS based catheter-tip pressure transducer is widely suitable for pressure monitoring where accurate pressure reading is required in preclinical research activities and cost effective disposable OEM clinical applications.

With Opsens' unique design, the OPP-M sensor offers the highest performance available in the market in terms of size, accuracy, thermal stability, moisture induced drift and mechanical robustness.

Benefits

- High fidelity pressure measurements with no hysteresis, motion artifact, and signal drift
- High frequency response preserves signal integrity and prevents damping of signal
- Lesser invasive catheterization practices with catheter size reduction
- Increase functionality with immunity to MR, RF, MW, EM and electro surgery environments
- Easy integration without complicated wire harness leads to manufacturing cost reduction and high production yield

OPP-M Pressure Sensor

Miniature, High Performance

Opsens new OPP-M25 with dimension of 0.25mm OD is the smallest MEMS based optical pressure available in the market. It is 2/3 the size of the current OPP-M40 sensor.

The OPP-M25 and OPP-M40 are bare fiber optic pressure sensors that come without any packaging and can be made with optical fibers of different dimensions.

The bare optical pressure sensor model is dedicated for applications where partners want to perform in house sensor-catheter integration and sensor packaging unique to their product.

The OPP-M optical pressure transducer is also widely used in preclinical research activities where size matters.

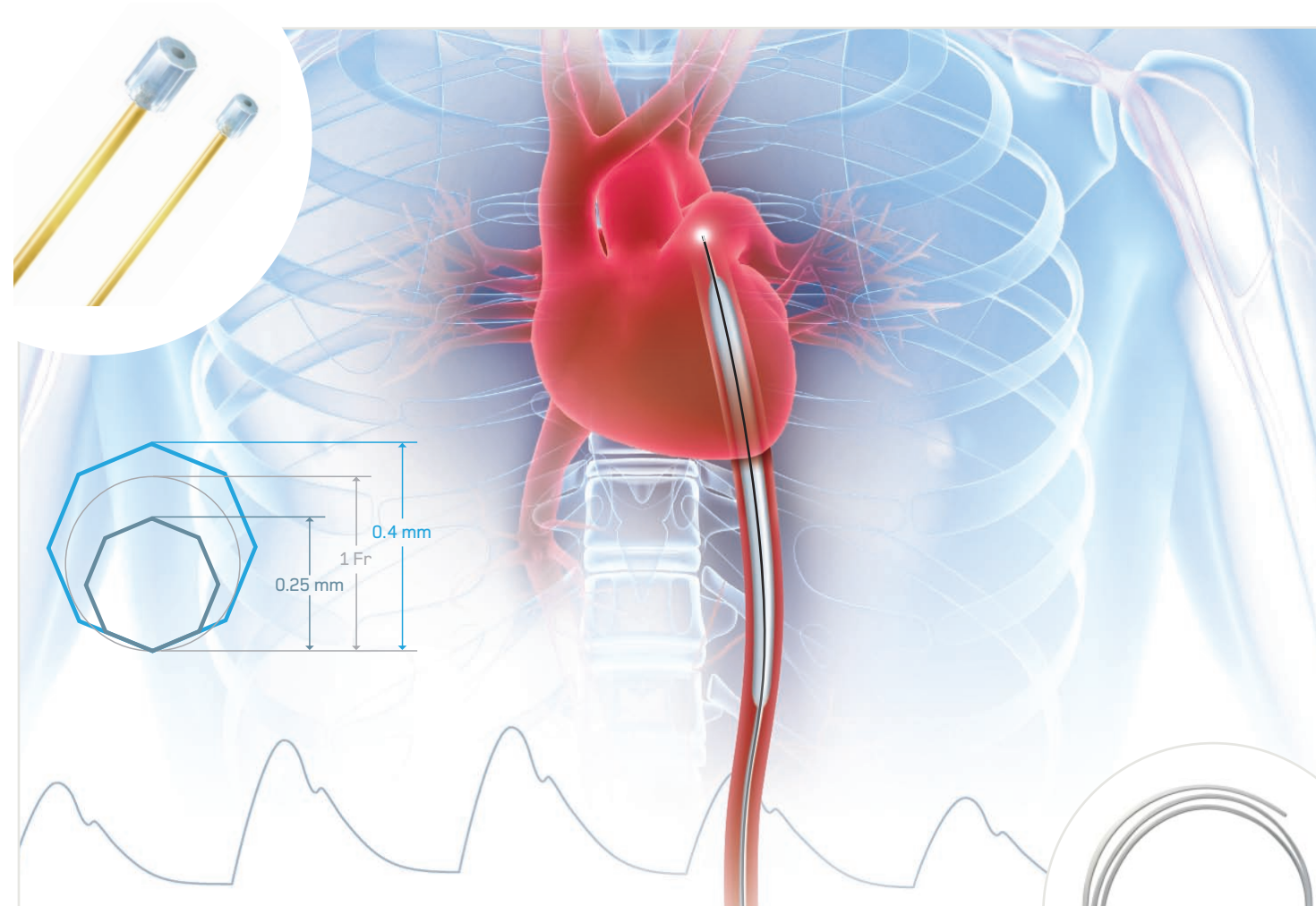
SENSOR SPECIFICATIONS	OPP-M25	OPP-M40
Dimension	0.25mm OD	0.40mm OD
Pressure range	-50 to +300 mmHg	-50 to +300 mmHg
Precision	±2 mmHg	±1 mmHg
Resolution	0.5 mmHg	0.2 mmHg
Thermal shift	< 0.3 mmHg/°C	< 0.15 mmHg/°C
Moisture drift	< 3 mmHg	< 4 mmHg
EM/RF/MR/MW	Complete immunity	

Robust Packaging For Easy Integration

Opsens also offers packaged sensor for our partners who seek for **minimal R&D and integration effort** in their product development phase.

The packaging provides the required protection to the OPP-M sensor and gives our partners additional flexibility in deploying the sensor with their project. **Development efforts are greatly reduced with these package sensors making them quicker to setup and use; easier to integrate into OEM manufacturing environment.**

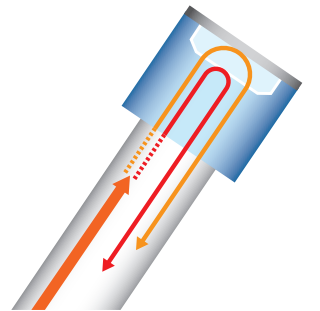
Sensor encapsulation can be done on the sensor tip and/or throughout the optical cable length. Different packaging are available taking into consideration biocompatibility, sterilization methods, stiffness, operating environment and safety requirements.



Added Values

Smallest MEMS Based Optical Pressure Sensor

OPP-M25 is the smallest MEMS based fiber optic pressure sensor available in the market. With its compact size, it can now satisfy applications where size truly matters.



Reliable Pressure Measurement

As a consequence of our system utmost reliability, Opsens OPP-M fiber optic pressure transducers are interchangeable among Opsens signal conditioners without changes in pressure measurements.

Minimal Thermal Shift and Moisture Drift

Through Opsens unique design and manufacturing process, Opsens' OPP-M sensor resolved the problems related to temperature shift and moisture induced drift.

Sensor Robustness

Opsens OPP-M unique design provides high tensile and pull strength that surpasses industry general product robustness requirements.

Optimal Sensor Packaging

Opsens' skill and knowledge in fiber optic pressure sensor ensure an optimal package design without adding any packaging induced stress. Our packaged sensor shows little degradation in the performance characteristics of the original OPP-M pressure sensor. The much-needed characteristics of repeatability, linearity, low hysteresis, temperature independency are preserved. Opsens works continuously with its partners to achieve the best sensor packaging for their their final product.

Fitting Product Design to Production Efficiency

Opsens steers the product design to connect with process engineering to ensure optimal DFM, delivering reliable products at competitive prices to the market.

Typical Applications

- Cardiovascular application
- Intracranial pressure
- Intrauterine pressure
- Intervertebral disc pressure
- Urodynamic pressure
- Compartment pressure
- Intraocular pressure
- Catheter research
- Guidewire design
- Preclinical research activities
- Pressure measurement under electro-surgery, MRI and MW/RF fields