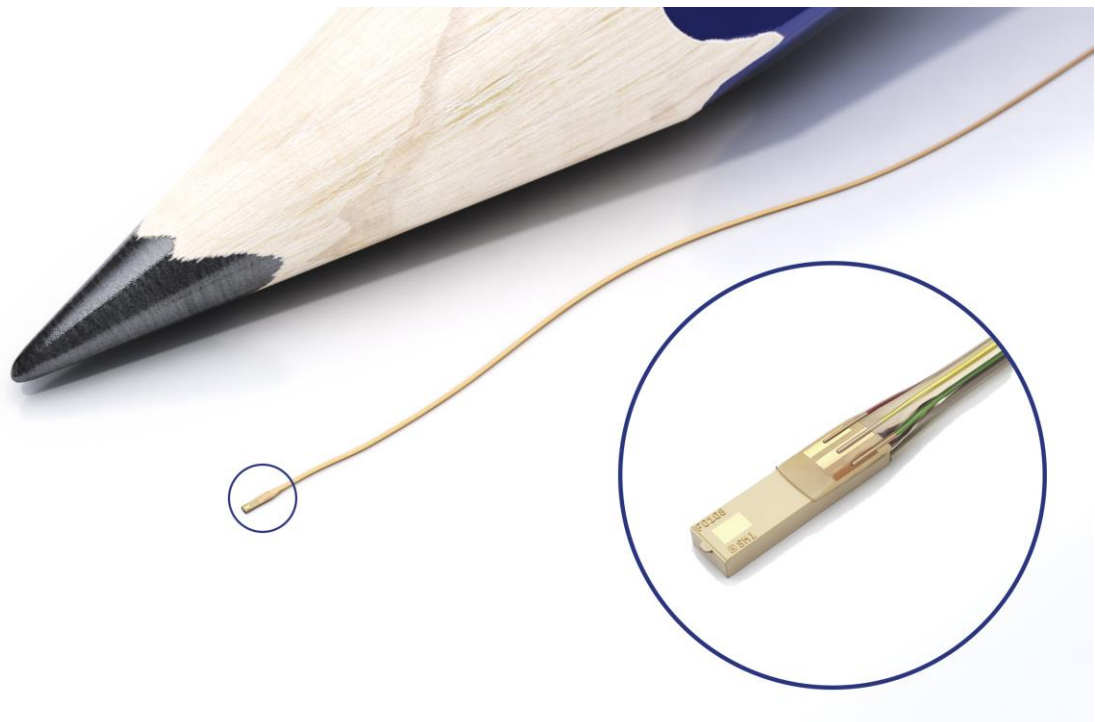




# IntraSense – world's smallest in-vivo pressure sensor for catheter

**AMSYS GmbH & Co. KG**, November 2021 - With the IntraSense, AMSYS presents the smallest in-vivo pressure sensor for integration into catheters with only 1 French diameter. Measuring only  $750\text{ }\mu\text{m} \times 220\text{ }\mu\text{m} \times 75\text{ }\mu\text{m}$ , the sensor already has a highly flexible, fully protected cable connected for ease of use. The sensor is designed to operate in air and saline fluids such as blood, cerebrospinal fluid or urine. This makes it suitable for use in arteriosclerosis and urology, as well as brain and eye surgeries.



The absolute pressure sensor provides accurate and stable values in the range of -300 mmHg to +500 mmHg, which is of interest for clinical operation. The range can also be adjusted for special applications. The IntraSense SMI-1B is also available as a light-shielded version. Due to the opaque coating, this sensor is also suitable for applications with built-in illumination, as in endoscopes. The sensors are available with an open cable end or with a PCB and pin contacts as well as 60 cm or 180 cm cable length.

An evaluation kit is available for easy commissioning of the IntraSense. The pressure and temperature signals of the sensor can be easily read out via the free open-source Arduino software after connecting the evaluation board to a USB interface. The evaluation kit with several sensors is available with two cable lengths (60 cm and 180 cm) in the normal as well as light-protected version.

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## Metadata

### Title

**IntraSense – world's smallest in-vivo pressure sensor for catheter**

### Excellent features

- 1-French diameter
- Dimensions: 750µm × 220µm × 75µm
- Pressure range: -300 to +500 mmHg (customizable)
- Cable already assembled; custom length
- Available with light protection for endoscopic applications
- Nonlinearity typ. +/-0,07%FS
- Evaluation Kit with Arduino-software available for easy prototyping

### Applications

- Embolization
- Atrial Ablation
- Atherectomy
- Resuscitative Balloon
- Occlusion of the Aorta
- Thermodilution
- Microvascular Obstruction
- Endoscopy
- Intracranial Pressure
- Fractional Flow Reserve (FFR)
- Reproductive Health
- Aortic Control
- Compartment Syndrome
- Endourology
- Glaucoma
- Cochlear Implant

## Company

**AMSYS** GmbH & Co. KG is a medium-sized company based in Germany and has focused on the field of sensor technology since its foundation. As a distributor for sensors, AMSYS is one of the specialists in pressure measurement technology on the German-speaking market.

AMSYS' product range extends from piezoresistive pressure sensing elements, simple SMD mountable transducers, amplified/unamplified and matched OEM sensors, PCB modules, to ready-to-use pressure transmitters.

AMSYS offers sensors and pressure cells in the pressure range from 1.25 mbar up to 800 bar. In addition to a wide variety of pressure sensor types, AMSYS also offers OEM humidity sensors, temperature and inclination sensors, and wireless Bluetooth solutions.

Due to the technical competence of the employees and the good contact to the suppliers, customer-specific modifications of the standard products can also be offered, which allows individual problem solutions. Further information can be found at [www.amsys-sensor.com](http://www.amsys-sensor.com).



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## **Offered materials**

Article (pdf), article (Word), photo (jpg)