Subsea Integrity Monitoring
For improved integrity control and cost reduction

4Subsea’s portfolio of autonomous subsea sensors is developed to reduce cost and improve integrity control of ageing assets. Autonomous monitoring solutions allow for continuous integrity monitoring of subsea assets, enabling increased ROV inspection intervals up to 5 years.

Products in the Smart Monitoring Sensors (SMS) range are SMS Gyro™, SMS Vibration™, SMS Strain™, SMS Magic Hand™, SMS Satellite™, and SMS Microcontroller™ OEM. Technology applications include monitoring of wellhead integrity, risers, mooring lines, subsea spools and manifolds, as well as monitoring of pipelines and subsea structures.

KEY BENEFITS
• Reduces cost of ROV inspections
• Improves integrity control
• Allows for integrated operations on brownfield assets
• Sensors are autonomous, robust, and field proven with 5-year battery life
• Enables continuous monitoring at up to 10 Hz for 5 years
• Includes data processing within sensors to assess integrity status
• Allows for wireless data transfer from subsea to shore
Sensor Technologies
- Defense grade gyro measuring motions
- Strain and curvature (<1µ)
- Pressure
- Temperature
- Leak detection (liquids and gas)

Sensor Communication Alternatives
- Satellite communication (float up device)
- Acoustics to installation, surface buoy, or surface AV
- High bandwidth wireless ROV communication
- Cables and plug-in to any existing infrastructure

Sensor Specifications
- Modular and highly customizable design
- Typical dimensions: Height: <500mm - Diameter: ≈130mm - Weight: ≈12kg
- Pressure rating 3000m water depth
- ROV installable and retrievable
- Designed for retrofit installation on subsea assets
- Design life: 25 years
- Operational life: 5 years continuous operation
- Field proven concept ≈100 000 hours of monitoring

Click [here](#) to watch Smart Monitoring Sensors demonstration video.

4Subsea is a Norwegian technology company specialised in production riser systems and subsea well systems. We deliver solutions to maintain production from subsea oil and gas fields, enabling cost reduction and increased service life of existing installations. We also provide our specialist services within offshore wind turbines and wave power systems.

4Subsea combines expert knowledge and practical experience with software and instrumentation to optimise operation of production risers and subsea wells, aiming to be in the forefront of digitising the oil and gas industry.

The company was established in 2007, and clients include all the major oil and gas operators as well as the large suppliers of subsea equipment. 4Subsea has offices in Oslo, Bergen, Kristiansand, and Trondheim.

4Subsea - Share ideas, move forward

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