

# Listen



KONGSBERG

## Efficient subsea inspection

Listen is a passive electrode- and magnetometer system for electric- and magnetic field measurements in sea water. The system is modular and can be implemented into various underwater vehicles. Listen is perfect for inspection of subsea cathodic protection systems, positioning of buried power cables and marine mineral exploration.

### Contactless Surveys for Enhanced Safety and Efficiency

Listen's innovative design allows operators to perform detailed CP surveys without the need for physical contact with the pipeline, reducing operational risk and survey time. The Listen system design also allow for accurate and efficient Marine mineral exploration and positioning of active buried cables. The system's robust electronics and advanced noise suppression techniques ensure reliable performance, even in environments with significant electromagnetic interference. By combining Listen data with high-resolution image and sonar data, decision ready information are obtained.

### Proven Reliability and Repeatability

The system's proven reliability and repeatability have been demonstrated in field tests, where multiple survey runs produced consistent results with high signal-to-noise ratios. This level of precision makes Listen an ideal choice for operators seeking to safeguard pipeline assets and optimise maintenance strategies. The Listen sensor system also enables for delineation of marine mineral deposits as well as accurate burial depth estimation of buried cables.



## TECHNICAL SPECIFICATIONS

### Electrode receiver system

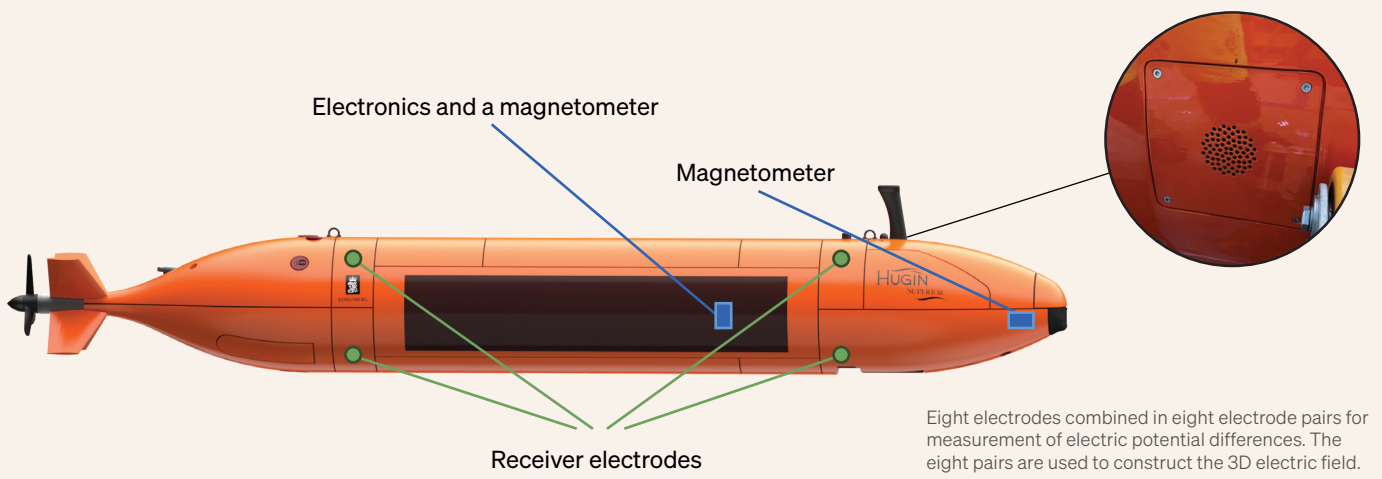
- Frequency range < 120 Hz
- Dynamic range:  $10^{-8}$  –  $10^{-1}$  V/m
- Noise/Sensitivity:  $0.1 \cdot 10^{-6}$  V/m
- Depth rating: 6000 m
- Hull flush mounted electrodes on AUVs
- 24 V power
- 100 Mbit ethernet

### Magnetometers

- Frequency range < 80 Hz
- Dynamic range:  $\pm 65000$  nT
- Noise/Sensitivity:  $\pm 0.5$  nT
- Depth rating: 6000 m

## BENEFITS

- Efficient inspection of cables and pipelines, both buried and on seafloor
- Rapid estimation of cathodic protection status and remaining lifetime
- Simultaneous data acquisition with other sensors
- Complete characterisation through integration of all sensor data
- Faster project turnaround providing safer operations with lower HSE risk
- Accurate and high-quality data with low noise levels
- The system is modular and can be installed on a variety of underwater platforms

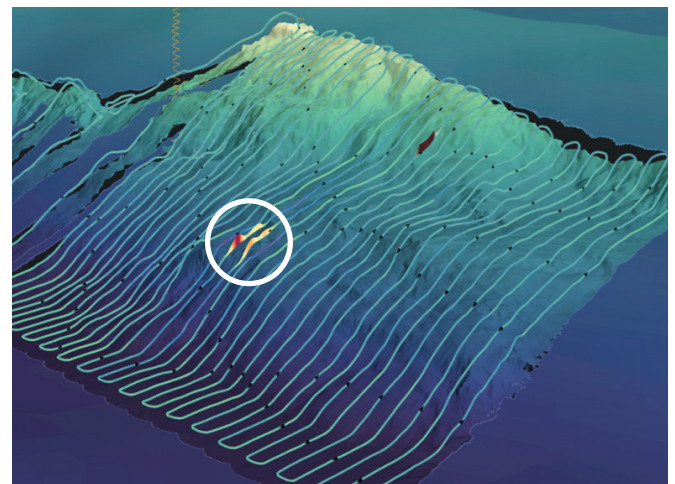


## Applications

### Cathodic protection measurements and analysis

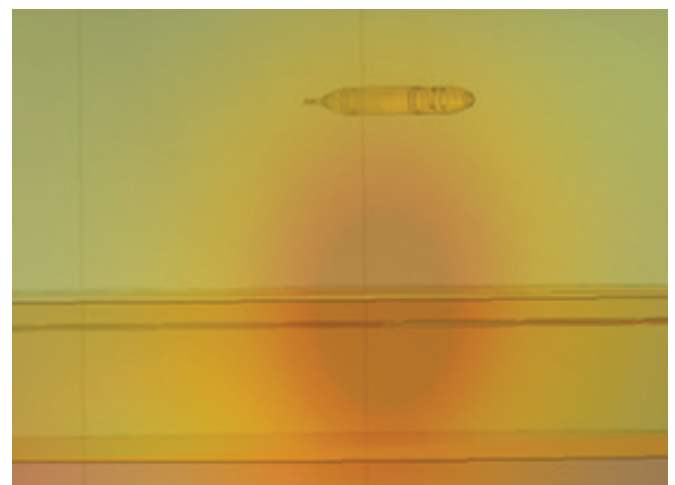


### Marine mineral exploration



Circled area: An identified SMS SP anomaly.

### Buried cable positioning



Magnetic field from the buried cable.

Specifications subject to change without any further notice.