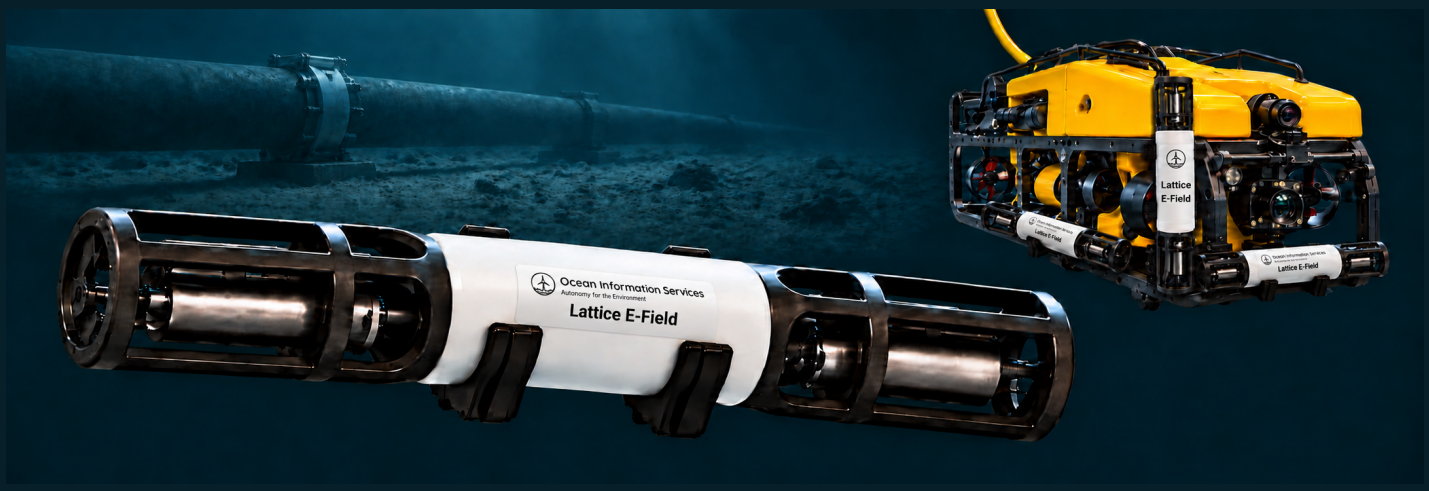
Ocean Information Services
Autonomy for the Environment

Lattice E-Field

Reduce risk. Reduce cost.

Corrosion inspection for offshore energy and subsea infrastructure



E-field (Field Gradient) Inspection

E-field monitoring, also known as field gradient surveying, is an established method used in subsea cathodic protection surveys. It measures voltage gradients caused by current flowing between anodes and steel, helping identify suspected anode failures and high current output that can accelerate depletion.

Risk-based inspection and maintenance

Identify corrosion protection problems early to reduce the risk of emissions, shutdowns and costly repairs. Use E-field findings to inform inspection and maintenance schedules, extend asset life and track changes between corrosion campaigns.

Lattice E-Field for ROV inspections

Lattice E-Field brings this established method to inspection class ROVs in a compact, neutrally buoyant device. Record non-contact measurements alongside sonar, visual inspection and proximity CP on pipelines, subsea structures and submerged steelwork at ports, jetties and harbours.

Exposed and buried pipeline CP

Collect E-field measurements over exposed and buried pipelines without contacting the steel. Measurements help locate active anodes and investigate protection where the pipeline cannot be seen. Add E-field to planned campaigns to focus follow-up work and reduce unnecessary intervention.

Offshore ROV deployments in Norway and the UK.

Purchase or rental: brendan@oceaninfoservices.com
oceaninfoservices.com/lattice-e-field/

Supplied kit



Technical specifications

Measurement	Single axis, Ag/AgCl pair, approx. 0.5 m baseline.
Signal	Noise floor 4 µV/m RMS. Range ±180 mV/m.
Sampling	2–800 samples/s. Default 10 samples/s.
Dimensions and weight	512 mm overall length × Ø70 mm housing. Approx. 3 kg in air. Neutral in water. POM-C.
Depth rating	1,000 m standard. 3,000 m option.
Power	Nominal 24 V DC. <1 W per device.
Interface	Ethernet via ROV MUX. 2 m unterminated whip. Each device needs its own power/Ethernet connection. Isolated power and communications.
Data logging	Continuous PC logging of raw and processed CSV with JSON metadata. Ethernet link required.

Modular solution

Each device measures one axis. Use two perpendicular devices for two components or three for X, Y and Z. One spare device can replace any axis, reducing the number of spares needed offshore. Match device timing, positions and alignment, and combine readings with ROV position and attitude data.

Lattice MARS Console is preinstalled on the controller, with live Scan and Localise views, alerts, event marking and serial output to inspection data systems.

Interpretation using conductivity, geometry and anode information supports estimates of current output and depletion rate.

No moving parts. Replaceable electrode assemblies simplify offshore maintenance. Factory test certificate and manual included. Training, installation help and specialist interpretation available.