Lattice E-Field

Non-contact electric-field surveys
for inspection ROVs

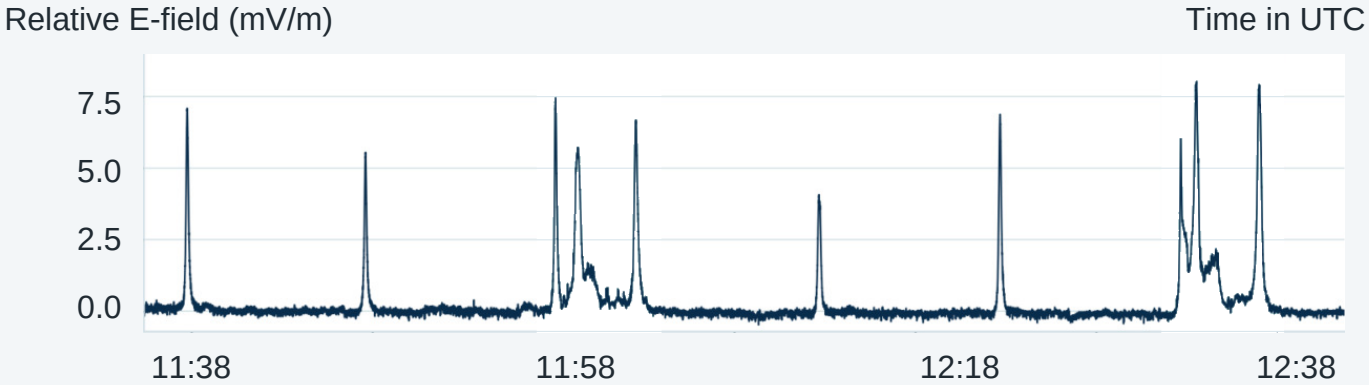


Assess anode performance and locate coating holidays

Assess anode output and coating condition on exposed and buried pipelines. Add electric-field measurements to routine ROV inspections to target contact CP checks.

4 µV/m RMS noise floor 1,000 m standard | 3,000 m option

Electric-field response during pipeline inspection



Active anodes release protective current into seawater. The peaks show changes in the resulting electric field measured as the ROV surveys the pipeline.

Comparing responses at a consistent survey distance and orientation helps identify inactive anodes and anodes supplying more protective current. It also helps locate coating holidays: damaged or missing coating where exposed steel draws protective current. Contact CP readings establish whether the steel is adequately protected.

info@oceaninfoservices.com
Tel: +44 20 4549 9299 Mobile: +44 7801 063450

Specifications and integration

Mk2 | ROV-powered configuration | Per-device values

Parameter	Specification
Measurement	Single-axis electric field. Replaceable Ag/AgCl electrode pair.
Noise floor	4 µV/m RMS.
Measurement range	±180 mV/m.
Sampling	2-800 samples/s, configurable; default 10 samples/s.
Depth rating	1,000 m standard; 3,000 m variant option.
Size / housing	512 × Ø70 mm; POM-C pressure housing.
Mass / buoyancy	3 kg in air; neutrally buoyant in water.
Power	Nominal 24 V DC; less than 1.5 W per device.
ROV interface	Ethernet via ROV MUX. 2 m unterminated power/data whip; separate connection for each device.
Electrical isolation	Galvanically isolated power and communications.
Software	Lattice MARS Console: live Scan and Localise displays, event marking and review.
Recording / export	Continuous logging on connected PC. Raw and processed CSV plus JSON settings and metadata. Ethernet link required; no internal logging.

Multi-axis options

Each Lattice E-Field device measures the electric field along one axis.

One axis suits controlled surveys where the measurement direction is known and the device’s orientation remains consistent.

Two devices mounted at right angles measure two field components. For pipeline surveys, these can be aligned along the pipeline and vertically.

Three devices mounted in perpendicular directions measure all three field components. This suits complex structures and surveys where the field direction changes.

Supplied system and options

The system includes three Lattice E-Field devices, a controller with Lattice MARS Console, connection cables, mounting standoffs and a transport case. A factory test certificate and operating manual are supplied.

Use all three devices for three-axis measurement, or deploy one or two and retain the remaining devices as spares. A second complete system can be supplied where full system redundancy is required.

info@oceaninfoservices.com
Tel: +44 20 4549 9299 Mobile: +44 7801 063450