ELISTECH
GEOMEMBRANE LEAK DETECTION

eDipole

Datasheet EU 14/10/2025

Product description

The eDipole is a professional system designed for geomembrane leak detection using the Electrical Leak Location (ELL) dipole method. It fully complies with ASTM D7007-16 and ASTM D8265-21, integrating RTK GPS for precise georeferenced measurements. The system provides real-time data visualization, automatic logging, and seamless GIS export, making it an essential tool for landfill, mining, and water reservoir applications.

Dipole method

The dipole method uses the electrical insulation properties of geomembrane materials to identify and locate faults. An electrical charge from the eSource 360 is passed into the soil or sand cover. If faults are present, the charge passes through the defect to a grounding electrode, generating a signature identifiable by a qualified technician. This enables reliable localisation and full profiling of membrane integrity.

Key features

1. Advanced RTK precision

Equipped with RTK GPS tracking for survey accuracy up to 2 cm, ensuring highly reliable results.

2. Superior leak detection sensitivity

Short probe spacing combined with ELIS electrode covers enables detection of even the smallest leaks on covered geomembranes.

3. High survey efficiency

Capable of surveying up to 10,000 m² per day, ideal for large-scale inspection projects.

4. Superb data collection & reporting

Features a live voltage graph, reliable data logger, and seamless XML file export for effortless data processing.

5. User-friendly operation

Large display, external trigger device, and audible alarms make field use straightforward and efficient.

6. ASTM standard compliance

Fully compatible with ASTM D8265-21 and ASTM D7007-16, meeting rigorous industry standards. of even the smallest leaks on covered geomembranes.

Differences between versions

PRO

Basic eDipole is the standard version of the device with no GPS coordinate recording.

PRO RTK

Fully equipped eDipole with RTK antennas for highly accurate GPS coordinate recording, achieving up to 5 cm precision. Compliant with ASTM standards.

Application areas

Landfills

- Inspection of landfill liner integrity to prevent leaks and environmental contamination. Ideal for seams, penetrations, and critical areas.

Tailings

- Monitoring of mining tailings dams to detect potential breaches and weak points. Enables preventive maintenance and structural safety.

Reservoirs

- Assessment of water reservoirs and lagoons for leaks. Easy inspection of inlets, edges, and hard-to-reach areas.

Containment

- Testing of industrial containment facilities to prevent chemical leaks and structural damage. Ensures safety and compliance with regulations.

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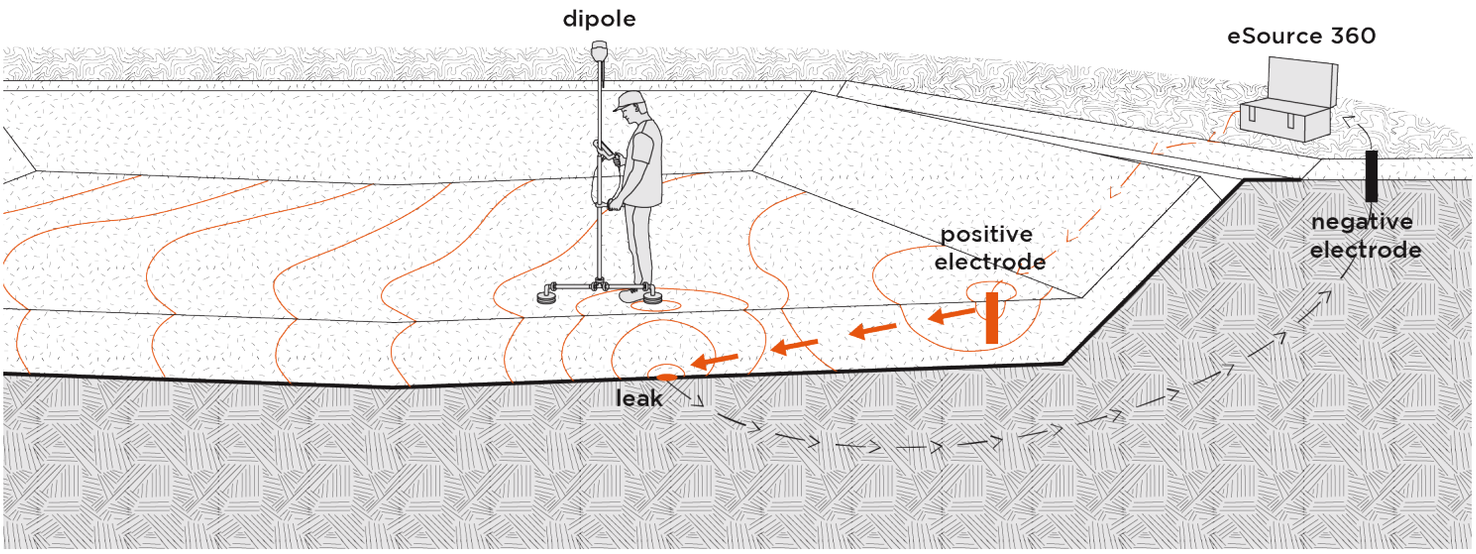

Technical specifications

• **Name**	eDipole PRO and PRO RTK
• **Weight (device)**	-
• **Dimensions (device)**	-
• **Power supply**	12-24 V DC
• **Battery life (single charge)**	10 - 12h
• **Battery type**	Li-Ion battery pack
• **USB-C charging**	Yes
• **Fast charging**	Yes
• **Positioning system**	RTK GPS (multiple-band GNSS)
• **GPS accuracy**	Up to 5 cm
• **Connectivity**	USB-C, Bluetooth
• **Data storage**	4 GB
• **Data logging**	CSV / XLS / KML export
• **Display**	5” rugged screen
• **Operating temperature**	-20°C to +55°C

Kit contents

	Name	Quantity
eDipole PRO	• eDipole survey probes with datalogger	2
	• High-sensitivity electrodes	4
	• Cover foams	4
	• Artificial leak	1
	• eCable 150	2
	• eSource 360	1
	• Trigger	2
	• USB-C charger	2
	• USB-C heavy-duty cable	2
	• Extra carrying handle	2
	• Protective case	2
eDipole PRO RTK	• Basic kit (as above)	1
	• GPS rover antennas with quicksnap connector	2
	• RTK GPS base antenna	1
	• eTripod	1

Certifications and approvals

- **ASTM Standards:**
  D7007-16
  D8265-21
- **CE Approved**
- **RoHS Compliant**

Packaging dimensions and weight

- **eDipole PRO:** - mm x - mm x - mm - g
- **eDipole PRO RTK:** - mm x - mm x - mm - g

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