



DRONE VOLT

LINEDRONE

A REVOLUTION IN POWER LINE INSPECTION AND MAINTENANCE

www.dronevolt.com

The ultimate solution for **Power Line Inspection**

With the support of Hydro-Québec, Canada's largest producer of electricity and one of the world's largest producers of hydroelectricity, DRONE VOLT has developed an industrial drone, designed to land on and inspect energized transmission lines.

When used on high-voltage lines in operation, it enables highly accurate measurements of electrical resistance across splices and the corrosion degradation process of ACSR conductors. Its simple deployment allows for inspections over hard-to-access sections whilst limiting human risks and without greenhouse gas emissions.

The LineDrone thus provides grid operators with reliable data for better analysis of technical risks, optimisation of investments and prioritisation of work on lines requiring intervention.

A line with deteriorated splices or corroded conductors will be more likely to eventually fail, a risk that large networks must manage in conjunction with the ageing of the installed assets, and their consideration for line uprating projects.



Hybrid - Flying and rolling

Lands on an active line and moves along thanks to a motorized rolling system.

Robust

Resists electromagnetic fields induced by voltages up to 315kV.

Piloting assistance

Its architecture allows an excellent flight stability and resistance, no matter the payload it carries.

Benefits

Avoidance of power outages

Precision data for line risk management & uprating projects

Limitation of human risks

Reduction of greenhouse gases



[Learn more](#)



[Videos](#)

Dedicated **sensors** NUCLEOM



LINEO1-HM

Electrical resistance measurement

Electrical resistance calculation of splice, prevents yield losses and risks of breakage.

Off and On power operations, with a **a minimum current of 2.5 Amps** (transit and/or capacitive)

Assured electrical contact with the conductor

No need to clean or brush the line to get reliable results

Uniformity and repeatability of results

User interface integrated into the ground station

Lightweight and accurate device



LINECORE

Corrosion evaluation

Real time evaluation of zinc layer thickness of the conductor

Quantification and qualification of residual zinc thickness

Off and On power operations:
aucune interruption de service
(Operating voltage up to 315kV / 400A)

Operation and data analysis software

Consistency and repeatability of results independent of the carrier

Ability to pass over splices



Technical specifications

Weight (inc. batteries)	19kg (42 lbs)
Dimensions	135 cm x 135 cm x 110 cm (53,1" x 53,1" x 43,3")
Resistance	Voltage : up to 315 kV Electrical : up to 2000 A
Max. operating time	Fly & Inspect : up to 2 h
Max. payload weight	Up to 2 kg (4,4 lbs excluding sensor)
On-board camera	Sensor position validation camera (720 p)
Electromagnetic compatibility	Tested up to 315 kV
Wind resistance	20 km/h (12 mph) and 40 km/h (24 mph) wind gusts
Software	LineDrone Station
Propulsion	8 motors T-Motors

Specifications on conductor

Travel speed on conductor	Varies from 1,6 m/s (5,2 ft/s) to 2 m/s (6,5 ft/s)
Voltage resistance	Up to 315 kV
Electrical resistance	Up to 2000 A
Positioning accuracy	+/- 1 cm (0,4 inch)
Diameter of the element on which the linedrone rolls	10 mm to 70 mm (0,4 inch to 2,7 inch)
Max. crossable splice diameter	70 mm (2,7 inch)
Conductor tilt	15°

14, rue de la Perdrix, Lot 201
93420 Villepinte, France

+33 (0)1 80 89 44 44
contact@dronevolt.com

www.dronevolt.com

Member of :
GICAT
cigre



Our drones are based on more sustainable electrical technology. They generate 0% CO₂ in use, and thus help reduce the environmental impact of our partners.