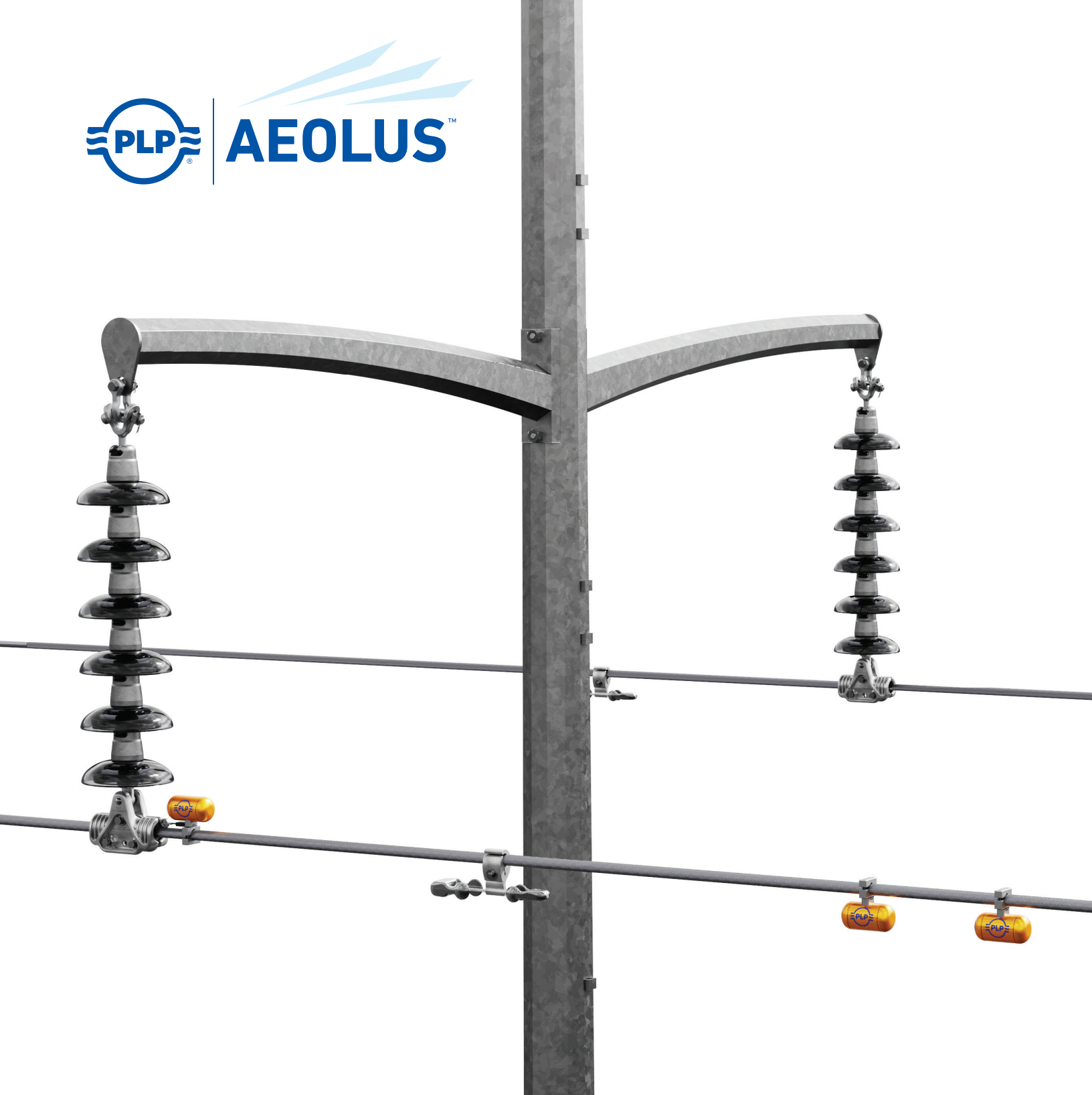




AEOLUS™



AEOLUS™ LINE MONITORING

THE WORLD'S MOST ADVANCED SYSTEM FOR MEASURING
AND ANALYZING WIND-INDUCED CONDUCTOR MOTION



AEOLUS™ LINE MONITORING

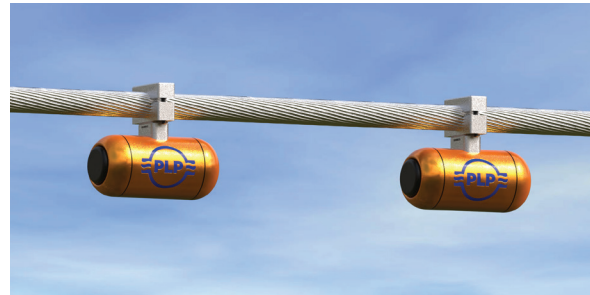
Aeolus is a revolutionary new field testing solution that enables line engineers and electric utilities to monitor and analyze wind-induced conductor motion on overhead lines - empowering individuals to delve deeper into the mechanical behavior of overhead conductors and associated transmission line hardware like never before.

Whether assessing newly installed damping systems or investigating line failures, engineers can now gain valuable insights into the dynamic forces of real-world conductor motion in near real-time from anywhere in the world.

Next-Generation Sensor Nodes

Multiple lightweight sensor nodes installed on a transmission line span accurately detect and measure all forms of wind-induced conductor motion, including:

- **Aeolian Vibration**
 - Bending amplitude measured at 89 mm (IEEE standard 1368)
 - Antinode amplitude - frequency (fymax)
 - Damping efficiency
- **High-Amplitude Conductor Motion**
 - Galloping
 - Wake-induced motion
 - Subspan oscillation
 - Ice shedding
 - Conductor sway / Wind gust response



Wireless Data Hub and Weather Station

Data collected from the sensor nodes is seamlessly transferred to a structure-mounted data hub.

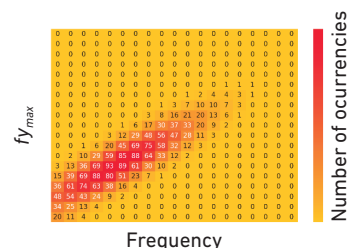
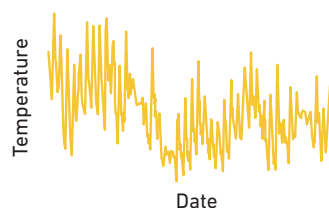
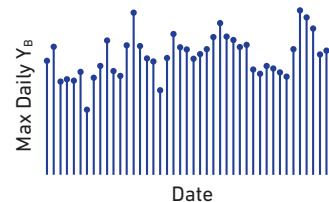
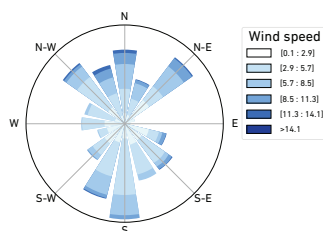
- Time-domain data from sensor nodes is synchronized and wirelessly transmitted to the Aeolus data hub before being automatically transferred to secure cloud storage by cellular communications
- Data hub is powered by solar and wind energy and utilizes intelligent lithium iron phosphate batteries
- Multiple wireless weather stations can be deployed simultaneously to accurately monitor local environmental conditions



Web-Based User Interface

A comprehensive and easy-to-navigate user interface provides clients with immediate access to a continuous stream of near real-time data and analytics from anywhere in the world.

- Remote access to sensor data
- Comprehensive analytical tools
- Retrieval of raw time-domain data
- Integration of user-defined data processing scripts
- User-defined alerts
- Remote sensor configuration



SYSTEM SPECIFICATIONS

Model H2121	
Autonomy	Sensor Nodes: 12 months Data Hub: Self-powered
Sync Accuracy	< 1 ms
Weight	Sensor Nodes: 500 g (ea) Data Hub: 10 kg
Operating Temperature	Ambient: -40°C to 50°C Conductor: -40°C to 220°C
Sampling Frequency	Sensor Nodes: 200 Hz – 1000 Hz Weather Station: 1 Hz
Communication Frequencies	Sensor Nodes: 868/915 MHz Cellular: 3G/4G/LTE/5G
Power Source	Sensor Nodes: Primary lithium battery Data Hub: Solar/Wind
Acquisition Triggers	Time; Acceleration; Wind



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