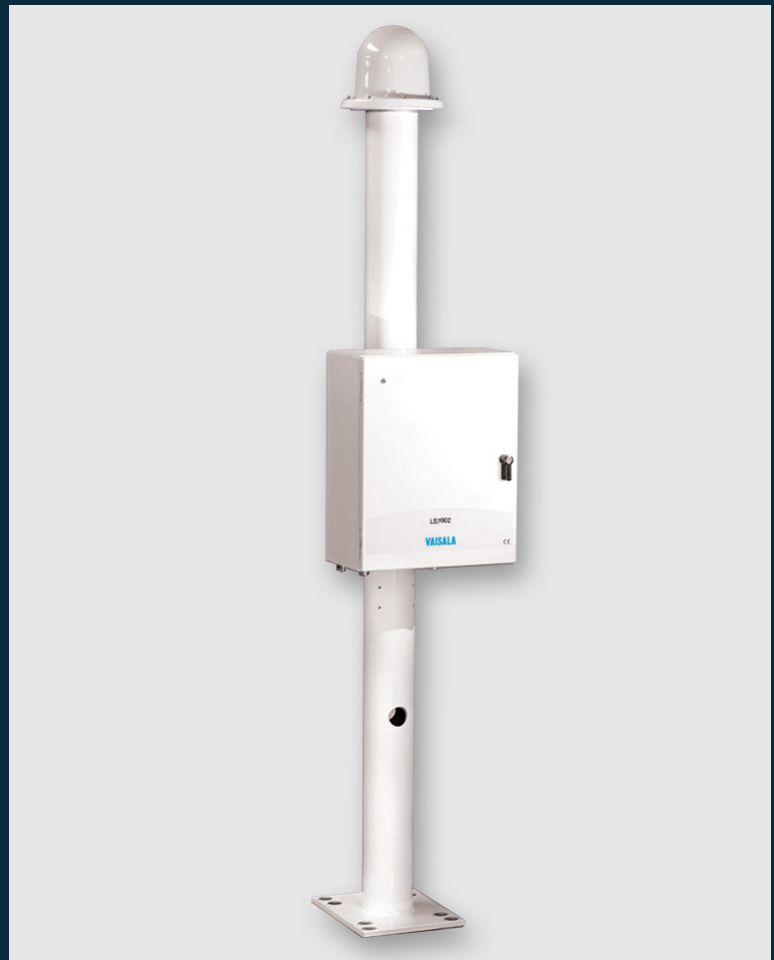# Advanced Lightning™ Sensor LS7002

Product Spotlight

VAISALA

Providing trusted weather observations for a sustainable future

Precision lightning geolocation technology that delivers more complete real-time data

A lightning detection network is only as good as the sensors it's built around. The Advanced Lightning™ Sensor LS7002 captures the most comprehensive lightning data for the most accurate and reliable real-time weather monitoring solutions. Get the most reliable information possible, especially when severe weather and lightning are a threat.

Key benefits

Comprehensive lightning detection that includes type classification, amplitude, polarity, location, and waveform features.

Exceptional data capture with up to 95% network detection efficiency for cloud-to-ground lightning and better than 50% network detection efficiency for cloud lightning.

Real-time data delivery with minimized latency and raw sensor data generation capabilities to support offline reprocessing and archiving needs.

At-sensor data buffering for data confidence and redundancy in case of communication failure between sensor and central processor.

Why Vaisala?

As the global leader in weather and environmental measurements, Vaisala provides trusted weather observations for a sustainable future. With over 85 years of experience and customers in 170+ countries, from the North and South Poles to Mars, we help provide the most reliable and accurate weather and climate information for better and safer daily lives.

Our instruments and intelligence are known as the gold standard for precision and reliability. As a sustainability leader we enable meteorology professionals to better understand, forecast and explain climate change. We continue to channel our curiosity into climate action and new ways of enabling a better planet for all.

Vaisala LS7002 sensors use a combination of magnetic direction finding and time-of-arrival techniques to detect both cloud lightning pulses and cloud-to-ground lightning strokes. They provide a comprehensive view of lightning activity within a storm and capture broad data sets for making well-informed decisions.

The LS7002 is not only the most cost-effective network-based lightning detection solution, it's extremely powerful sensing capabilities mean sensors can be positioned up to 350km apart. This translates to superior detection efficiency, optimal location accuracy, and system redundancy — all from a fewer number of sensors. Be better informed with this powerful technology offering high accuracy, reliability, ease of installation, and ease of maintenance.

Applications:

- Establishing early warning systems to alert people about hazardous weather conditions and potential for lightning threat
- Providing critical information for utility companies and telecoms for storm preparation and system reliability support
- Generating reliable data for meteorological modeling, hazardous weather forecasting, and emergency management
- Supporting operational safety while maximizing productivity for aviation and maritime operations
- Prioritizing resource deployment in the first moments of incident to speed containment and limit property damage

vaisala.com/meteorology