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INDUSTRIAL PRODUCT DATASHEET

RS485 Industrial Lightning Detection Sensor, Modbus RTU, Strike count, Energy of Strike, Lightning distance estimation

The Industrial Lightning Detection Sensor is an IP68 lightning detection sensor that detects cloud-to-cloud, intra-cloud, and cloud-to-ground discharges, estimates lightning distance up to 40 km, and reports strike count, energy,...

SKU	UPDATED	PRICE
100092529	2026-11-11 09:26:58	$99.00(Excl. VAT)



Overview



The Industrial Lightning Detection Sensor is an IP68 lightning detection sensor that detects cloud-to-cloud, intra-cloud, and cloud-to-ground discharges, estimates lightning distance up to 40 km, and reports strike count, energy, noise, and disturber count. Featuring an RS485 Modbus RTU interface, 5–28 V DC input, and a -40 to 80°C operating range, it is ideal for weather monitoring and industrial safety systems.

Key Features

01

40 km Lightning Detection

Detects cloud-to-ground, cloud-to-cloud, and intra-cloud lightning activity within a radius of up to 40 km. It provides an estimated distance of the latest strike, helping users monitor nearby thunderstorm activity and judge whether a storm front is approaching or moving away.

02

Comprehensive Lightning Data

Provides real-time lightning activity insights including strike count since last read, latest strike distance estimation, and relative strike energy. It also records noise and disturber events to assess signal quality and environmental interference. In addition, the device supports rolling statistics over 10, 30, and 60-minute windows, along with 60-minute noise and disturber counts for trend analysis and system evaluation.

03

RS485 ModbusRTUOutput

Provides an RS485 communication interface with Modbus RTU protocol for reliable industrial data acquisition and long-distance transmission. It supports standard Modbus register access and features built-in surge protection, ensuring stable connectivity with data loggers, gateways, PLCs, and other monitoring systems.

04

Low-Power, Wide-Voltage Operation

Supports a 5 ~ 28 V DC power supply range. In RS485 mode, the device consumes less than 1.2 mA quiescent current at 12 V DC and less than 6 mA during lightning detection. The low power design makes it suitable for remote, battery powered, and solar powered monitoring systems.

05

Rugged Outdoor Protection

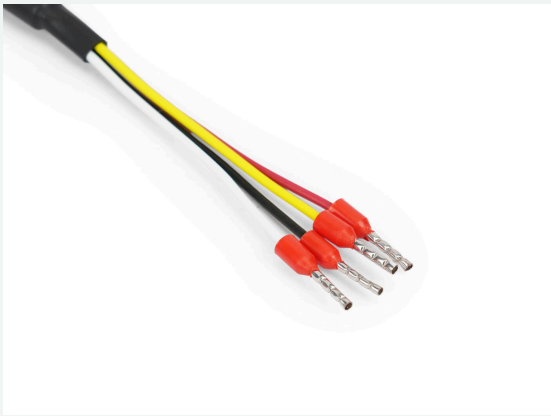
Designed for outdoor and industrial use with an IP68-rated compact wall-mount housing. It supports -40 to 80°C operation, 0-100% humidity, reverse-power protection, and built-in TVS/ESD protection for exposed field and industrial environments.

Product Gallery









Applications

- Industrial Site Storm Advisory
- Weather Station Lightning Monitoring
- Outdoor Safety Management
- Smart Agriculture Storm Warning

Resource Links

- https://www.seeedstudio.com/RS485-Industrial-Lightning-Detection-Sensor-p-6924.html
- Datasheet

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