

Info-Electronics Systems

Weather & water are our business

Info-Electronics Systems Inc. (IES) is proud to bring to Canada the latest technologies in Remote Sensing, Analysis & Weather Forecasting through the representation of state-of-the-art meteorological instrumentation companies.

Not only do we represent these firms, but we act as a prime contractor, customer liaison and provide value-added services, including project management, software development, systems integration, installation, training, testing, support and post-maintenance support as well.



Established in 2015, **Shenzhen AUTO**

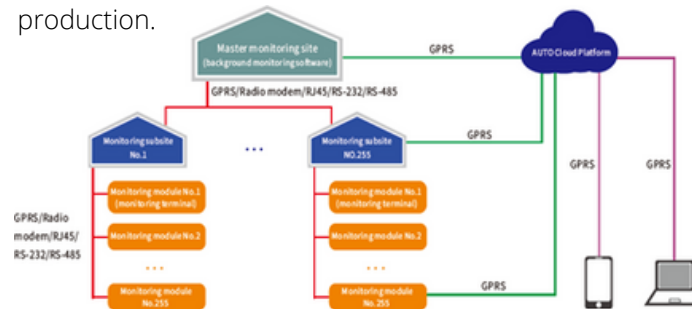
Automation Technology Co., Ltd. is a high-tech enterprise specializing in R&D, design, production, sales, installation and training of simulated lightning strike laboratory, lightning wave generator, lightning online monitoring system, Surge Protection Devices (SPD), automatic testing equipment, and lightning protection component test instrumentation.

Monitor your changing environment

A direct lightning strike can discharge a massive current causing overvoltage in a system. The strikes can cause considerable degradation on electrical components of lightning protection systems. In this document, we are introducing you to an On-line Lightning Protection Monitoring System which we provide with AUTO Automation Technology to help monitor the reliability of your networks.

On-line Lightning Monitoring System

Created by AUTO Automation to improve the safety, stability and reliability of your online system for monitoring Lightning and Surge Protection Systems/Networks. Through this online system, the working status and parameters of lightning protection facilities can be known in real-time, and the various faults generated by the equipment can be quickly informed to the staff and can be promptly responded to and handled to put an end to potential dangers of safety production.



System Highlights

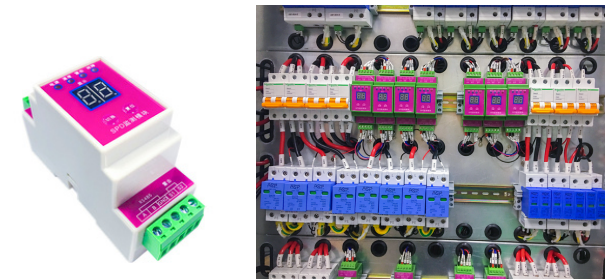
- Real-time monitoring: The system can realize remote online real-time monitoring of the working conditions of the high voltage lightning arrester, SPD, grounding resistance change trend, lightning current peak, lightning strike counting, etc. Up-to-the-second reporting of faults, real-time alarm, analysis and other functions can be realized.
- Intelligent management: Implementation of Internet of Things (IOT) and sensor technologies, logical algorithm and built-in lightning protection design can help realize automatic analysis and judgment of lightning protection devices.
- User-Friendly Design: Patent technologies ensure reliability and stability of the system with professional modules without having to do testing by professionals. The system is characterized by a user friendly interface, facilitating staff management.

System Composition

The online system for monitoring Lightning and Surge Protection consists of the following key elements:

AT4181/AT4181W/AT4181F, Four-in-one SPD intelligent monitoring module (low-voltage):

Used for monitoring the remote signaling condition of the SPD and the state of the air switch, monitoring the number of times lightning strikes and the environment temperature when the lightning strike happens as well as recording the occurrence time.



AT4181-H, High-voltage lightning arrester intelligent monitoring module:

The device can monitor the total current and resistive current of the high-voltage lightning arrester. When the lightning arrester reacts, it can precisely record the peak value of current of the lightning arrester, the current pulse duration and occurrence time of each action.



AT4182/AT4182W/AT4182F, Lightning current intelligent monitoring module:

In combination with the Rogowski coil, it can realize real-time capture of the lightning current peak, lightning current polarity, lightning strike occurrence time on the lightning rod and the overhead static cable as well as the SPD remote signaling signals, the state of air switch, the number of times lightning strikes and the environment temperature when the lightning strike happens.



AT4183/AT4183W/AT4183F, Grounding resistance intelligent monitoring module:

Captures the grounding resistance value in real-time, timely know the resistance change trend and the grounding material corrosion situation.



AT4185/AT4185W/AT4185F, Centralized controller:

Captures all the data of the intelligent monitoring modules and transmits them to the AT4181S background software.

AT4181S, Background online monitoring software:

Processes centrally all the data uploaded by the intelligent monitoring module, sends alarms to the administrator to promptly and precisely locate faults, generates trend statements, centrally displays real-time monitoring data and sets bottom limiting value and upper limiting value of the monitoring module via remote control.

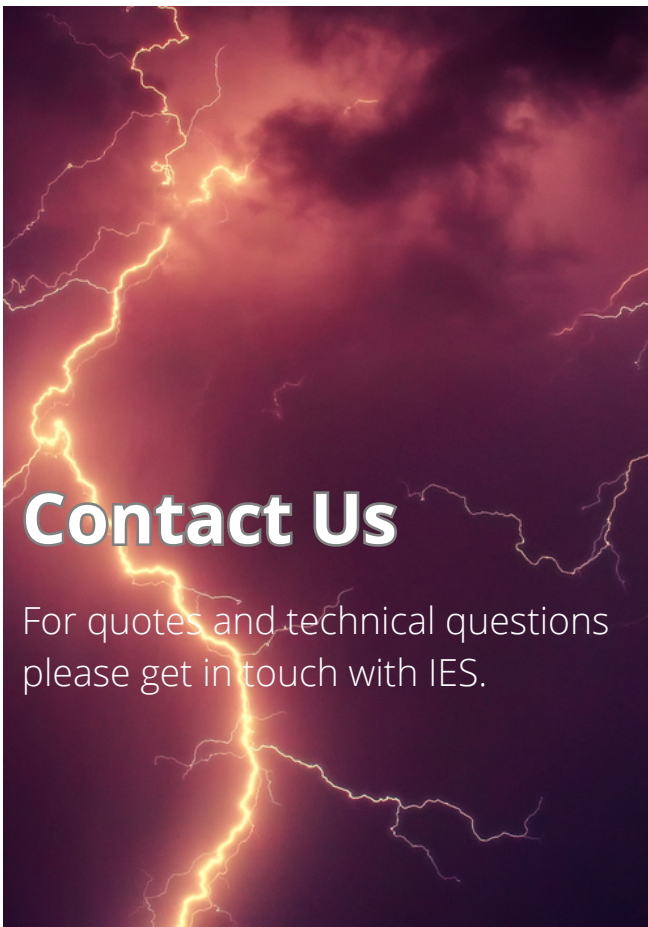
Optional Cloud monitoring platform:

Installing online monitoring software at the cloud end can facilitate management to view monitoring data in real-time via the Internet at any location around the world and take corresponding handling measures.

Conclusion

Application of this IoT-based online system for monitoring Lightning and Surge Protection Systems/Networks can enable management personnel to know in real-time: the lightning current peak, polarity and the time of the lightning strike, distinguish direct lightning strike and induction lightning at the time of lightning occurrence. In addition, management can capture data on the number of times lightning strikes which will provide enterprises with reliable data support for future maintenance.

This system can monitor the resistance of the grounding grid, capture data continuously and judge corrosion of the grounding grid through data analysis. Monitoring data can be used by companies for safety risk assessment which will assist decision makers and improve reliability standards.



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