

Application of PLC in wind power generation system

What is a wind power control system (plc)?

PLC is the core of the whole wind power control system, which not only has the function of receiving and transmitting signals, but also can process and analyse some collected signals precisely. First of all, the wind power generation control system needs to monitor the operation status and environmental conditions of the wind turbine in real time.

How can plc help a wind power system?

In addition, PLC can also implement remote troubleshooting and diagnosis of the wind turbine to improve the reliability of the system and the efficiency of protection. PLC can realise remote monitoring and management of the wind power system by connecting with the remote monitoring system.

What is a Wind Power plc soft redundancy system?

In conclusion, the wind power PLC soft redundancy system improves the reliability and stability of the system by using multiple PLC controllers and realising automatic switching. When the main controller fails, the standby controller can immediately take over control to ensure the normal operation of the wind turbine.

What is a wind power control system?

In summary, the wind power control system maximises power generation efficiency and stability by monitoring and adjusting the operating parameters and status of the wind turbine in real time. The working principle of this automated control system provides important support for the reliable operation and development of the wind power industry.

What is the working principle of PLC?

The working principle of PLC is based on the logic operation of input and output multiplier. It receives signals from sensors and other input devices, performs internal logic operations and processing, and then controls actuators and other output devices via output modules.

How does wind power generation work?

Wind power generation requires wind energy, and the blades of the wind turbine rotate under the wind, and then cooperate with the gear box, generator, inverter and other systems to achieve the purpose of power generation.

Jan 17, 2022 · The authors [29] presented the work on designing of a model predictive controller for the application of automatic generation control of a two-area interconnected power system ...

Unionscience Technology offers advanced wind power solutions powered by its proprietary LicOS PLC controllers. These solutions cover critical wind turbine systems, including pitch control, ...

