

Distribution network automation technology based on EPON



Overview

This paper introduces the basic principle of EPON and discusses the feasibility of EPON applied in distribution automation system from the aspects of transmission ability, reliability, security, expandability and economical efficiency. Combined with the smart grid technology requirements, the overall structure of the distribution automation communication network and the basic principle is introduced firstly, at the same. The invention discloses a distribution network automatic communication system based on EPON technology, which adopts a 2-layer networking mode, and a plurality of switches simultaneously open a rapid ring network protection protocol; the local side master station and the transformer substation are. Then, on this basis, the enhanced EPONs technology is adopted to build a digital network communication system for distribution networks, which includes data communication wiring, communication network organization, topology design based on the improved EPONs and bandwidth allocation. Based on analysis of the structures commonly applied in.



Article Content

The Application of Intelligence Distribution Network Communication ...

Download Citation | The Application of Intelligence Distribution Network Communication Based on EPON | The distribution network communication technology plays a very important role in

Research on Digital Network Communication System for Distribution ...

EPON is a passive optical network based on Ethernet technology. EPON uses optical fiber as the medium, uses passive distributed devices to distribute and concentrate optical signals, and uses

Identity-based Access Control for Distribution Automation Using EPON ...

Ethernet passive optical networks (EPONs) are promising communication technologies for Distribution automation system (DAS). However, EPONs have very specific security requirements, due to the

EPON technology used in distribution automation system in

It helps grasping the loss and reliability of the distribution automation system at any time, and provides the practical basis for the calculation of the power supply efficiency of the power system.

Communication System for Distribution Automation Using EPON

The architecture is based on a centralized controller that employs EPON technology as networking technology among central node, substations, and smart devices located in the field. ...

Application Research of EPON in Distribution Automation System

The following discusses the feasibility of EPON applied in distribution automation system from the aspects of transmission ability, reliability, security, expandability and economical...

The Application of EPON Communication Technology in

Based on the development and application of the first 220 kV smart substation at Liaoyang Power Supply Company of State Grid Corporation of

EPON technology used in distribution automation system in

According to the stability of distribution automation network in different environments, the reliability calculation method of equipment protection structure provides an effective calculation method for the

The Communication Network Scheme Based on EPON and Industrial

The scheme using the advantage of EPON and industrial Ethernet technology, transmits different partitions business on distribution network. The analysis shows that the scheme can improve the

Security mechanism for distribution automation using EPON

This paper first proposes a novel communication method for distribution automation using Ethernet Passive Optical Networks (EPON). Then, based on the symmetric cryptographic

Discussion on application of EPON communication technology in

With the development and innovation of science and technology in China, a greater number of advanced technologies have been developed in response to the proper time and conditions. Ethernet

Distribution Automation Communication Technology Based on EPON

The communication technology of distribution automation is the base of the smart grid information transmission. Combined with the smart grid technology requirements, the overall structure of the

Distribution Automation Communication Technology Based on EPON

Theoretical analysis proves that this research can satisfy the requirements of the distribution automation communication and provide strong support for the smart grid.

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The invention relates to a distribution network automation communication system based on EPON technology, and belongs to the technical field of distribution network automation.

The Application of Intelligence Distribution Network

Abstract: The distribution network communication technology plays a very important role in the distribution network automation. The intelligent level of distribution

EPON technology used in distribution automation system in

First, EPON (Ethernet Passive Optical Network) technology was proposed, and the transmission principle and advantages of EPON technology were described. Second, the calculation

Research on Distribution Network Automation Communication

Through using a variety of means of communication networking, the integrated solutions of distribution network automation communication technology implements the distribution network communication

Impacts of EPON-Based Communication Networks on Differential

In literature , an access control mechanism for distribution automation with a communication network using Ethernet Passive Optical Network (EPON) is described. A protection

Study on communication scheme of distribution network automation based ...

Against the backdrop of sustained socio-economic growth, public demand for power quality, energy conservation, service optimization, and environmental protection is becoming

Communication network structure based on EPON

Download scientific diagram | Communication network structure based on EPON from publication: Applied Research on Intelligent Collection System of

The Communication Network Scheme Based on EPON and

In order to meet the demand of security zone and reliable transmission for the business in smart distribution network, this paper proposes a communication network scheme based on EPON

EPON technology used in distribution automation system in

Second, the calculation method of optical attenuation was proposed for EPON technology and the optical loss in distribution automation communication network. Finally, according

Communication System for Distribution Automation Using EPON

This paper proposes a novel communication method for distribution automation using Ethernet Passive Optical Networks (EPON). Based on centralized control scheme, a three-layer communication

The design and application of EPON technology in distribution ...

Based on the comparative analysis of EPON technology and industrial Ethernet technology, this paper analyzed the applicability of EPON technology. according to the analysis results, a design idea of

The Application Research of Power Distribution Communication

Abstract: With the continuous development of network technology, the traditional access method can not meet the needs of the vast number of network users, and it is eager to have higher bandwidth and

Application Research of EPON in Distribution Automation System ...

This paper introduces the basic principle of EPON and discusses the feasibility of EPON applied in distribution automation system from the aspects of transmission ability, reliability, security,

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