

Coaxial cable used for relay protection



Article Overview

Coaxial cables are used in relay protection systems to transmit high-frequency signals with minimal loss and interference, ensuring accurate and reliable operation of protective relays.

Role in Relay Protection

In relay protection systems, coaxial cables serve as the transmission medium for signals between protective relays, current transformers (CTs), and other monitoring equipment. Their shielded design—with a central conductor, dielectric insulation, and metallic outer shield—prevents electromagnetic interference (EMI) from affecting sensitive relay signals, which is critical for maintaining the integrity of protection schemes. This is especially important in high-voltage substations where electrical noise can compromise relay performance.

Interaction with Coaxial Relays

Coaxial cables are often paired with coaxial relays, which are specialized switches designed to handle RF and high-frequency signals. These relays allow signals to be routed, disconnected, or switched between redundant paths without degrading signal quality. The combination of coaxial cables and relays ensures low insertion loss, high isolation, and fast response, which is essential for protective relays that must operate within milliseconds to prevent equipment damage.

Cable Selection Considerations...

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While all coaxial cables are used to transmit signals, they are not all the same. Coaxial

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Coaxial Cable Protection

Coaxial Cable Protection Why is coaxial cable protection needed? ording to its frequency. This effect is present in coax cable,

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