Box-Type Substation

The ideal product for new energy generation

Box-type Substation

- HV Compartment
- LV Compartment
- Transformer

Structural Features

The box-type substation consists of three parts: the HV compartment, LV compartment, and transformer. The Huaya-style structure box-type substation is primarily applied as a step-up substation for new energy generation. The structural difference from traditional box-type substations is that the transformer part is placed outside the substation enclosure, effectively solving transformer heat dissipation issues. Heat generated by the transformer body is rapidly dissipated through the natural climate. The transformer is closely connected to the enclosure via side-exit bushings. The substation is divided into HV and LV compartments by an internal partition wall. It is an ideal product for new energy generation.

Electrical Features

The HV side of the Huaya-style box-type substation can utilize technical schemes involving vacuum circuit breakers (VCB) or load break switches + fuses (combination units). The electrical feature of the combination unit structure is that the blowing of any one phase fuse will ensure the load break switch trips to cut off the power; the main switch can only be closed after the fuse is replaced.

The vacuum circuit breakers or load break switches + fuses used on the HV side are all equipped with mechanical interlocks to prevent misoperation. Both vacuum circuit breakers and load break switches + fuses are equipped with signal transmission capabilities to facilitate real-time monitoring of operating status and remote control functions from the background.

Electrical Features

Due to the relatively harsh operating environment of this product, there are high requirements for wind-sand resistance, thermal insulation, and heat dissipation. The protection rating must satisfy operational requirements to effectively protect internal components and extend their service life.

Transformer body protection rating: IP68

Box-type substation enclosure protection rating: Not less than IP54