



## Overview

- **System footprint:** The footprint for the system installation is reduced by 60% or more for smart substation systems of 110KV and below
- **Construction period:** The construction period of the system is reduced by 30%.
- **System service power:** The power consumption of the system is reduced by 20% to 30%, enabling substations to be more environmentally friendly in operation.
- **Reduce investment:** Investment in smart substation systems of 110kV and below will be reduced by 50% to 60%.
- **Operation and maintenance (O&M) cost:** Such cost is reduced by more than 50% as it is easy to deploy and implement.

## >>> Technical Parameters

Level 2
IP30 (GB 4208-2008)
-20 °C ∼ +55 °C
-40 °C ∼ +75 °C
5% to 95%, free from condensation or icing in device
GB/T 14047-1993 (idt IEC 60225-1:2009)
GB/T 8367-1987 (idt IEC 60255-11:2008)
110Vdc, 220Vdc
88~330Vdc
<35W
<50W
IEC 60255-1:2009
Shield twisted pair (STP) EIA-485 Interface, Five-shielded network cable Ethernet Interface, 10 Base-T/100 Base- TX Fiber Interface, RS-232 Printing Interface, RS-485 Timing Interface

#### Performance Characteristics

- Fully support digital substation functions (support digital sampling and GOOSE switching).
- Offer complete event report handling, and able to save the latest 64-time action reports, as well as the latest 1024time shift reports, 1024-time self-inspection reports, 1024time
- Support power industry standards, including IEC61850 and IEC60870-5-103 protocol.
- Support main wiring diagram display, where graphics can be loaded via the network, while providing improved bay interlocking, where interlocking logic can be loaded via the network.
- The ratio braking differential protection principle is adopted for bus differential protection. There are high differential elements and sectional bus low differential elements. High differential elements are used to determine faults inside and outside bus zone, whereas low differential elements are used to select faulty bus.

- Line distance protection consists of advanced and reliable power swing blocking function, ensuring reliable blocking during external faults occurrence and system power swing and reliable fault clearing during internal faults occurrence and system power swing.
- Integrated: Multiple split units are combined into one device.
- Real-time: Adopt high performance CPU and FPGA to ensure real-time business processing.
- Easy to deploy: Uniform management.
- Business software handling. Networks and hardware require no updating or upgrading; only business software configuration and development need to be added.
- Reliable: Reduce fault points, and achieve safety redundancy and disaster recovery with 1:1 hot backup.
- Economical: Bring about obvious cost reduction and increase in efficiency with regard to footprint, energy consumption and O&M.



# >>> Function Configuration

- Transformer protection
- Bus protection
- Line protection
- Measurement and control
- Reserve power source automatic connection protection
- Remote-control
- Exchange

## Certification

· Pass the State Grid's type test and dynamic model test.