Intelligent distribution network automatic integrated solution (system)

Configuration of ring main unit: two in and four out, two in and six out, six - eight circuit switch “three teles”
1)Telemetry part: (Eight-way switch “three teles”)
Secondary circuit voltage: each one takes three phase voltages (Ua, Ub, Uc, zero sequence) for a total of six voltages
Eighth circuit current: 24 currents for each collected current (A, C, zero sequence)
2)Telesignalization part: six circuits per switch, totally 48 circuits; inputting 48 states of telesignalization, including switch position, grounding breaker position, energy storage of electric operating mechanism, etc.
3)Telecontrol part: up to 8 circuits remote control outputs can be accessed. DC24, the energy storage of electric operating mechanism, is supplied by DTU battery. If the electric power is supplied by other power sources, it is provided by the DC screen.
4)Communication part: supporting fiber optic communication: interface type includes RS232 / RS485, Ethernet? LAN (10Base-T), wireless GPRS communication.
5)Protocol part: supporting 101/104 protocol. (intercommunicated with the distribution network automation master station)
6)Cabinet group screen: customized according to the drawings. The 6 circuit standard is: 1000 high × 600 wide × 400 deep; the 8 circuit standard is: 1600 high × 600 wide × 450.
7)Battery part: not less than 12AH, 12V battery pack 2 / 4 section.
8)Power management part: battery activation, power charge and discharge management, 500W
9)Security key: Built in this feature. It complies with the documentation requirements of National Grid No. 168 on the security protection of distribution network terminals.

Solutions of large sub – section post
Application place: large sub – section post distribution automation project
Configuration of sub – section post: two in sixteen out and 1 contact, total 20 sub – section posts in 1PT, the energy storage of electric operating mechanism is DC48V, station terminal of TD series uses three teles, two circuit voltage: each one takes three phase voltages (Ua, Ub, Uc, zero sequence) for a total of six voltages.
Sixteenth circuit current: 48 currents for each collected current (A, C, zero sequence).
Telesignalization part: each switch is equipped with 6 telecontrol, a total of 19 switches with 120 circuits of telesignalization. Inclusive of: switch position, grounding breaker position, energy storage of electric operating mechanism, etc.
Telecontrol part: supporting 19 circuit switches remote control output. DC24, the energy storage of electric operating mechanism, is supplied by TD battery. If the electric power is supplied by other power sources, it is provided by the DC screen.
Communications within the station: there are 16 relay protection devices in the station, 1 DC screen, and 1 multi-function table data requires TD acquisition. The TD uses the Modbus protocol to read the data of devices in the station. The cascaded multiple devices in the station use RS485 cascaded communication, which requires the TD to have the function of communication service. And it requires the station equipment to have RS485 interface and the function of Modbus protocol.
Communication part: ONU passive optical network or industrial Ethernet.
Used protocol: 104 protocol requires the encryption module of the State Grid Corporation.
Features of program: the TD requires more equipment in the station to be connected; dual network interface, 4 – way serial port. And the dual network interface has dual IP function: one network interface is connected to the main station to realize remote three teles functions, and one network interface is

connected to the local monitoring platform to realize remote control and local monitoring function of the sub – section post.

Solutions of station terminal TD + intelligent demarcation switch controller (feeder terminal unit) of TF series

Requirements and configuration: one in three out ring main unit. It is required to configure the intelligent demarcation switch controller (feeder terminal unit) of TF series and the TD station terminal.
Solution realization: the three outlet circuits are equipped with the intelligent demarcation switch controller (feeder terminal unit) of TF series, and the RS485 communication mode is connected with the 101 or Modbus protocol to the TD station terminal. Then the TF uploads to the master station with the 104 protocol to complete the remote function of the ring main unit. After the three outlet load switches or circuit breakers equipped with the intelligent demarcation switch controller (feeder terminal) of TF series, the interphase fault and ground fault are judged and isolated. And then the power can be resumed by the TD remote closing function.
Communication methods: ONU/ optical fiber communication/ GPRS
Used protocol: Modbus/ 104 protocol/ encryption module of the State Grid Corporation

Solutions of box transformer substation

Terminal configuration: intelligent distribution automation station terminal of TD series
Configuration of box transformer substation: high voltage one in two out loop structure box transformer substation, low voltage 6 – 8 circuits;
Three teles implementation: the high voltage loop directly collects the bus PT voltage and the inlet – outlet lines CT current and DC signal acquisition. The low voltage part is connected to the low voltage multi-function instruments through the RS485 interface, and the low voltage data can be read. The high voltage switch can be remotely controlled to open and close. The low voltage switch is generally not equipped with electrical operation.
Communication methods: FOT (Fiber Optical Transceiver)/ ONU/ GPRS
Used protocol: 101/ Modbus/ 104 protocol
Features of program: sensors such as temperature, humidity, and gas in the box transformer substation are connected to the TF by telesignalization and uploaded to the dispatch center. In addition to the three teles functions, remote environment monitoring is also implemented. In addition, there is more DC measuring function than the conventional application of the power grid.
Cabinet body size: height 1000 × width 600 × depth 400

Product link：https://www.onlinemadeinchina.com/?p=1104