Busbar protection REB670
Relion® 670 series Ver. 1.2

Features

- Fully IEC 61850 compliant
- Monitoring and protection integrated in one IED
- Extensive self-supervision including analog channels
- Six independent parameter setting groups
- Signal matrix for easy configuration of binary and analog signals
- Ethernet interface for fast and easy communication with PC
- Built-in HMI for easy on-line visualization of bay to zone connections and primary switchgear object status
- Pre-configured and type tested solutions including default settings for:
  - Single busbar, one-and-a-half breaker and double breaker arrangements
  - Double busbar-single breaker arrangements
- User management and authority handling

Most important protection features

- Two busbar differential protection zones
  - Sensitive differential protection level
  - Automatic detection and selective busbar protection blocking for troubles in CT secondary circuits
  - Extremely fast operation
  - Full stability for all external faults
  - Correct operation for all types of evolving faults
- Overall check zone
- Integrated, software driven zone selection (i.e. disconnector replica)
- Breaker failure protection
- Selective tripping for busbar and breaker failure protection
- Four-step, non-directional, phase overcurrent protection with definite and inverse time characteristics
- Autoreclosing function for busbar restoration after IED operation
- Configurable logic blocks
- Summation principle with additional auxiliary CTs

Monitoring

- Disturbance recorder
  - 100 disturbances
  - 40 analog channels, 30 physical and 10 derived
  - 96 binary channels
- Event list with 1000 events
- Disturbance report
- Event and trip value recorders
- Event counters
- Supervision of AC and mA input quantities
- Small and large HMI in local language
- LED indications with 6 red and 9 yellow LEDs

Control functions

- Versatile switch with two positions
- Selector switch with up to 32 positions

Measurements
- Currents in all bays, differential currents, busbar through-going currents
- AC input quantities with accuracy better than 0,5%

Metering
- Pulse counting support for energy metering

Communication
- IEC 61850-8-1 including GOOSE messaging
- Individually supervised redundant station bus with zero seconds recovery time
- IEC 60870-5-103
- DNP 3.0 slave protocol
- LON
- SPA
- Remote end communication for transfer of up to 192 binary signals

Setting, configuration and disturbance handling
- Protection and control IED manager PCM600

Hardware
- 1/1 x 19”, 3/4 x 19” or 1/2 x 19” 6U height case selected according to the number of required I/O modules
- Power supply modules from 24 to 250 V DC ± 20%
- ADM module
- Up to 11 I/O modules in 1/1 x 19” case
- Binary input module, 30 mA and 50 mA, with 16 inputs
- Binary output module with 24 outputs
- Static binary output module with 12 outputs (6 static)
- Binary input/output module, 30 mA and 50 mA, with 8 inputs and 12 outputs
- Accurate time-synchronization through GTM, GPS time module, IRIG-B-module, SNTP and DNP 3.0
- Remote end data communication modules for C37.94, X.21 and G.703/G.703E1
- COMBITEST test switch module

Technical details are available in the REB670 Product Guide.

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