**Distributed busbar protection**

Relion® REB500 Ver. 7.60

**Main features**
- Low-impedance busbar protection
- High functional reliability with
  - stabilized differential current
  - directional current comparison
- Low CT performance requirements
- High through-fault stability even in case of CT saturation
- Neutral current measurement for impedance-grounded networks
- No switching of CT circuits
- Flexible solutions at system extension
- Extensive self-supervision
- Web server
- Access to station monitoring data via standard internet browser: events, single line diagram, differential currents and primary values
- User management and authority handling

**Installation**
- Distributed protection solution with IEDs close to the feeders, with short connections to CTs, isolators, circuit breakers, etc.
- Centralized protection solution with IEDs in one cubicle
- Fiber-optic connections between central unit and bay unit IED
- Interference-proof data transfer with up to 1200 m length

**Scalability**
- Up to 60 feeders (bay units)
- 32 busbar zones

**Most important back-up protection functions**
- Breaker-failure protection
- End fault protection
- Definite time overcurrent protection
- Breaker-pole discrepancy
- Current release criteria
- Voltage release criteria
- Breaker-pole discrepancy
- Phase and ground overcurrent
- Directional sensitive earth fault
Most important station protection functions
• Distance protection
• Power swing protection
• Teleprotection
• Transformer differential protection for 2- and 3 winding transformers
• Thermal overload
• Peak value Over/Undercurrent
• Peak value Over/Undervoltage
• Power protection
• Frequency protection

Control
• Auto-recloser
• Synchrocheck

Logic
• Binary logic and timer in the bay unit

Monitoring
• Event recorder with a sampling rate of 1 ms
• Fault recorder with a sampling rate of 2400 Hz

Measurements
• Output of relevant analogue measured (current, voltage, differential current)
• Currents in all bays, busbar through-going currents

Communication
• LON
• IEC 60870-5-103
• IEC 61850-8-1
• IEC 61850-9-2 LE Process bus
• IEC 62439 standard redundant station bus communication

Tool
• HM500 Operator
• HM500 Configurator

Hardware
• 1 and 5 A rated currents transformers
• Supply voltages between 48 V DC and 250 V DC
• Nominal frequencies of 50, 60 and 16.7 Hz
• Redundant power supply

Technical details are available in the REB500 Product Guide.

For more information please contact:

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