

Voltage Protection REU610

Relion® 610 series

REU610 is a voltage IED for system voltage protection, measuring and supervising in utility and industrial power systems. REU610 is a member of ABB's Relion® protection and control product family and part of its 610 product series. The 610 series includes IEDs for feeder protection, motor protection and general system voltage supervision. The plug-in design of the 610 series IEDs facilitates the commissioning of the switchgear and enables fast and safe insertion and withdrawal of IED plug-in units.

Application

REU610 is designed for distribution substation busbar overvoltage and undervoltage protection, feeder and power transformer overvoltage protection, motor undervoltage protection, and capacitor bank overvoltage protection and supervision. In isolated neutral power systems, REU610 is also used for non-discriminative earth-fault protection based on residual voltage measurement. Further, the REU610 is used for initializing automatic substation busbar changeover and for disconnecting small power units from the public network, i.e. islanding, during a major network disturbance. REU610 is also suitable for employment in marine and off-shore environments.

Protection

REU610 offers integrated protection functions including two-stage overvoltage protection, two-stage undervoltage protection and two-stage residual overvoltage protection. Furthermore, REU610 includes two mutually exclusive protection functions, a single-stage negative phase-sequence overvoltage protection function or a single-stage positive phase-sequence undervoltage protection function.



Standardized communication

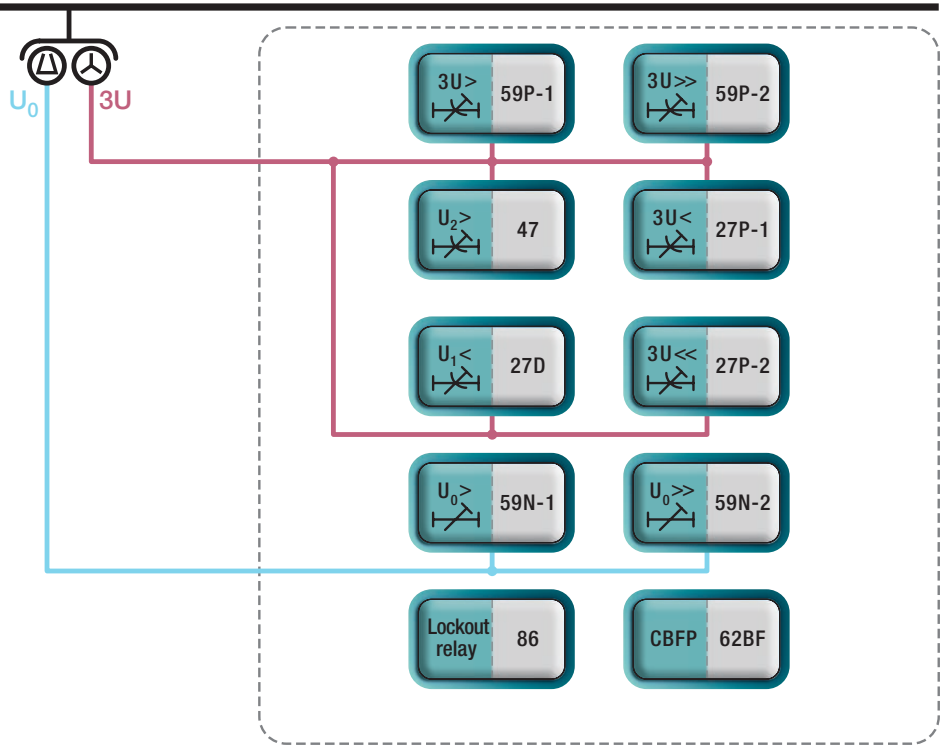
REU610 supports a wide range of standard communication protocols, including IEC 61850, IEC 60870-5-103, Modbus®, Profibus, DNP3, SPA and LON.

Disturbance recorder

The 610 series IEDs feature an integrated disturbance recorder for logging events and registering transient variables before, during and after a network disturbance situation. The disturbance recorder includes four analog channels and eight binary channels, which can be assigned by the user to the analog and digital signals requiring monitoring to enable subsequent post-fault analyses of power system events.

Supervision

To ensure continuous availability of protection the 610 series IEDs feature extensive self-supervision of the function of the digital circuitry and the software. The IED also includes an integrated trip-circuit supervision function monitoring the external trip signal path. When a permanent IED fault is



Protection function overview of REU610.

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detected, the IED's protection stages and outputs will be blocked to prevent malfunction. Further, a LED indicator will light up and an alert message for remote fault indication will be generated.

Unique plug-in design

The patented IED case and the plug-in type IED unit speed up installation, testing and maintenance of the IED. A convenient pull-out handle with built-in release enables quick removal of the plug-in unit and insertion of a replacement unit. When an IED plug-in unit is inserted into the IED case for the first time, a mechanical coding system permanently adapts the IED case to the type of IED plug-in unit inserted.

Universal case

The normal delivery mode for 610 series protection IEDs is a complete package including a case, a plug-in unit and a possible optional communication card. When a fair amount of IEDs are to be factory installed, e.g. by a panel builder or on-site installed in a retrofit project, it may be more

convenient to obtain empty IED cases to be installed and tested together with the switchgear. The dispatch of the plug-in units can then be postponed until the switchgear has been erected on site and the IEDs are needed. For this purpose, the 610 series IEDs are provided with a universal case not assigned to any particular type of IED plug-in unit when delivered from the factory.

For more information see REU610 Product Guide.

For more information please contact:

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