GE Multilin UR products deliver anti-islanding protection for distributed generation environments

P1547 compliant URs help utilities reduce the risks associated with generation islands

August 7, 2003, Markham, Ontario – GE Multilin announces that its F60 Feeder Management Relay and G60 Generator Protection Relay are now P1547 compliant – a standard that includes specifications for anti-islanding protection. An integral function of distributed generation applications, anti-islanding protection ensures that any distributed generation equipment on an electrical grid can be properly monitored and detected in the event of grid disconnection.

Dale Finney, Applications Engineer for GE Multilin explains that anti-islanding protection is a critical element in a distributed generation environment for a number of reasons, including personnel safety. “An island is formed if a section of a distribution network is isolated from the grid but is still supplied by a local generator. This represents a safety hazard to maintenance personnel. Therefore, distributed generators must have the capability to detect the formation of an island and automatically disconnect from the network.”

Finney adds that islanding after a fault on the distribution network can also impact auto reclose functions, which can cause local generators to be out of phase with the power supply. “If a utility breaker opens during a fault and the distributed generator remains connected, the generator can quickly lose synchronism with the grid. If the utility breaker then re-closes, serious damage can result. Power quality is another problem. Utilities cannot monitor and ensure power quality when local generators supplying local loads become disconnected from the distribution network.”

Anti-islanding has become an increasing concern as more and more operations look to develop new technologies for distributed generation applications, such as wind turbines, fuel cells, microturbines and others. At the same time says Finney, the widespread acceptance of distributed generation applications has been hampered by the lack of standards governing deployment, monitoring and control functions.
“The development and acceptance of the P1547 standard will be instrumental in moving distributed generation applications forward,” says Finney. “This standard helps organizations resolve the technical issues associated with distributed generation and provides them with guidelines to ensure connectivity for the equipment they purchase. With P1547-compliant equipment, users immediately know it can be deployed in distributed generation applications. “

The UR family has already been used in a number of distributed generation applications for industrial and utility customers, and the anti-island function has been tested successfully at the national renewable energy lab (NREL) in Golden, Colorado. The UR’s microprocessor-based technology based on an open systems platform and advanced peer-to-peer communications allow for easy, cost-effective integration and real-time monitoring and control of local generation equipment. Future issues will also include basic control functions such as autosync and P&Q control. “Given the many product features that are now available, including P1547 compliance, the UR is an ideal technology choice for this ever evolving market,” concludes Finney.

About the UR

GE Multilin UR products are microprocessor-based solutions that support the open standard EPRI UCA™ MMS/Ethernet protocol. All UR products combine peer-to-peer high-speed communication capabilities with modularity, flexibility and field-programmable FlexLogic™ control for simplified substation automation. UR products include the F35 Feeder Protection Relay, the F60 Feeder Management Relay, the C30 Controller, the L90 Line Differential Relay, the C60 Breaker Management Relay, the T60 Transformer Management Relay, the T35 Transformer Management Relay, the L60 Phase Comparison Relay, the B30 Bus Differential Relay, the B90 Bus Differential Relay, the D30 Distance Relay, the D60 Line Distance Relay, the G60 Generator Management Relay, and the M60 Motor Management Relay.

About GE Multilin

GE Multilin, a division of GE Industrial Systems, is a global leader in the design, manufacture, sales and service of protection, metering, control and automation systems, as well as telecommunication networks for utility, industrial and general industry applications. For more information, visit the website at http://www.GEindustrial.com/Multilin.

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