L60 Scheme Selection

GE Power Management No. GET-8408

PROBLEM

What are PT (permissive tripping) and BL (blocking) schemes and how are they chosen for particular applications.

SOLUTION

Phase Comparison essentially compares the time coincidence of the local and remote squares representing half the power cycle.

The Permissive Tripping (PT) scheme does not allow a trip/restraint decision unless the permissive remote square is received.

The Blocking (BL) scheme always trips (if fault detectors are picked up) unless the remote blocking signal is received to suppress the trip decision during external fault.

Applying these schemes depends on the utility protection philosophy and communications channel employed. Permissive Tripping (PT) schemes are more attractive for reliable communication channels as they are inherently more secure. For less reliable and noisy channels, the Blocking (BL) scheme can be applied, since many utilities prefer to trip the fault anyway and correct the situation later with a reclosure.