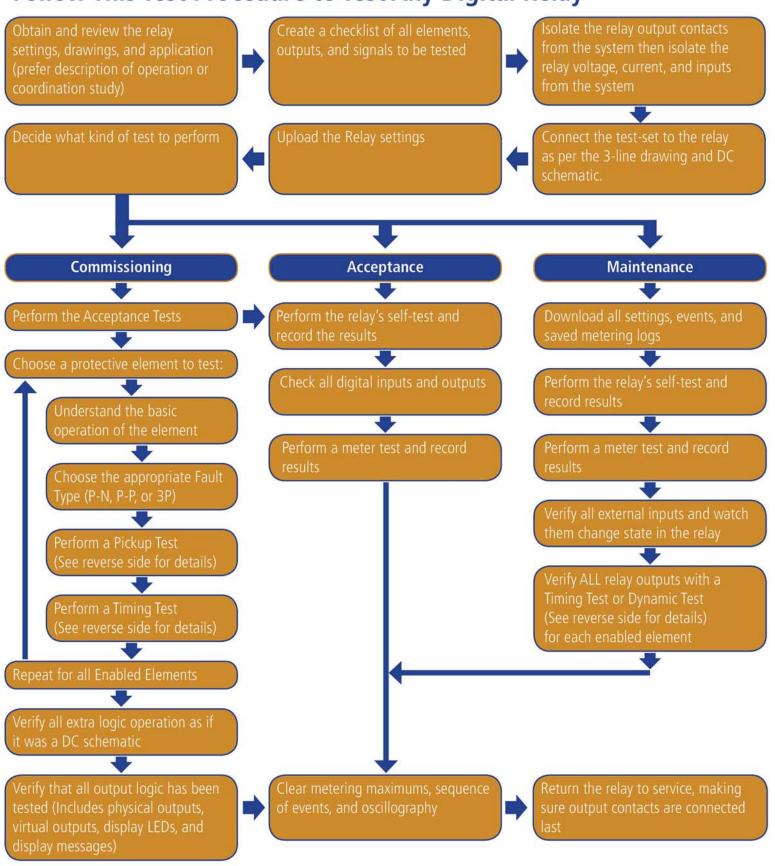
Relay Testing Steps

Follow This Test Procedure to Test Any Digital Relay



Relay Testing Steps

How to Apply a Realistic Fault

* indicates manual test only - skip for automated tests

Decrease the faulted voltage: Increase the faulted current: The faulted current should lag the faulted voltage 45-89° All non-faulted phases stay the same Pickup Test Procedure - Choose a Pickup Test Type **Ramping Pickup Test Pulse Pickup Test** Dynamic Pickup/Timing Test hoose a method to detect pickup Connect all outputs programmed to operate Apply a nominal prefault voltage Apply a realistic fault that should trip Apply a nominal prefault voltage for a for a time longer than the expected few seconds Apply a realistic fault that should not trip Apply a realistic fault that should not outside the expected tolerance for a time longer than the expected: the relay should a time longer than the expected trip Immediately apply a nominal prefault apply a realistic fault that should not Apply a realistic fault that is 1% closer trip outside the expected tolerance to the pickup than the last step for a Immediately apply a realistic fault that should Change the appropriate parameters so than the expected trip time; monitor time from test start to input operations Yes Did all inputs operate with the correct time delay? Yes Record the results and check percent error or allowable tolerances Pickup is between the Check your settings, two tests, time is the measured time **Timing Test Procedure** Apply a nominal prefault voltage for Apply realistic fault (P-N, P-P, or 3P) Connect all outputs programmed to a few seconds elements, at least 120% for fixed time elements) monitor time from test