

Protection Solutions

www.rmspl.com.au/1M122.htm

Parallel Transformer Control

The Problem

Master follower parallel control schemes traditionally use auxiliary switches on the tap changers to determine out of step errors. While this is a reliable & proven technique there are two significant drawbacks:

- Wiring complexity between the tap changer auxiliary switches
- Requirement for matched tap changers

The Solution

The first issue is overcome by replacing each tap changer auxiliary switch with a TPI transducer (2V200), which sends a frequency signal proportional to the tap position. This requires only two wires for each tap changer & is simply wired back to the 1M122. The second issue is overcome with a user specified tap position logic table to allow non-matched tap changers to operate together.

The tap position of each transformer is monitored as well as the raise / lower commands initiated by the selected master voltage regulating relay. Appropriate raise / lower commands are sent to each tap changer in accordance with the tap position logic table.

If any tap changer moves outside the limits established in the tap position logic table, an out of step alarm contact will pick up & all further tap change commands inhibited.

