FACULTY OF ENGINEERING & TECHNOLOGY

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Testing of CT and PT

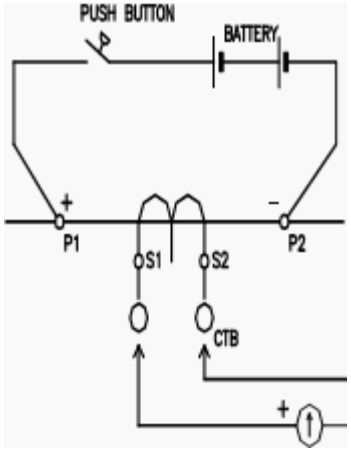
Insulation Resistance Test

The voltage shall be applied between:

1. Primary to secondary plus ground (covered during switchgear test).
2. Secondary to primary plus ground.
3. Secondary core to core.

Polarity Test

Polarity test is to confirm the polarity marking on the CT primary and secondary and verify it is matching with drawing. More ever it is giving an idea, how to connect the secondary's to make the protection (like directional, differential) and metering function properly.
Isolate CT secondary from the load and make circuit connection as shown in Figure Close and open the battery switch connected on the primary. Observe the pointer is moving +ve direction, while closing and –ve direction while opening for correct polarity.



Secondary / Loop Resistance Test (optional test)

Secondary resistance test is to verify the CT secondary winding resistance with specified one and no discontinuity in the winding. This value can be used in other calculations.
Loop resistance to ensure load is connected properly and circuits not left open. The circuit connection shall be made as shown Figure for secondary resistance. Measure the DC resistance value and record. The same shall be done for all taps and cores. These values are influenced by temperature, so ambient temperature must be recorded during this test. The circuit connection shall be made as shown Figure for loop resistance. Measure the DC resistance including CT and load, phase by phase and values can be compared between them.

Limits

The value must be within specified on nameplate after the effect of temperature taken in to account. If not factory test results shall be taken as reference.