

## TYPICAL DIFFERENTIAL PROTECTION SCHEME

Read all currents entering the transformer.

Extract FUNDAMENTAL and 2nd HARMONIC magnitudes from each.

Bring all FUNDAMENTAL currents to the same base; correct for Y- $\Delta$  shifts; correct for CT Y- $\Delta$  and ratio imbalance; remove zero sequence quantities. Then...

IF the sum of the currents in any one phase exceeds a TRIP THRESHOLD,

AND the 2nd/FUNDAMENTAL ratio of none of the currents exceeds say 30% ,

THEN **TRIP.**

[ Note: The TRIP THRESHOLD setting is automatically increased as the current level increases, to prevent false trips due to higher measurement errors at higher current levels. ]

## Typical sampling scheme











