

3.7 Protection of transmission lines:

The fault current depends on the type of fault and source impedance.

- If over current relays are used in transmission lines, it will trip the C.B irrespective of the location of fault.
- Hence a relay which operates based on the location of fault is required.
- Location is identified by the ratio of voltage to current (selectivity).

3.7.1 Phase Comparison Carrier Protection:

Internal Fault

External Fault

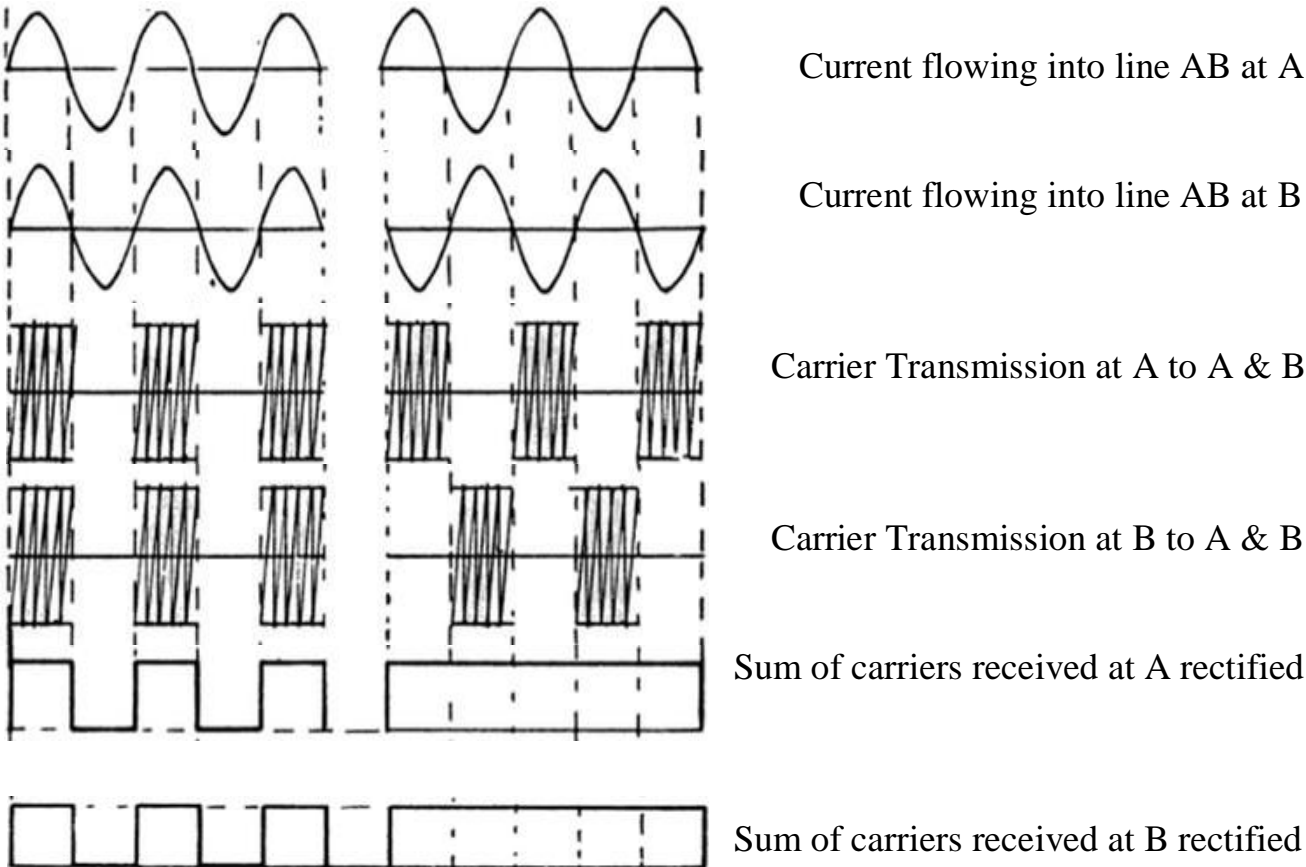


Figure: 3.7.1 Phase Comparison Carrier Protection

[Source: "Principles of Powersystem" by V.K.Mehta, Page: 346]

3.7.2 Directional Comparison Carrier Protection:

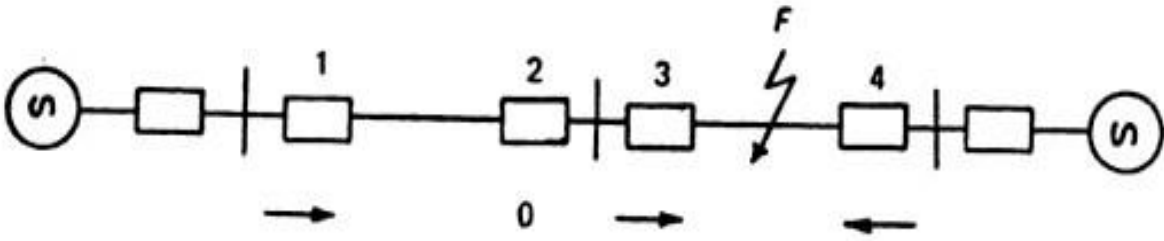


Figure: 3.7.2 Directional Comparison Carrier Protection
[Source: "Principles of Powersystem" by V.K.Mehta, Page: 347]