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Operation of conventional algorithms of distance protection on the power system side

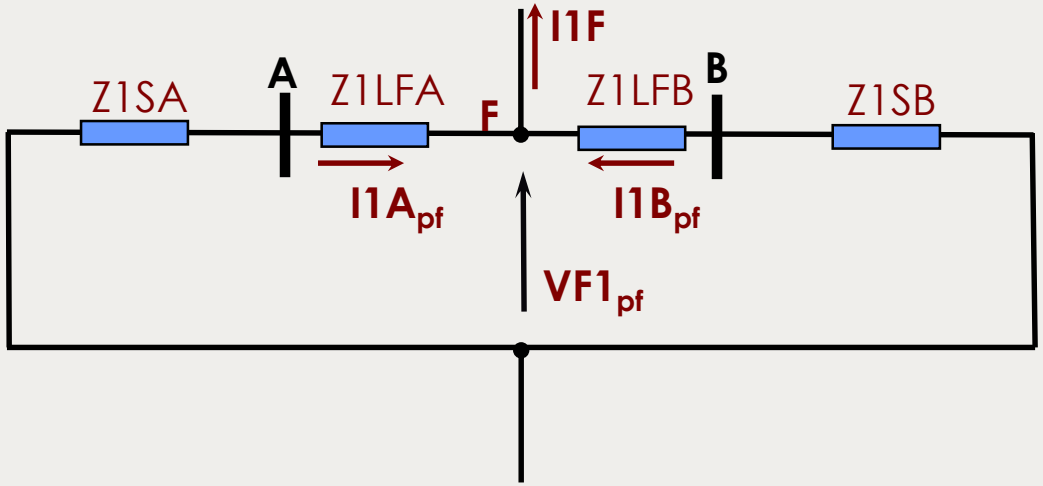
B5 PS1 Q 1.02

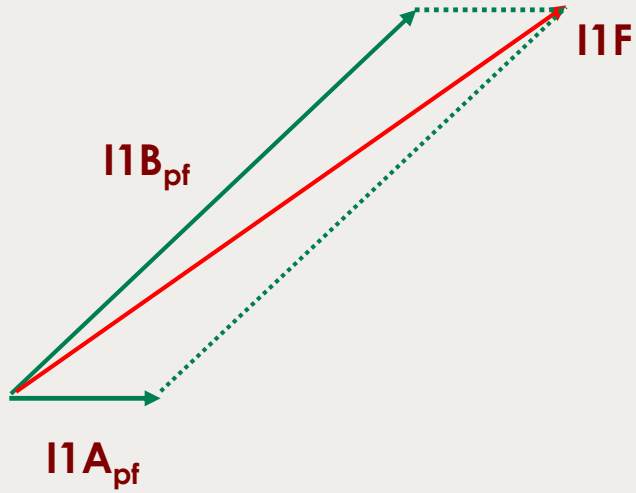
Roberto Cimadevilla SPAIN

Influence on the power system side

- RES create changes in positive and negative-sequence networks
- However, the influence on the power system side is low:
  - There is negative-sequence current injection
  - The current from the system side is much higher than the current from the RES side→the influence of network non-homogeneity is low

A: RES
B: Power System
Ang(Z1SA)>>90º
Ang(Z1LFA)=90º
Ang(Z1LFB)=90º
Ang(Z1SB)=90º





Influence on the power system side

- Conventional reactance line polarizations work well
- Current based phase selectors work well
- Directional units work well

Only if the power system is weak the mentioned protection functions may fail