

Phasor Diagram Verification - 4 wire system

Safety Precautions

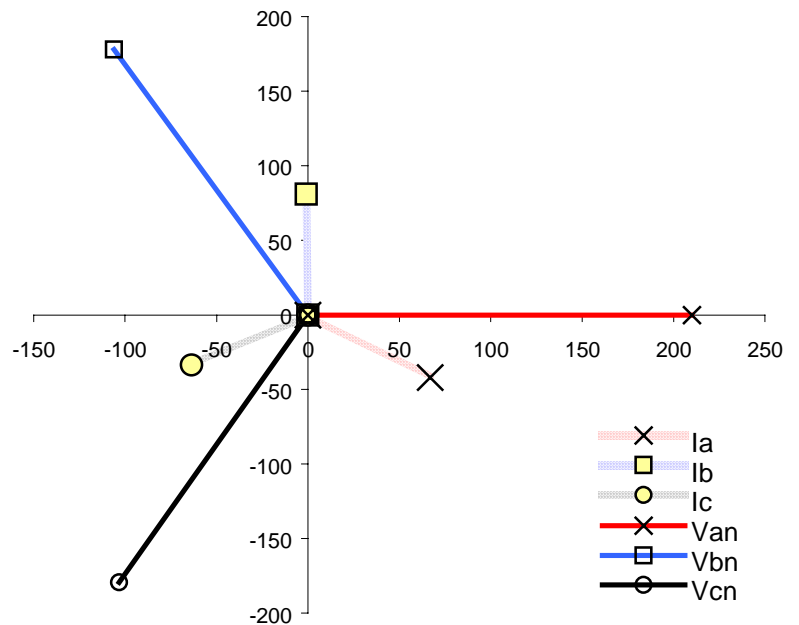
- Work on De-Energized Gear
- NEVER short circuit the secondary of a PT
- NEVER open circuit a CT
Use the shorting block to short circuit the leads of the CT before removing the connection from the CM.

Procedure

1. Follow [Phasor Diagram Data Reading](#) procedure
2. Draw each of the vectors in the diagram or complete the [Phasor Diagram Creator](#) spreadsheet, 4-wire Tab

Example:

4-Wire				
Current	Register	Magnitud	Register	Angle
Phase A	1078	79	1079	327.8
Phase B	1080	81	1081	90.6
Phase C	1082	72	1083	207.9
Neutral	1084		1085	
Voltage				
Phase A-B	1094		1095	
Phase B-C	1096		1097	
Phase C-A	1098		1099	
Phase A-N	1088	210	1089	0
Phase B-N	1090	207	1091	120.8
Phase C-N	1092	207	1093	240.1



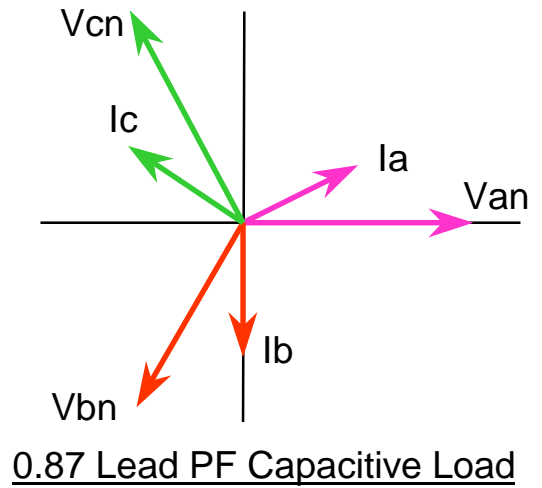
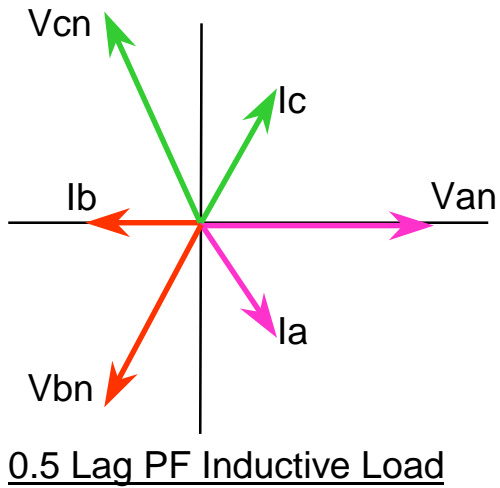
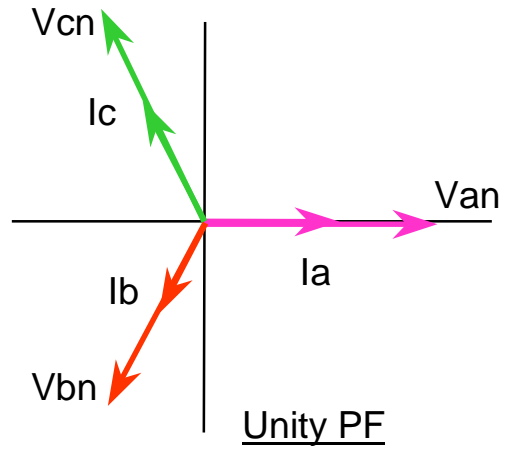
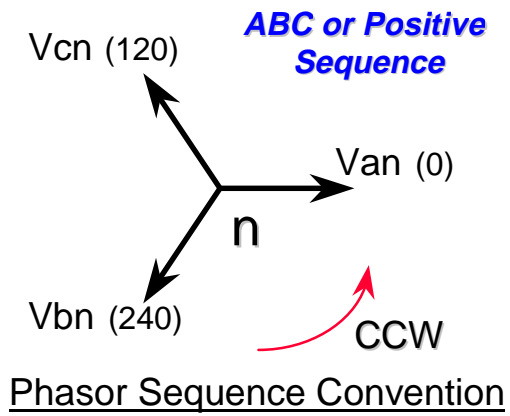
3. Compare your diagram with the possible cases

Note

- Voltage between Va and Vn is the 0 degree reference
- ALL other phasors are referenced from these phasors
- Examples shown are with ABC or positive phasor sequence convention. To use negative sequence convention or ACB replace B by C and C by B in all diagrams.

PowerLogic Knowledge Base Procedure

Possible Cases



PowerLogic Knowledge Base Procedure

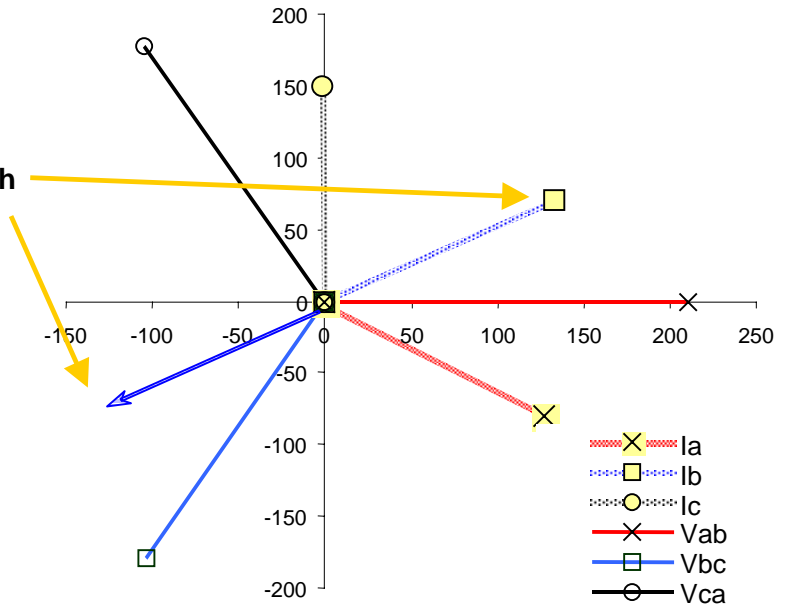
4. Use the following rules to match your system to one of the possible cases

- To change phasor direction: revert polarity of PT/CT

Example:

The polarity of CT phase b is reversed

Reversing the polarity of the CT will correct the phasor with a shift of 180 degrees

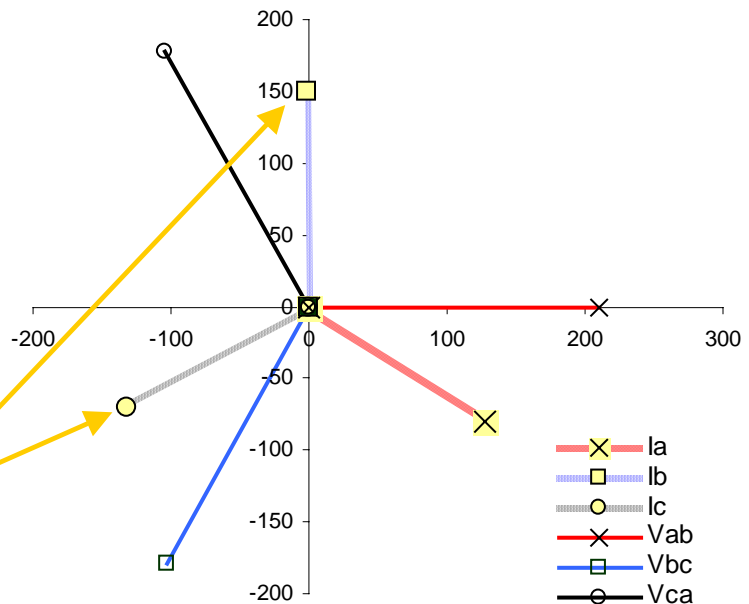


- To change phases: swap CT/PT

Example:

The leads from the CTs for B and C phases were swapped on the input terminals of the circuit monitor

Swapping the phase B&C CT leads on the current input terminal of the circuit monitor will correct this condition



- Do one change at a time
- Repeat [Checking Meter Readings](#) procedure after you finish changing connections