

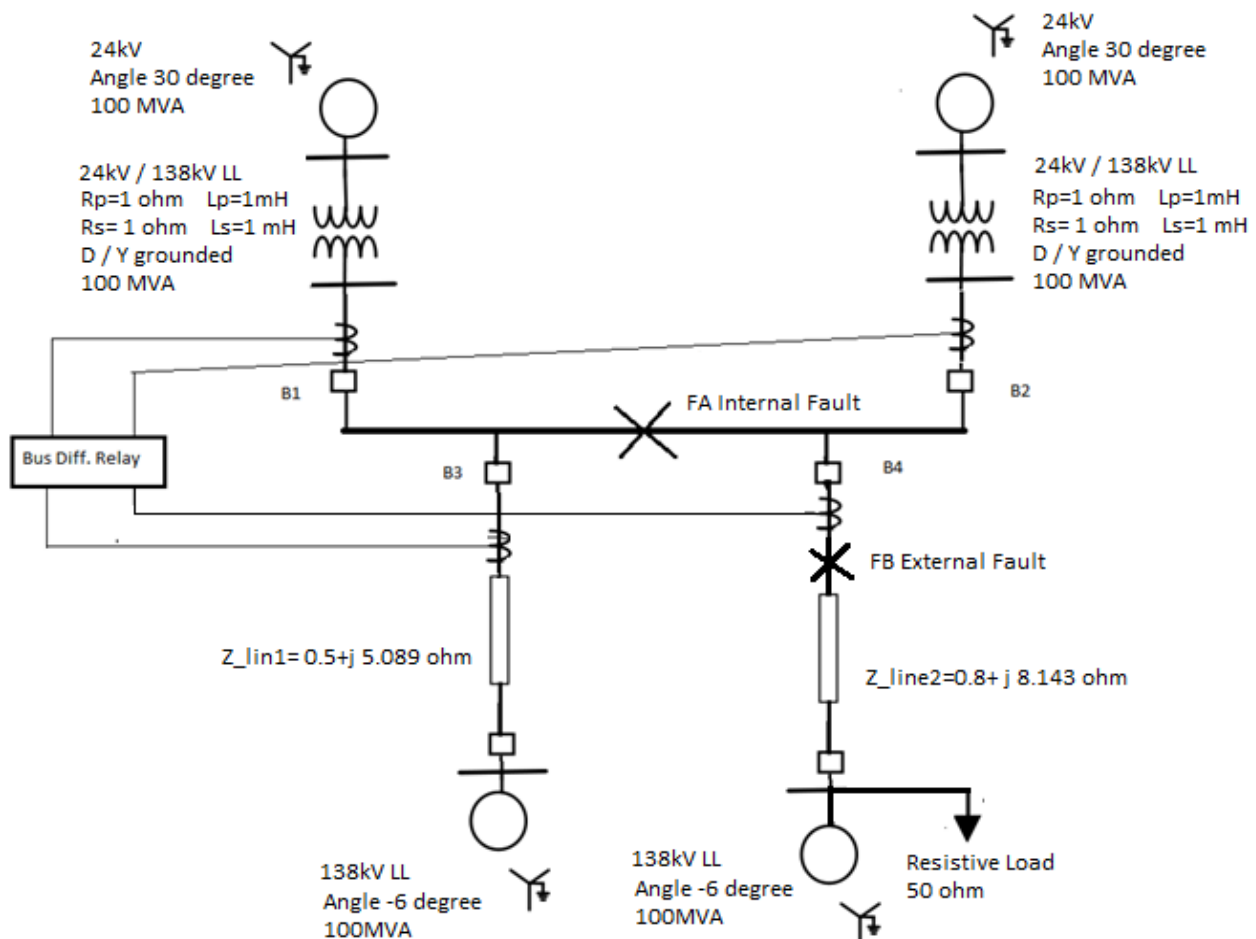
## ECE 525: Lab 3

### Bus Differential Protection

Due Lecture 30, December 10

#### Lab Procedure:

- Set the slopes for the differential relay.
- Fault data are provided in COMTRADE files and the all the currents are in secondary Amperes.
- Apply the COMTRADE files for 3ph, DLG, SLG, and LL faults at FA (Internal fault) and FB (External fault). The relay should trip for internal faults only.
- Apply different type of external faults with saturation of CT 3. Examine relay response.
- Apply the COMTRADE file applying 3 phase external fault followed by a 3 phase internal fault. Note the relay response.



- The CT's have a CTR of 400:1.
- Download the MathCAD relay model from the course web site.

**Report:**

1. Your report should list your relay settings
2. Table with summarizing the MathCAD relay responses for each cases, indicating whether the response was correct or not.
3. Brief summary comments.