

ECE 215

Fall 2025

Objective 1.2: Circuit Protection

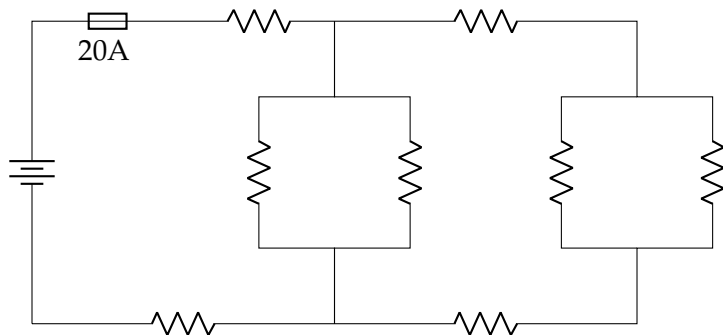


UNITED STATES
AIR FORCE
ACADEMY

Objective 1.2

I can determine appropriate circuit breaker values for adequate system protection.

DON'T LET THE SMOKE OUT!



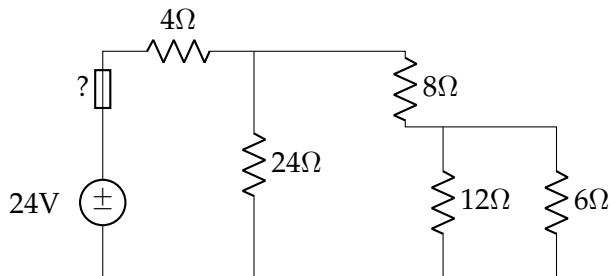
Considerations:

- Are the components protected from failures?
- Are the load voltages/currents within operational limits?
- → We need to analyze the circuit!

METHOD

- Label nodes
- Combine resistors working towards source
- Find source current
- Choose appropriate circuit protection
 - Select circuit protection rated for current between 10% and 50% higher than source current

EXAMPLE - FIND I_s AND SELECT FUSE



Rating
2A
2.5A
3A
3.5A
4A