



Motor Theory Nameplate Lab

Program: Electrician Technician

Course: EL120 Introduction to Electrical Theory

Objectives: Under the supervision of your instructor, you should be able to do the following:

- Collect data from a motor nameplate.
- Connect the terminals for a dual voltage motor.

Lab Equipment:

- Dual voltage motor

Required Tools:

- Pair of strippers

Materials:

- Dual voltage motor
- 14/3 Romex
- 2-screw Romex connector
- 6 red wire nuts
- Paper
- Pencil or pen

Safety (PPE):

- Safety glasses/goggles

Resources: N/A

Required Time: 120 minutes.

Shop Maintenance:

- All work will cease 20 minutes prior to the end of class.
- All work areas must be cleaned.
- Tools and equipment must be cleaned and returned to the designated areas (cage, tool room, cabinets etc.)
- Any broken or missing tools must be reported immediately.
- Tools and equipment are students' responsibility.



Procedures: (Eye protection must always be worn)

Connecting dual voltage motor

1. Strip about 6" of outer insulation off the end of the 14/3 Romex.
2. Install one 2-screw Romex connector in the motors designated entry for the electrical connection.
3. Strip off about 2" of insulation off each of the wires from Romex wire.
4. Using the name plate data on a dual voltage motor wire first for high voltage and then wire for low voltage.
5. Have the instructor see each of the connections before disconnecting wires.

Collect Data from a nameplate

Collect the following information from a 3-phase motor by filing out the "Motor Name Plate Questionnaire" sheet.

1. Rated Voltage
2. Rate Amperage
3. Rated Full Load Speed
4. Rated Horsepower
5. Phase
6. NEMA Design Letter
7. Insulation Class
8. Nominal Rate Voltage
9. Minimum Starting Voltage
10. Frequency
11. Power Factor



Student Name: _____ Date: _____

Motor Nameplate Questionnaire

1. Rated Voltage _____
2. Rated Amperage _____
3. Rated Full Load Speed _____
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