

SECTION 16462

PANELBOARDS

PART 1 - GENERAL

1.1 Summary

A. This Section includes:

1. Panelboards.

B. Related Work Specified Elsewhere

Circuit Breakers.....Section 16180
Grounding.....Section 16450
Field Testing.....Section 16950

2.2 References

1. Federal Specifications

W-P-115b - Panelboards.

W-C-375b - Molded-Case Circuit Breakers.

2. National Fire Protection Association (NFPA)

3. National Electrical Code (NEC)

4. National Electrical Manufacturers Association (NEMA)

AB1 - Molded-Case Circuit Breakers.

ICS - Industrial Control and Systems.

PB1 - Panelboards.

ST20 - Dry-Type Transformers for General Applications.

5. Underwriters' Laboratories, Inc. (UL)

50 - Electrical Cabinets and Boxes.

67 - Electric Panelboards.

508 - Electric Industrial Control Equipment.

6. National Electrical Safety Code

7. Standard for Electrical Safety in the Workplace – NFPA 70E

8. Occupational Safety and Health Administration, OSHA.

9. All electrical and control equipment and material shall bear the recognized Underwriters Laboratories, Inc. (UL) seal of approval. It is Vendor's responsibility to obtain local inspection approval for all non-UL labeled equipment and pay all fees in connection with the same.

2.3 Submittals

A. Submit as specified in Section 1330.

B. Includes, but not limited to, the following:

1. Physical size, number of poles, ratings and nameplate information on panelboards.
2. Overall dimensions, weight, ratings, impedance and taps on transformers.
3. Schematic diagrams.
4. Factory test data if required.
5. Coating system.

PART 2 - PRODUCTS

2.1 Acceptable Manufacturers

A. Power Distribution Panelboards:

1. Square D Company.

B. Lighting Panelboards:

1. Square D Company.

2.2 Lighting and Small Power Panel-boards

- A.** Required final arrangement of breakers determined by system design.
- B.** Provide required components with ratings and voltages as indicated on the plans.
- C.** Heavy-duty type with size, number of poles, and quantity of breakers as indicated.
- D. Enclosure:**
1. NEMA Type 1 (located in electrical room).
 2. Code gauge, hot-galvanized sheet steel boxes for surface and flush mounting.
 3. Code gauge steel trim.
- E.** Wiring trough at top and bottom.
- F.** Hinged door with lock and latch combination in the front trim.
- G.** Phenolic nameplate approximately 1-inch x 3 inches on front of panel engraved with the panelboard title and designation such as shown on the project documentation.
- H.** Main circuit breaker for incoming line as indicated.
- I.** Spare space filler plate if required for panel symmetry.
- J.** Minimum symmetrical interrupting rating of as indicated on the plans.
- K.** Circuit directory in each panelboard filled in by typed lettering identifying the loads connected to each breaker.
- L.** Bus bar material to be copper

2.3 Painting

- A.** Paint all items this section with manufacturers standard system suitable for the service intended. System shall include surface preparation, prime and finish coats.
- B.** Submit with Submittals the type, color, and manufacturer of paint system used.

PART 3 - EXECUTION

3.1 Panelboard Installation

- A.** Install at locations indicated.
- B.** Surface-mount on wall (or equipment rack), as indicated, at an elevation 6'-6" to top of panel.
- C.** Arrange with proper clearances from other equipment and material to obtain good accessibility for operation and maintenance.
- D.** Install circuit directory in each panelboard.
- E.** Ground all neutral buses to the building ground system.
- F.** Connect feeder circuits as indicated in the panel schedules to obtain best balance of load between phases.

3.2 Field Painting

- A.** Preparation of surfaces and touch-up of scratched or damaged painted surfaces is specified in Section 9900.

PART 4 MEASUREMENT AND PAYMENT

4.1 Measurement

- A.** No measurement will be made for this item.

4.2 Payment

- A.** Payment will be made at the contract lump sum price bid and shall be considered full payment for providing labor and materials to perform this work.

**** END OF SECTION 16462 ****