

SECTION 26 24 16.00 - PANELBOARDS

PART 1 - GENERAL

1.1 SUBMITTAL REQUIREMENTS

A. Product Data

1. For each provide bus configuration, current ratings, voltage ratings, SCCR Ratings, overcurrent protective device(s), surge suppression device(s), accessory, and components indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, provide products to match manufacturer of existing equipment.
- B. Enclosures: Refer to electrical drawings and coordinate with field conditions for cabinet mounting types (i.e. flush, surface, flush and surface).
 1. Rate for environmental conditions at installed location.
 2. Directory Card: Provide neatly typewritten circuit directory card for each panelboard upon completion of installation work. Include the actual room names/numbers that are selected for interior signage/designation.
- C. Future Devices: Provide all mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- D. Fault Current Ratings
 1. In existing buildings where fault current values are not indicated on drawings, coordinate with existing "upstream" distribution equipment, and provide equipment AIC ratings that meet or exceed same.

2.2 PANELBOARDS

- A. Provide circuit breaker panelboards unless indicated otherwise on drawings.
 1. Circuit Breaker Branch Overcurrent Protective Devices: Bolt-on type, replaceable without disturbing adjacent units.

2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Molded-Case Circuit Breakers (MCCB): Comply with UL 489, with series-connected rating interrupting capacity to meet available fault currents.
1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
 2. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.
 - c. Application Listing: Appropriate for application
 - d. Multipole units enclosed in a single housing or factory assembled to operate as a single unit.
 - e. Mounting: Designed to be mounted and operated in any physical position, and to be operated in a minimum ambient temperature of 40 degrees C.; with mechanical screw type removable connector lugs, AL/CU rated.
 - f. Size: Full size, no "tandem" or "split" breakers.
 - g. Position: All load-side box lugs of each breaker in the same gutter.
 - h. Common Trip: Common trip for multi-pole breakers so overload on one pole will trip all poles simultaneously. Provide multi-pole breakers with common trip (or with handle-ties, only if needed because breakers are existing) for applications where it is determined that a common disconnecting means is required for multi-wire branch circuits serving, or within, the same enclosure, outlet box, equipment, or device.
 - i. SWD Type: Provide for 15 and 20 ampere branch circuit breakers (UL Listed).
 - j. HACR Type: Provide for 15 through 70 ampere branch circuit breakers.
 - k. Spares: Place all spare circuit breakers in the 'OFF' position, provide with breaker locks, and schedule them as "Spare" on directory card.

2.4 ACCESSORIES

- A. Provide panelboard accessories and devices including, but not necessarily limited to, overcurrent protection devices, ground-fault protection, etc., as recommended by panelboard manufacturer for ratings and applications indicated. Provide distribution equipment with ground bus bars. Provide a minimum of 20 handle, lock-on devices of the non-padlocking type for life safety, special systems and other essential circuits.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install overcurrent protective devices and controllers not already factory installed. Set field-adjustable, circuit-breaker trip ranges and other applicable settings. Arrange conductors in gutters into groups. Maintain filler plates installed in unused spaces.
- B. Provide neatly computer-typed/printed circuit directory card for each panel upon completion of installation work. Include the actual room names/numbers that are selected for interior signage and/or designation. Scheduling shown on drawings is shown to indicate feeder and branch circuiting requirements. Determine exact numbering sequence of circuits in field after performing final balancing.

END OF SECTION 26 24 16.00