

**PART 1            GENERAL**

**1.1            SECTION INCLUDES**

- .1            Materials and installation for standard and custom breaker type panelboards.

**1.2            RELATED SECTIONS**

- .1            Section 01 33 00 - Submittal Procedures.
- .2            Section 26 80 00 – Commissioning of Electrical Systems.
- .3            Section 26 05 00 – Common Work Results - Electrical.
- .4            Section 26 28 16.02 – Moulded Case Circuit Breakers.

**1.3            REFERENCES**

- .1            Canadian Standards Association (CSA)
  - .1            CSA C22.2 No.29, Panelboards and enclosed Panelboards.

**1.4            SUBMITTALS**

- .1            Drawings to include electrical detail of panel, branch breaker type, quantity, ampacity and enclosure dimension.

**PART 2            PRODUCTS**

**2.1            PANELBOARDS**

- .1            Panelboards: to CSA C22.2 No.29 and product of one manufacturer.
  - .1            Install circuit breakers in panelboards before shipment.
  - .2            In addition to CSA requirements manufacturer's nameplate must show fault current that panel including breakers has been built to withstand.
- .2            250 and 600 V panelboards: bus and breakers rated for 10,000 and 18,000 A (symmetrical) minimum interrupting capacity respectively or as indicated on electrical drawings.
- .3            Sequence phase bussing with odd numbered breakers on left and even on right, with each breaker identified by permanent number identification as to circuit number and phase.
- .4            Panelboards: mains, number of circuits, and number and size of branch circuit breakers as indicated.
- .5            Two keys for each panelboard and key panelboards alike.

- .6 Tin plated aluminum bus with neutral of same ampere rating as mains.
- .7 Mains: suitable for bolt-on breakers.
- .8 Trim with concealed front bolts and hinges.
- .9 Trim and door finish: baked grey enamel.

## **2.2 BREAKERS**

- .1 Breakers: to Section 26 28 16.02 - Moulded Case Circuit Breakers.
- .2 Breakers with thermal and magnetic tripping in panelboards except as indicated otherwise.
- .3 Main breaker: separately mounted on top or bottom of panel to suit cable entry. When mounted vertically, down position should open breaker.
- .4 Lock-on devices for 10% of 15 to 30 A breakers installed as indicated. Turn over unused lock-on devices to Departmental Representative.
- .5 Lock-on devices for receptacles, fire alarm clock outlet, emergency, door supervisory, intercom, stairway, exit and night light circuits as indicated.

## **2.3 EQUIPMENT IDENTIFICATION**

- .1 Provide equipment identification in accordance with Section 26 05 00 – Common Work Results - Electrical.
- .2 Nameplate for each panelboard size 4 engraved as indicated.
- .3 Nameplate for each circuit in distribution panelboards size 2 engraved as indicated.
- .4 Complete circuit directory with typewritten legend showing location and load of each circuit.

## **PART 3 EXECUTION**

### **3.1 INSTALLATION**

- .1 Locate panelboards as indicated and mount securely, plumb, true and square, to adjoining surfaces.
- .2 Install surface mounted panelboards on plywood backboards. Where practical, group panelboards on common backboard.
- .3 Mount panelboards to height specified in Section 26 05 00 – Common Work Results - Electrical or as indicated.

- .4      Connect loads to circuits.
- .5      Connect neutral conductors to common neutral bus with respective neutral identified.

**END OF SECTION**