

## **1. GENERAL**

### **1.1 Product Data**

- .1 Submit product data in accordance with Section 16010 - Electrical General Requirements.
- .2 Include time-current characteristic curves for breakers with interrupting capacity of 22,000 A symmetrical (rms) and over at system voltage.

## **2. PRODUCTS**

### **2.1 Breakers General**

- .1 Bolt-On Moulded Case Circuit Breaker: Quick-make, quick-break type, for manual and automatic operation with temperature compensation for 40°C ambient.
- .2 Common-Trip Breakers: With single handle for multi-pole applications.
- .3 Magnetic instantaneous trip elements in circuit breakers to operate only when value of current reaches setting. Trip settings on breakers with adjustable trips to range from 3-8 times current rating.
- .4 Circuit breakers with interchangeable trips as indicated.

### **2.2 Thermal Magnetic Breakers**

- .1 Moulded case circuit breaker to operate automatically by means of thermal and magnetic tripping devices to provide inverse time current tripping and instantaneous tripping for short circuit protection.

### **2.3 Magnetic Breakers**

- .1 Moulded case circuit breaker to operate automatically by means of magnetic tripping devices to provide instantaneous tripping for short circuit protection

### **2.4 Solid State Trip Breakers**

- .1 Moulded case circuit breaker to operate by means of a solid-state trip unit with associated current monitors and self-powered shunt trip to provide inverse time current trip under overload condition, and long time instantaneous tripping for phase ground fault short circuit protection.

### **2.5 Optional Features**

- .1 Include where indicated on drawings:
  - .1 Shunt trip

- .2 Auxiliary switch
- .3 Motor-operated mechanism c/w time delay unit
- .4 Under-voltage release
- .5 On-off locking device
- .6 Handle mechanism
- .7 Keyed interlocks
- .8 Non-auto
- .9 Solid state trip units.

## **2.6 Enclosure for Individually Mounted Breakers**

- .1 Enclosure shall be CSA code gauge galvanized steel, hinged door, front mounted external operating handle, lockable in “off” position, EEMAC-1 unless shown otherwise. Use EEMAC-12, for industrial application, enclosure for wet environment or as shown “WP” on drawings. Increase enclosure size above standard for large cables.
- .2 Where distribution system has grounded neutral conductor, provide neutral bar, with ampere rating equal to breaker/switch rating in enclosure.

## **3. EXECUTION**

### **3.1 Installation**

- .1 Install circuit breakers as indicated on drawings and specified herein.
- .2 Install circuit breakers in panelboards to satisfy branch circuit requirements under the scope of work of this contract.
- .3 Provide 15% spare quantity of circuit breakers in each panelboard.
- .4 Identification: Provide lamicoid plate on each breaker showing voltage, source of supply and load being fed - 120/208 V, 3 phase, 4W fed from LDP No.1 to Splitter Trough No. 1.

**END OF SECTION**