



## COMPONENTS FOR MOTOR STARTER PANELBOARDS

### TYPE MSC – CIRCUIT BREAKER DISCONNECT

### TYPE MSF – FUSIBLE DISCONNECT

The components for these panelboards that are available are:

- Starter enclosures complete with starters.
- Circuit breaker enclosures complete with breakers and connecting straps.
- Vacu-Break panelboard fusible switches.

Both the starter enclosures and the circuit breaker enclosures are designed to match the Vacu-Break panelboard units. Each of these units will fit on any panel base assembly that is designed for Vacu-Break units.

#### STARTER ENCLOSURES

The starter enclosures are available in four (4) basic sizes as described by the vertical space they require. These units accommodate a large selection of starter sizes and related accessories.

- Code No. 5E10 - The 5 inch unit is arranged for twin-mounting (horizontally) starters up to Size 1, or any combination of Size 00, 0, and 1.
- Code No. 7E10 - The 7-1/2 inch enclosure is similar to the 5 inch unit with starters horizontally mounted. However, control transformers may be included. This is the reason for the increased height.
- Code No. 10E10 - The 10 inch enclosure is arranged for twin mounting (vertically) starters up to Size 2. There is sufficient space for control transformers sized to match each starter.
- Code No. 11E10 - This is also a 10 inch unit, but it is designed to accommodate one (1) Size 2 in the LH compartment and either Size 00, 0, or 1 in the RH compartment.
- Code No. 13E10 - This 15 inch unit accommodates a Size 3 in the LH compartment and a Size 1 starter in the RH compartment. Control transformers may also be fitted within the unit.
- Code No. 14E10 - This 15 inch unit accommodates one (1) Size 3 and one (1) Size 2 starters in the same manner as described for Code No. 13E10.
- Code No. 15E10 - This 15 inch unit is designed to accept two (2) Size 3 starters, individually mounted. When only one (1) Size 3 is required the LH hand compartment is utilized leaving the RH compartment available for a control transformer.

Code No. 16E10 - This 15 inch unit is arranged for individual mounting (horizontally) of one (1) Size 4 starter, with or without a control transformer.

These starter enclosures may be ordered by word description or by the coded description illustrated on the following pages. The units can be purchased as a completed assembled unit with all accessories mounted and connected, or as an un-assembled unit.

The un-assembled unit will consist of the enclosure, starter, mounting brackets, hardware and accessories as called for by the code number. The enclosure covers will be punched to accept the accessories specified, but all assembly work will be done by the purchaser.

The code description system and code numbered unit enclosures are limited to full voltage non-reversing starters for the present. Other forms, such as reversing are available by word description and will be specially assembled per order.

These units are shown in Section 6.11.2.

#### CIRCUIT BREAKER ENCLOSURES

Circuit breaker enclosures are steel boxes with hinged doors and match dimensional the starter enclosures. The breakers are horizontally mounted. Each door is dished inward and the circuit breaker handle protrudes through this section. The door is interlocked so that the breaker must be in the "OFF" position in order to open the door. Padlocking provisions are furnished.

Catalog number MSC5EF2 is a 5 inch unit which will take two (2) E, EH, or EF breakers. Using the ETI breaker this will permit using this unit with starters up to Size 3.

Catalog number MSC5EF1 is the same as described above, but will accept only one (1) E, EH, or EF in the LH side. The RH cover is furnished blank.

Catalog number MSC7QJ2 is a 7-1/2 inch unit which will take two (2) EQ-225 breakers (250 volt maximum).

Catalog number MSC7QJ1 is the same as the above, but will accept only one (1) EQ-225 in the LH side. The RH cover is furnished blank.

Catalog number MSC5FJ is a 5 inch unit which will take one (1) FJ breaker.

These units are shown in Section 6.11.2.

#### FUSIBLE (VACU-BREAK) SWITCHES

The fusible switch used on these panels are the standard Vacu-Break panelboard units as shown in Section 1.6 of the I-T-E Components Catalog. To provide a mechanical interlock between the Vacu-Break switch and the motor starter enclosure the switches must be modified by the purchaser. Page 10, Section 6.11.2 illustrates the addition of the interlock plate.



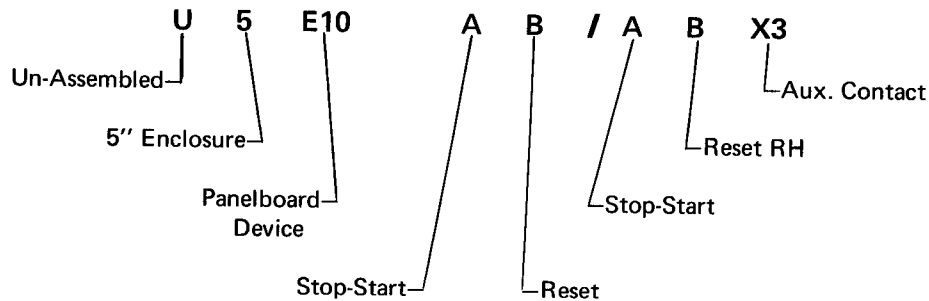
COMPONENT ORDERING INFORMATION

Panelboard Starter Enclosures are available complete with starters mounted inside with required accessories such as Stop-Start, or H. O. A., and etc. For un-assembled units prefix code number with the letter "U".

Code Number	Description	Page
5E10	5" Enclosure (two Size 00, 0, or 1)	1
7E10	7-1/2" Enclosure (two Size 00, 0, or 1)	2
10E10	10" Enclosure (two Size 2)	3
11E10	10" Enclosure (one Size 2 & one Size 1)	3
13E10	15" Enclosure (one Size 2 & one Size 1)	6
14E10	15" Enclosure (one Size 3 & one Size 2)	6
15E10	15" Enclosure (two Size 3)	4
16E10	15" Enclosure (Size 4)	5

The enclosure number will be suffixed by code letters and numbers to indicate the accessories required. Divide LH and RH compartments by a slant where applicable.

EXAMPLE:



Suffix Code Letter	Accessory Description
A	Stop-Start pushbutton
B	Reset button
C	H. O. A. or H. O. Selector Switch
D	Pilot Light
X1	Aux. Contact (1-N.O.)
X2	Aux. Contact (1-N.C.)
X3	Aux. Contact (1-N.O. & 1-N.C.)
X4	Aux. Contact (1-N.C. late break)
T	Control Transformer

To complete the code numbers it will also be necessary to list the catalog number of the starter to be enclosed. These catalog numbers can be taken from the current listing of "Open" type Class A-20 starters.



### COMPONENT ORDERING INFORMATION (Continued)

#### EXAMPLE:

Required are 5" box complete with one (1) Size 0 and one (1) Size 1 starter equipped with reset and Stop-Start push button (480V, 60 cycle coil). One (1) 7-1/2" box complete with one (1) Size 1 starter having H. O. A. selector switch and reset button (120V, 60 cycle coil) - RH side blank.

Order:

1 - 5E10-AB/AB  
with 1 - A203B48 & 1 - A203C48

1 - 7E10 - CBT/blank  
with 1 - A203C12

The circuit breaker enclosures may also be ordered by catalog numbers. Enclosures contain all parts to accept I-T-E circuit breakers. The enclosure is designed to fit the mounting rails and bus bars which accept Vacu-Break units.

Catalog Number	Description	Page
MSC5EF1	one E, EH, or EF Breaker	7
MSC5EF2	two E, EH, or EF Breakers	7
MSC7QJ1	one EQ-225 Breaker	8
MSC7QJ2	two EQ-225 Breaker	8
MSC5FJ	one FJ Frame Breaker	9

When circuit breakers are to be included with enclosures the catalog numbers of the circuit breakers should be included as part of the description.

#### EXAMPLE:

Required are one (1) 15A 3P and one (1) 20A 3P EF circuit breakers complete with enclosure for use as a motor starter disconnect.

Order:

1 - MSC5EF2  
1 - EF3B015  
1 - EF3B020

### REPLACEMENT PART KITS

Should it be necessary to add a circuit breaker to a blank compartment at a future date kits are available.

To add a circuit breaker to the RH compartment of Catalog No. MSC5EF1 order kit Catalog No. MSC5EFC.

To add a circuit breaker to the RH compartment of Catalog No. MSC7QJ1 order kit Catalog No. MSC7QJC.