



## **M-T-T-M Open Transition**

### **Selector Switches**

#### *43 M/A Manual/Auto Switch*

Describes manual or automatic operation for the transfer scheme

#### *43PT T1/T2 Preferred Tie Switch*

Only when 43 M/A switch is in "Auto", used to indicate what tie breaker should be normally open when system is in "Auto" and both incoming lines are available

### **Normal Mode of Operation**

The normal mode of operation would be with device 43 M/A switch in "Auto" mode, both incoming lines will be normally closed, and preferred tie breaker will be open as indicated by 43-PT switch. The alternate (non-preferred) tie breaker shall always be closed when 43 M/A switch is in "Auto" in order for the Automatic Transfer Scheme to work properly.

### **Electrical interlocks**

Under manual operation there is an electrical interlock between all incoming sources to prevent paralleling.

**In order for any of the Automatic mode described in this section to work properly, please make sure that the preferred tie breaker is open as indicated by selector switch 43PT, and the non-preferred tie breaker is always closed.**

### **Automatic Mode**

#### **Selector switch device 43 in "Auto"**

(a)

Loss of voltage (UV or NEG SEQ) on either incoming line will after a time delay cause its main breaker to open and then the preferred tie breaker will close, provided that voltage is present on the other incoming line.

When the voltage is restored, the preferred tie breaker will open after a time delay automatically and then the opened incoming line would close.

(b)

However, if the voltage is subsequently lost on the second line after the transfer has occurred as described in (a) above, the second line will after a time delay open and then the preferred tie would open.

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Return of voltage on either line will after a time delay cause its main breaker to close, and then the preferred tie would close. When voltage returns to the other line, the preferred tie breaker will after a time delay open, and then the other line breaker will close, restoring the system to normal.

(c)

Simultaneous loss (or restoration) of both sources will after a time delay cause both main breakers to open (or close), leaving the preferred tie breaker open.

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