

Doc Number	Revision	Date	Editor	SME Approval
TB-018	0.0	January 13, 2016	J. Allen	S. Norman

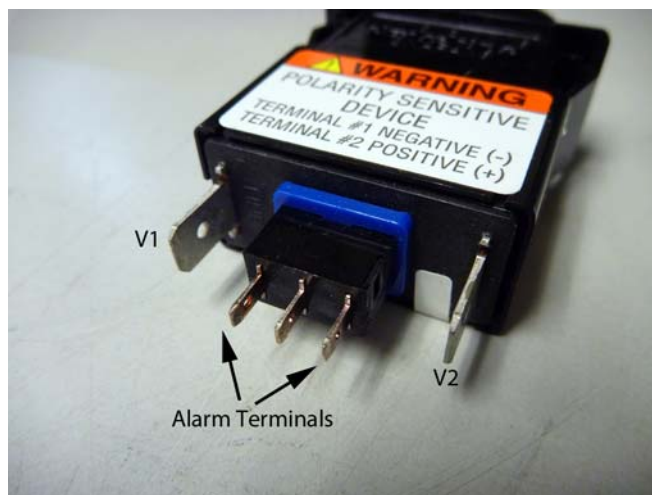
## MTS Distribution Breaker Insertion

### 1. Minimum Requirements:

1. Experience and knowledge with spade-style terminal breakers.
2. Fine manual dexterity and excellent eyesight for terminal alignment.
3. Touch-sensitive placement to prevent irreparable damage to alarm terminals.

### 2. Technical Scope:

1. When inserting the distribution circuit breakers into their respective terminals, both spades may not fully seat in the female terminals and the auxiliary alarm spades are at high risk of being bent and/or broken during insertion.
  - In some cases, this lack of attention to detail at application prep has caused auxiliary alarm terminals to break and voltage terminals to bend.
  - The standard warranty does not cover bent or broken terminals on breaker body nor on breaker circuit panel.
2. The micro-distribution circuit breakers for the MTS system are unique in that they utilize small, spaded terminals for voltage throughput and, even smaller, spaded terminals for alarm sensory activation. It is imperative that the installer take the time to understand this installation process and potential trouble points before attempting breaker insertion.



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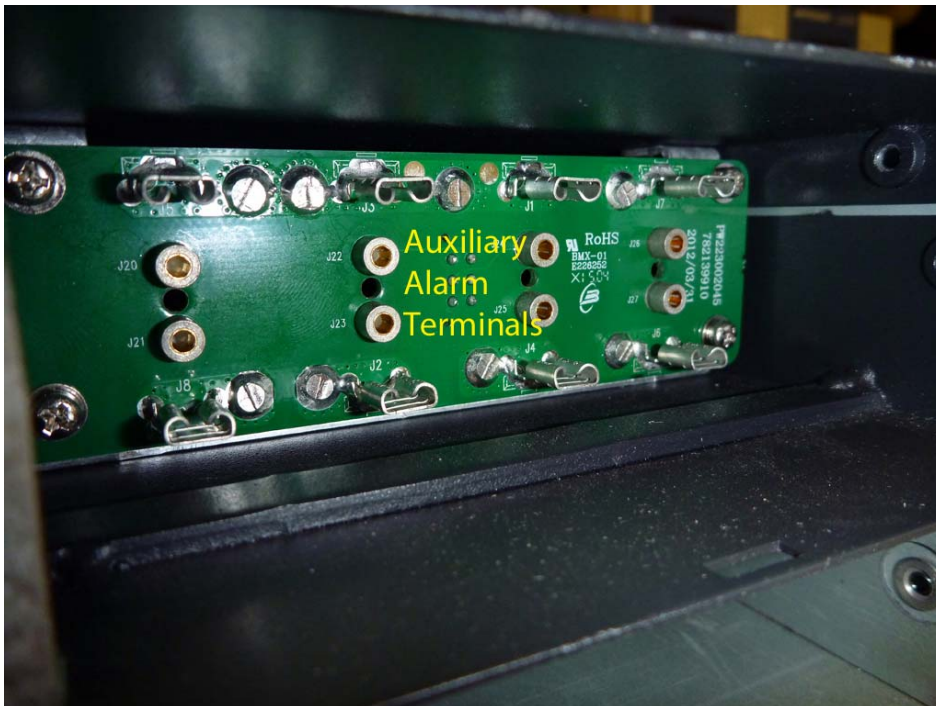
3. On the front-right panel of the MTS system chassis the user will find two captive Phillips thumbscrews retaining the breaker panel faceplate.

1. Loosen the screws and set the baseplate aside



4. Viewing inside the breaker panel will show four sets of female breaker voltage SPADE terminals and four sets of female auxiliary alarm terminals as shown below:

1. Note that the female auxiliary alarm terminals are round; though the male terminals on the breaker body are spade.



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5. Please also note in the above image how the female spade terminals are spaced and their respective angle up or down.
  1. It may be necessary to, very gently, manipulate the female terminal angle up or down to facilitate correct alignment with the male terminal on the breaker body upon insertion.
  2. The most effective method of terminal adjustment is to use light thumb pressure and push the upper terminal; slightly up, toward the top panel and the lower terminal; slightly down, toward the rectifier slot. **It is critical that the installer use very slight pressure when aligning the terminals. Over-pressing them will create too much angle and/or bend them beyond repair.**

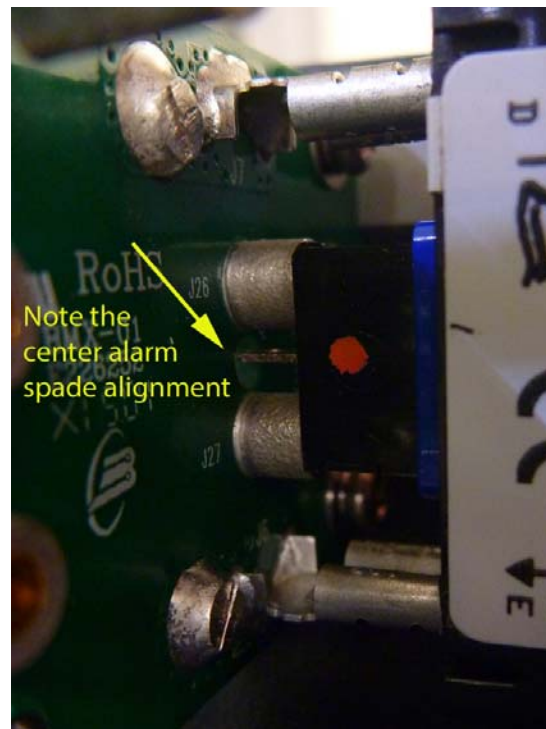
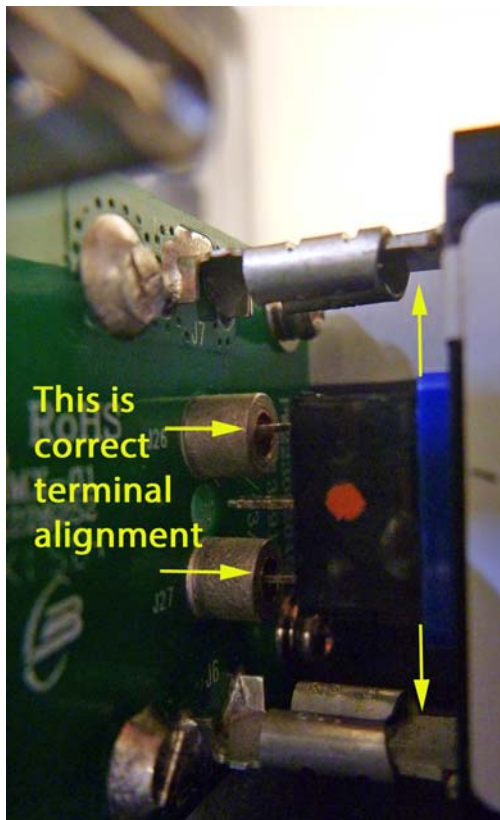
This image shows a mis-alignment and the need to slightly widen the voltage terminals.



**♣ Each set of female terminals may need to be adjusted to properly align with and receive the breaker. ♣**

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6. The voltage spades will seat in the female terminals prior to the alarm spades making contact. Inspect for correct alignment/seating of the voltage terminals prior to continuing this installation sequence.
  1. The alarm terminals will make contact at approximately 1/4 of the full breaker insertion. The installer will feel a slight resistance when they seat and should visually verify that both upper and lower alarm spades are centrally aligned in their respective holes before continuing with breaker insertion.
  2. This is a critical point where breaker terminals are often bent and/or broken during installation. Please use caution and patience.



7. Repeat the above steps for each breaker and its respective terminals.
8. Replace the breaker panel front cover and place the safety cover (located in the white accessories box) over the captive screws just prior to securing them by finger-tightening only.