

Siemens Energy & Automation, Inc.  
Bellefontaine, Ohio 43311 U.S.A.  
For questions call 1-800-241-4453 or our web site:  
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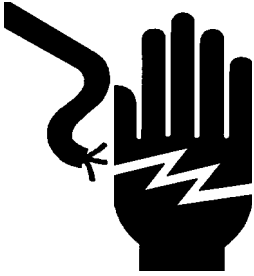
Item: Solid State Molded Case Circuit  
Breakers Electronic Sentron Standard  
Mining Duty

Devices: Siemens MM Frame Type MM6 and  
NM Frame Type NM6.

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Pc. No. 720658B00

## Installation Instructions

	<b>⚠ DANGER</b>
	<b>Hazardous Voltage. Will cause death or severe injury.</b>
	Turn off and lock out all power supplying this device before removing cover(s) or device and while cover(s) are removed.
	Wire connector shield no. NDT5 must be installed when wire connectors TA2K8750, TA3P8750, TA4P8500, TA2N8750, TA3N8750, OR TA4N8500 ARE USED. Replace all covers and shields before power supplying this device is turned on.



### SAFETY INSTRUCTIONS

**NOTE:** This instruction outlines the recommended installation procedure.

### Introduction

The MM and NM Frame circuit breaker line includes MM6 and NM6 circuit breaker types. These devices are rated for operating voltages up to 600 VAC, 50/60 Hz.

### Installation

The MM and NM Frame circuit breaker devices are for use in individual enclosures, panelboards or other approved equipment.

The installation procedure consists of inspecting, attaching required accessories, mounting the device and connecting and torquing the line and load wire connectors.

Mounted hardware and unmounted wire connectors (where required) are available as separate catalog items.

### Circuit Breaker Preparation

- Before installing or servicing the breaker, turn off and lock out all power to prevent incidental or accidental contact.
- Make sure that the device is suitable for the installation by comparing nameplate ratings with system requirements. Inspect the device for completeness and check for any damage before mounting.

**NOTE:** Accessory installation should be complete before the circuit breaker is mounted and connected. (See installation instructions supplied with the Accessory before proceeding.)

C. Depress the red trip button (See Fig. 4) or turn the breaker off before installation.

- D. To mount the device, perform the following steps:
- For enclosures, panelboards and switchboards manufactured by Siemens Energy & Automation, Inc., follow instructions provided with the equipment.

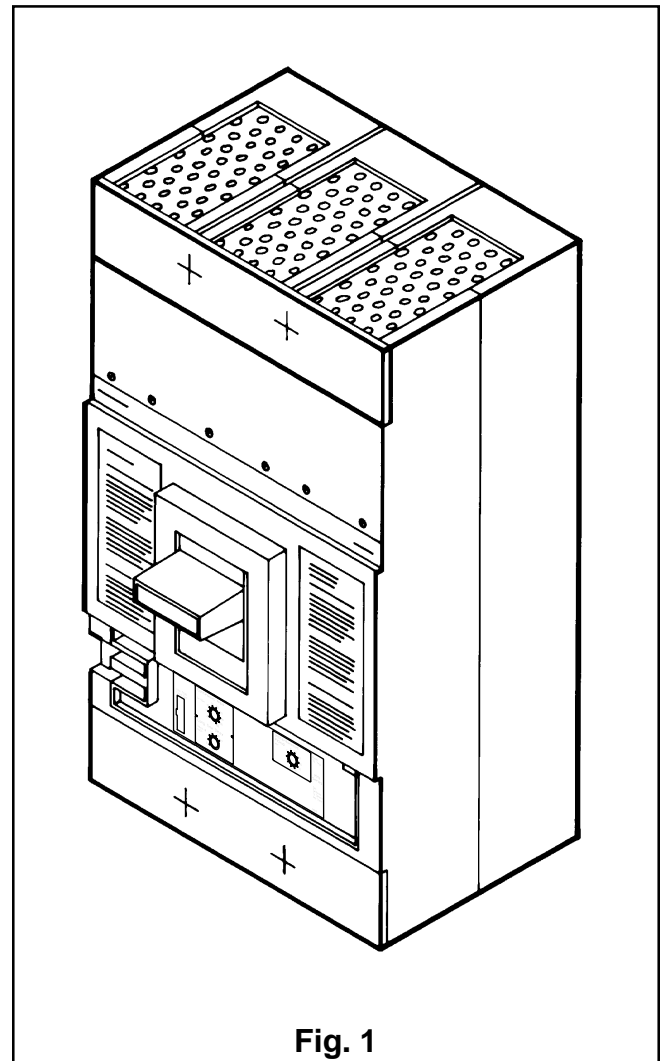
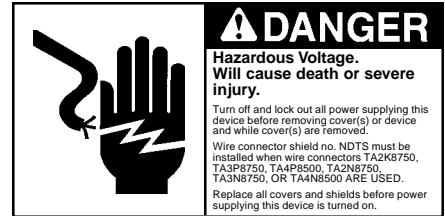
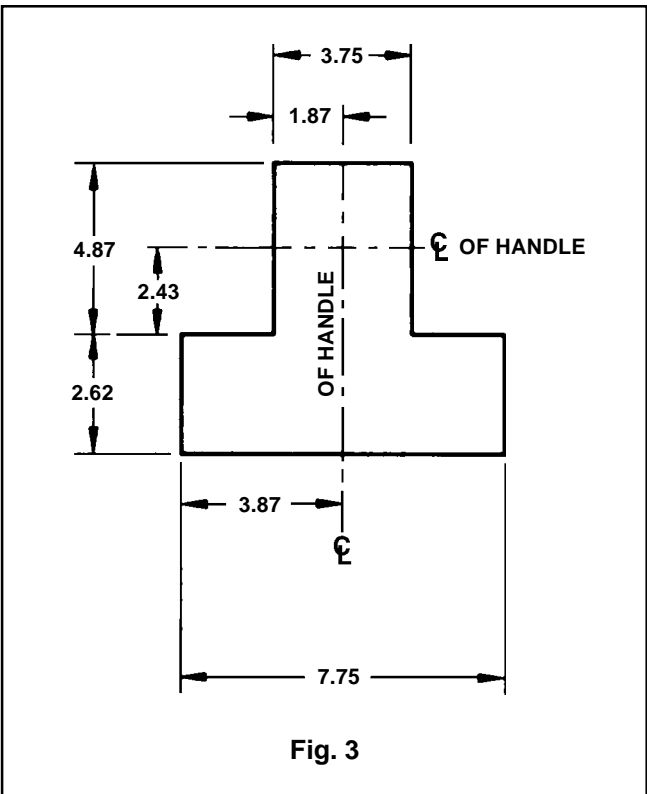
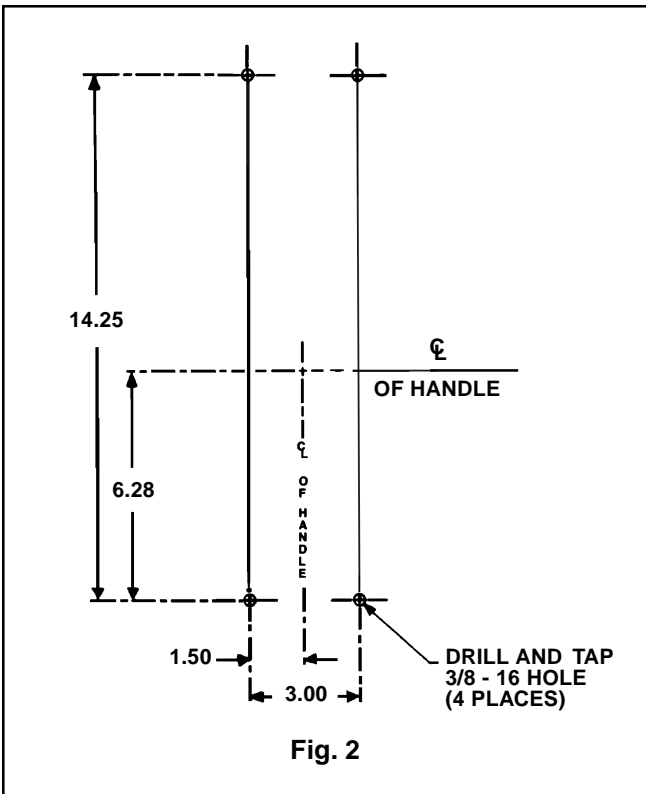


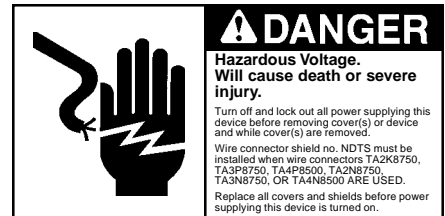
Fig. 1



# Installation Instructions

2. For applications where mounting is on a flat surface of the equipment, drill and tap mounting bolt holes as shown in Fig. 2. For handle escutcheon cutout, refer to Fig. 3.
3. Ensure that any internal breaker accessory terminals can be properly connected with the circuit breaker in the mounted position.
4. Position the circuit breaker in the mounting location, install the mounting hardware and tighten securely.
5. Connect the line and load terminals and torque using the values shown on the circuit breaker nameplate.
6. Connect all accessory terminals, if present.
7. NDTs Lug Shields are **required** to be installed when Pressure Wire Connectors 3TA2K8750, 3TA4P8500, 3TA2N8750, 3TA3N8750, 3TA4N8500 and Crimp Connectors CCM800K3 and CCN1200K3 are used. The NDTs Lug Shields are **recommended** to be installed on the line and load ends, when the MM6 and NM6 Circuit Breakers are operated at 600VAC. See NDTs Lug Shield instruction sheet.
8. Check all mounting hardware for secureness. Check wire connectors for correct torque requirements.





# Installation Instructions

## Manual Operation

Manual operation of the device is controlled by the circuit breaker handle and the PUSH-TO-TRIP button. The device handle has three indicating positions, two of which are molded into the handle to indicate ON and OFF. The third position indicates a TRIP position and is between ON and OFF positions. (See Fig. 4)

- A. Device Reset  
After tripping, the device is reset by moving the device handle to the reset position and then moving the handle to the ON position.
- B. The PUSH-TO-TRIP Button  
The PUSH-TO-TRIP button checks the tripping function and is used to manually exercise the operating mechanism.

## Maintenance

Experience has shown that properly applied molded case circuit breakers normally do not require maintenance. However, some industrial users may choose to establish an inspection and maintenance procedure to be carried out on a regular basis. For detailed information, consult applicable NEMA publications or your local Siemens sales office.

**NOTE:** Do not spray or allow any petroleum based chemicals, solvents or paints to contact the molded parts or nameplates.

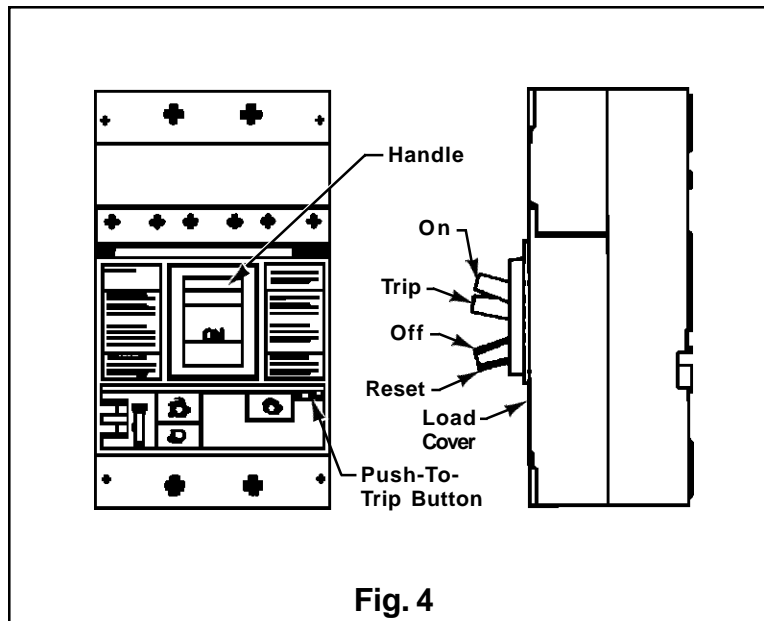
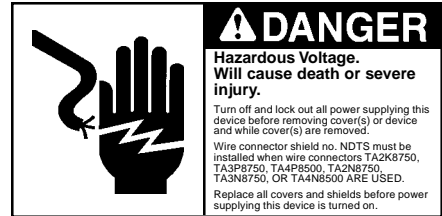


Fig. 4



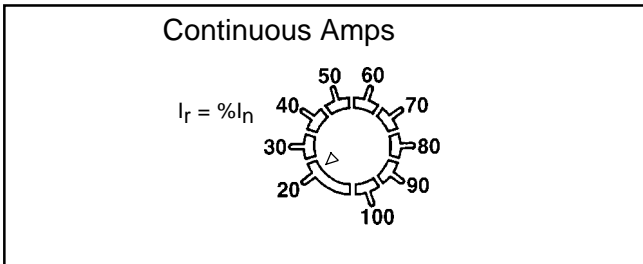
# Installation Instructions

## ELECTRONIC OPERATION

The setting dials on the face of the electronic trip unit are rotary switches that must be properly set to mechanical detent (click stop) positions. An improper switch setting will cause the trip unit to default (as a fail safe condition) to the lowest permissive setting and, consequently, may result in unintentional or nuisance tripping.

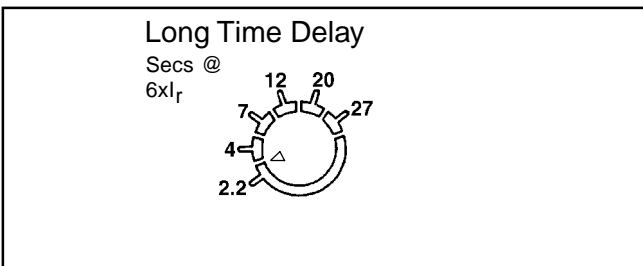
### Continuous Current Switch $I_r = \%I_n$

Adjustments made to this switch can change the continuous amps rating of the breaker to 20, 30, 40, 50, 60, 70, 80, 90 or 100% of the maximum continuous amps rating ( $I_n$ ) of the circuit breaker. The diagram below shows the settings possible on this switch.



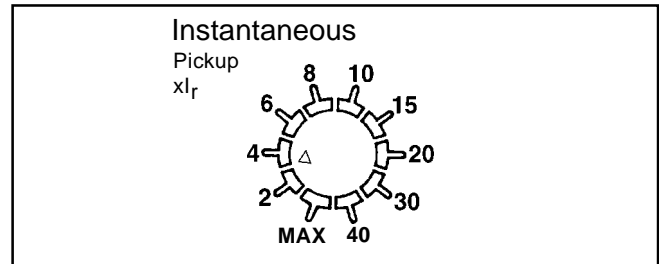
### Long Time Delay @ $6xI_r$

The adjustable long time delay switch allows for selection of long time delays based on  $I^2t$  curves at six time the continuous amps setting ( $I_r$ ). The diagram below illustrates the possible settings for this switch.



### Instantaneous Trip Switch $xI_r$

The adjustable instantaneous trip switch allows selection of a tripping point from 2 to 40 times the ampere rating. The MAX setting sets the instantaneous pickup to the override level (see note below). The diagram below illustrates the possible settings for this switch.



**NOTE:** Breaker contains an override at multiples of the maximum continuous current rating. These multiples are 12.5 times for 600A - 800A breakers. Ten (10) times for 1000A breakers and 8 times for 1200A breakers. Above these levels, the short time delay is no longer operational, and the breaker will trip instantaneously.