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Item: Internal Accessories

For Use With: MD, MM, ND, NM, PD, PM & RD
Frame Circuit Breakers with Trip Units In-
stalled, Molded Case Switches, and Circuit
Interrupters (See Types Below).

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Pc. No. 73346A07

Installation Instructions



⚠ DANGER

Hazardous voltage.
Will cause death or serious injury.
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. NDTs must be installed when wire connectors TA2K8750, TA3P8750 or TA4P8500 are used.

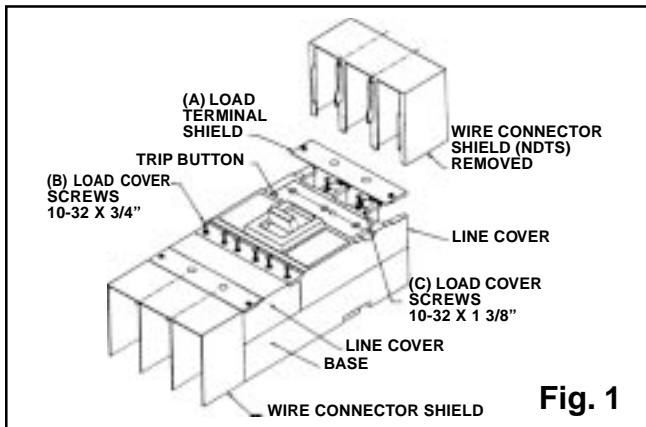
Replace all covers and shields before power supplying this device is turned on.



SAFETY INSTRUCTIONS

Device Types: MD6(ETI), HMD6, CMD6(ETI), ND6(ETI), HND6, CND6, SMD6, SHMD6, SCMD6, SND6, SHND6, SCND6, PD6, HPD6, CPD6, SPD6, SHPD6, SCPD6, RD6, HRD6, CRD6, MM6, MMK, NM6, NMK, PM6, PMK

NOTE: This instruction outlines the recommended installation procedure.



CIRCUIT BREAKER PREPARATION

Step 1. Before installing the accessory, turn off the power supplying the device in which the accessory will be installed. Also turn off any nearby power to prevent incidental or accidental contact during the installation.

Step 2. Make sure the device is in the tripped position. For circuit breakers, depress the red trip button (see fig. 1). For molded case switches, remove the load cover (step 3); this will trip the switch mechanism.

Step 3. Remove the load terminal shield (A, fig. 1) by removing the two load terminal shield screws that attach it to the load cover. Then remove the wire connector shield (if used). Remove the load cover by removing the six load cover screws "B" and the two load cover screws "C" (see fig. 1).

ACCESSORY MOUNTING INSTRUCTIONS

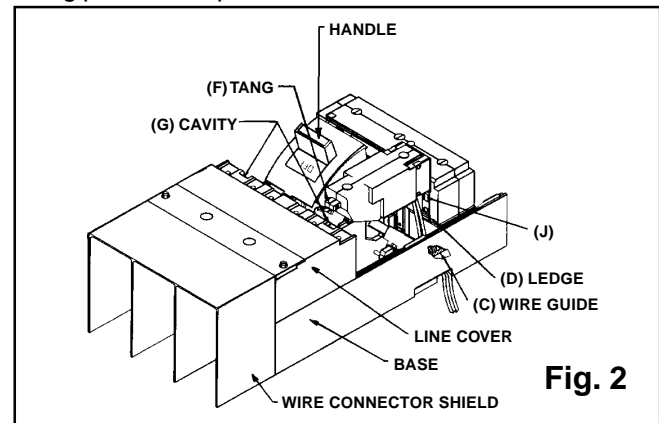
Step 4. Accessory unit(s) can be mounted in either the right, or left pole, or in both poles of the device. If a protective seal is present on the corresponding side of the trip unit that the accessory is being installed, the seal must be completely removed (see fig. 3).

Accessory can not be installed in left pole when Mechanical Interlock system is used.

WARNING: The following steps must be followed precisely to ensure the proper operation of the accessory.

Step 5. Repositioning of the accessory wires through the accessory wire guide **may** be necessary to insure proper routing of the wires when the accessory is installed (see fig. 3). The wires should be positioned, if **necessary**, through the wire guide so that the wires will all be on the side of the accessory that corresponds to the closest device wire-way guide (refer to figs. 2 & 3).

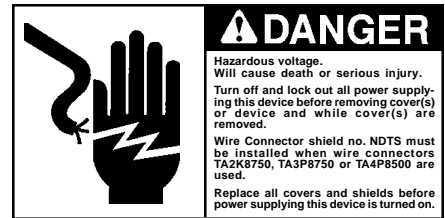
Step 6. Feed the accessory leads down through the rectangular wire guide (see fig. 2) to bring the leads out the bottom of the device. The alarm switch accessory requires the actuator M to be inserted below the top edge of the center trip unit opening (J, fig. 3) as it is being placed into position.



The accessory is then positioned by gently pulling the wire leads and aligning the "E" groove (fig. 3) and "F" tang (fig. 2) on the accessory, with the "D" ledge on the trip unit and the "G" cavity on the line cover. Do not force accessory into place. Damage to actuator could result. Be sure actuator is properly placed on trip unit.

Step 7. The device operating handle should be fully seated and positioned with the "ON" marking toward the trip unit. Replace the load cover using the six screws and the two "C" screws (see fig. 1).

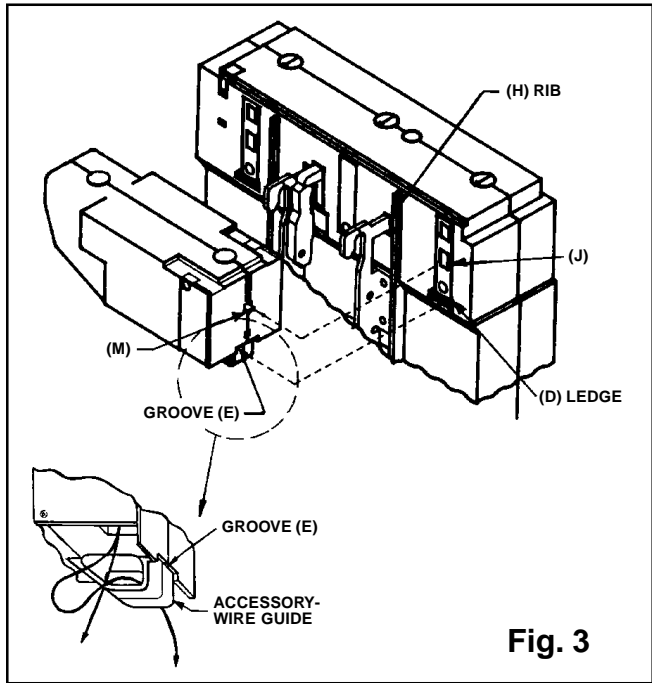
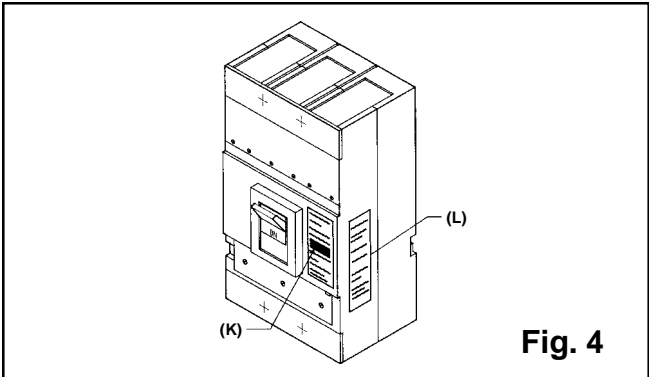
CAUTION: Ensure accessories stay located properly during load cover installation.



Installation Instructions

Step 8. Replace the wire connector shield (if used) and the load terminal shield with the two load terminal shield screws.
Step 9. Add the following informational labels to the device: (a) Attach the internal accessory ID label (K, fig. 4) to the top of the device on the right hand side. Make sure it is located in the proper space on the existing label. (b) Attach the wiring label (L, fig. 4) on the side of the device closest to the installed accessory.

NOTE: This Shunt Trip accessory is suitable for use for Ground Fault Protection when combined with Class I Ground Fault Sensing Equipment. The Shunt Trip accessory is equipped with an internal clearing switch.



Alarm Switch Information

Alarm switch has three leads and are identified as follows:

Wire Markings	Wire Color	Switch Terminals or Contacts
C	White	C - Common Terminal
A	Yellow	N.C. - Normally closed contact (closed when circuit breaker is tripped).
B	Brown	N.O. - Normally open contact (open when circuit breaker is tripped).

Mechanical / Electrical Check - Alarm Switch

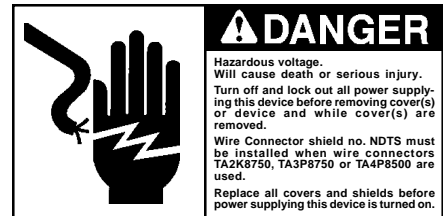
1. Use a buzzer or light indicator attached to switch leads A and C. With device in "Tripped" position, indicator light or buzzer should operate.
2. Reset breaker to "OFF". Indicator light or buzzer should turn off.
3. Move breaker handle to "ON". Indicator light or buzzer should remain off.

Should the indicator not function properly during check procedure, inspect for incorrect installation or wiring.

Auxiliary Switch Information

All switches have three leads and are identified as follows:

Wire Markings	Wire Color	Switch Terminals or Contacts
C1 or C2	White	C - Common Terminal
B1 or B2	Red	N.C. - Normally closed contact (closed when circuit breaker is off).
A1 or A2	Black	N.O. - Normally open contact (open when circuit breaker is off).



Installation Instructions

Auxiliary, Low Voltage, Alarm Switch Information

Cat. No.	Number Of Auxiliary Switches	A.C. Voltage				D.C. Voltage		
		12V	120V	240V	480V	12V	125V	250V
B00MN64	0	10	10	10	.5	.25		
A01MN64B	1	10	10	10	.5	.25		
A02MN64B	2	10	10	10	.5	.25		
A01MN64	1	10	10	10	.5	.25		
A02MN64	2	10	10	10	.5	.25		
A01MNDLV	1	.1			.1			
A02MNDLV	2	.1			.1			

Mechanical / Electrical Check:

Shunt Trip Accessory

- Reset and turn device ON.
- Attach test circuit to accessory. With the test voltage set at 55% or more of the rated voltage for AC units and 75% for DC units, the circuit breaker should trip when accessory is energized.
- With breaker TRIPPED or OFF, check to make sure coil circuit has opened.

Electrical Data For Shunt Trip

Coil Voltage	Inrush Current At Rated Voltage (Amperes)	Cat. No.
60 Cycles AC		
120VAC	0.92	S01MN6
208VAC	0.50	S02MN6
240VAC	0.55	S03MN6
277VAC	0.73	S15MN6
480VAC	0.44	S04MN6
600VAC	0.58	S06MN6
D.C.		
12V DC	2.15	S16MN6
24V DC	0.98	S07MN6
48V DC	2.16	S09MN6
125V DC	0.89	S11MN6
250V DC	1.77	S13MN6

Mechanical / Electrical Check:

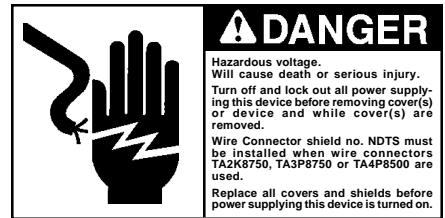
Undervoltage Trip Accessory

- With breaker in TRIPPED position, connect test circuit to accessory leads. Energize undervoltage trip device at 85 percent of the marked rated voltage of the coil.
Reset and turn breaker handle ON.
- Reduce voltage to 35 percent of rated coil voltage. Circuit breaker must trip.
- Breaker must **NOT** turn "ON" when Undervoltage Trip is **NOT** energized. Without energizing the Undervoltage Trip, reset breaker handle and move breaker handle to the "ON" position. After testing, the breaker handle must be in the "Tripped" position.

Should the Undervoltage Trip not function properly during check procedure, inspect for incorrect installation or wiring.

Electrical Data For Undervoltage Trip

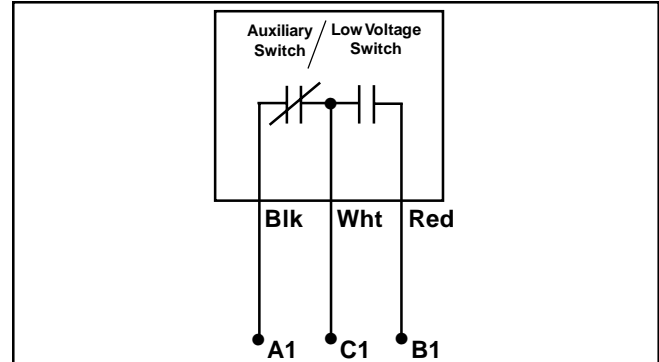
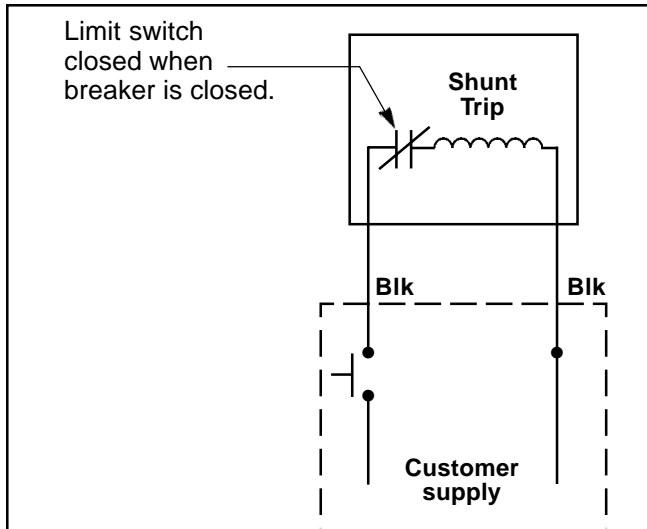
Coil Voltage	Sealed-In Current At Rated Voltage (Amperes)	Cat. No.
60 Cycles AC		
120VAC	0.07	U01MN6 / U01MNM6
208VAC	0.04	U02MN6
240VAC	0.04	U03MN6
277VAC	0.03	U15MN6
480VAC	0.02	U04MN6
600VAC	0.02	U06MN6
D.C.		
24V DC	0.12	U07MN6
48V DC	0.07	U09MN6
125V DC	0.06	U11MN6 / U11MNM6
250V DC	0.03	U13MN6



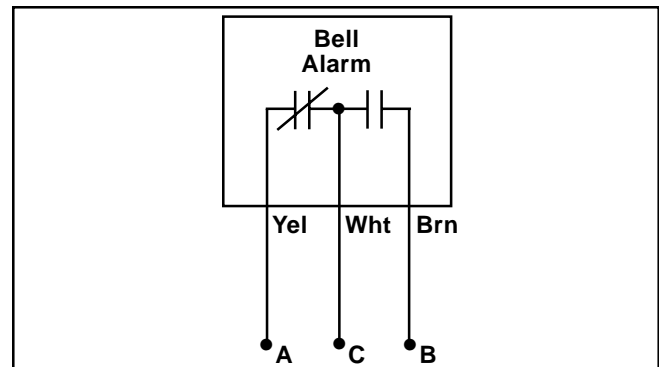
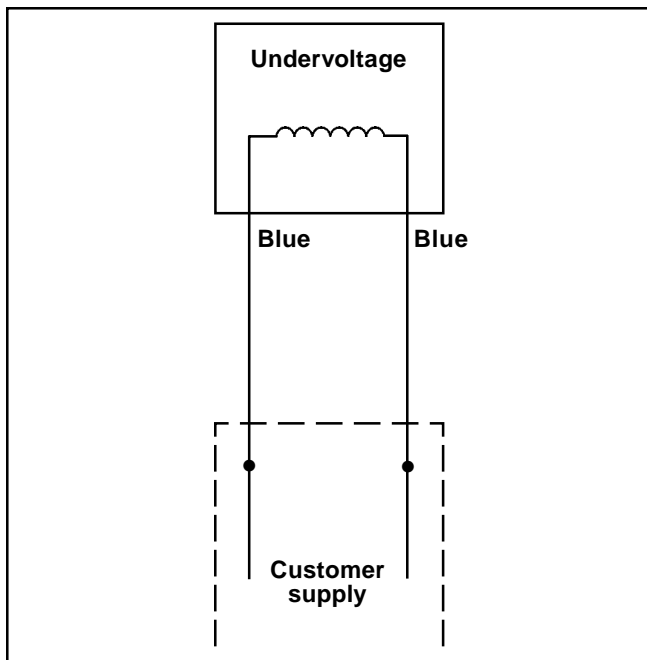
Installation Instructions

Accessory units that employ a combination will have the same wire colors and identifiers.

A double auxiliary switch combination will use wiring markings A1-A2, B1-B2, and C1-C2.



A1-C1 Closed when circuit breaker is closed.
 B1-C1 Open when circuit breaker is closed.



A-C Closed when circuit breaker is in tripped position.
 B-C Open when circuit beaker is in tripped position.