

# INSTALLATION INSTRUCTIONS

## LG-FRAME BREAKER

### PRL1a OR PRL2a PANELBOARD

THESE INSTRUCTIONS ONLY FOR USE WITH PRL1a/PRL2a PANELBOARD  
AND THE FOLLOWING TYPE BREAKERS: LGE/LGH  
BREAKER COMES ASSEMBLED AS TOP MOUNTED DEVICE. IF BOTTOM MOUNTED DEVICE IS NEEDED,  
DIS-ASSEMBLY AND RE-ASSEMBLY WILL BE REQUIRED.

1. FOR TOP MOUNTED APPLICATIONS:
  - a. Breaker assembly included in this kit is set up for top mounted application.
  - b. Go to Step 5 (Sheet 2).
2. FOR BOTTOM MOUNTED APPLICATIONS, BREAKER ASSEMBLY MUST NOW BE RECONFIGURED:
  - a. Disassemble the breaker assembly:
    - i. Retain all parts for re-assembly.
    - ii. Remove terminals and associated hardware from each breaker pole.
    - iii. Remove breaker mounting bracket and bracket insulation (items 1 & 2, Sheet 5 – Top Mounted Breaker Assembly Details).
    - iv. Remove phase isolator (item 12) and breaker connectors from each pole (items 6-11, Sheet 5 – Top Mounted Chassis Assembly Details).
  - b. Reassemble the breaker for Bottom Mounted Application:
    - i. Determine Top end of breaker by confirming that breaker handle is "up" when in the "ON" position and faceplate labels are right side up (with breaker held vertically).

**CAUTION:** For bottom mounted applications, breaker must be sealed and set up for reverse feed. To confirm this, (see Figure 1) locate the "Factory Sealed" label on seam of breaker, ensure Caution Label is present on the face of the breaker, and check to be sure that there are no line and load labels on the face of the breaker. If breaker cannot be confirmed to be sealed and set up for reverse feed, do not continue. Contact Eaton Technical Resource Center – P&S Aftermarket.

- ii. Install each terminal at bottom end of breaker as shown in Figure 2. **Secure the terminals to the circuit breaker and torque to 200 lb-in (22 Nm).** After mounting the circuit breaker and before installation of the conductors, the terminal mounting screw can be checked or retightened through the terminal when the conductor screw is removed.
- c. See Caution label located on breaker cover concerning required use of Terminal Shield (provided with breaker/breaker terminals). Terminal Shield is required to be installed over line terminals. Install Terminal Shield as shown in Figure 2.

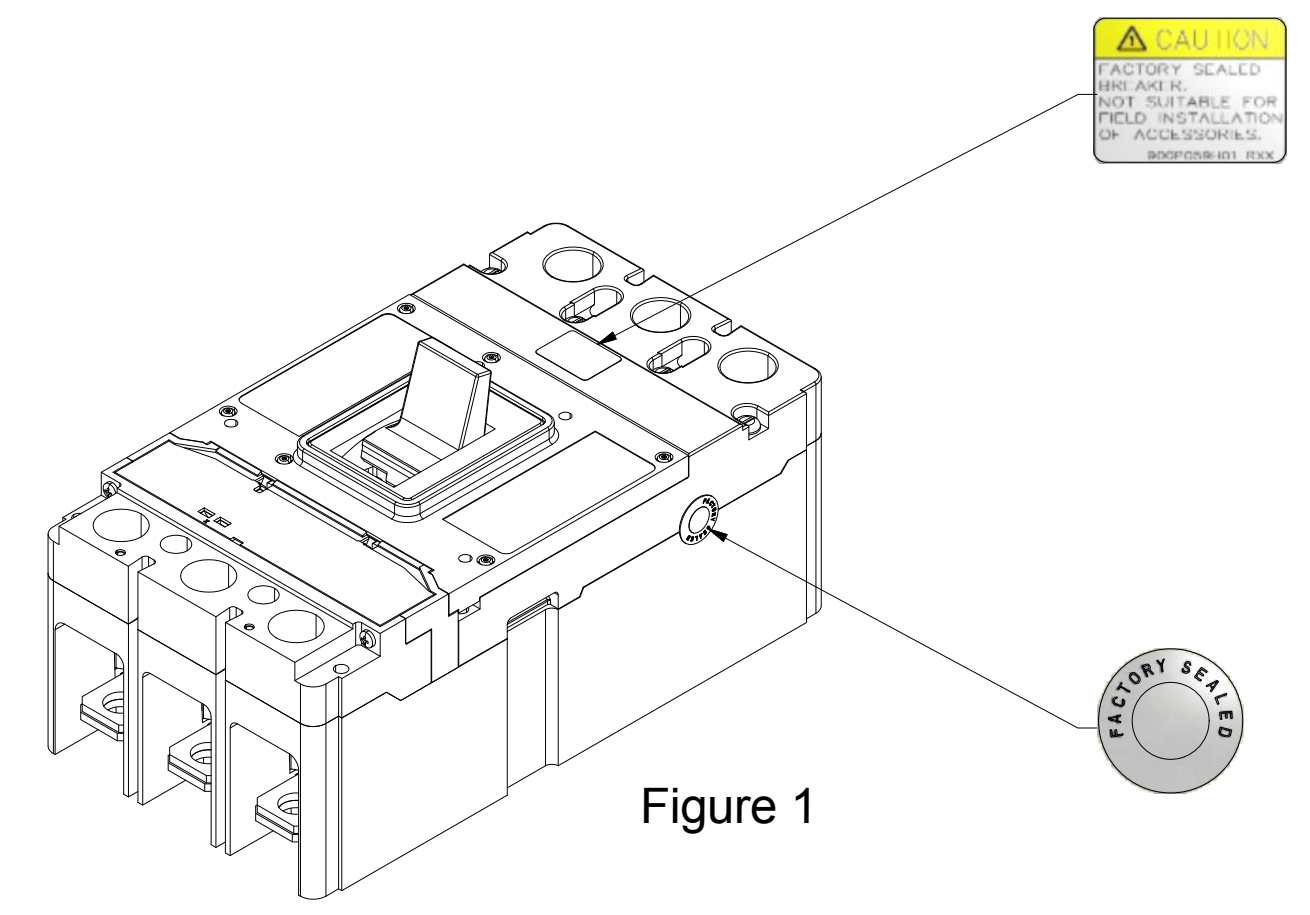


Figure 1

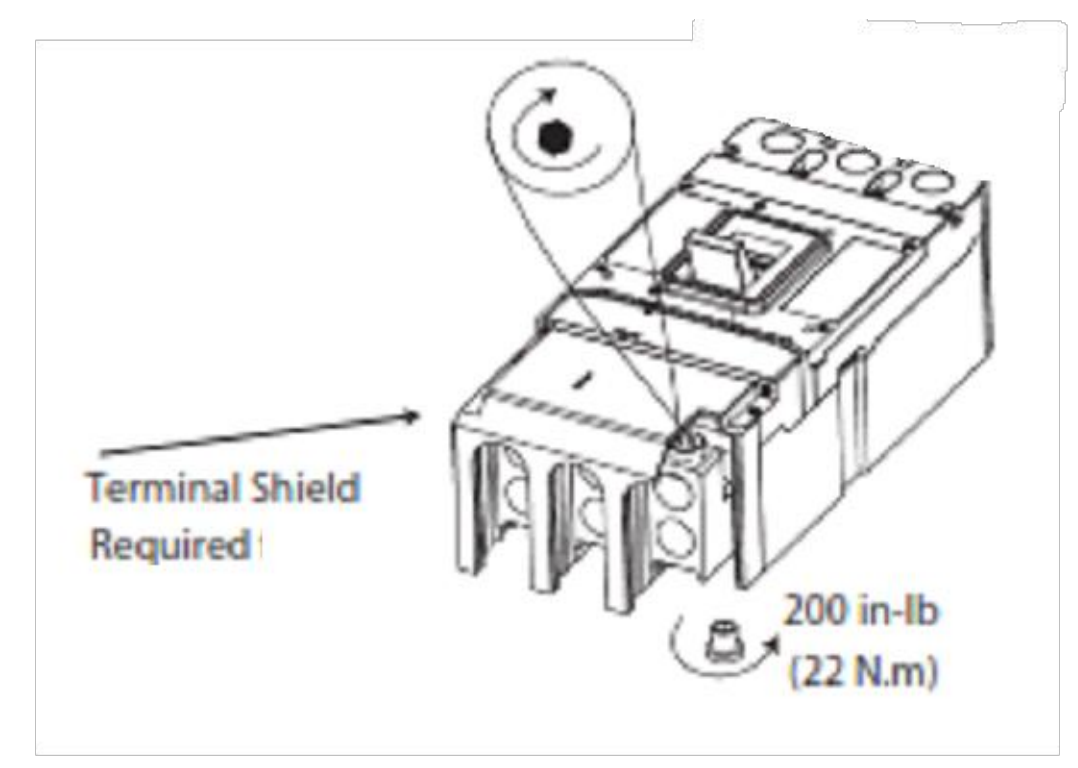


Figure 2

1	2	3
REVISION HISTORY	ECO-147753 DSF 9/5/18 RBH 9/5/18 REVISED INSTRUCTIONS TO REFLECT BKR KIT BEING SHIPPED AS TOP INCOMING.	ECO-161230 HMC 3/27/19 DSF 3/27/19 ADDED FIGURE 1. LABELS IN THIS VIEW ALSO SHOW IN OTHER VIEWS. UPDATED CAUTION NOTE TO REFERENCE THIS VIEW.

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DRAFTER PSM		DATE 10/12/2017		<b>EATON</b>		SUMTER, SC	
ENGINEER RH		DATE 10/12/2017		TITLE INSTALLATION INSTRUCTIONS LG-FRAME MAIN BREAKER			
REVISION 3		PARTS LIST		DWG NO. <b>1A32083</b>			
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME 1A32083G01.iam	MODEL REV 2	TYPE STANDARD	UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 1 OF 6



**WARNING**

DO NOT ATTEMPT TO INSTALL OR PERFORM MAINTENANCE ON EQUIPMENT WHILE IT IS ENERGIZED. DEATH, SEVERE PERSONAL INJURY, OR SUBSTANTIAL PROPERTY DAMAGE CAN RESULT FROM CONTACT WITH ENERGIZED EQUIPMENT. ALWAYS VERIFY THAT NO VOLTAGE IS PRESENT BEFORE PROCEEDING WITH THE TASK, AND ALWAYS FOLLOW GENERALLY ACCEPTED SAFETY PROCEDURES.

EATON IS NOT LIABLE FOR THE MISAPPLICATION OR MISINSTALLATION OF ITS PRODUCTS.

The user is cautioned to observe all recommendations, warnings, and cautions relating to the safety of personnel and equipment as well as all general and local health and safety laws, codes, and procedures.

3. **Bottom Mounted Only** - Install breaker mounting bracket onto breaker:
  - a. Refer to Sheet 5 – Bottom Mounted Breaker Assembly Detail for specifics including orientation and placement of bracket (item 1) and bracket insulation (item 2).
  - b. Using a Phillips head screwdriver, start installation of breaker mounting screws (item 3) with appropriate number of lock washers (item 4) through breaker and into bracket (item 1) but do not tighten all the way down at this time.
4. **Bottom Mounted Only** - Install phase connectors (items 6-11) and phase isolator (item 12) onto main chassis bus as detailed below (refer to Sheet 5 – Bottom Mounted Chassis Assembly Detail for specifics):
  - a. Use a tester to be sure that no voltage is present on the panelboard. Note Warning (inset at left).
  - b. Remove trim (do not discard).
  - c. Remove deadfront cover assembly (do not discard).
  - d. Attach phase connectors (items 6-11) to vertical chassis bus using #10-32 X 1.25" screws (item 13). Refer to Sheet 4 - Figure 1. Please note: Orientation of connectors (items 6-11) must be as shown. Note chamfer locations on Sheet 4 - Figure 1.
  - e. Using the large plastic rivet (Item 5), secure phase isolator (item 12) onto B phase connector (item 8) ensuring that phase isolator (item 12) properly separates opposite polarity connectors (items 6-11) as shown.
5. Install breaker assembly onto panelboard (refer to Sheet 5 - applicable Chassis Assembly Detail for specifics):
  - a. Position panelboard to achieve installed orientation (rotate chassis assembly 180 degrees if applicable).
  - b. Place breaker assembly onto panelboard confirming breaker orientation is per Sheet 4 – Figure 1 as appropriate (top vs. bottom).
  - c. Fully Secure breaker mounting bracket (Item 1) onto panelboard rails using #8-32 X .531" screws (Item 14). Refer to Sheet 4 - Figure 1 for dimension from bus support to breaker mounting bracket (item 1) as appropriate (top vs. bottom).
  - d. **Top Mounted Only** – Secure phase connectors (items 6-11) to main chassis bus using #10-32 X 1.25" screws (item 13). Skip to step h.
  - e. **Bottom Mounted Only** - Adjust breaker as needed to line up phase connectors (items 6-11) and breaker stabs.
  - f. **Bottom Mounted Only** - Secure phase connectors (items 6-11) to breaker stabs using .375-16 cap screw (item 15) and Keps nut (item 16). Repeat for each phase.
  - g. **Bottom Mounted Only** - Fully secure breaker to mounting bracket (item 1) by tightening breaker mounting screws (item 3).
  - h. Using a torque wrench, ensure that hardware (item 13) from phase connectors (item 6-11) to main chassis bus is properly seated and is tightened to a torque value of 28-32 lb-in (3.2-3.6 N-m). DO NOT OVERTIGHTEN.
  - i. Using a torque wrench, ensure that hardware (item 15/17) from phase connectors (items 6-11) to breaker stabs is properly seated and is tightened to a torque value of 18-22 lb-ft (24.4-29.8 N-m). DO NOT OVERTIGHTEN.
  - j. All connections should be fully secured (tightened) at this time.
6. Configure deadfront cover assembly for the application:
  - a. For Top Mounted applications, deadfront cover provided with existing deadfront cover assembly is appropriate for the top mounted application by removing filler plate.
  - b. For Bottom Mounted applications, remove LG breaker cover from deadfront cover assembly and discard. Replace with Bottom Mounted deadfront cover (item 21).

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			UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 2 OF 6	


**5. Reinstall deadfront cover assembly and panelboard trim:**

- a. If chassis was rotated 180 degrees to achieve correct orientation, then deadfront covers will need to be removed and relocated to conform to appropriate Deadfront Cover Arrangement.
- b. See Sheet 6 - Figure 4 (Top Mounted) or Figure 5 (Bottom Mounted) for appropriate deadfront cover arrangement. When applicable, remove and relocate the Branch cover, the 5" Blank cover, and the End covers to achieve correct deadfront cover arrangement.
- c. Install newly provided 23" Main cover (item 21A or 21B per the application) into proper location on deadfront cover assembly (see Sheet 6 - Figure 4 or Figure 5 as appropriate). Insert small plastic snap rivets (item 17) and nylon button fasteners (item 18) into holes located on newly provided 22" Main cover (see Sheet 6 - Figure 3).
- d. Replace deadfront cover assembly. Discard unused deadfront cover.
- e. If newly installed breaker assembly is to be used as a Main or Service Disconnect, apply the appropriate label (Item 19 or 20) to the deadfront cover directly beside the newly installed breaker handle.  
 If the panel is a Service Entrance Panel, use the "Service Disconnect" label.  
 If the panel is not a Service Entrance Panel, use the "Main" label.  
 Discard unused label(s).

**6. BE SURE THAT ALL TOOLS AND ANY OTHER LOOSE ITEMS ARE REMOVED FROM THE PANELBOARD BEFORE REPLACING THE TRIM AND TURNING ON THE POWER.**

PARTS LIST FOR LG-FRAME BREAKER PRL1A OR PRL2A PANELBOARD			
ITEM #	QTY	COMPONENT DESCRIPTION	PART #
1	1	BREAKER MOUNTING BRACKET	42C3609H01
2	1	BRACKET INSULATION	5760B65H01
3A	2	#10-32 x 3.75" THREADFORMING SCREW (BOTTOM MTD)	70010REG9B
3B	2	#10-32 x 4.00" THREADFORMING SCREW (TOP MTD)	70010RBG9D
4	3	#10 LOCK WASHER	70510CR10K
5	1	LARGE PLASTIC RIVET <sup>2</sup>	7499A46H01
6	1	PHASE CONNECTOR 5, CUAG	42C6355H07
7	1	PHASE CONNECTOR 6, CUAG	42C6355H03
8	1	PHASE CONNECTOR 7, CUAG <sup>1</sup>	42C6356H07
9	1	PHASE CONNECTOR 8, CUAG <sup>1</sup>	42H6356H03
10	1	PHASE CONNECTOR 9, CUAG	42C6355H15
11	1	PHASE CONNECTOR 10, CUAG	42C6355H11
12	1	PHASE ISOLATOR <sup>1</sup>	42C6353H01
13	6	#10-32 X 1.250" THREADFORMING SCREW <sup>2</sup>	70010RBB8R
14	2	#8-32 x .531" THREADFORMING SCREW <sup>2</sup>	70010RBB5V
15	3	.375-16 CAP SCREW	70041RD09B
16	3	.375 KEPS NUT	70222DAN0L
17	4	SMALL SNAP RIVET <sup>2</sup>	5756B83H01
18	4	.136 NYLON BUTTON FASTENER <sup>2</sup>	70801AIA03
19	1	"MAIN" LABEL <sup>2</sup>	267P442H01
20	1	"SERVICE DISCONNECT" LABEL <sup>2</sup>	267P443H01
21A	1	MAIN DEADFRONT COVER (TOP MTD)	42C6455G01
21B	1	MAIN DEADFRONT COVER (BOTTOM MTD)	42C6455G02

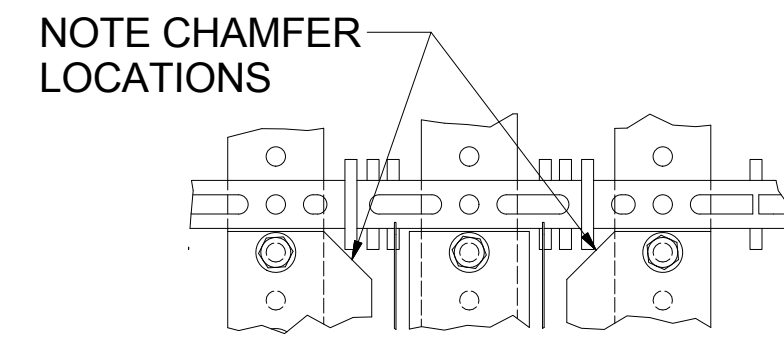
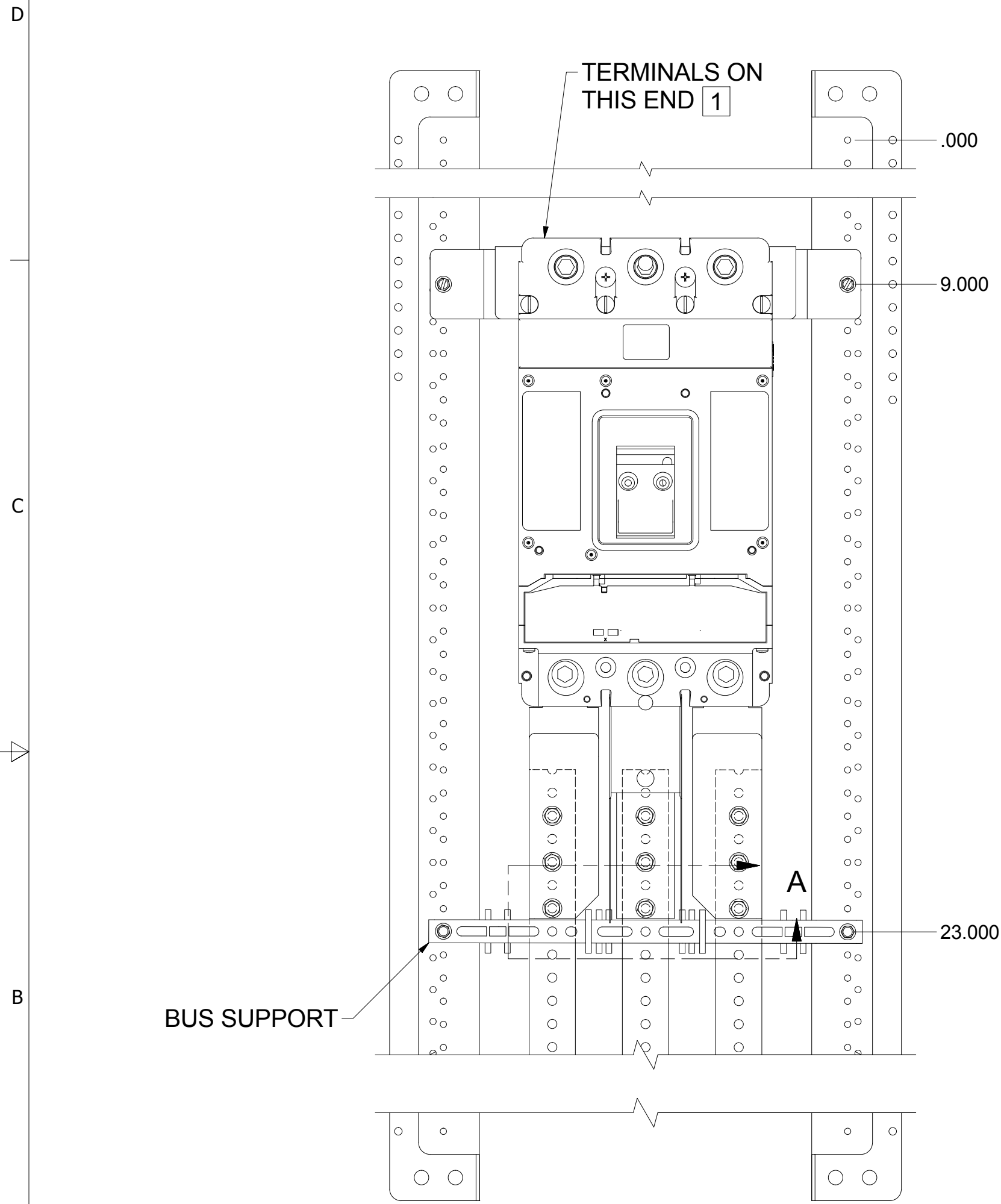
**NOTES:** 1 - Omit B-phase terminal, connector, and isolator for single phase applications.  
 2 - Items included in hardware bag.

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		TYPE STANDARD	UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 3 OF 6

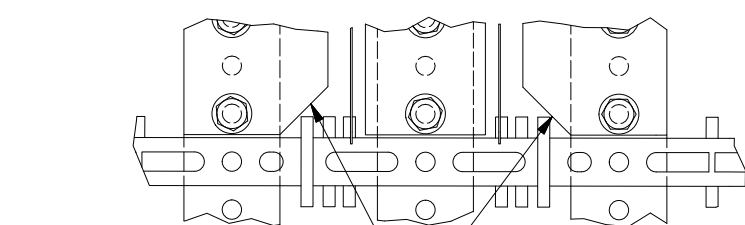
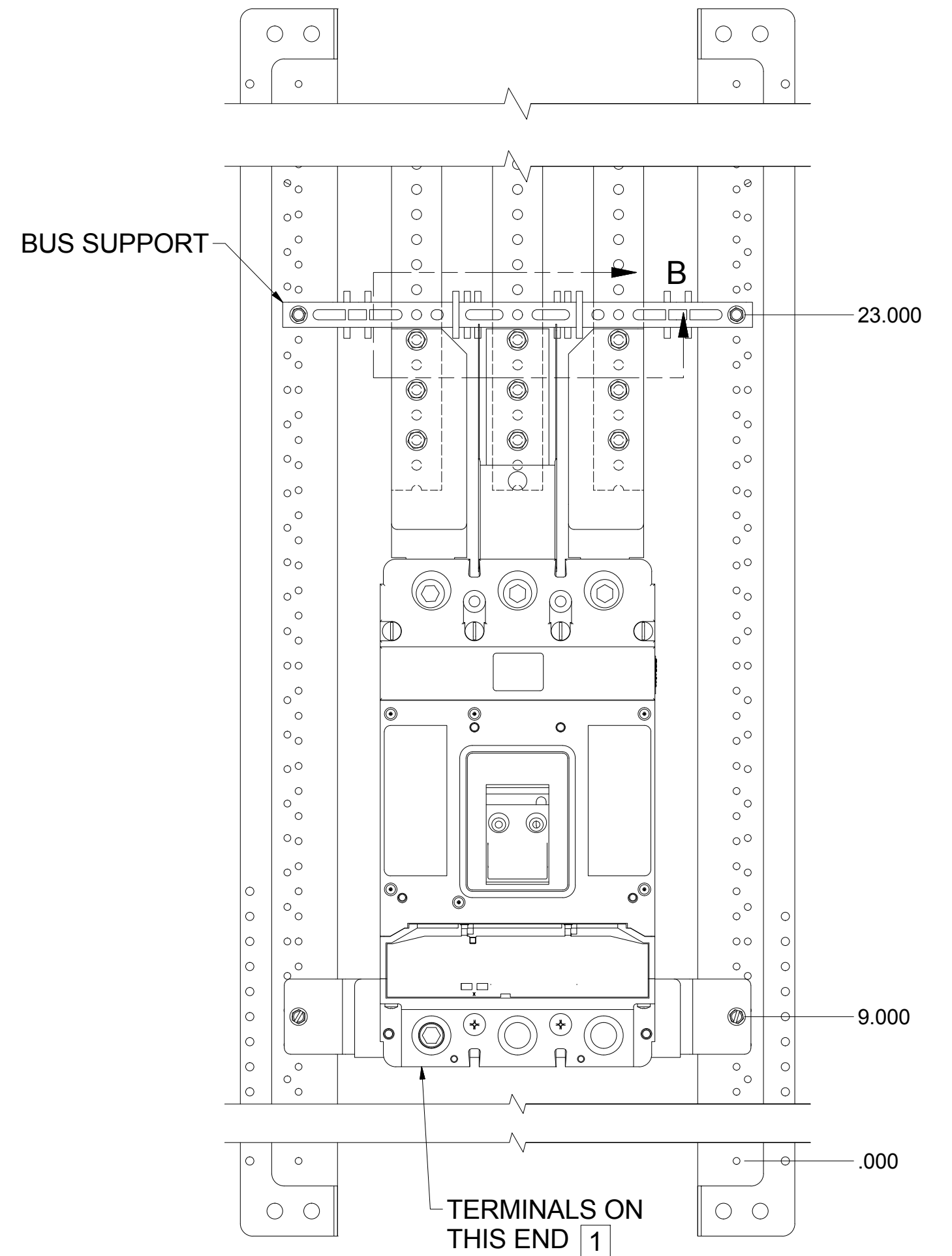
**FIGURE 1**

**TOP MOUNTED**

**BOTTOM MOUNTED**



**DETAIL B**



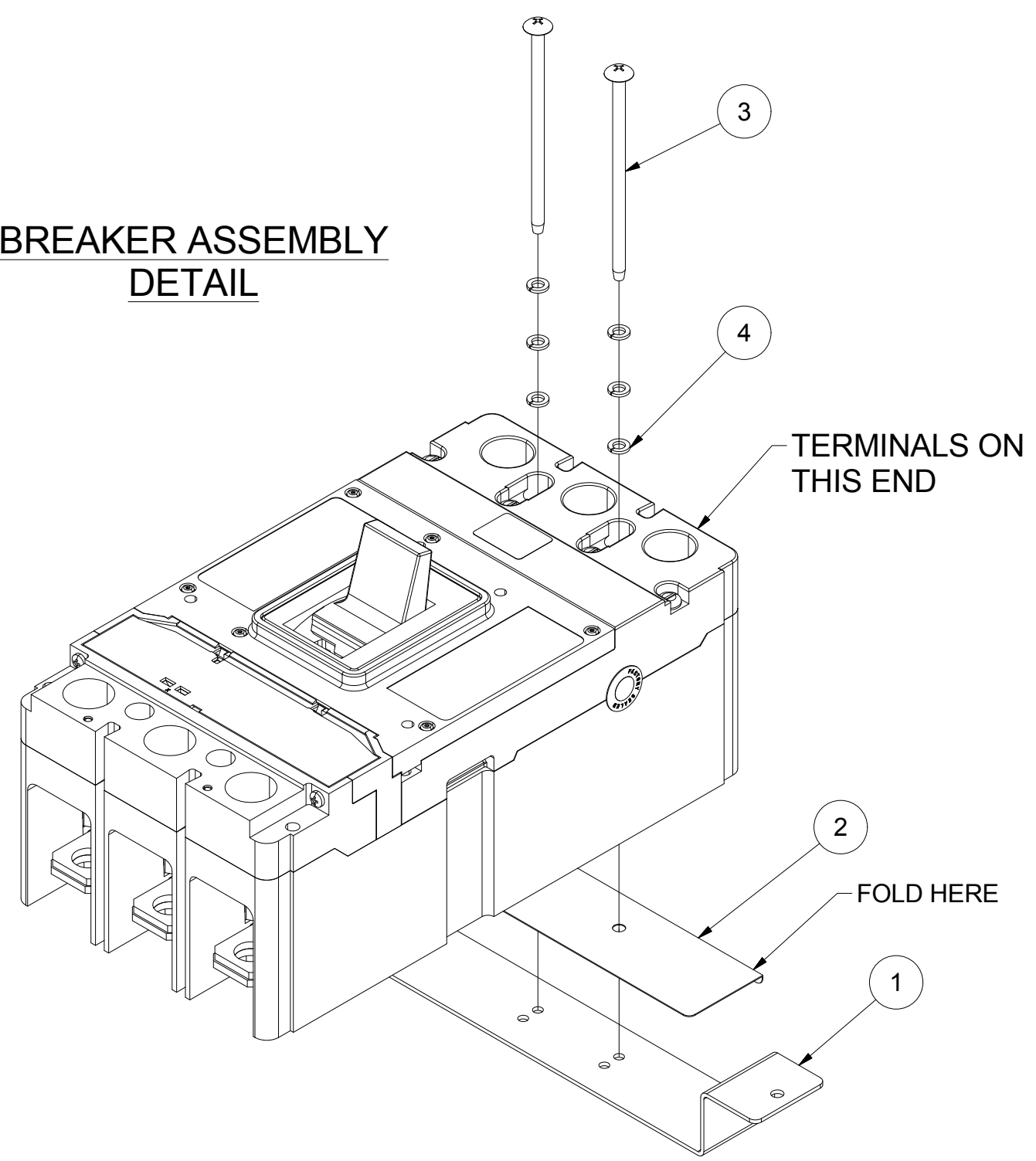
**DETAIL A**

**1 OMIT B PHASE TERMINAL FOR SINGLE PHASE APPLICATIONS**

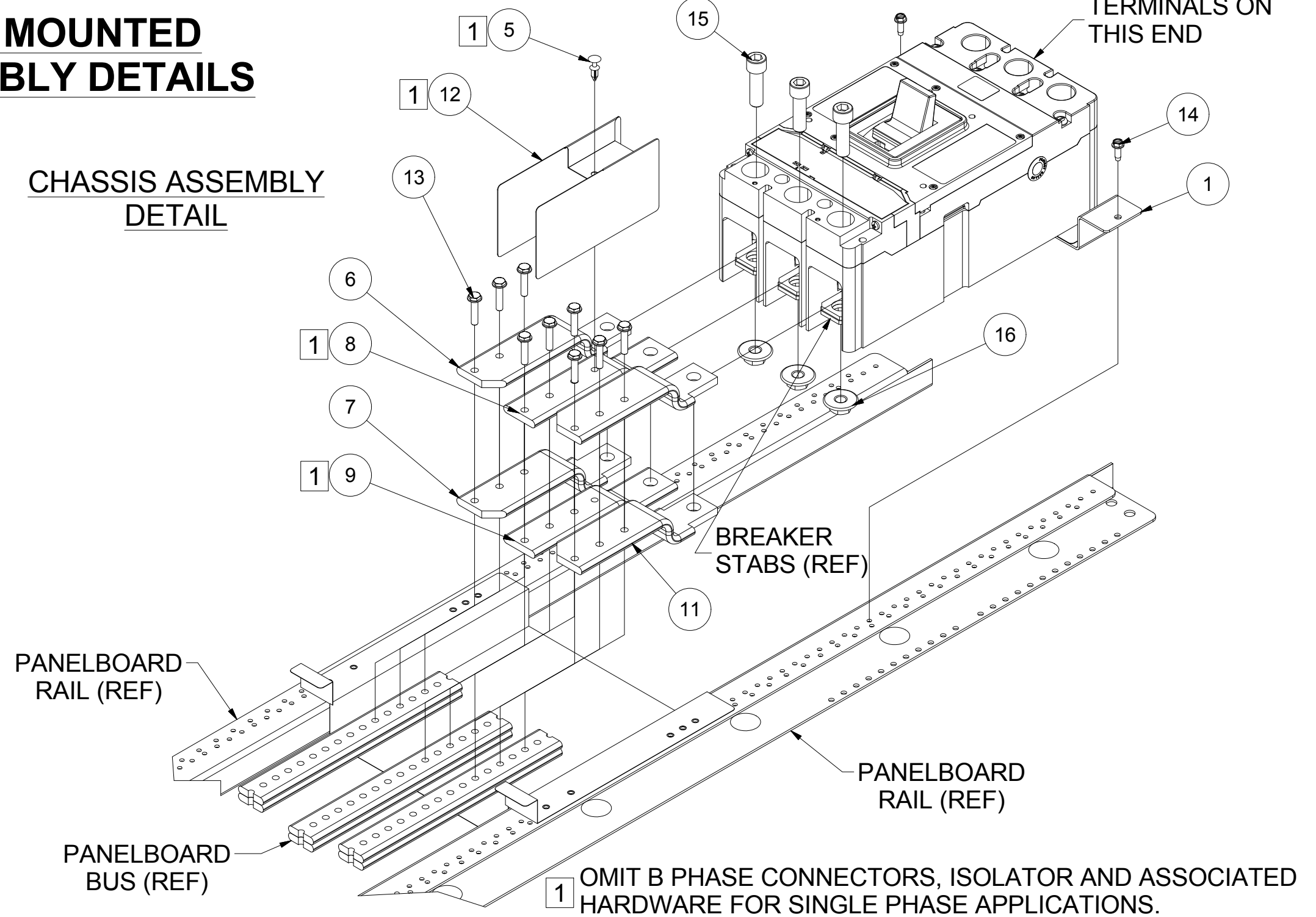
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				SHEET 4 OF 6	

### TOP MOUNTED ASSEMBLY DETAILS

BREAKER ASSEMBLY  
DETAIL

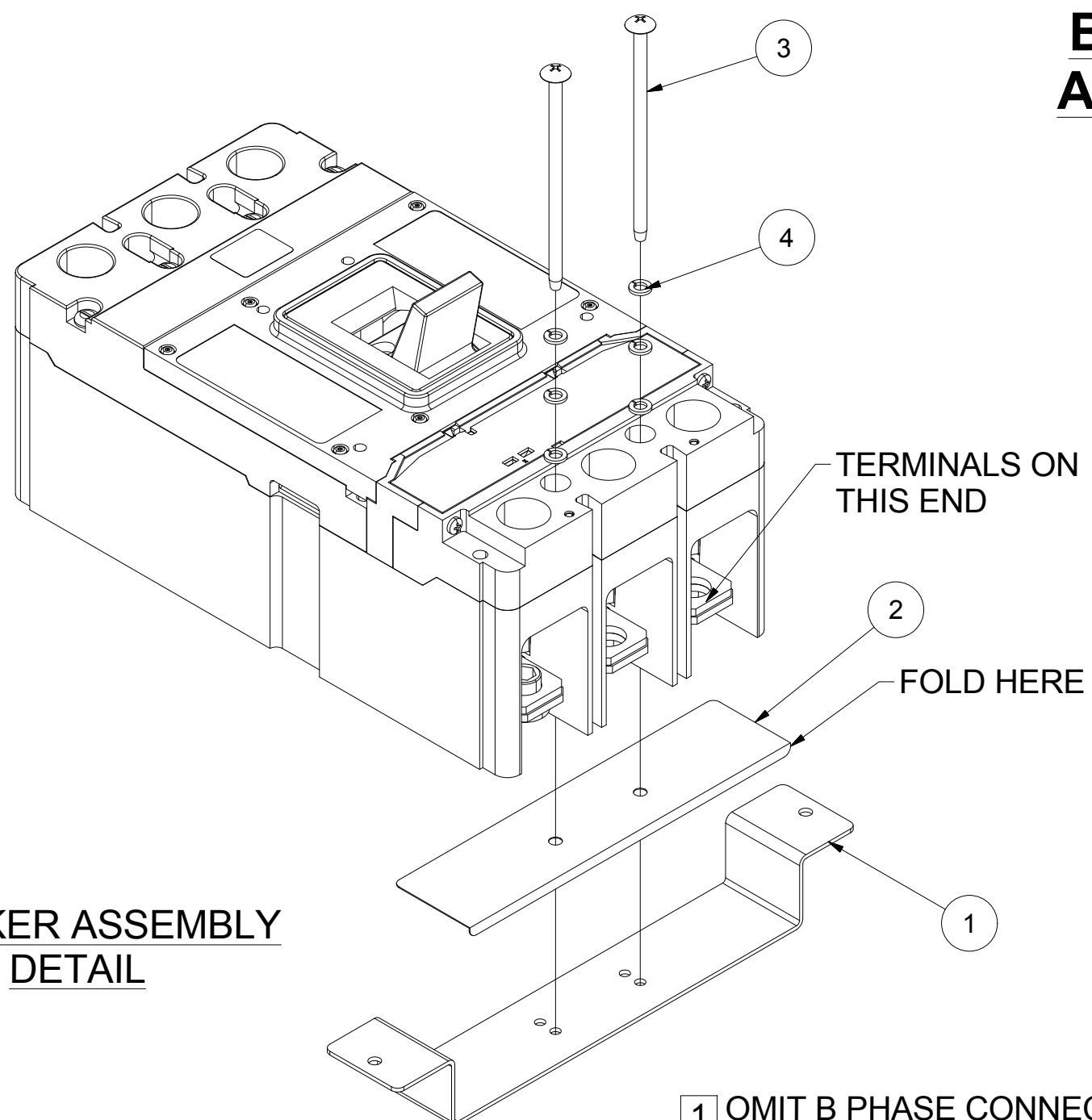


CHASSIS ASSEMBLY  
DETAIL

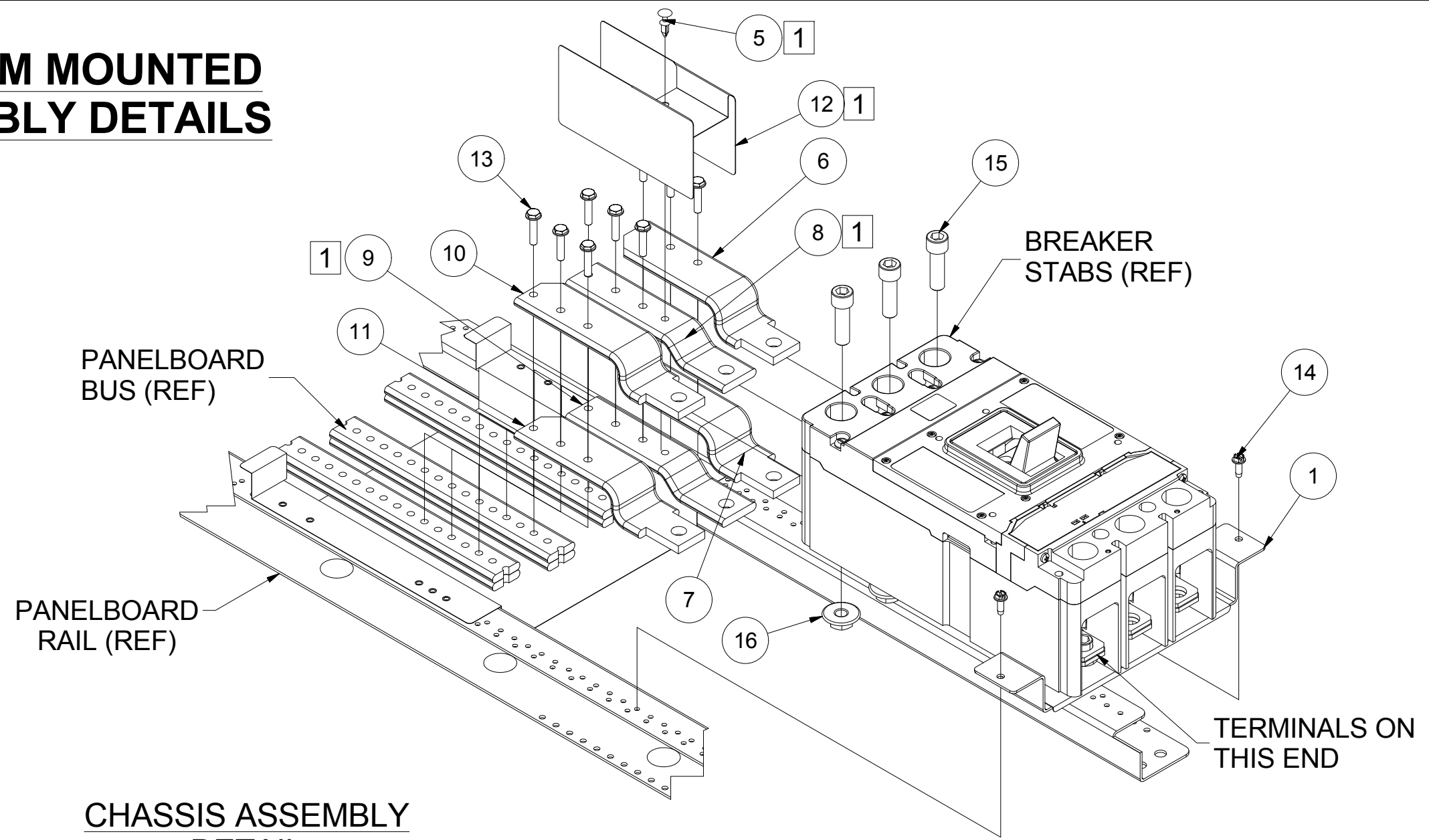


### BOTTOM MOUNTED ASSEMBLY DETAILS

BREAKER ASSEMBLY  
DETAIL



CHASSIS ASSEMBLY  
DETAIL

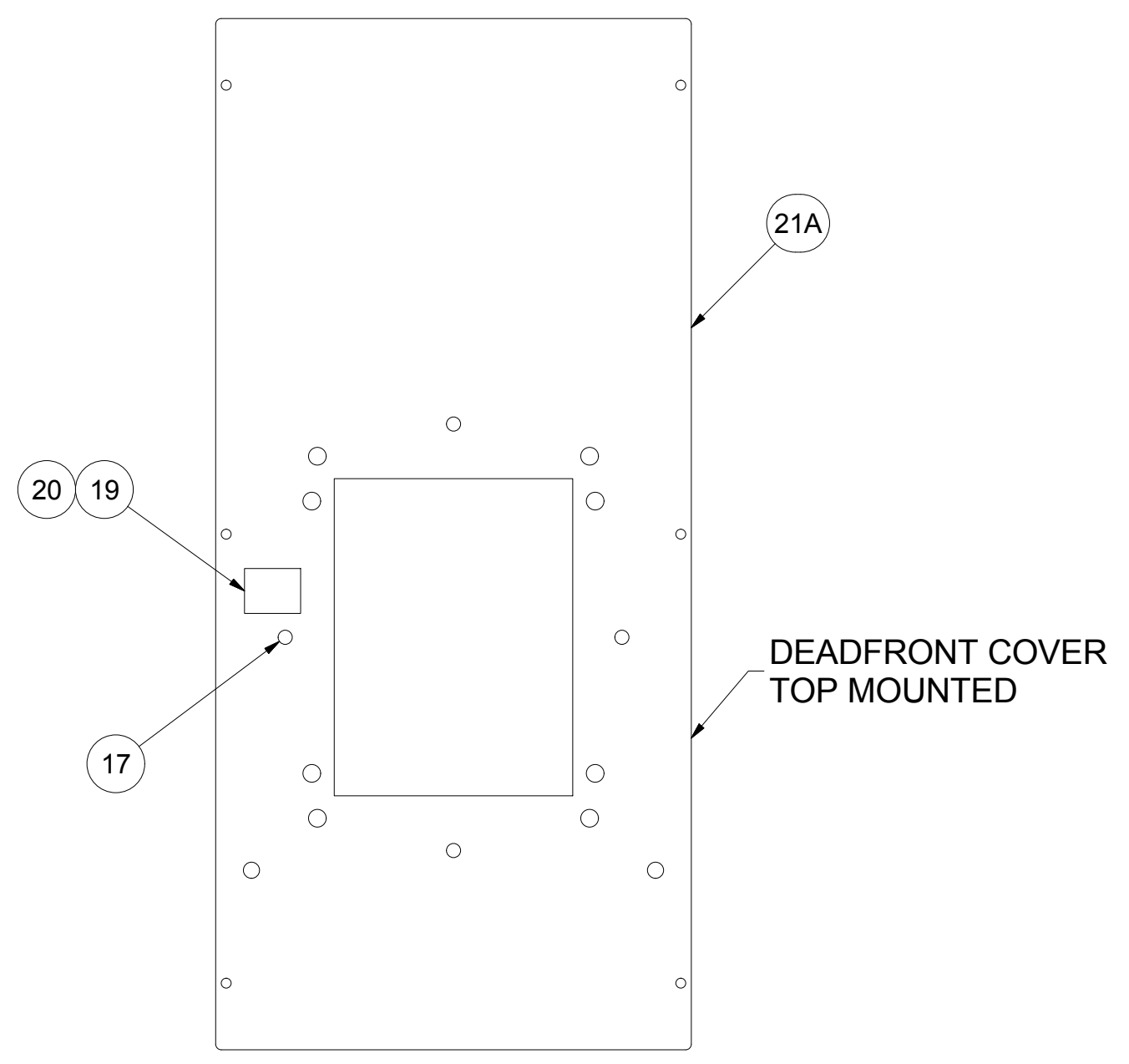


1 OMIT B PHASE CONNECTORS, ISOLATOR AND ASSOCIATED HARDWARE FOR SINGLE PHASE APPLICATIONS.

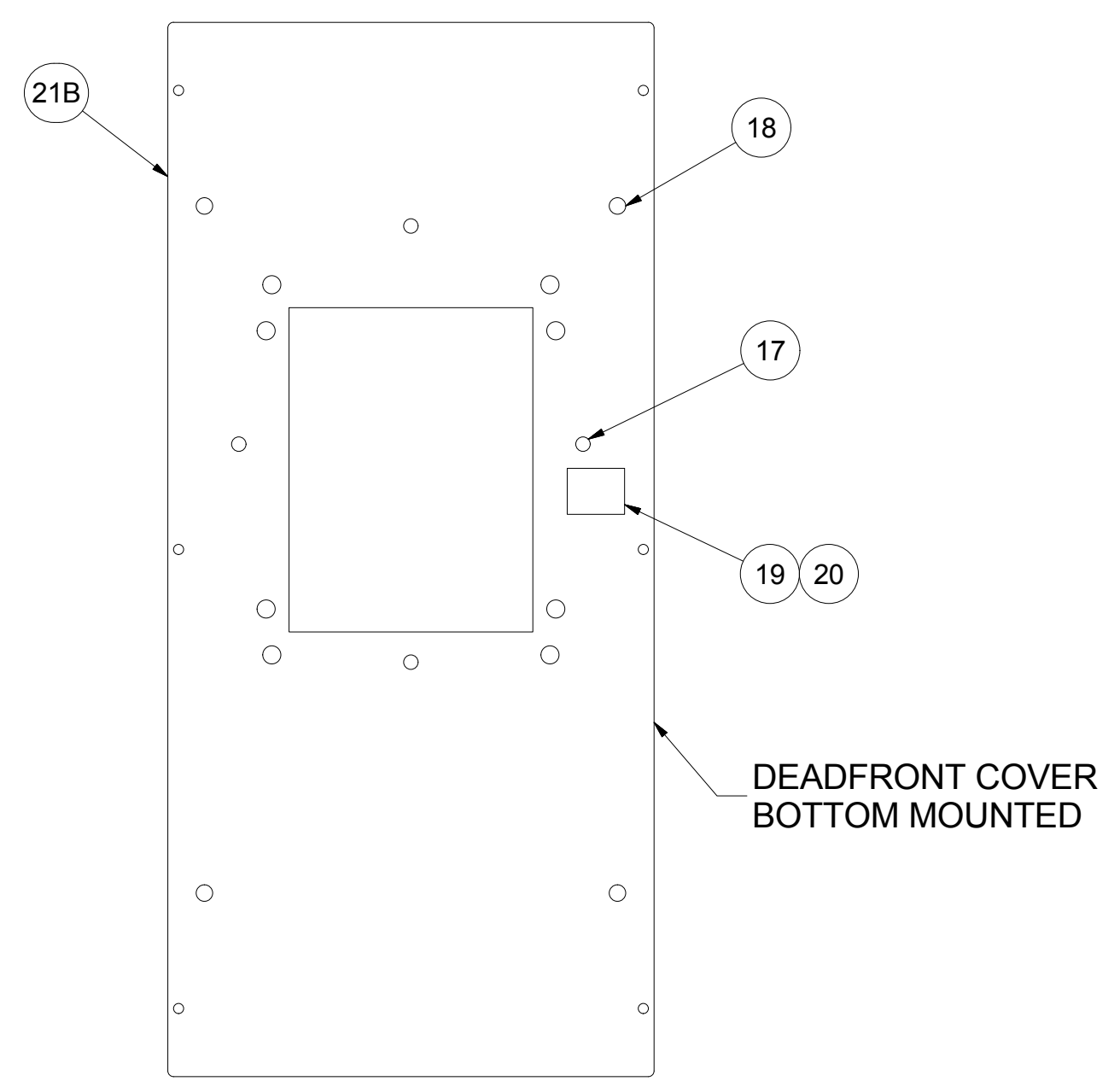
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**FIGURE 3**

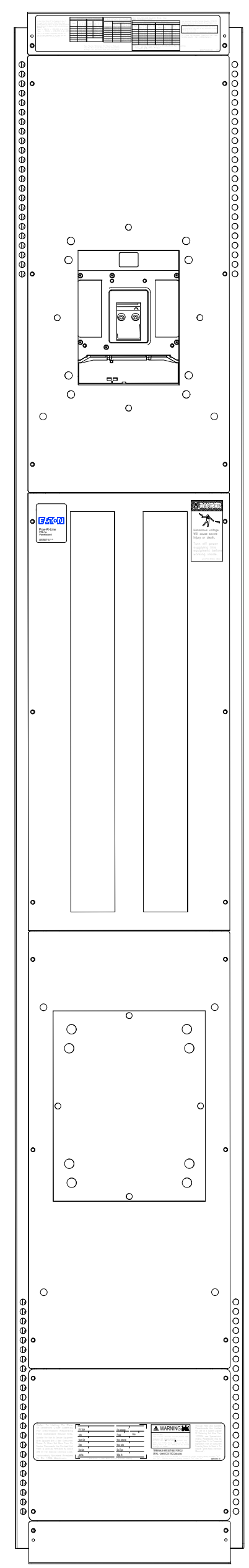
TOP MTD



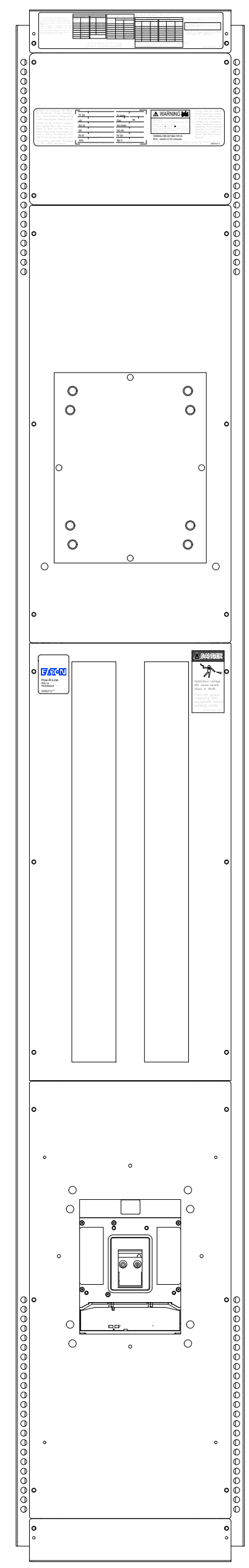
BOTTOM MTD



**FIGURE 4**  
TOP MOUNTED  
DEADFRONT COVER  
ARRANGEMENT



**FIGURE 5**  
BOTTOM MOUNTED  
DEADFRONT COVER  
ARRANGEMENT



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