

INSTALLATION INSTRUCTIONS K-FRAME BREAKER PRL1a OR PRL2a PANELBOARD

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

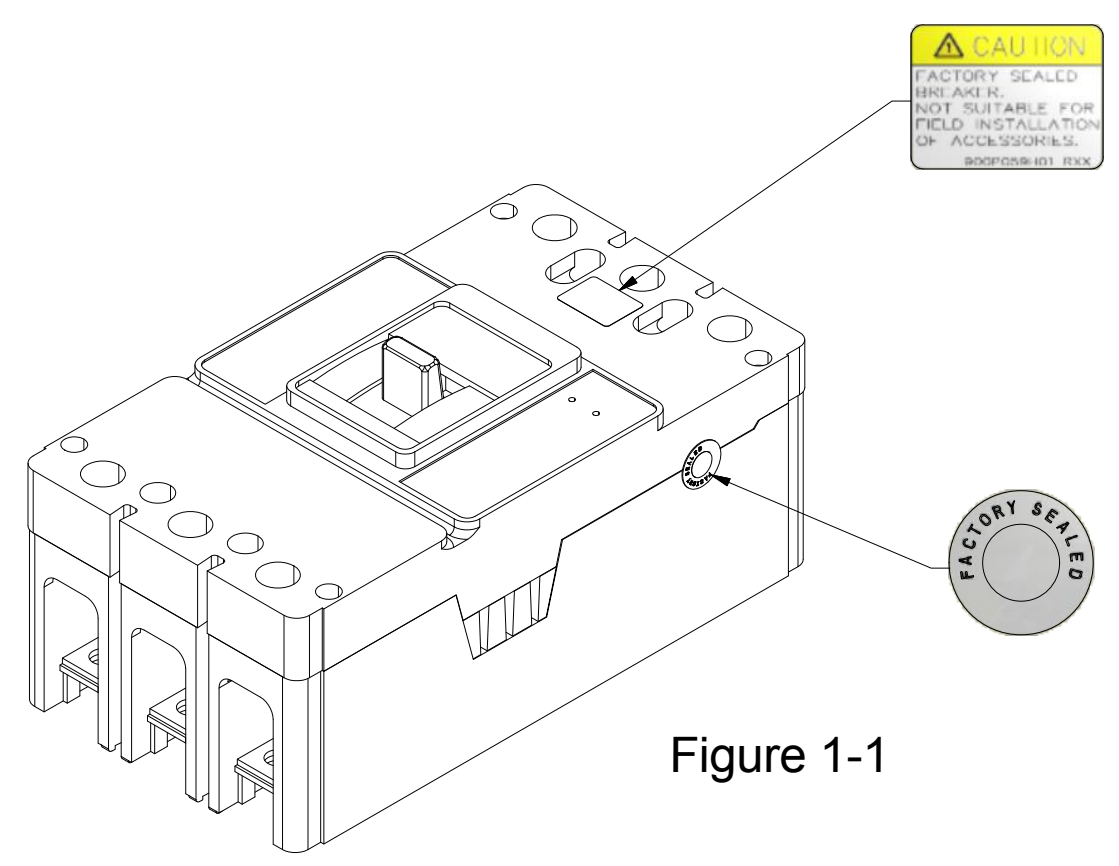


Figure 1-1

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 11) and breaker connectors from each pole (items 5-10, 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 1-1) locate the “Factory Sealed” label on a 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 2-1. **Secure the terminals to the circuit breaker using 7/32-inch socket wrench, and torque to 6-8 lb-ft (8-11 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.

- iii. For TA400K, TA401K, TA402K, T400K terminals, see Warning label located on breaker cover concerning required use of terminal cover (provided with terminals) due to hazardous voltage being present (see Figure 2-2).

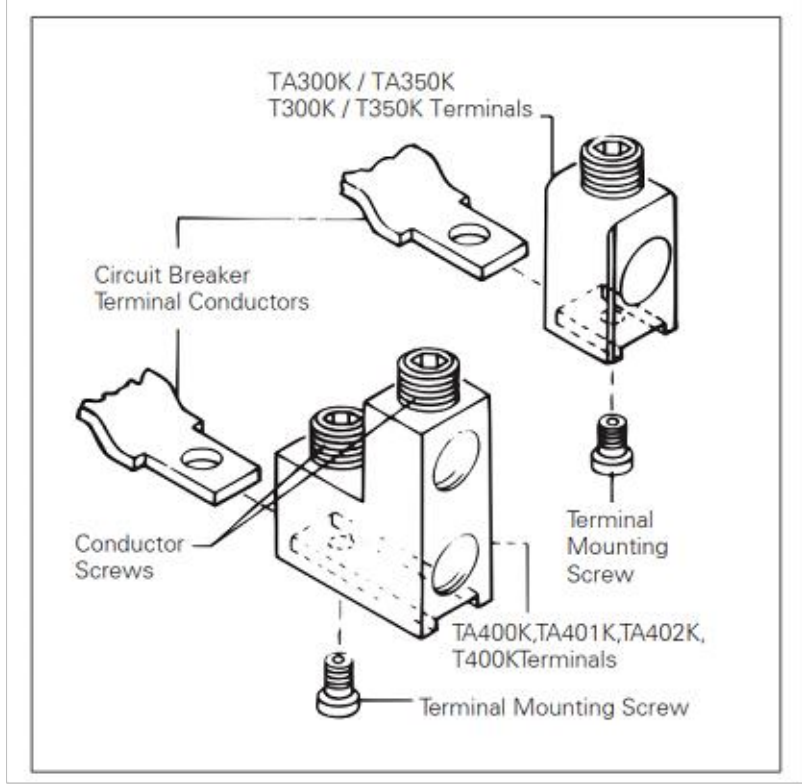


Figure 2-1

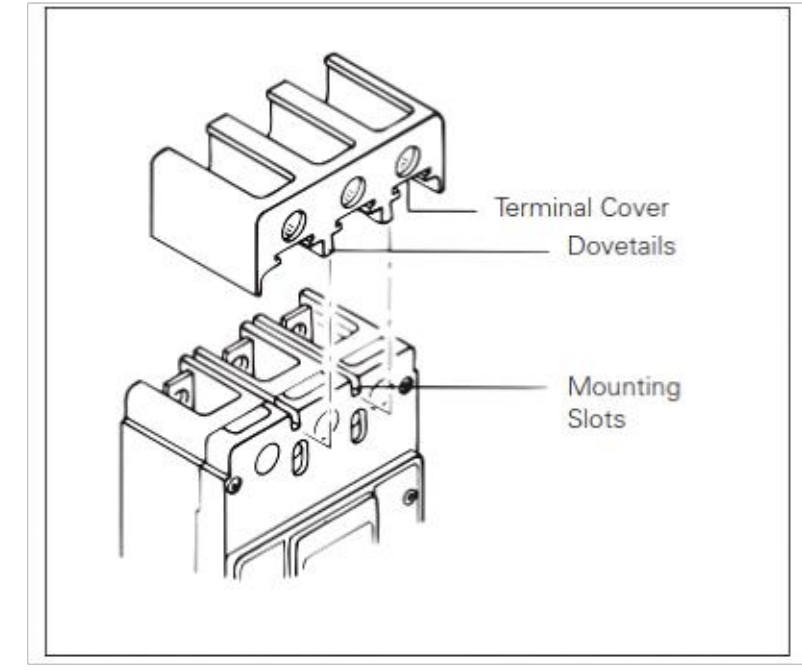


Figure 2-2

1	2	3
REVISION HISTORY	ECO-147753 DSF 9/20/18 RBH 9/20/18 REVISED TO MATCH PROCESS OF ASSEMBLING BREAKER KITS RECEIVED FROM THE FACTORY AS TOP-CUSTOMER INSTRUCTIONS TO REASSEMBLE FOR BOTTOM.	ECO-161230 HMC 3/27/19 DSF 3/27/19 ADDED FIGURE 1-1. LABELS IN THIS VIEW ALSO SHOW IN OTHER VIEWS. UPDATED CAUTION NOTE TO REFERENCE THIS VIEW.

THE INFORMATION ON THIS DOCUMENT IS CREATED BY EATON CORPORATION. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DRAFTER PSM	DATE 10/12/2017	EATON SUMTER, SC	
		ENGINEER RH	DATE 10/12/2017	TITLE INSTALLATION INSTRUCTIONS K-FRAME MAIN BREAKER	
		REVISION 3	PARTS LIST	DWG NO. 1A32082	
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME 1A32082G01.iam	MODEL REV 2	TYPE STANDARD
			UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 1 OF 6	

4

3

2

1



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), and cage nuts (item 4).
- b. Using a Phillips head screwdriver, start installation of breaker mounting screws (item 3) into cage nuts (item 4) but do not tighten all the way down at this time.

4. Bottom Mounted Only— Install phase connectors and phase isolator onto main chassis bus as detailed below (refer to Sheet 5—Bottom Mounted Chassis Assembly Detail):

- 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 5-10) to main chassis bus using #10-32 X 1.25" screws (item 12) but do not fully tighten at this time. Refer to Sheet 4—Figure 1 for dimension from bus support to end of connectors (items 5-10). Please note: Orientation of connectors (items 5-10) must be as shown. Note chamfer locations in Sheet 4—Figure 1.
- e. Using the large plastic rivet (item 13), secure phase isolator (item 11) onto B phase connector (item 7) ensuring that phase isolator (item 11) properly separates opposite polarity connectors (items 5-10) 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 5-10) to main chassis bus using #10-32 X 1.25" screws (item 12). (Skip to step h.)
- e. **Bottom Mounted Only**—Adjust breaker as needed to line up phase connectors (items 5-10) and breaker stabs.
- f. **Bottom Mounted Only**—Secure phase connectors (items 5-10) to breaker stabs using 1/4-20 X .875" screws (item 15). 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 12) from phase connectors (item 5-10) to main chassis bus is properly seated and is tightened to a torque value of 28-32 lb-in (3.2-3.6 Nm). **DO NOT OVERTIGHTEN**
- i. Using a torque wrench, ensure that hardware (item 15) from phase connectors (items 5-10) to breaker stabs is properly seated and is tightened to a torque value of 62-68 lb-in (7.0-7.7 Nm). **DO NOT OVERTIGHTEN**
- j. **All connections should be fully secured (tightened) at this time.**

THE INFORMATION ON THIS DOCUMENT IS CREATED BY EATON CORPORATION. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DRAFTER PSM	DATE 10/12/2017		SUMTER, SC
		ENGINEER RH	DATE 10/12/2017		TITLE INSTALLATION INSTRUCTIONS K-FRAME MAIN BREAKER
		REVISION 3	PARTS LIST	DWG NO. 1A32082	
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME	MODEL REV	TYPE STANDARD
				UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 2 OF 6

4

3

2

1

6. 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 22" Main cover (item 19A or 19B per the application) into proper location on deadfront cover assembly (see Figure 4 or Figure 5 as appropriate). Insert small plastic snap rivets (item 16) and large plastic rivets (item 13) into holes located on newly provided 22" Main cover (see Figure 3 on sheet 6).
- 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 17 or 18) 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).

7. 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 K-FRAME BREAKER PRL1A OR PRL2A PANELBOARD			
ITEM #	QTY	COMPONENT DESCRIPTION	PART #
1	1	BREAKER MOUNTING BRACKET	4180B25H02
2	1	BRACKET INSULATION	4180B70H01
3	2	1/4-20 x 1.625" BREAKER MOUNTING SCREW	70001CSJC1
4	2	CAGE NUT	70222BI21E
5	1	PHASE CONNECTOR 5, CUAG	4180B27H03
6	1	PHASE CONNECTOR 6, CUAG	4180B27H07
7	1	PHASE CONNECTOR 7, CUAG ¹	4180B29H03
8	1	PHASE CONNECTOR 8, CUAG ¹	4180B29H07
9	1	PHASE CONNECTOR 9, CUAG	4180B28H03
10	1	PHASE CONNECTOR 10, CUAG	4180B28H07
11	1	PHASE ISOLATOR ¹	4180B07H03
12	6	10-32 X 1.250" THREADFORMING SCREW ²	70010RBB8R
13	1	LARGE PLASTIC RIVET ²	7499A46H01
14	2	8-32 x .531" THREADFORMING SCREW ²	70010RBB5V
15	3	1/4-20 x .875" THREADFORMING SCREW	70010RBB5V
16	2	SMALL SNAP RIVET ²	5756B83H01
17	1	"MAIN" LABEL ²	267P442H01
18	1	"SERVICE DISCONNECT" LABEL ²	267P443H01
19A	1	MAIN DEADFRONT COVER (TOP MTD)	4180B05H01
19B	1	MAIN DEADFRONT COVER (BOTTOM MTD)	4180B05H02

NOTES:

1 - Omit B-phase terminal, connector, and isolator for single phase applications.

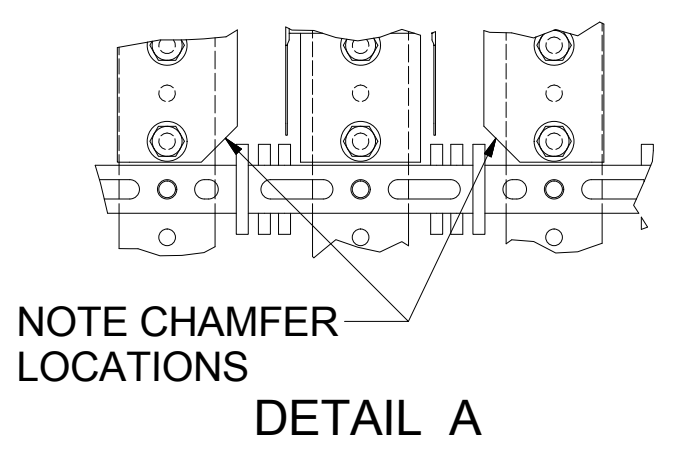
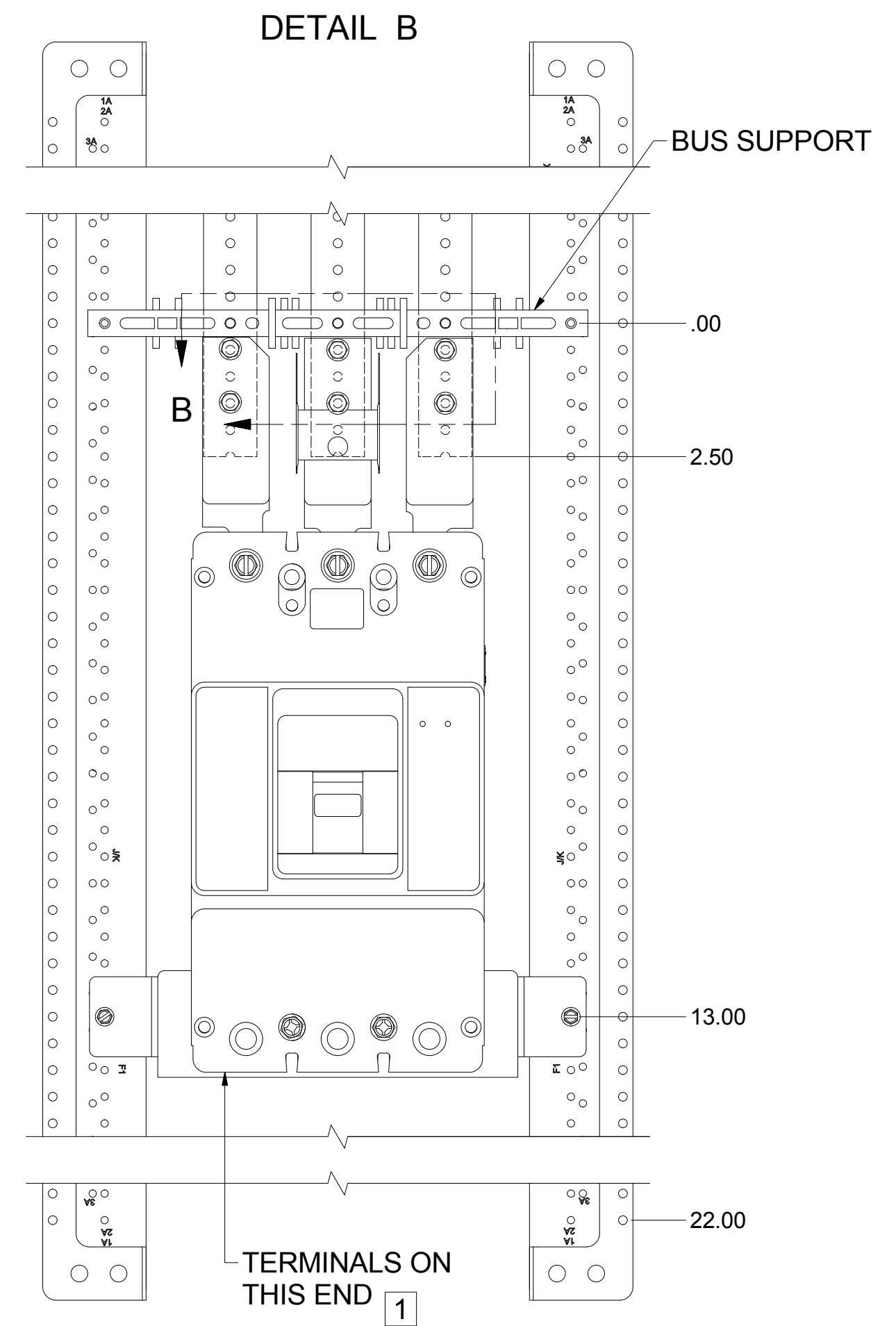
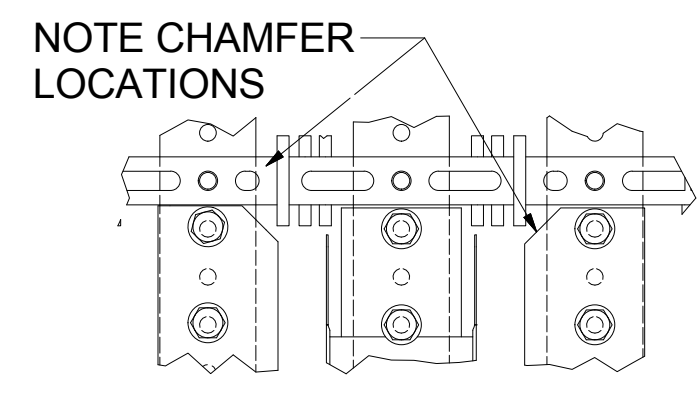
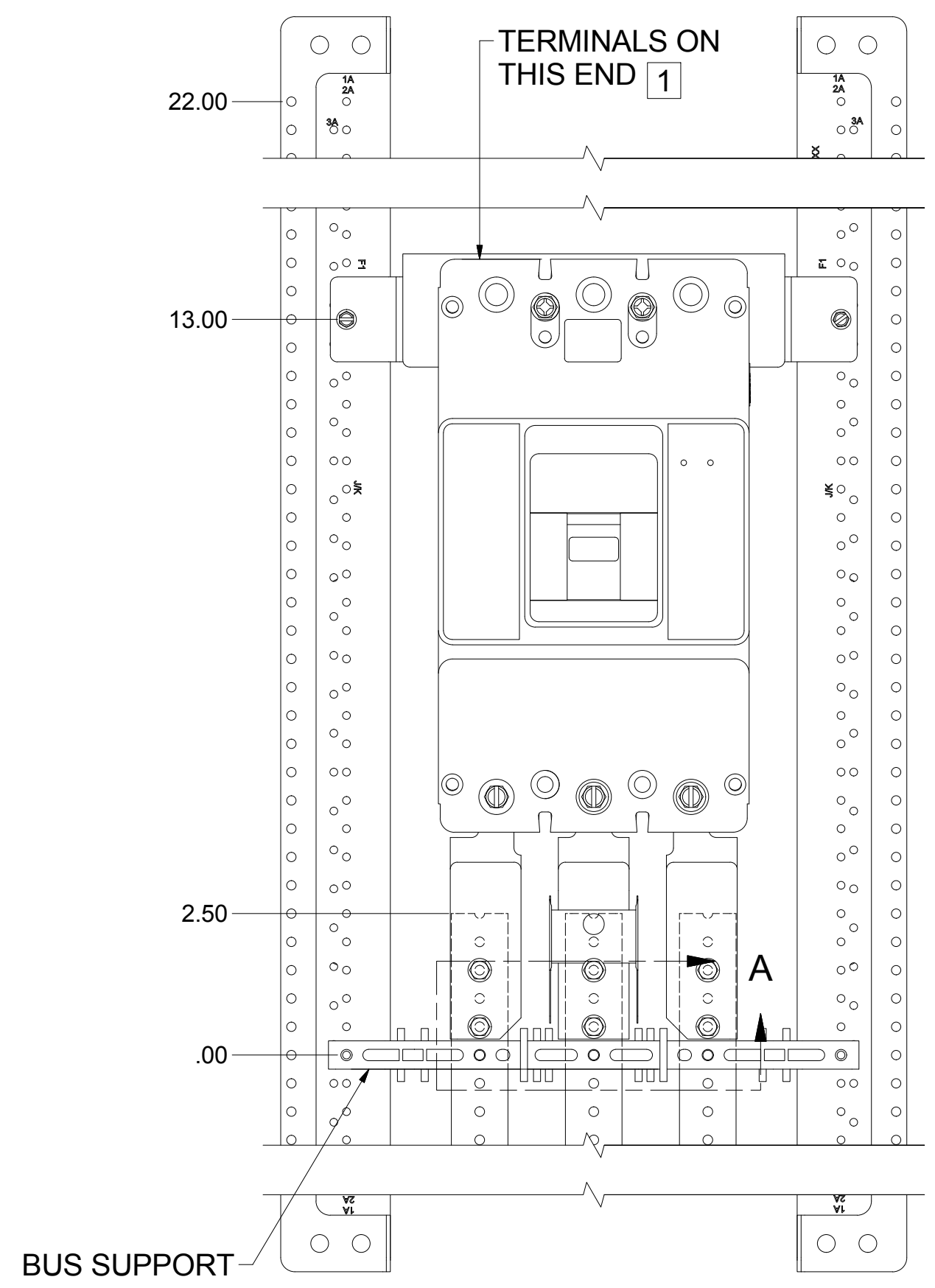
2 - Items included in hardware bag

THE INFORMATION ON THIS DOCUMENT IS CREATED BY EATON CORPORATION. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DRAFTER PSM	DATE 10/12/2017	SUMTER, SC		
		ENGINEER RH	DATE 10/12/2017		TITLE INSTALLATION INSTRUCTIONS K-FRAME MAIN BREAKER	
		REVISION 3	PARTS LIST	DWG NO. 1A32082	UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 3 OF 6
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME	MODEL REV	TYPE STANDARD	SUM CUST TITLEBLOCK REV - 1

FIGURE 1

TOP MOUNTED

BOTTOM MOUNTED

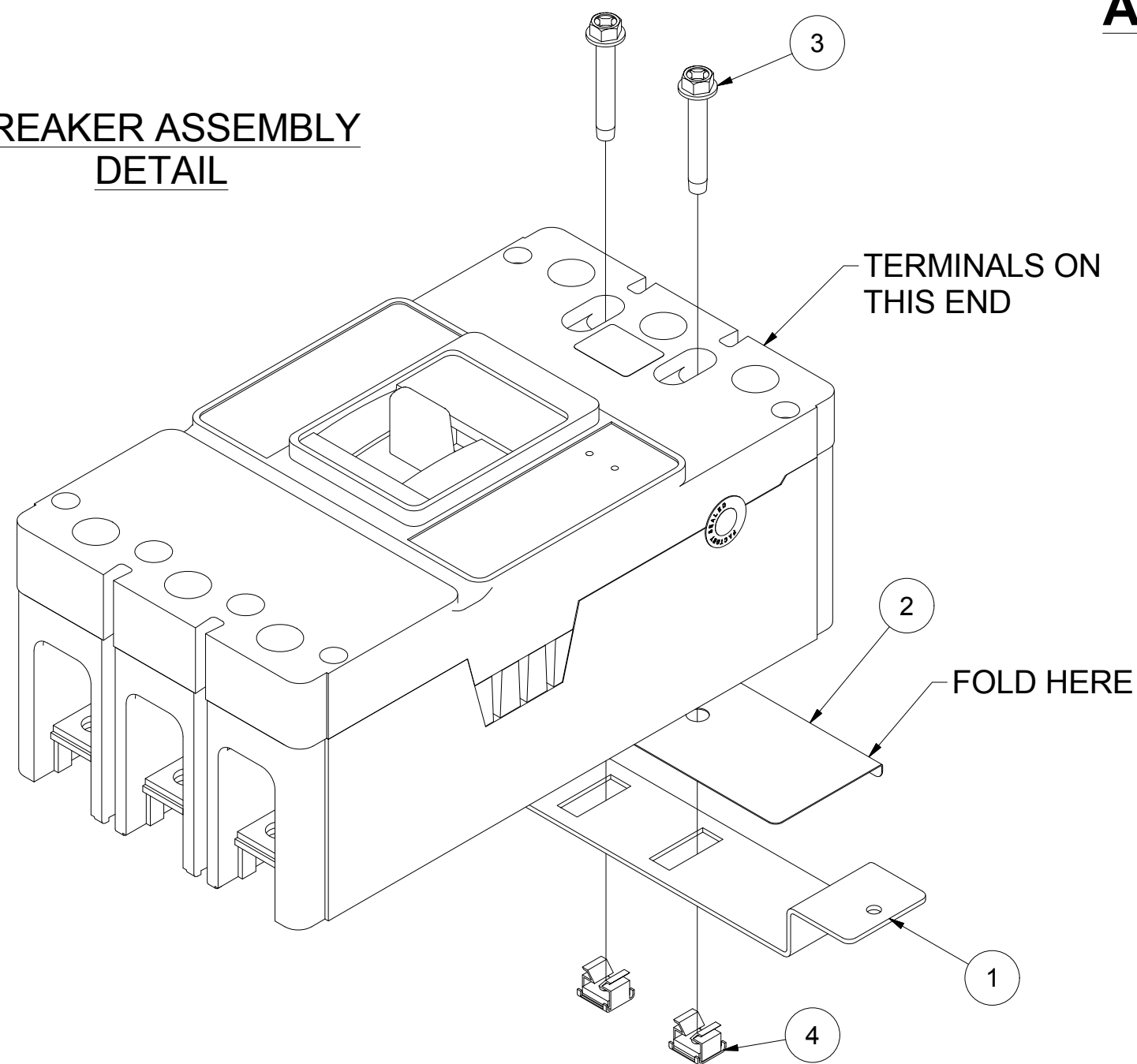


1 OMIT B PHASE TERMINAL FOR SINGLE PHASE APPLICATIONS

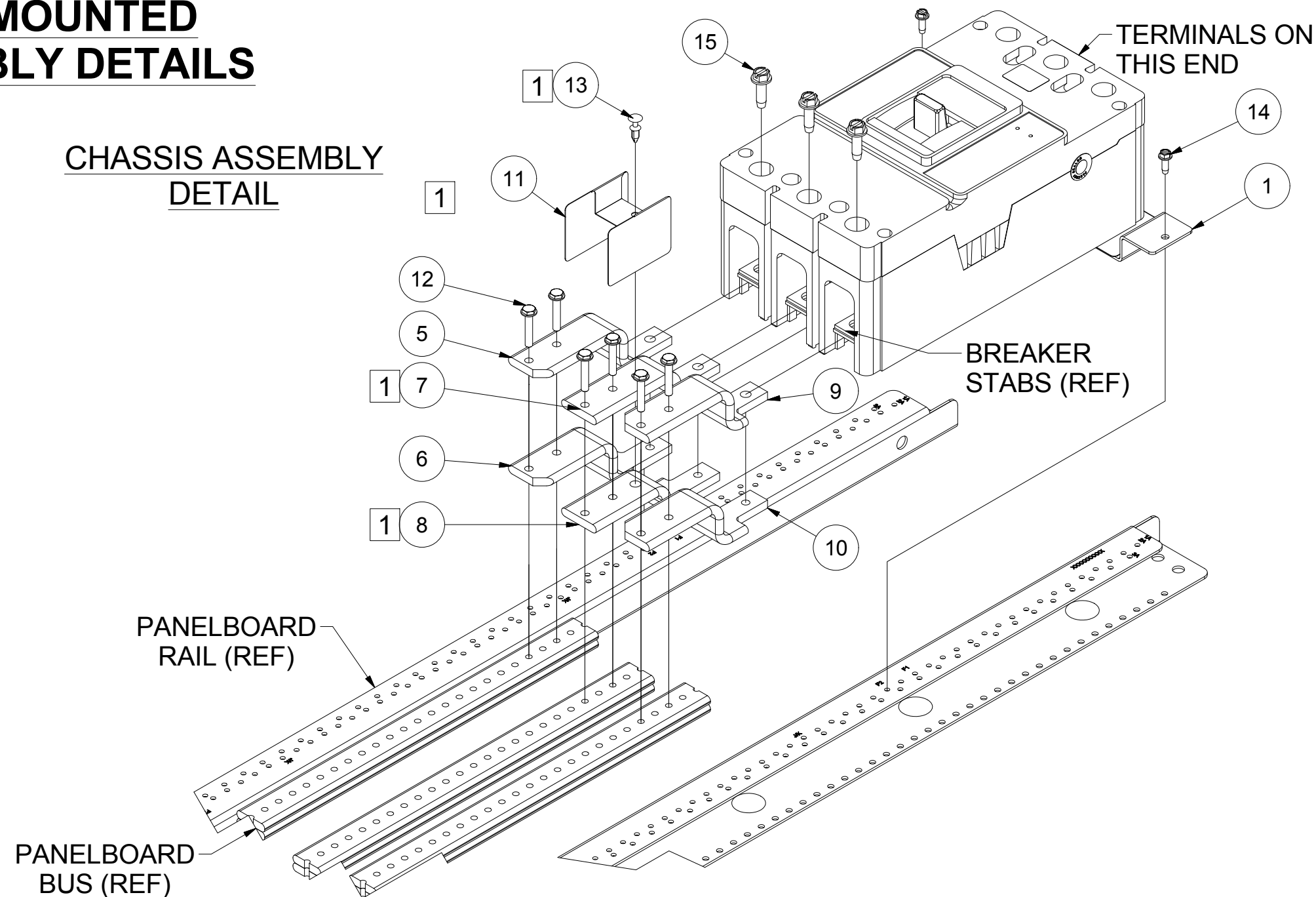
THE INFORMATION ON THIS DOCUMENT IS CREATED BY EATON CORPORATION. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DRAFTER PSM	DATE 10/12/2017	EATON SUMTER, SC	TITLE INSTALLATION INSTRUCTIONS K-FRAME MAIN BREAKER
		ENGINEER RH	DATE 10/12/2017		DWG NO. 1A32082
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME 1A32082G01.iam	MODEL REV 2	UNLESS SPECIFIED TOLERANCES PER 5078A01
				REVISION 3	SHEET 4 OF 6
				TYPE STANDARD	SUM CUST TITLEBLOCK REV - 1

TOP MOUNTED ASSEMBLY DETAILS

BREAKER ASSEMBLY DETAIL



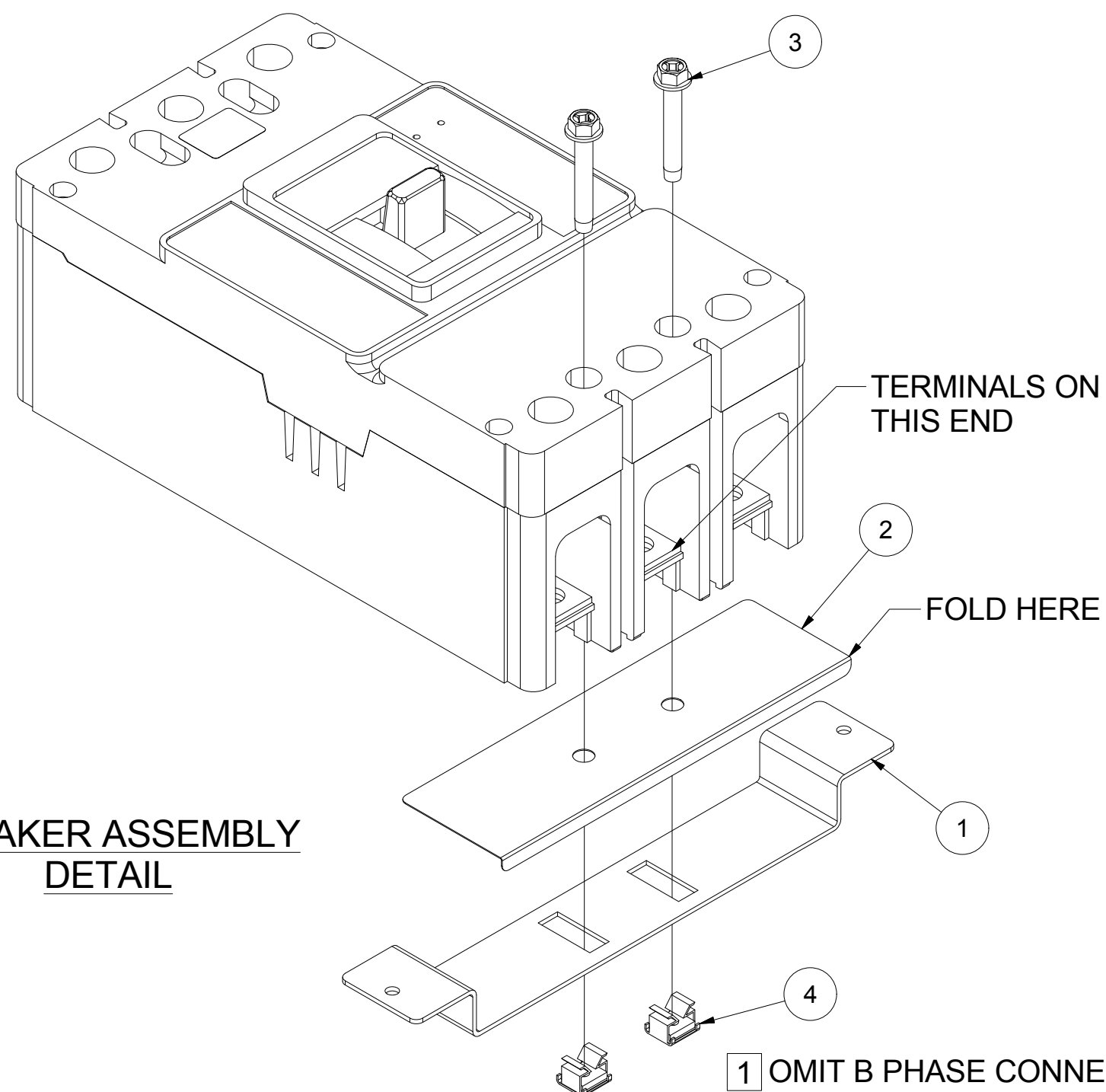
CHASSIS ASSEMBLY DETAIL



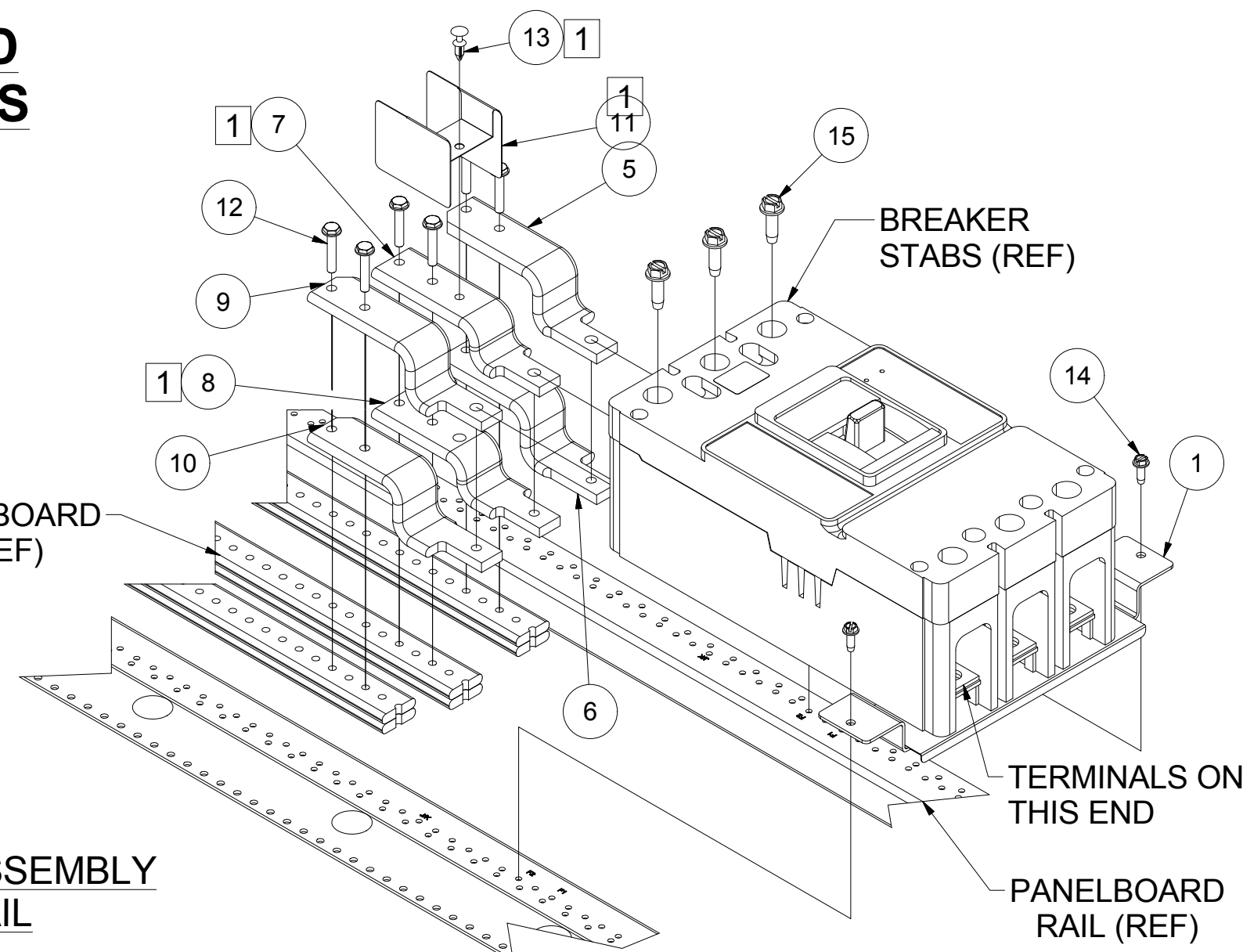
1 OMIT B PHASE CONNECTORS, ISOLATOR AND ASSOCIATED HARDWARE FOR SINGLE PHASE APPLICATIONS.

BOTTOM MOUNTED ASSEMBLY DETAILS

BREAKER ASSEMBLY DETAIL



CHASSIS ASSEMBLY DETAIL

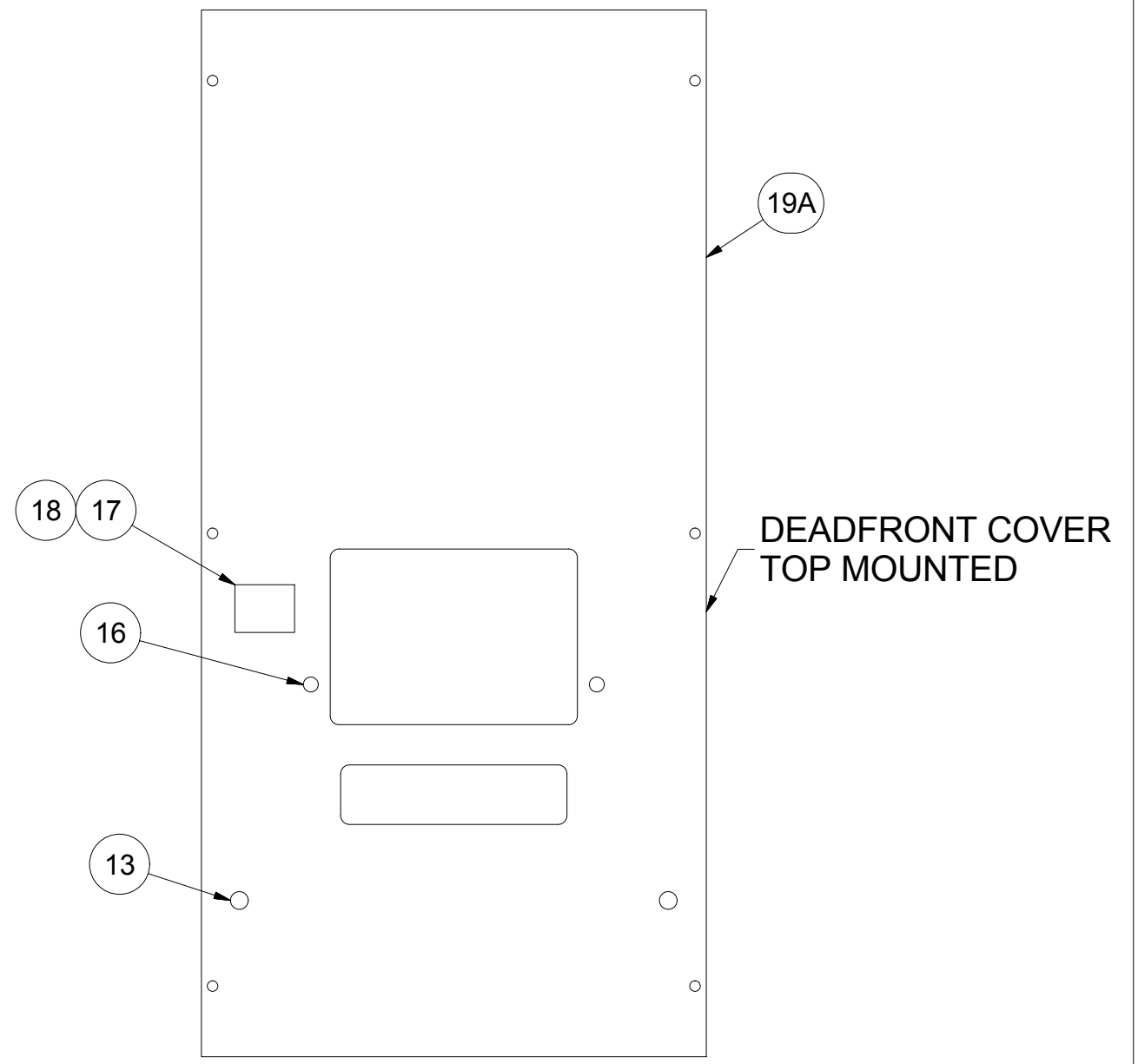


1 OMIT B PHASE CONNECTORS, ISOLATOR AND ASSOCIATED HARDWARE FOR SINGLE PHASE APPLICATIONS.

THE INFORMATION ON THIS DOCUMENT IS CREATED BY EATON CORPORATION. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DRAFTER PSM	DATE 10/12/2017		SUMTER, SC
		ENGINEER RH	DATE 10/12/2017		TITLE INSTALLATION INSTRUCTIONS K-FRAME MAIN BREAKER
		REVISION 3	PARTS LIST	DWG NO. 1A32082	
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME 1A32082G01.iam	MODEL REV 2	TYPE STANDARD
				UNLESS SPECIFIED TOLERANCES PER 5078A01	SHEET 5 OF 6

FIGURE 3

TOP MTD



BOTTOM MTD

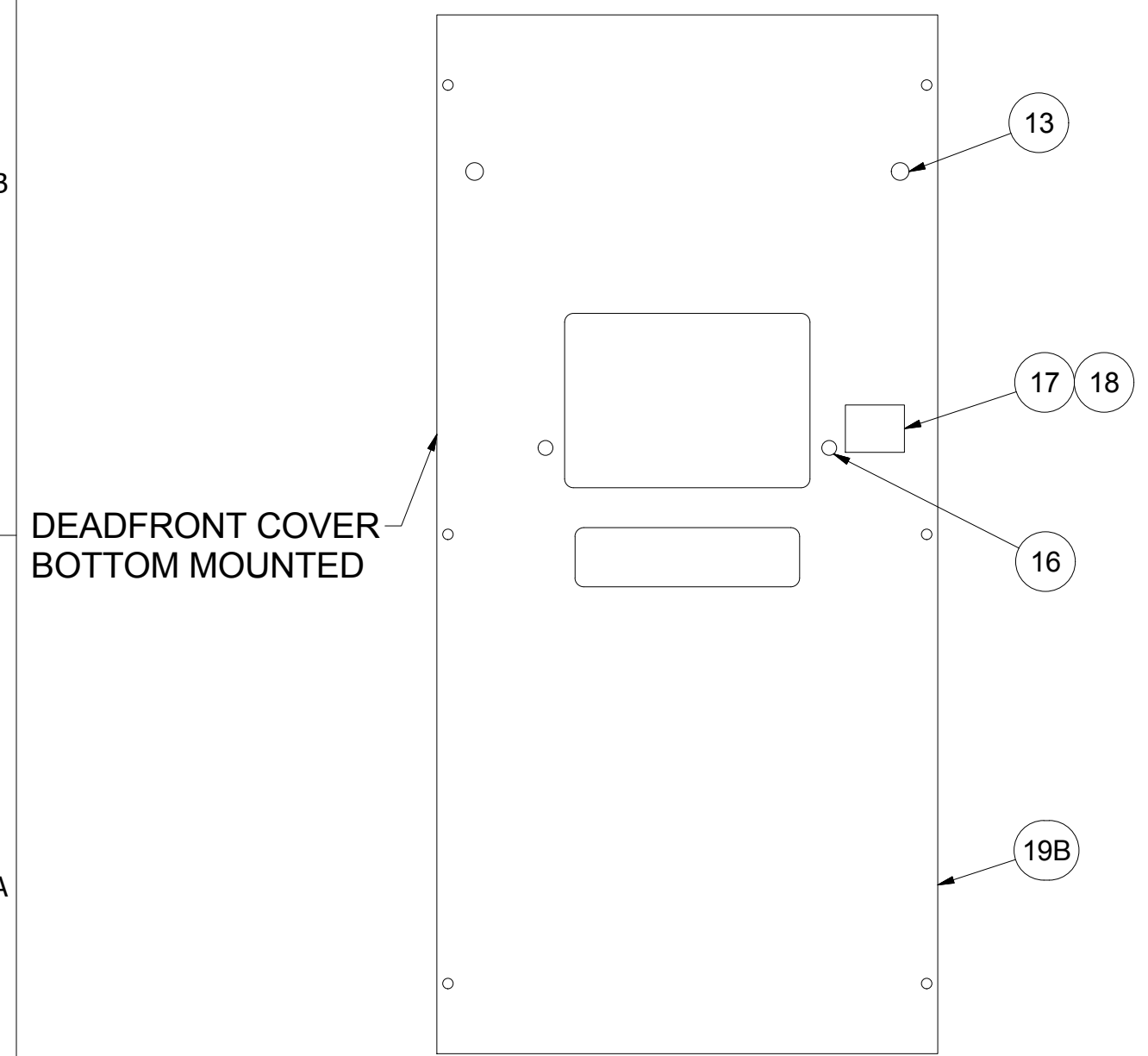


FIGURE 4
TOP MOUNTED
DEADFRONT COVER
ARRANGEMENT

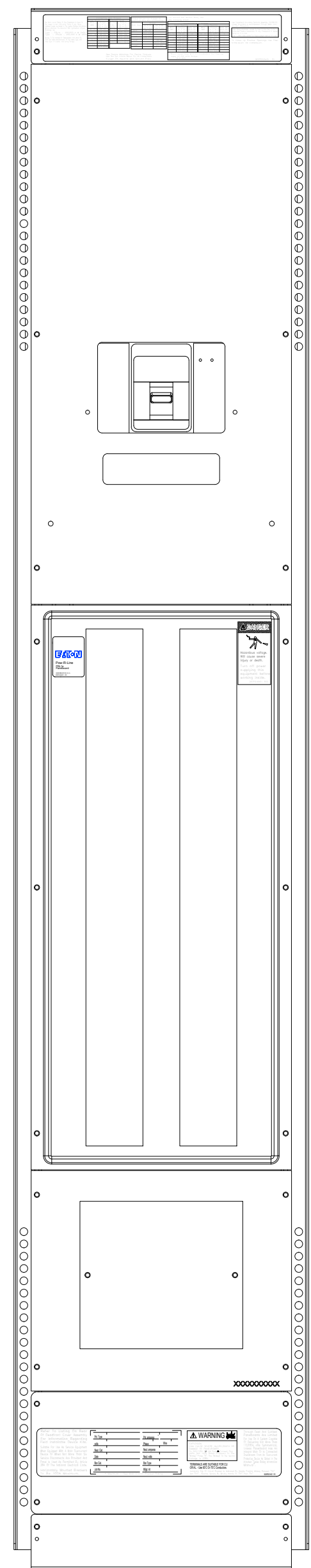
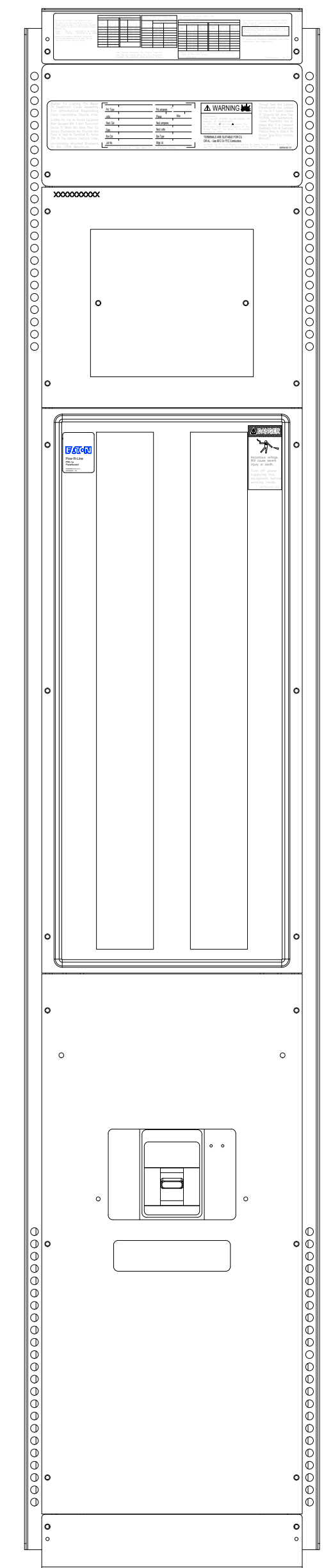


FIGURE 5
BOTTOM MOUNTED
DEADFRONT COVER
ARRANGEMENT



THE INFORMATION ON THIS DOCUMENT IS CREATED BY EATON CORPORATION. IT IS DISCLOSED IN CONFIDENCE AND IS ONLY TO BE USED FOR THE PURPOSE IN WHICH IT IS SUPPLIED.		DRAFTER PSM	DATE 10/12/2017	EATON	SUMTER, SC	
		ENGINEER RH	DATE 10/12/2017		TITLE INSTALLATION INSTRUCTIONS K-FRAME MAIN BREAKER	
		REVISION 3	PARTS LIST	DWG NO. 1A32082		
FEDERAL ID NO.	PRODUCT U	SCALE NTS	MODEL FILENAME 1A32082G01.iam	MODEL REV 2	TYPE STANDARD	UNLESS SPECIFIED TOLERANCES PER 5078A01
					SHEET 6 OF 6	SUM CUST TITLEBLOCK REV - 1