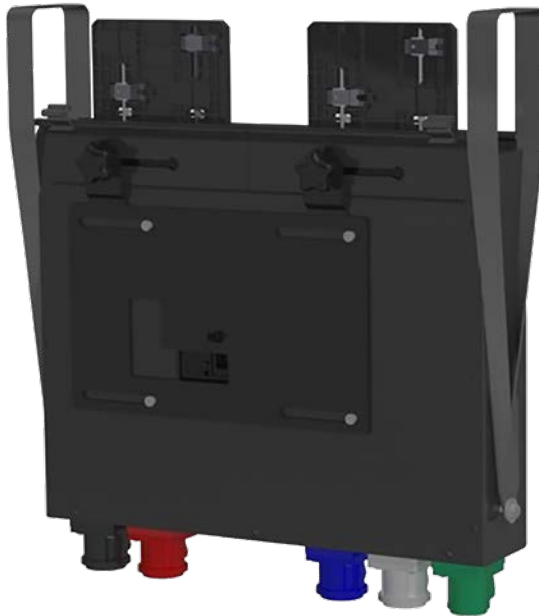


# PowerWave 2 load bank tap-off box



This instruction leaflet describes the installation procedures for Eaton's PowerWave 2 load bank tap-off box (LBTOB) system.

**For any questions regarding installation, operation, service, or maintenance**

Please call the **Eaton Help Desk** at:

United States: **1-800-843-9433** or **1-919-870-3028**

Canada: **1-800-461-9166 ext 260**

All other countries: Call your local service representative

**For manual comments, suggestions, or to report a technical error within this document, please email:**

[LVB-NSBSalesGreenwood@Eaton.com](mailto:LVB-NSBSalesGreenwood@Eaton.com)

**Download the most recent version of this product manual from the Eaton website product page, Resources section:**

[Eaton.com/powerwave2](https://Eaton.com/powerwave2)

**⚠ DANGER**

**HAZARDOUS VOLTAGE!**

WILL CAUSE ELECTRICAL SHOCK OR BURN. TURN OFF THE POWER TO BUSWAY BEFORE INSTALLING, REMOVING OR WORKING ON THIS EQUIPMENT. SEE INSTRUCTIONS ON THE INSIDE COVER.

- DE-ENERGIZE THE BUSWAY BEFORE INSTALLING OR REMOVING THE TAP-OFF BOX.
- ENSURE TAP-OFF BOX HANDLE IS IN THE OFF POSITION BEFORE INSTALLING OR REMOVING THE TAP-OFF BOX.

**⚠ WARNING**

FAILURE TO COMPLY WITH THESE INSTRUCTIONS WILL RESULT IN DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE.

- APPLY APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) AND FOLLOW SAFE ELECTRICAL WORK PRACTICES ACCORDING TO NFPA 70E®, CSA® Z462, OR NOM-029-STPS-2011.
- FOLLOW ALL REQUIRED LOCK-OUT/TAG-OUT PROCEDURES.
- ONLY QUALIFIED ELECTRICAL PERSONNEL SHOULD INSTALL OR REMOVE THE TAP-OFF BOX.

**Note:** Eaton recommends two-person team for installation. The unit weighs about 30 lb and must be inserted into the bus rail and held in place while the unit is secured to the rail with straps and clips.



*Powering Business Worldwide*

1. Inspect tap-off boxes before installing

- a. Inspect the tap-off box enclosure for dents, bent edges, cracks, and missing components. Inspect all contacts for bent contacts, bent contact springs, or missing springs.

**NOTICE**

**IF THE TAP-OFF BOX APPEARS TO BE DEFECTIVE, DO NOT INSTALL THE TAP-OFF BOX.**

- b. Test conductor contacts movement.
  1. Move the contact engagement knob all the way left: conductor contacts on both sides of the mast should be completely recessed (Figure 1).



Figure 1. Shows the conductor contacts on the front of the mast fully recessed

- 2. Move the contact engagement knob all the way right: conductor contacts should open on both sides of the mast (Figure 2).



Figure 2. Shows the conductor contacts on the front of the mast open

**Note:** To loosen contact engagement knob so that you can slide it, turn it counter-clockwise. To tighten again, turn clockwise.

1. Prerequisites for installation.

- a. The bus run should already be installed and functional.
- b. The circuit breaker on the LBTOB must be OPEN or OFF (Figure 3).
- c. Both contact engagement knobs should be fully in the left position so that the contacts on both masts are completely recessed (Figure 3).
- d. The load bank should not be attached to the LBTOB (Figure 3).
- e. De-energize the busway and perform Lock-Out/Tag-Out (LOTO).

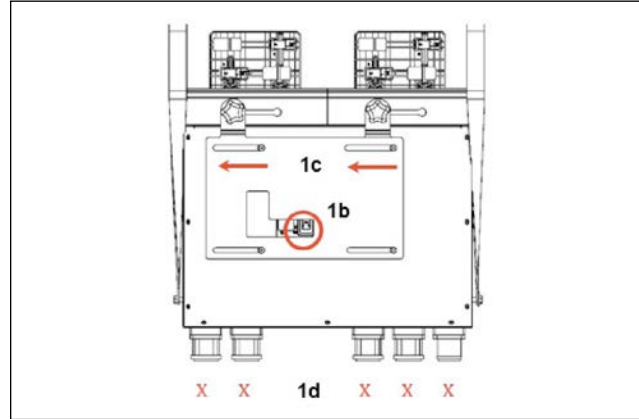


Figure 3. Prerequisites

2. Placement of the LBTOB.

The LBTOB should be inserted into the bus rail near the end cap and after any tap-off boxes (TOBs) already installed on the rail.

The front of the unit should face out from the **Neutral** side of the bus rail.

3. Install the retainer clips.

Install the two retainer clips (included) on the bus rail outside of the LBTOB position (Figure 4) on the Neutral side (Figure 5). The clips have different orientations for 250–400 A bus rails and 600–1000 A bus rails.

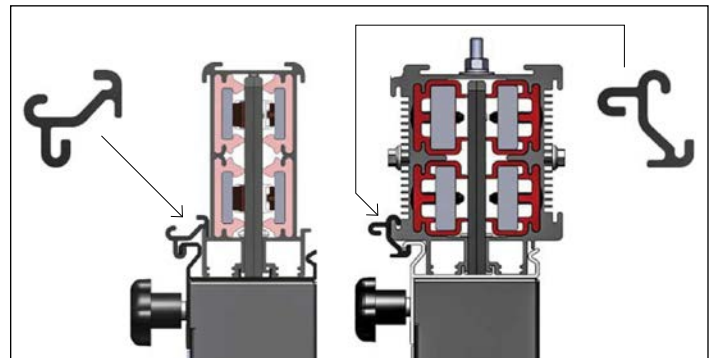


Figure 4. 250–400 A profile (left) and 600–1000 A profile (right)

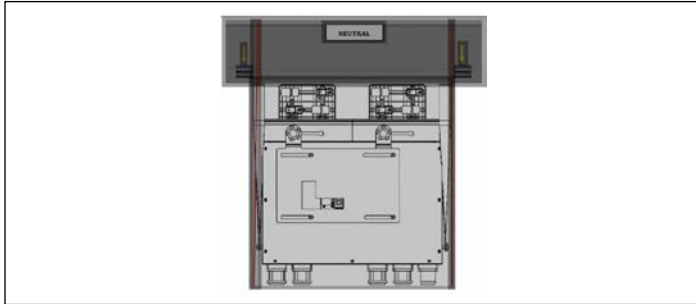


Figure 5. Neutral side

4. Insert the LBTOB into the rail.

**⚠ CAUTION**

**KEEP UNIT SUPPORTED THROUGH STEPS 4 AND 5.**

5. Secure the LBTOB on the rail.

- a. Move both retainer clips inward over the lip of the LBTOB (Figure 6).
- b. Wrap the straps (shown in green) on each side around the bus rail. Connect each strap through the strap's cam buckle. The strap on each side should be tight and snug around the bus rail (Figure 6).

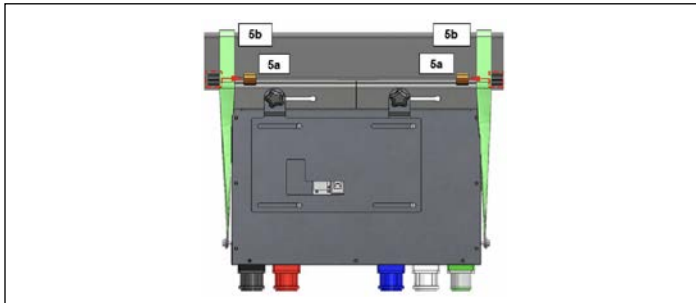


Figure 6. Secure the LBTOB on the rail

6. Push contact engagement knobs to the right.

Push both contact engagement knobs all the way to the right (Figure 7). (Each knob is attached to a separate circuit breaker cover plate.) This engages the contacts to the conductors in the bus rail and exposes the circuit breaker.

**⚠ CAUTION**

**DO NOT FORCE CAM ENGAGEMENT IF EXCESSIVE RESISTANCE IS FELT DURING ENGAGEMENT.**



Figure 7. Push both contact engagement knobs

7. Connect the load bank cables ABCNG to the Cam-Loks™ on the LBTOB (Figure 8).

8. Close (turn on) the circuit breaker on the LBTOB.

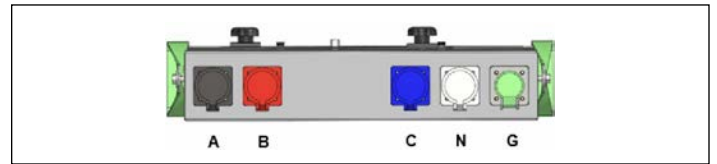


Figure 8. Bottom of unit

**⚠ WARNING**

**DO NOT CLOSE (TURN ON) THE LBTOB CIRCUIT BREAKER UNTIL ALL FIVE LOAD BANK CABLES ARE CONNECTED TO THE CAM-LOKS.**

9. Follow recommended procedures as detailed by the load bank manufacturer.

To un-install, de-energize the busway and perform LOTO. Reverse the installation procedure.

**⚠ CAUTION**

**TURN OFF THE CIRCUIT BREAKER BEFORE DETACHING THE LOAD BANK CABLES FROM THE CAM-LOKS.**

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