

# Electrically Released Brake Module For EM-FBB and EUM-FBB

Installation Instructions

P-1337-1-WE  
819-0317



 **Warner**<sup>®</sup>  
Electric

An **Altra Industrial Motion** Company

Warner Electric's FBB series of Electrically Released Brake Modules are designed for brake only applications when mounted to the front of a NEMA C-face motor. The fail safe brake engages when power goes off.

**EM 210-20 FBB**  
**EM 215-20 FBB**  
**EUM 210-20 FBB**  
**EUM 215-20 FBB**

**⚠ WARNING** Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

**⚠ CAUTION** If brake is to be applied with the brake output shaft in a vertical position Warner Electric's application engineering should evaluate application.

If any problems should occur during adjustments or application questions arise please contact:

Technical Support at 1-800-825-9050. Monday through Friday 7:30 a.m. - 4:30 p.m. central time.

## Mounting Instructions

### Step 1: Mounting the Brake to a Motor

The brake module can be mounted directly to the motor as follows:

- A. Insert a key in the motor shaft keyway. Prick punch the end of the motor shaft keyway to prevent the key from sliding out.
- B. Align the motor shaft and key with the mating shaft hole and key slot in the brake module.
- C. Slide the module onto the motor shaft so the module surface is snug against the motor face.  
**NOTE: Brake Module should slide freely onto shaft and fit flush with motor C-face.**
- D. Secure the brake module in the motor C-face with the four (4) long hex head capscrews. Suggested torque for capscrews is 30-35 lb.ft.

### Step 2: Electrical Connections and Control Requirements

- A. The wiring diagram included with each Warner Electric control shows the proper electrical connections to be made.
- B. Controls used must have adjustable output voltage.
- C. All Permanent Magnet Type Electrically Released Brake Modules are polarity sensitive. Therefore, the (+) red wire must be connected to the (+) terminal and the (-) black wire to the (-) terminal.

90 Volt Brake recommended controls are:

CBC-160-1  
CBC-160-2  
CBC-300  
CBC-500-90  
CBC-550-90

24 Volt Brake recommended controls are:

CBC-500-24  
CBC-550-24

### Step 3: Burnishing and Maintenance

- A. No burnishing required, units are pre-burnished at factory.
- B. Improper voltage setting can reduce the braking life.
- C. Wear grooves appear on the friction surfaces. This is a normal wear condition, and does not impair functioning of the unit. Never machine the friction surfaces to remove grooves or score marks resulting from normal wear.
- D. Excessive heat and high operating temperatures are causes of rapid wear. Units should be ventilated as efficiently as possible.
- E. If brakes are used on machinery where fine, abrasive dust, chips or grit are dispelled, brake should be shielded.
- F. Where brakes are used near a possible oil contamination source, brake should be shielded.
- G. Oil and grease accidentally reaching the friction surfaces may be removed by wiping with a rag dampened with a suitable cleaner, which leaves no residue. In performing this operation, do not drench the friction material. If the friction materials have been saturated with oil or grease, no amount of cleaning will be effective. Replace brake.

### Brake Release Adjustment

**Instructions for setting the optimum release voltage of permanent magnet applied/electrically released brakes.**

**▲CAUTION** The following procedure will result in the brake releasing and allowing the load to be free to move. Be sure the load is in a safe condition before proceeding with this process.

In a permanent magnet applied/electrically released brake, the attractive force between the brake surfaces is created by permanent magnets. The brake is electrically released by applying DC power to the electro-magnetic coil in the brake that opposes the permanent magnets. Electrically released brakes are polarity sensitive: the positive lead of the power supply must be connected to the positive (red) lead of the brake, and the negative lead of the power supply must be connected to

the negative (black) lead of the brake. The power supply applied to the brake must also be adjustable so that the optimum release voltage for each individual brake can be determined and set.

The following procedure describes how to set the adjustable power supply to the optimum release point of the brake. A volt-meter is required to perform the procedure.

**▲CAUTION** No power is applied to motor during this procedure. Power normally supplied by motor to brake control should be supplied by alternate method.

1. With power off, connect the positive lead of the power supply to the positive (red) lead of the brake and the negative lead of the power supply to the negative (black) lead of the brake.
2. Connect a volt-meter to measure the voltage applied across the brake.
3. Adjust the power supply to its lowest possible output, then energize the power supply only, to apply power to the brake.
4. Starting from the low point, slowly increase the applied voltage until the brake armature disengages from the magnet. Note and record the applied voltage at this point.
5. Continue to slowly increase the applied voltage until the armature re-engages the magnet. If the maximum voltage available from the supply does not cause the armature to re-engage, the armature should be manually assisted into engagement.  
**NOTE: If armature needs to be manually assisted, armature should be pressed on back side to make contact with friction face of magnet.**
6. With the armature re-engaged, slowly reduce the applied voltage until the armature disengages from the magnet. Note and record the applied voltage at this point.
7. The optimum release point for the brake is half-way between the two recorded voltage readings. Adjust the supply to this optimum release voltage.  
**NOTE: The above procedure should be done by visually watching the armature move and may be repeated if necessary from Step 1 through Step 7.**

## Warranty

Warner Electric LLC warrants that it will repair or replace (whichever it deems advisable) any product manufactured and sold by it which proves to be defective in material or workmanship within a period of one (1) year from the date of original purchase for consumer, commercial or industrial use.

This warranty extends only to the original purchaser and is not transferable or assignable without Warner Electric LLC's prior consent.

Warranty service can be obtained in the U.S.A. by returning any defective product, transportation charges prepaid, to the appropriate Warner Electric LLC factory. Additional warranty information may be obtained by writing the Customer Satisfaction Department, Warner Electric LLC, 449 Gardner Street, South Beloit, Illinois 61080, or by calling 815-389-3771.

A purchase receipt or other proof of original purchase will be required before warranty service is rendered. If found defective under the terms of this warranty, repair or replacement will be made, without charge, together with a refund for transportation costs. If found not to be defective, you will be notified and, with your consent, the item will be repaired or replaced and returned to you at your expense.

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### Changes in Dimensions and Specifications

All dimensions and specifications shown in Warner Electric catalogs are subject to change without notice. Weights do not include weight of boxing for shipment. Certified prints will be furnished without charge on request to Warner Electric.



[www.warnerelectric.com](http://www.warnerelectric.com)

31 Industrial Park Road  
New Hartford, CT 06057  
815-389-3771  
Fax: 815-389-2582

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