



# **AMBI-TECH**

## **Brake Pak**

### **Installation/Setup Instructions**

**TB Wood's Incorporated**  
Chambersburg, Pennsylvania

# Ambi-Tech

## Brake Pak – Installation/Setup Instructions

### APPLICATION

The **BRAKE-PAK** Electronic Motor Control is designed for use with switch controlled single phase AC induction motors. (Use SHORT-STOP for motors with magnetic starters). It will operate with virtually all single phase motors that do not have brushes.

Since braking action is achieved by the use of direct current, it will not brake a DC or universal motor.

Electronic braking does not affect the normal performance, operation, or life of a motor.

### LIMITATIONS

Motors may run hotter when used in conjunction with an electronic brake. If the thermal or overload protector trips, wait for the motor to cool, reset the protector, and restrict the number of start/stop cycles. Or, reduce the **TORQUE** setting.

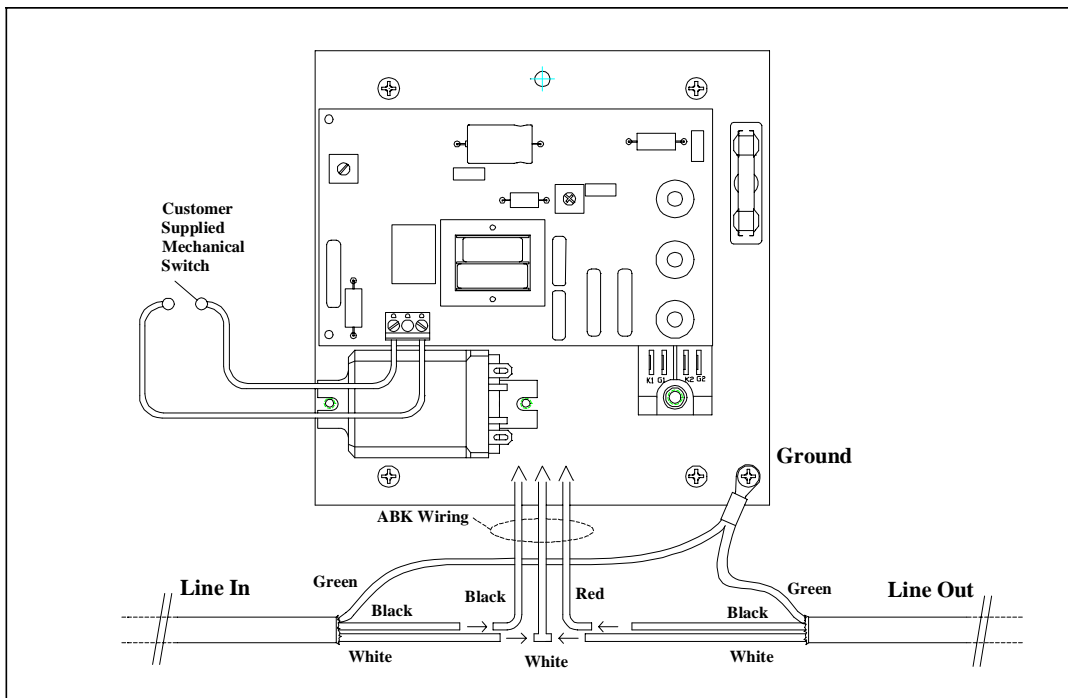
### INSTALLATION

#### A. Enclosed Unit

1. Turn power **OFF** before proceeding with any wiring.
2. Turn the existing machine operating switch to the OFF position.
3. Mount the unit securely in any position.
4. Plug the **BRAKE-PAK** line cord into a suitable power outlet.
5. Plug the machine line cord into the **BRAKE-PAK** receptacle.

## B. Chassis Unit

1. Turn power OFF before proceeding with any wiring.
2. Turn the existing machine operating switch to the OFF position.
3. Mount the unit securely in any position.
4. Refer to **Figure B.1**
5. Connect the black wire from the **BRAKE-PAK** to the + power wire from line in.
6. Connect the red wire from the **BRAKE-PAK** to the + power wire from motor line (line out).
7. Connect the white wire from the **BRAKE-PAK** to the white (*common*) wires from each of the power lines.
8. Connect an on-off toggle switch (single pole, single throw switch) to the terminals of Terminal Block TB2 on the circuit board.
9. Attach ground wires from both lines to ground lug, as shown.



**Figure B.1**

\*NOTE - Power wire colors may vary: Black refers to positive, white refers to common and green refers to ground.

## UNIT OPERATION

The **BRAKE-PAK** ON-OFF control switch is located on the right side of the enclosure. Set the switch to the "ON" (closed) position to start the machine. Set the switch to the "OFF" (open) position to initiate the automatic brake cycle. Closing the switch while an automatic brake cycle is in progress will terminate the brake and start the machine. Note: Once the **BRAKE-PAK** is installed, the existing machine operating switch must be placed and remain in the "ON" position in order for the **BRAKE-PAK** to control the motor.

## ANTI-RESTART FEATURE

If input power to the **BRAKE-PAK** is interrupted for more than a few seconds while the **BRAKE-PAK** is "ON", it should not re-start when input power is restored. Green LED D7 will blink to indicate this condition. Turn the **BRAKE-PAK** switch "OFF" and "ON" again to start normally.

## ADJUSTMENTS

Controls for setting the braking **TORQUE** and braking **TIME** (duration of automatic braking cycle) are clearly marked on the top of the circuit board.

**BRAKE-PAK** units are shipped with the **TIME** and **TORQUE** controls set for minimum (CCW). To adjust for your application:

1. Advance the **TIME** control to mid range.
2. Make sure the **BRAKE-PAK** control switch is in the "OFF" position.
3. Apply power to the **BRAKE-PAK**.
4. Turn you machine power switch to the "ON" position.
5. Turn the **BRAKE-PAK** switch "ON" to start the machine. Allow the machine to come to full speed, and then turn the **BRAKE-PAK** switch "OFF".
6. Increase the **TORQUE** setting in increments of 1/8 turn.
7. Repeat steps 5 and 6 as needed to obtain satisfactory braking.
8. Adjust the **TIME** control so that the **TORQUE** is applied for slightly longer than it takes the machine to reach a full stop. (When cold, a machine will stop slightly faster than when it is hot).





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