

BRAKE-PAK

Electronic Motor Brake

Instructions and Setup Manual

AMBITECH

A **TIE** Company

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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.

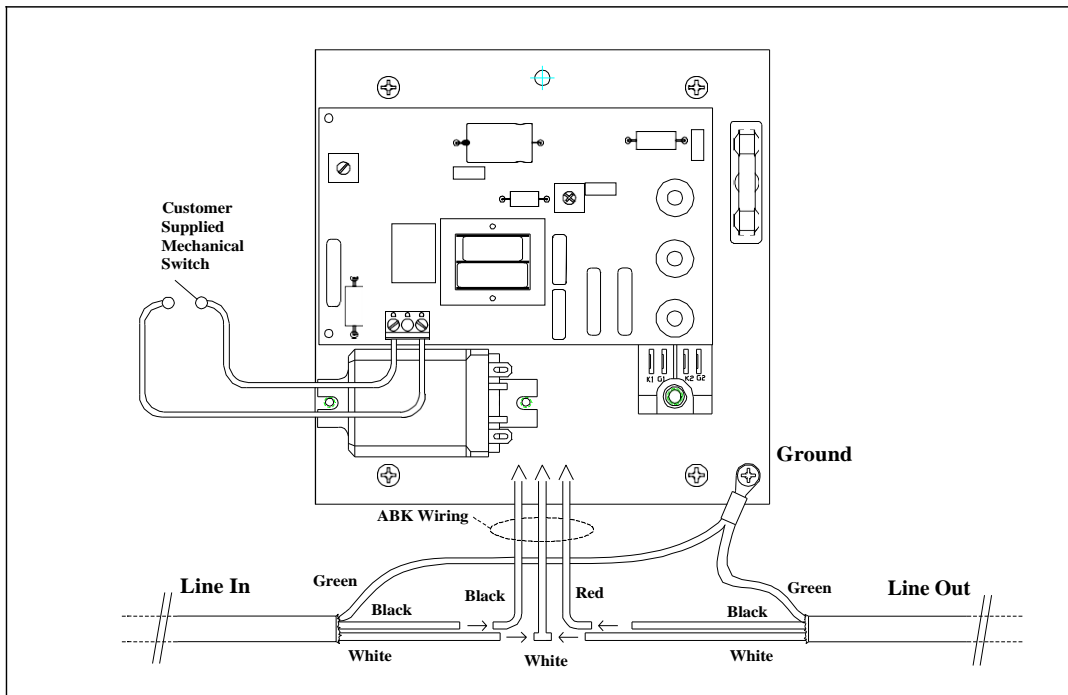


Figure B.1

*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).

WARRANTY

Each BRAKE-PAK is warranted by the factory for one year to be free from defects in materials and workmanship. Repairs will be made at the factory, on products that are returned postpaid to the factory.

The warranty is VOID if the unit has been tampered with without express permission: if fuses of an incorrect type or rating have been used; or for any other type of miss-use.

Aside from the above statement of warranty, TIE Industrial, its agents, employees, dealers and distributors assume NO LIABILITY, AND SPECIFICALLY ASSUME NO LIABILITY FOR ANY CONSEQUENTIAL DAMAGE to persons or property resulting from malfunction, failure to function, improper application, or improper operation of these products.

No allowance can be made for removal or installation costs, machine downtime, transportation, etc.

THE USER ASSUMES FULL APPLICATIONS RESPONSIBILITY.

PROCEDURE FOR REPAIRS

If a BRAKE-PAK unit needs to be returned for repair, create a packing list for the brake to be returned. This packing list should be on your company's letterhead and should state, at a minimum, the model number, serial number, and the problem you are experiencing with the unit.

After creating the packing list, send the brake and packing list to our authorized repair center at the following address:

Ambi-Tech
Attention: Repairs
44810 Vic Wertz Drive
Clinton Township, MI 48036