100 Series SCR Board Setup Instructions

Instruction Manual

PNEG-1347

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a division of
THE GSI GROUP

PNEG-1347

It is relatively easy to calibrate the SCR Drive Board and is something that should be checked periodically, particularly before the start of the drying season and also as a preventive measure.

There are four settings on the SCR Drive Board:

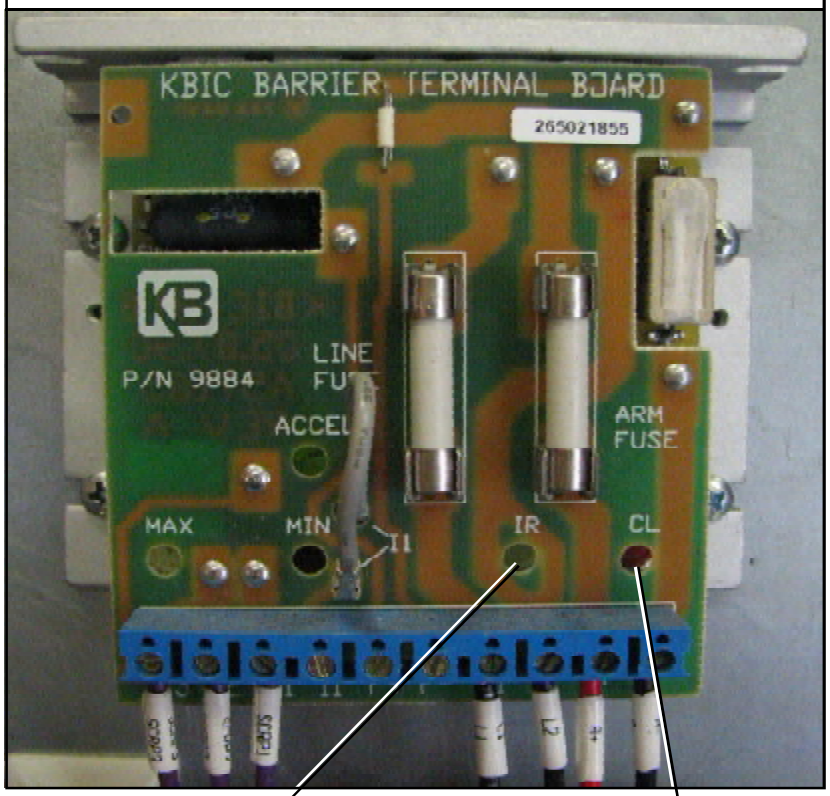
IR - IR compensation. "I" represents current (amps) and "R" represents the amount of resistance (Ohms). This setting fine tunes the "curve" of voltage output across the 0 to 100% range of settings.

CL - Current Limiter. Sets the maximum current in amps allowed.

Maximum - Sets max. voltage output when meter rolls are set to 100%.

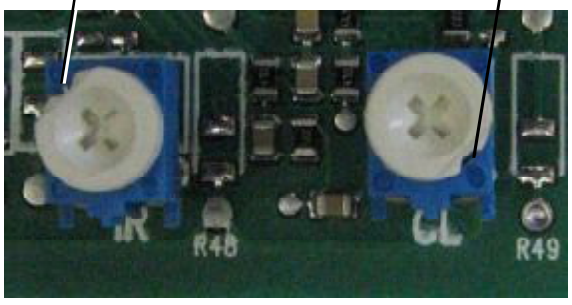
Minimum - Sets min. voltage output when meter rolls are set to 0%.

SCR board IR & CL adjustment locations.



IR adjustment pot. Set to 10 o'clock position.

CL adjustment pot. Set to 4 o'clock position.



* Before starting the calibration procedure it is important to check the IR and CL potentiometers. The photo on the left shows the location of these potentiometers.

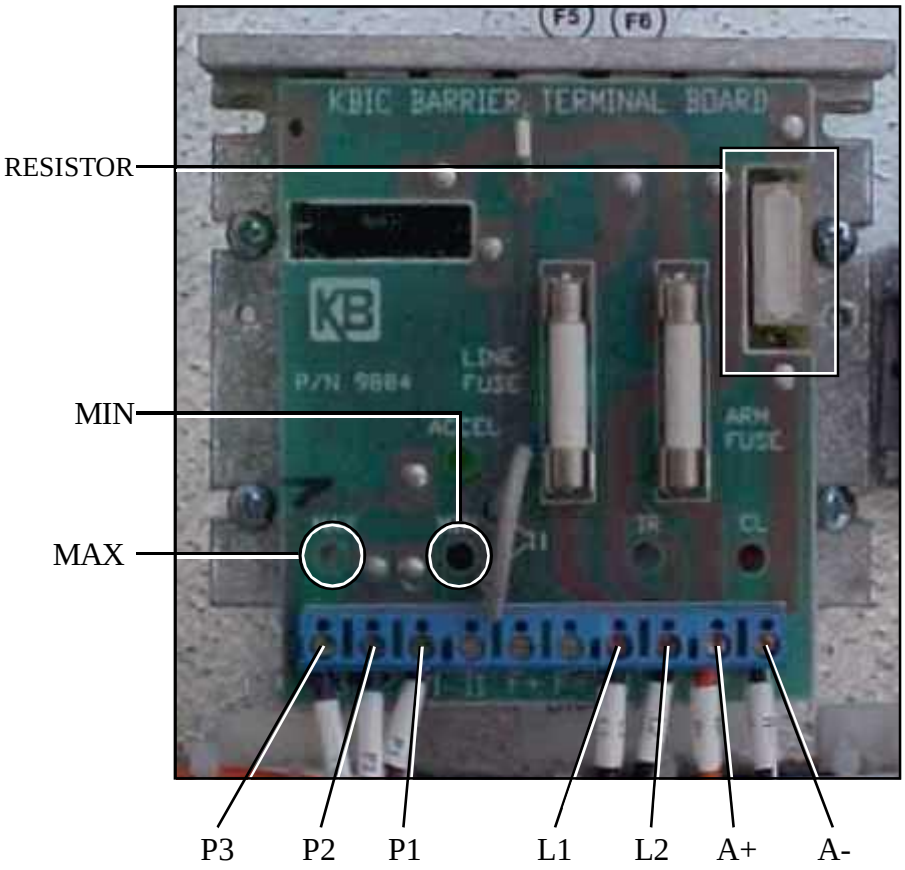
These two settings are always the same:

IR - The pointer on the adjustment pot. should be set to the **10 o'clock position** (see photo at bottom left of this page).

CL - The pointer on the adjustment pot. should be set to the **4 o'clock position** (see photo at bottom left of this page).

If these settings are not correct the SCR motor may stall before it should, it could blow fuses, or it may be impossible to calibrate the SCR Drive Board. For example, you may have the 5% setting right and find that the 100% setting is wrong, so you correct the 100% setting and it throws off the 5% setting and so on.

SCR board terminals and min./max. adjustment locations.



* The SCR board is located in the upper control box.

* Terminals L1 and L2 are the input terminals. When the unload system is turned on there should be 220 Volts AC across these terminals.

* Terminals A+ and A- are the output terminals. The voltage across these terminals is **DC** and will vary depending on where the speed control potentiometer is set.

* The item circled at the bottom right of the SCR board in the photograph is the minimum set potentiometer. This will be used in the SCR board set up to set minimum DC voltage.

* The item circled at the bottom left of the SCR board in the photograph is the maximum set potentiometer. This will be used in the SCR board set up to set maximum DC voltage.

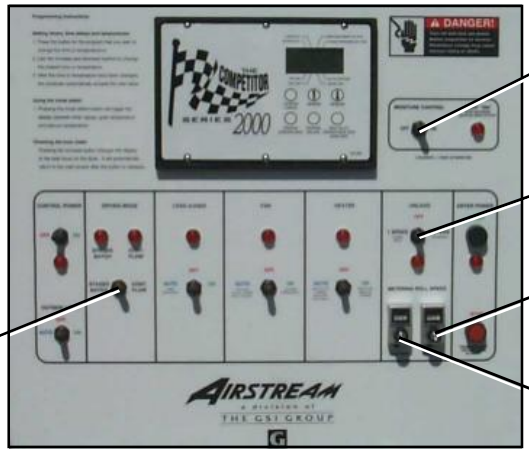
IMPORTANT: After the new board has been installed be sure to remove the resistor (shown in the photograph above) from the old board and install it in the new board. Just pull the resistor from the two pin socket and install in the same socket on the new board.

Resistor for 1/3 Hp Meter Roll motors used on 12 ft dryers and shorter. (part no. D03-0039)

Resistor for 3/4 Hp Meter Roll motors used on 14 ft dryers and longer. (part no. D33-0001)

NOTE: As of June 2006 all 100 Series dryers now use a 3/4 Hp Meter Roll SCR motor.

Control panel switch locations.



Before starting the procedure set the dryer up as follows:

1. All fan and heater switches to off position and load switch to off position.
2. Control power to on position.
3. Push the dryer power switch.
4. Dryer mode switch to cont. flow position.
5. Moisture control switch to on position.
6. Unload switch to 2 speed position.

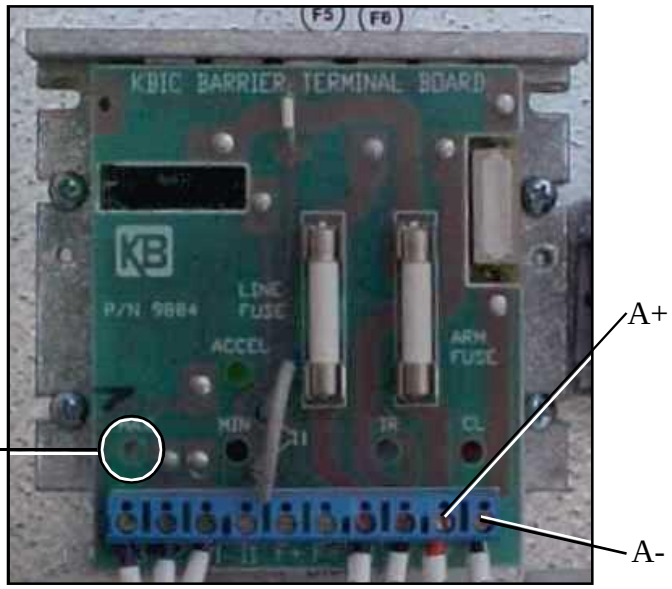
Setting SCR board maximum voltage.

1. Set the low metering roll speed to 050 on the dial indicator shown in the photograph on the left. Set the high metering roll speed to 999.

2. Switch the Unload switch to the 2 speed position.

3. Switch the Moisture Control switch to the off position. This will put the meter roll rotation speed to the high setting.

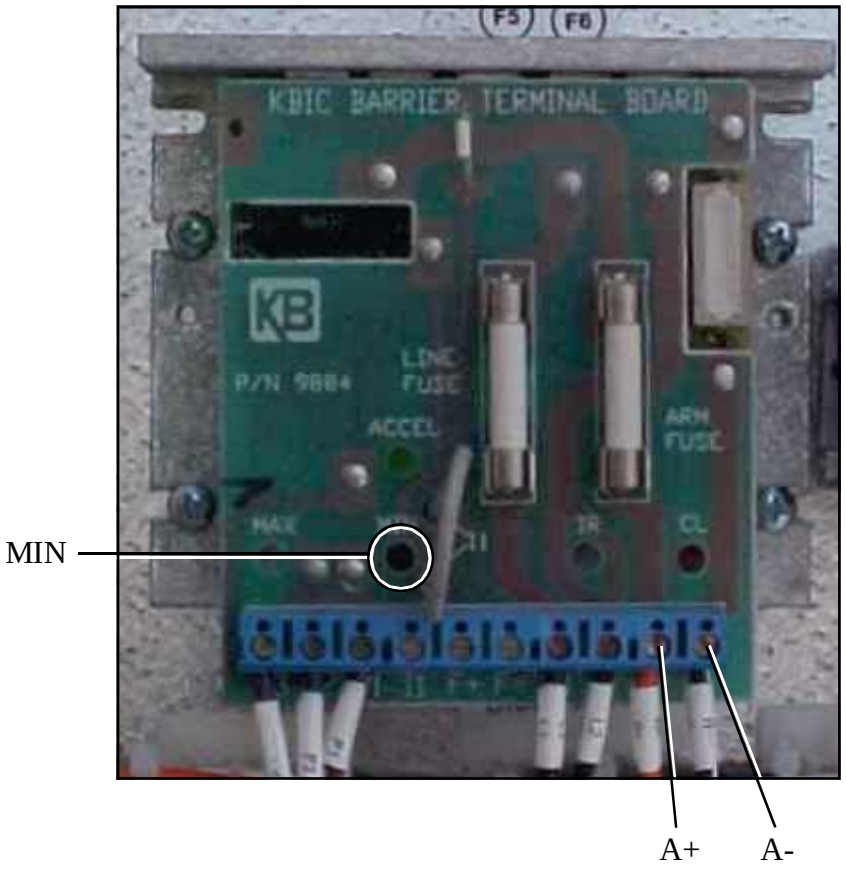
4. Use a voltmeter set at the 200 volt DC range and probe terminal A+ with the red voltmeter probe and A- with the black voltmeter probe. If the display on your voltmeter reads 180 volts DC no maximum adjustment is needed. If your voltmeter does not read 180 VDC, then use a small screw driver and adjust the max set potentiometer until the voltage is 180 VDC.



Setting SCR board minimum voltage.

1. Switch the Moisture Control Switch back to the on position. This will put the meter roll rotation speed at the low setting.

2. Use a voltmeter set at the 20 volt DC range and probe terminal A+ with the red voltmeter probe and A- with the black voltmeter probe. Use a small screw driver and adjust the min set potentiometer until the voltage is 9 VDC.



IMPORTANT: After setting the minimum and maximum voltages it is recommended that the calibration procedure be repeated a few more times in order to ensure a more accurate calibration.

The SCR board is now set and dryer is ready for normal operation at desired settings.

This Equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installation occurs.

The GSI Group, Inc.
1004 E. Illinois St.
Assumption, IL 62510-0020
Phone: 217-226-4421
Fax: 217-226-4420
e-mail: gsisales@grainsystems.com
internet: http://www.grainsystems.com