

**TB800 BOOSTER AMPLIFIER**

In accordance with Nexen's established policy of constant product improvement, the specifications contained in this manual are subject to change without notice. Technical data listed in this manual are based on the latest information available at the time of printing and are also subject to change without notice.

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**ISO 9001 Certified**



# DANGER

Read this manual carefully before installation and operation.

Follow Nexen's instructions and integrate this unit into your system with care.

This unit should be installed, operated and maintained by qualified personnel ONLY.

Improper installation can damage your system or cause injury or death.

Comply with all applicable codes.

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## INTRODUCTION

The TB800 Booster Amplifier amplifies control signals from Nexen tension controls into the electric signals needed for operating an electro-magnetic brake or clutch.

### Functions:

- Variable output signal varies directly with input signal
- Constant current output circuit
- External potentiometer or signal input operation
- Adjustable output range

## INSTALLATION

1. Install the TB800 Booster Amplifier in a shock and vibration free area that has an ambient temperature of less than 120°F [50°C] and more than 32°F [0°C].
2. Mount the TB800 securely using 4 M5 screws. See Figure 1 for mounting hole dimensions.
3. Use 18 AWG [0.9 mm<sup>2</sup>] wire rated for 600V when connecting the output to a brake or clutch.
4. Set the AC Select connector to the supply voltage used (100, 110, 200 or 220 VAC). (See Figure 4)
5. Connect the Brake/Clutch, AC Power Supply and the Control Signal to the TB800.

**NOTE:** Refer to Figure 2 if amplifier is operated with an external control signal (0-10 VDC)\*. Refer to Figure 3 if amplifier is operated manually with an external potentiometer.

\* For voltage ranges other than 0-10 VDC, see Compensating Input Voltage in OPERATION section.

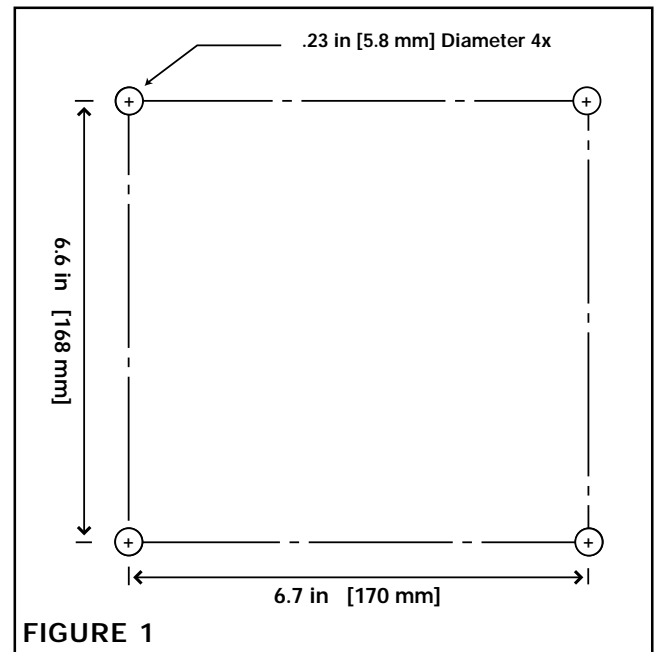


FIGURE 1

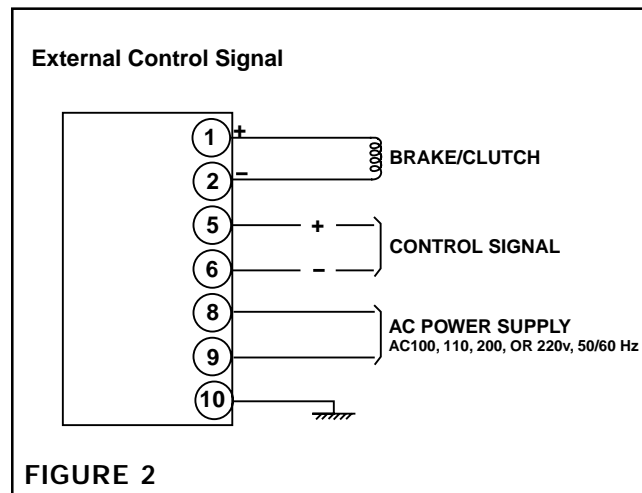


FIGURE 2

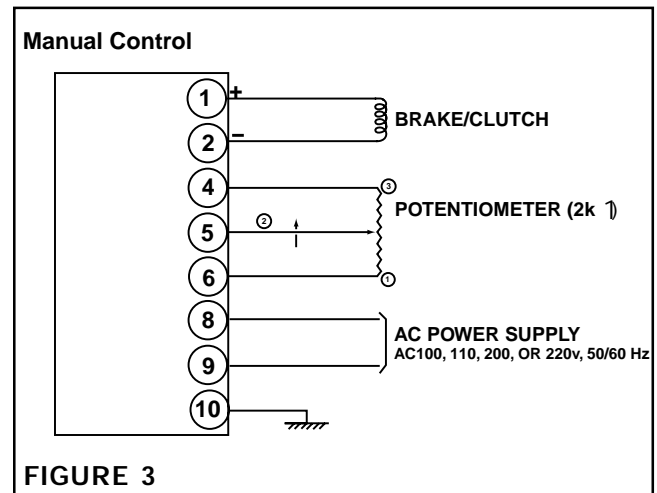


FIGURE 3

## OPERATION

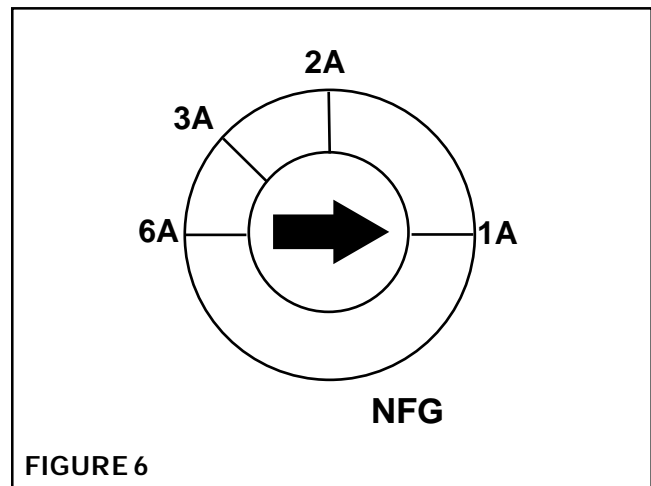
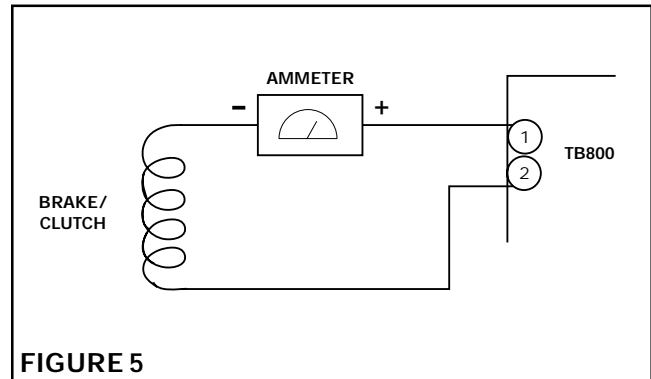
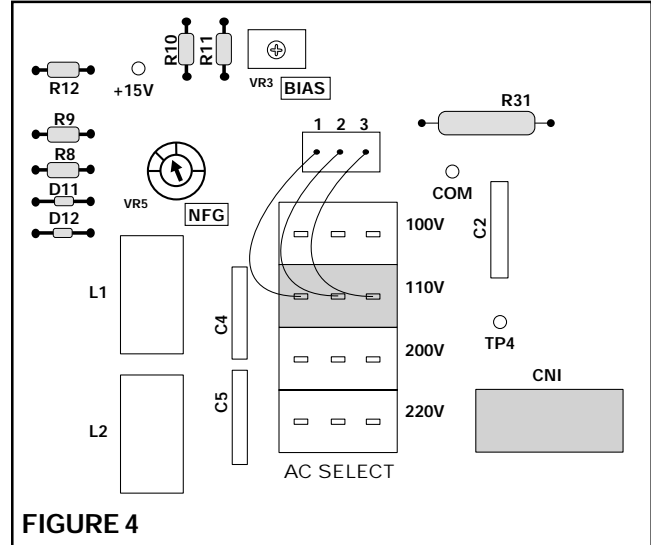
**The following Output Adjustment needs to be made prior to operation of TB800.**

### Output Adjustment

**NOTE:** Adjust the output current according to the rated current of the brake/clutch being used.

**NOTE:** Brake/Clutch must be connected to the TB800 before making proper adjustments.

1. Connect an ammeter in series to the brake/clutch. (See Figure 5)
2. Turn the NFG potentiometer fully clockwise. (See Figure 4 and 6)
3. Adjust the input control signal to full scale or set the external potentiometer to maximum.
4. Apply AC Power.
5. Slowly turn the NFG potentiometer counterclockwise until the rated output current is obtained.



(continued...)

## Compensating Input Voltage

NOTE: The TB800 can be used with a control signal within a voltage range of 0-5VDC to 0-10VDC. The TB800 is calibrated for a 0-10VDC signal. If a different voltage range is used, additional adjustments are needed. Follow this procedure for the set up of a specific voltage range.

1. Turn the ATT potentiometer fully counterclockwise. (See Figure 7)
2. Set the input control signal to maximum.
3. Turn the ATT potentiometer clockwise until the voltage between check pins COM (-) and TP2 (+) is 4V. (See Figure 8)
4. Perform steps for Output Adjustment in OPERATION section.

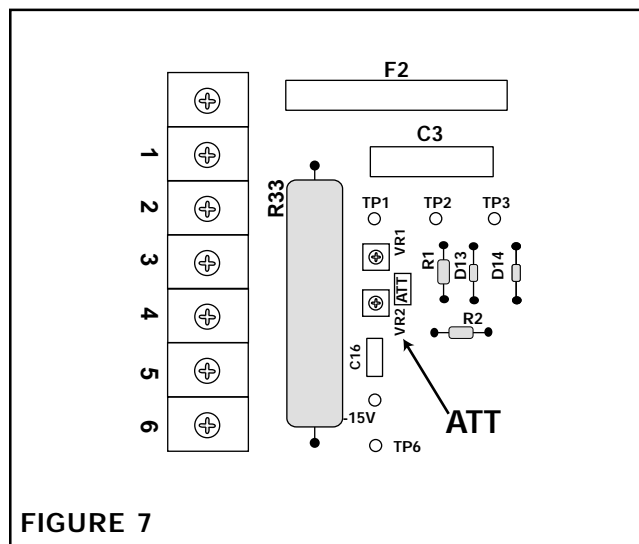
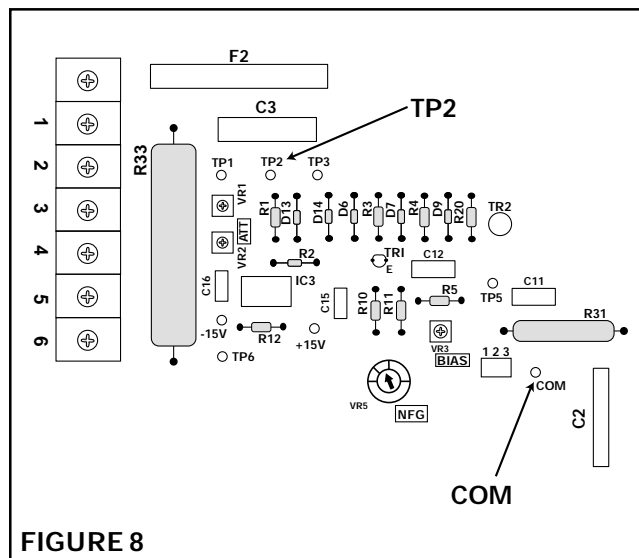


FIGURE 7

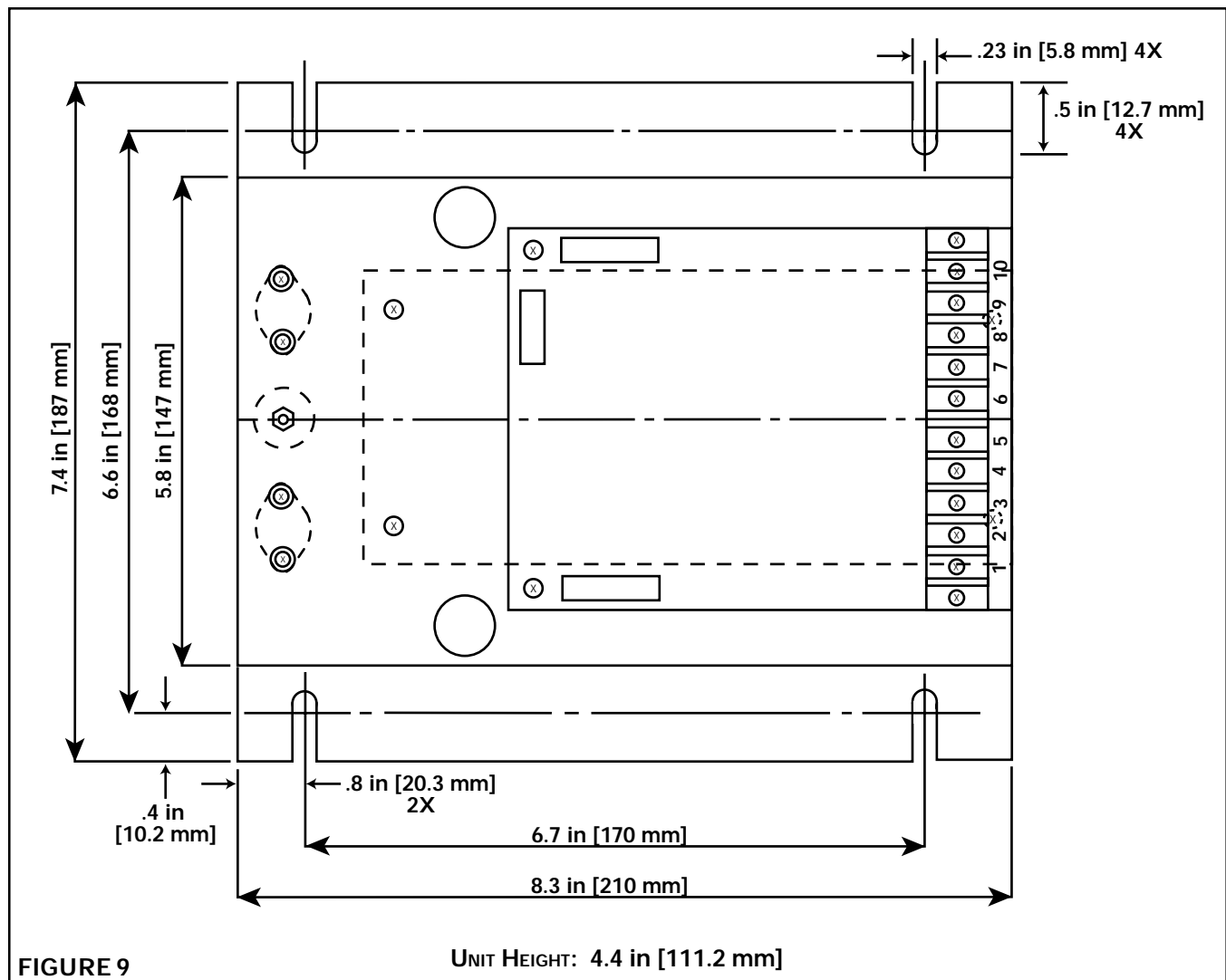


## SPECIFICATIONS

|                     |                                     |
|---------------------|-------------------------------------|
| Input               | 0-10 VDC*                           |
| Output              | 0-6A (maximum)                      |
| Power Supply        | 100, 110, 200, or 220 VAC, 50/60 Hz |
| Ambient Temperature | 32 to 122°F [0 to 50°C]             |

\* TB800 is factory calibrated for 0-10VDC, however, input voltage ranges down to 0-5VDC can be used. See Compensating Input Voltage in OPERATION section.

## PRODUCT DIMENSIONS



## WARRANTY

### Warranties

Nexen warrants that the Products will be free from any defects in material or workmanship for a period of 12 months from the date of shipment. NEXEN MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. This warranty applies only if (a) the Product has been installed, used and maintained in accordance with any applicable Nexen installation or maintenance manual for the Product; (b) the alleged defect is not attributable to normal wear and tear; (c) the Product has not been altered, misused or used for purposes other than those for which it was intended; and (d) Buyer has given written notice of the alleged defect to Nexen, and delivered the allegedly defective Product to Nexen, within one year of the date of shipment.

### Exclusive Remedy

The exclusive remedy of the Buyer for any breach of the warranties set out above will be, at the sole discretion of Nexen, a repair or replacement with new, serviceably used or reconditioned Product, or issuance of credit in the amount of the purchase price paid to Nexen by the Buyer for the Products.

### Limitation of Nexen's Liability

TO THE EXTENT PERMITTED BY LAW NEXEN SHALL HAVE NO LIABILITY TO BUYER OR ANY OTHER PERSON FOR INCIDENTAL DAMAGES, SPECIAL DAMAGES, CONSEQUENTIAL DAMAGES OR OTHER DAMAGES OF ANY KIND OR NATURE WHATSOEVER, WHETHER ARISING OUT OF BREACH OF WARRANTY OR OTHER BREACH OF CONTRACT, NEGLIGENCE OR OTHER TORT, OR OTHERWISE, EVEN IF NEXEN SHALL HAVE BEEN ADVISED OF THE POSSIBILITY OR LIKELIHOOD OF SUCH POTENTIAL LOSS OR DAMAGE. For all of the purposes hereof, the term "consequential damages" shall include lost profits, penalties, delay damages, liquidated damages or other damages and liabilities which Buyer shall be obligated to pay or which Buyer may incur based upon, related to or arising out of its contracts with its customers or other third parties. In no event shall Nexen be liable for any amount of damages in excess of amounts paid by Buyer for Products or services as to which a breach of contract has been determined to exist. The parties expressly agree that the price for the Products and the services was determined in consideration of the limitation on damages set forth herein and such limitation has been specifically bargained for and constitutes an agreed allocation of risk which shall survive the determination of any court of competent jurisdiction that any remedy herein fails of its essential purpose.

### Limitation of Damages

In no event shall Nexen be liable for any consequential, indirect, incidental, or special damages of any nature whatsoever, including without limitation, lost profits arising from the sale or use of the Products.

### Warranty Claim Procedures

To make a claim under this warranty, the claimant must give written notice of the alleged defect to whom the Product was purchased from and deliver the Product to same within one year of the date on which the alleged defect first became apparent.

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