nexen®

TCD600 OPEN LOOP TENSION CONTROLLER INSTALLATION, OPERATION MANUAL ADDENDUM (NETWORK FEATURE)

INTRODUCTION

Nexen's TCD600 is a LonWorks compatible controller. It has a unique networking feature which enables it to be installed in a LonWorks network, allowing all the functions that can be done on the front panel to be done by a network management interface or by other units within the network.

This addendum explains how to obtain the current settings of the TCD600 from the network, and how to control the TCD600 from the network.

INSTALLATION

NOTE

Handle with extra care whenever unit is open.

OPENING UNIT

At the back of the unit pull off the green Power Supply Connector, the orange Network Connector, and the six Terminal Connectors. Disconnect the Ground Wire from the ground post by removing the two Locking Nuts. (See Figure 1.)

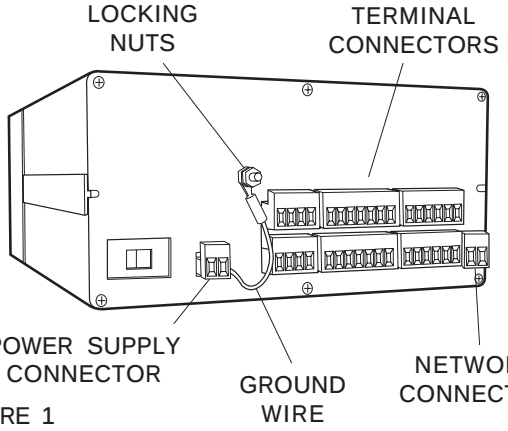

FIGURE 1

Remove the 4 Mounting Screws from the Front Panel. (See Figure 2.) Push on the Terminal Connectors from the back so that the Front Panel slides out of the box slightly.

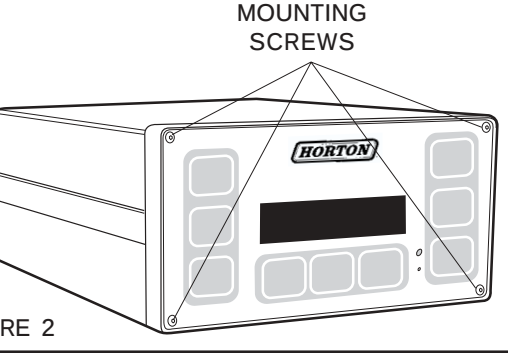

FIGURE 2

Disconnect the Chassis Ground Wire attached on the inside of the Front Panel with a 5/16” combination wrench. (See Figure 3.)

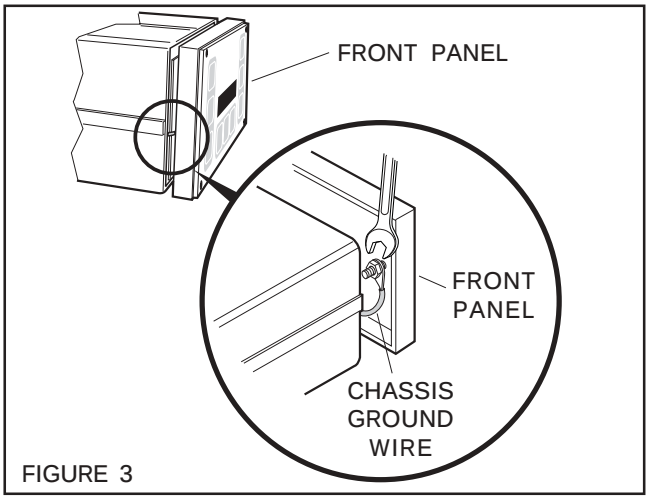

FIGURE 3

Lay the unit on Front Panel and remove the Cabinet by pulling it straight up. (See Figure 4.)

WARNING

Make sure you pull the Cabinet straight up. Do not twist when removing it- the Circuit Board inside could be damaged in the process.

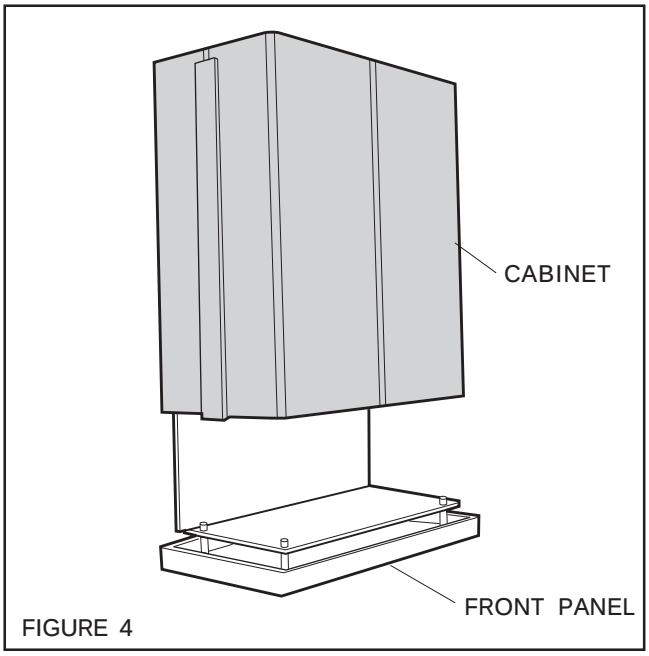

FIGURE 4

INSTALLING THE NETWORK KIT

The Network Kit comes in 3 parts: the Adaptor Board, the LonWorks Transceiver Board, and the Weidmuller Plug-In Connector. Assemble the Network Kit by plugging the Transceiver into the Adaptor Board, and then plugging in the Weidmuller Connector to the Transceiver Board. (See Figure 5.)

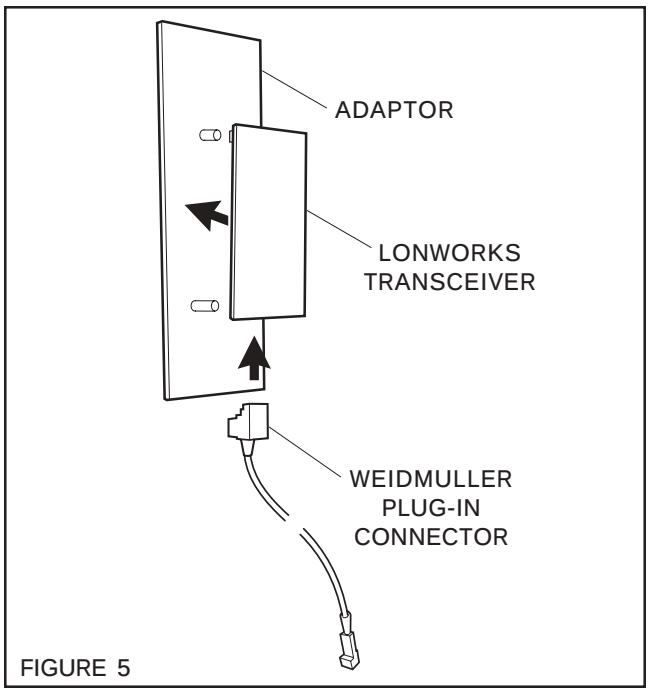

FIGURE 5

Lay the unit down as shown in Figure 6. Install the Network Kit into the unit by plugging the Adaptor Board onto Connec-tor J1 on the Circuit Board located at the back of the Front Panel, and then connecting the Weidmuller Connector into J7 on the Main Board.

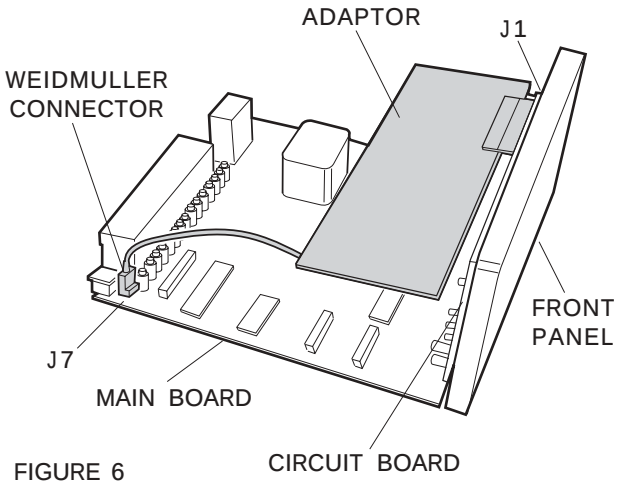

FIGURE 6

CLOSING THE UNIT

Without turning the unit, slide the unit back together by fitting the Circuit Boards into the slots on the inside of the Cabinet. The top board fits into the first slot from the top, and the bottom board fits into the slot second from the bottom. (See Figure 7.)

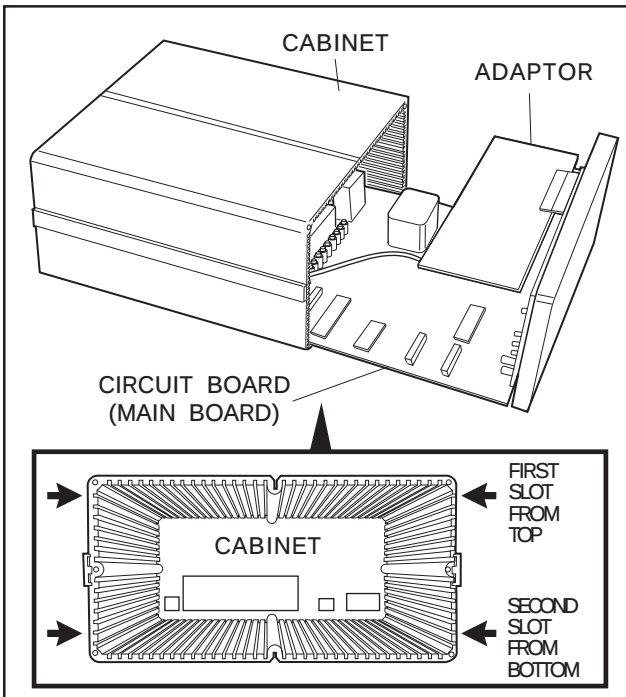

FIGURE 7

Carefully slide the Circuit Boards back into the box, directing the Ground Wire throught the hole in the back of the unit. (See Figure 8.)

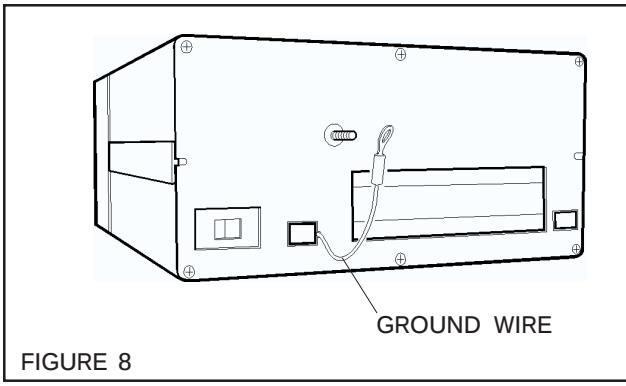

FIGURE 8

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Before closing the unit completely, reconnect the Chassis Ground Wire to the inside Front Panel using a 5/16" wrench. (See Figure 9.)

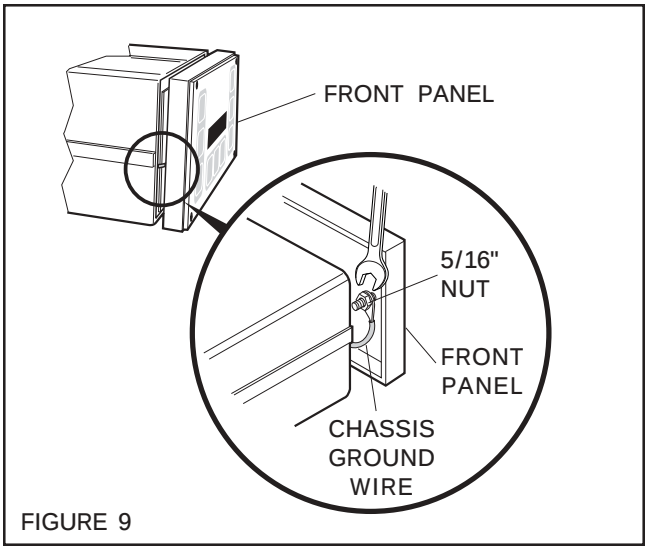

FIGURE 9

On the back of the unit, reconnect the Ground Wire to the ground post using two 11/32" lock nuts. Plug in the green Power Supply Connector, the orange Network Connector, and the six Terminal Connectors, which are arranged in numerical order. (See Figure 10.)

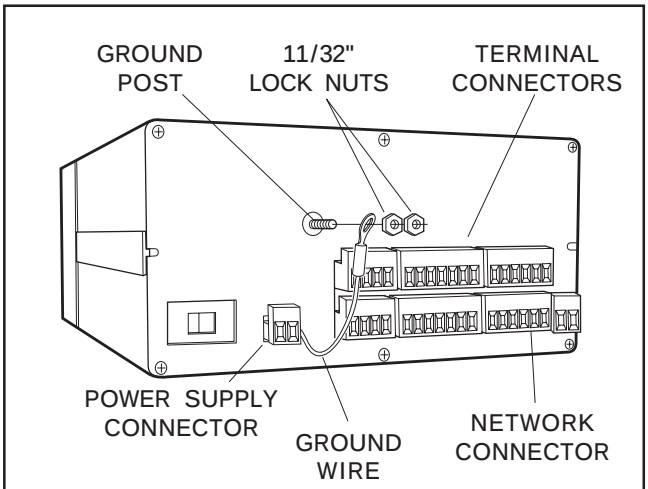

FIGURE 10

On the front of the unit, reattach the four Mounting Screws. (See Figure 11.)

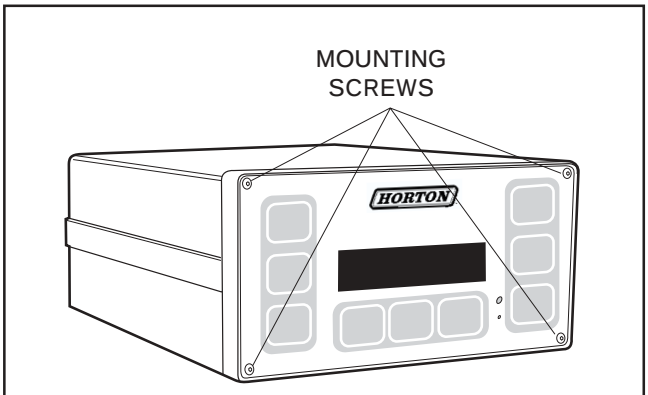

FIGURE 11

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Connect LonWorks Cable to the orange Network Connector on the Back Panel. (See Figure 12.)

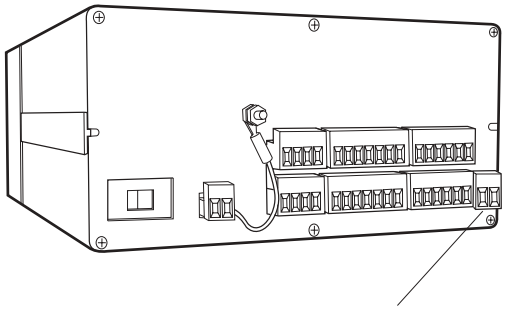

FIGURE 12

If you need to send a Service Pin message, press a pin into the small Service Pin hole located on the Front Panel below the LED. (See Figure 13.) The green LED on the Front Panel above the hole will flash once when the pin is pressed.

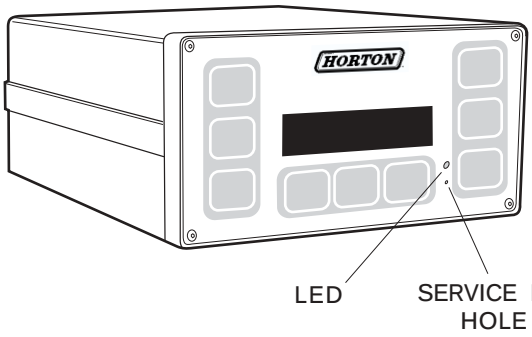

FIGURE 13

TCD600 NETWORK VARIABLE LIST

INDEX	NV NAME	DESCRIPTION	SNVT	USER TYPE
1	nvi00Request			
0	nvi00Status			
2	NviMode*1	16 bit stand for 16 mode. If one bit is set to 1, that means this mode is active.	_state	
3	NviMachine*2	16 bit stand for the settings for the machine	_state	
4	nviSetpoint	The set point for output 0-100%, resolution: 0.5%	_lev_cont	
5	nviHoldTorque	The output level when TCD600 is held. 0-100%, resolution: 0.5%	_lev_cont	
6	nviStopMult	Output level during stop = output * nviStopMult	_multiplier	
7	nvi_StartTime	The time between START is pressed to TCD600 enters AUTO or MANU run mode	_time_sec	
8	nviStopTime	The time delay between STOP is pressed to TCD600 actually stops	_time_sec	
9	nviTaper	The value for taper, 0-100%, resolution: 0.5%	_lev_cont	
10	nviDiam	The value for initial diameter	_length_mil	
11	nviThickness	The value for the thickness of the web	_length_micr	
12	nviMinAlrmDiam	The lower limit of the roll diameter that will not trigger the alarm	_length_mil	
13	nviMaxAlrmDiam	The upper limit of the roll diameter that will not trigger the alarm	_length_mil	
14	nviAlrmState	Only bit 0 to 5 are in use, 1:active, 0:inactive Bit 0 = min diameter alarm (read only) Bit 1 = min diameter alarm in Normally Open (NO) Bit 2 = min diameter alarm in Normally Closed (NC) Bit 3 = max diameter alarm (read only) Bit 4 = max diameter in NO Bit 5 = max diameter in NC	_state	
15	nviMinOut	The minimum value of output, 0-100%	_lev_cont	
16	nviCoreDiam	The value of the core, with no web wrapped on	_length_mil	
17	nviFullRollDiam	The value of the diameter of a full roll	_length_mil	
18	nviJobNum	The number of the job that is selected	_char_ascii	
19	nviNetControl	Any one of the 16 bit is set as 1, the front panel will be locked out	_state	
20	nviDiamHyst			
21	nvoRollDiam	The actual roll diameter	_length_mil	
22	nviOutputLev	_state: output on or off _value: the output value, 0-100%	_switch	
23	nvi_brightness			Unsigned short
24	nvoCount			Unsigned long
25	nvi_maxOutDelta			Unsigned long

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*1:

bit 0 = Auto Mode (read/write)

bit 1 = Manual Mode (read/write)

bit 2 = Calibration Mode (read/write)

bit 3 = Setup Machine (read/write)

bit 4 = Edit Job (read/write)

bit 5 = Load Job (read/write)

bit 6 = Save Job (read/write)

bit 7 = Starting (read)

bit 8 = Stopping (read)

bit 9 = Running (read)

bit 10 = Stopped (read)

bit 11 = Held (read, Hold key is being pressed)

bit 12 = Start (write)

bit 13 = Stop (write)

bit 14 = Hold/continue (write)

bit 15 = Factory reset (read/write)

*2:

bit 0 = English

bit 1 = French

bit 2 = German

bit 3 = Spanish

bit 4 = not in use

bit 5 = not in use

bit 6 = not in use only one of the bits 0-5 is set at all time

bit 7 = Metric unit (inch)

bit 8 = English unit (millimeter) only one of the bits 7-8 is set at all time

bit 9 = Wind Application

bit 10 = Unwind Application only one of the bits 9-10 is set at all time

bit 11 = Ultrasonic Sensor

bit 12 = Proximity Sensor

bit 13 = Proximity Sensor and Encoder

bit 14 = not in use

bit 15 = not in use only one of the bits 11-15 is set at all time

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.

WARRANTY

Nexen Group, Inc. (Nexen) warrants its product(s) [the Product(s)] will be free from defects in materials and workmanship under normal use and service conditions for a period of 12 months from the date of shipment. NO OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, OR OF FITNESS FOR A PARTICULAR PURPOSE, ARE GIVEN, AND ALL SUCH OTHER WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED.

Conditions
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) the claimant has complied with the warranty claim procedures set out below in Warranty Claim Procedures.

Exclusive Remedy
The sole and exclusive remedy for a breach of this warrant shall be, at Nexen's sole election, repair or replacement with new, serviceably used or reconditioned Product, or issuance of a credit in the amount of the current Nexen discounted price for the Product.

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 Nexen and deliver the Product to Nexen within one year of the date on which the alleged defect first became apparent.

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