Danaher MOTION
Engineered Systems Center

OWNER'S INSTALLATION AND OPERATING MANUAL

SE2000

Torque Slope Option Card
(WB37001-00)

Detailed changes to software programs are introduced frequently. Please ensure this manual refers to the software version you are using.

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For your safety and for proper operation, please take time to carefully read all instructions before installing and operating this unit.

LIM55335D

SE2000
ENHANCED EXTERNAL TORQUE SLOPE OPTION ASSEMBLY - WB37001-00

FEATURES

1) Terminal connections for external Torque and Slope pots for centerwind tension control.

2) Torque - Slope adjustment independent of line speed (over 10:1 range) when 0 - 10 VDC Line Speed signal is available.

3) Internal alternate Torque adjustment; selected by contact closure.

4) Internal Stop Torque adjustment (0 to 100%) is enabled below pre-set speed (adjustable 0 to 10%) (indicated by LED).

5) Slope function produces non-linear winder speed/motor torque curve required for constant tension (see FIG. 1).

6) Simple set-up: LED's eliminate need for meter.

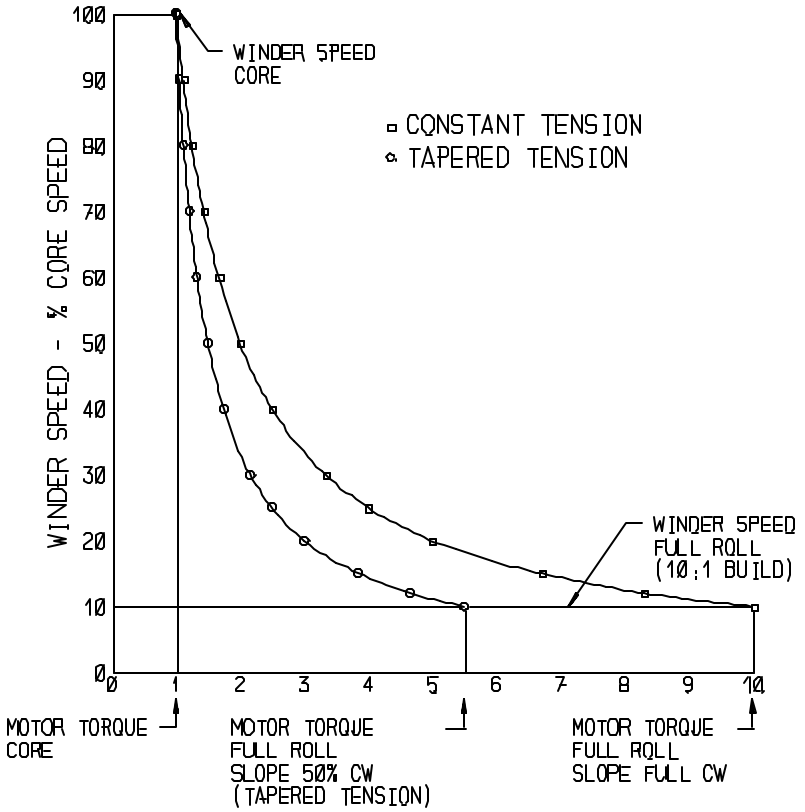

FIG. 1 - Winder Speed vs Motor Torque

SECTION A. ADJUSTMENT OF SE2000 DRIVE:

1) Refer to LIM55300, SE2000 Series Manual, for installation and operating instructions.

2) Set switch S1 for Speed Control Mode. A speed reference voltage is required at TB2-17 for proper operation. For most applications, TB2-18 should be connected to TB2-17 to provide a 10VDC reference voltage (no connection is required to TB2-16). The maximum (no load) winder speed can then be set by R112, maximum speed.

3) R116, Torque, and R117, Slope should remain in the factory set positions (reference Fig. 3-1 in SE2000 Manual).

SECTION B. ADJUSTMENT PROCEDURE WITH LINE SPEED SIGNAL:

1) Refer to FIG. 2 for location of adjustments. Set IR, LS, ST, WK^2 and AT pots CCW. Also set external TORQUE and SLOPE CCW. Place J1 in the LS position If a LINE SPEED signal is to be used. If a LINE SPEED signal is not available, see section C.

2) With line at STOP and empty roll in place, STOP TORQUE LED should be ON (SL is factory set for 5% of full speed - range is from 0 to 10%). Adjust ST CW for desired Stop Tension.

3) With stop tension applied, adjust IR until NULL LED's are balanced (both ON) (SLOPE LED should be off).

4) START line slowly; as speed reaches 5%, the STOP TORQUE LED will turn OFF. Adjust TORQUE CW to obtain desired core tension. Increase line speed to max; trim TORQUE if necessary.

5) At max. line speed adjust LS for balanced NULL LED's (SLOPE LED should be OFF).

6) As roll builds adjust SLOPE CW to maintain desired tension. The Slope function is active when the SLOPE LED is ON in addition to both NULL LED's. For constant tension adjust SLOPE full CW; for taper tension adjust SLOPE less than full CW (see FIG. 1). If LINE SPEED is changed, the system remains calibrated and does not require re-adjustment.

7) If an alternate pre-set TORQUE setting is required, a contact closure on TB8 pins 9 & 10 will enable the ALT TORQUE pot. The SLOPE function does not require re-adjustment.

8) Adjust WK^2 COMP CW to compensate for roll inertia by increasing motor torque during acceleration and decreasing torque during deceleration.

SECTION C. ADJUSTMENT PROCEDURE WITHOUT LINE SPEED SIGNAL:

1) Refer to FIG. 2 for location of adjustments. Set IR, LS, SL, ST, WK^2 and AT pots CCW. Also set external TORQUE and SLOPE CCW. Place J1 in the position if a LINE SPEED signal is not to be used. (With J1 in the position, winder torque will vary with the line speed).

2) Without a LINE SPEED signal, the SL and ST pots and the STOP TORQUE LED are not used. With line at STOP and an empty roll in place, adjust external TORQUE pot CW for desired Stop Tension.

3) With stop tension applied, adjust IR until NULL LED's are balanced (both ON) (SLOPE LED should be off).

4) START line slowly; adjust TORQUE to maintain desired core tension. Increase line speed to max; trim TORQUE if necessary.

5) At max. line speed adjust LS for balanced NULL LED's (SLOPE LED should be OFF).

6) As roll builds adjust SLOPE CW to maintain desired tension. The Slope function is active when the SLOPE LED is ON in addition to both NULL LED's. For constant tension adjust SLOPE full CW; for taper tension adjust SLOPE less than full CW (see FIG. 1). If LINE SPEED is changed, repeat steps 4) through 6) to calibrate torque and slope for new speed.

7) If an alternate pre-set TORQUE setting is required, a contact closure on TB8 pins 9 & 10 will enable the ALT TORQUE pot. The SLOPE function does not require re-adjustment.

8) WK^2 COMP is not used without a LINE SPEED signal.

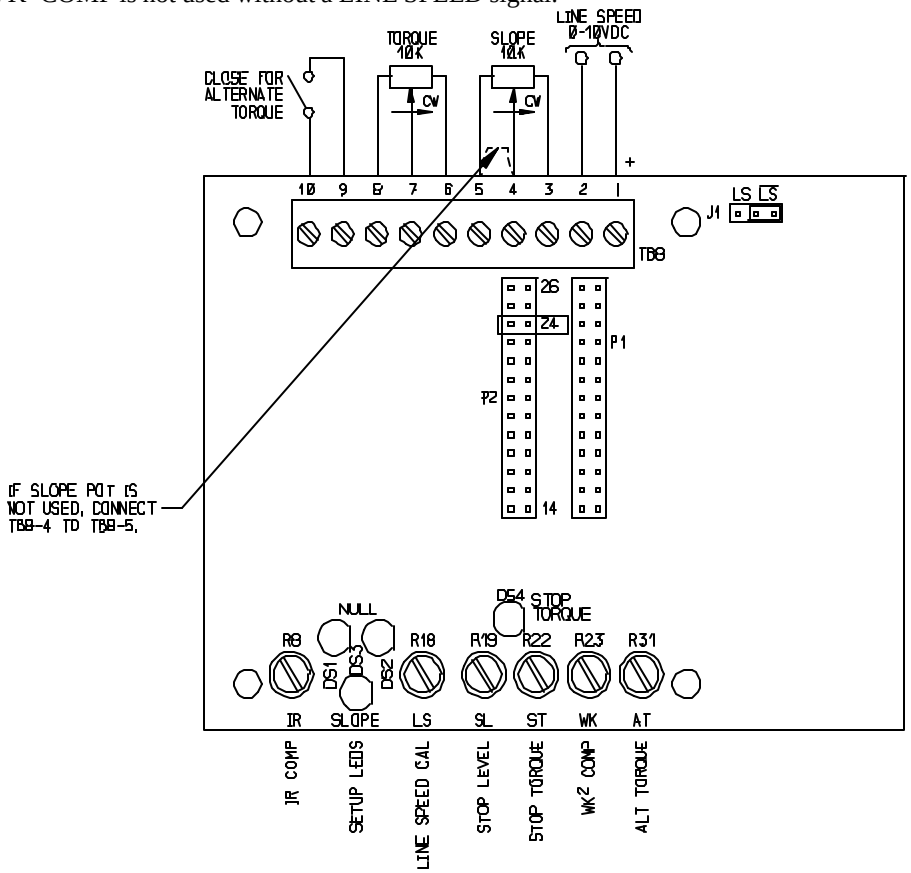

FIG. 2 - Adjustments and Connections.

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