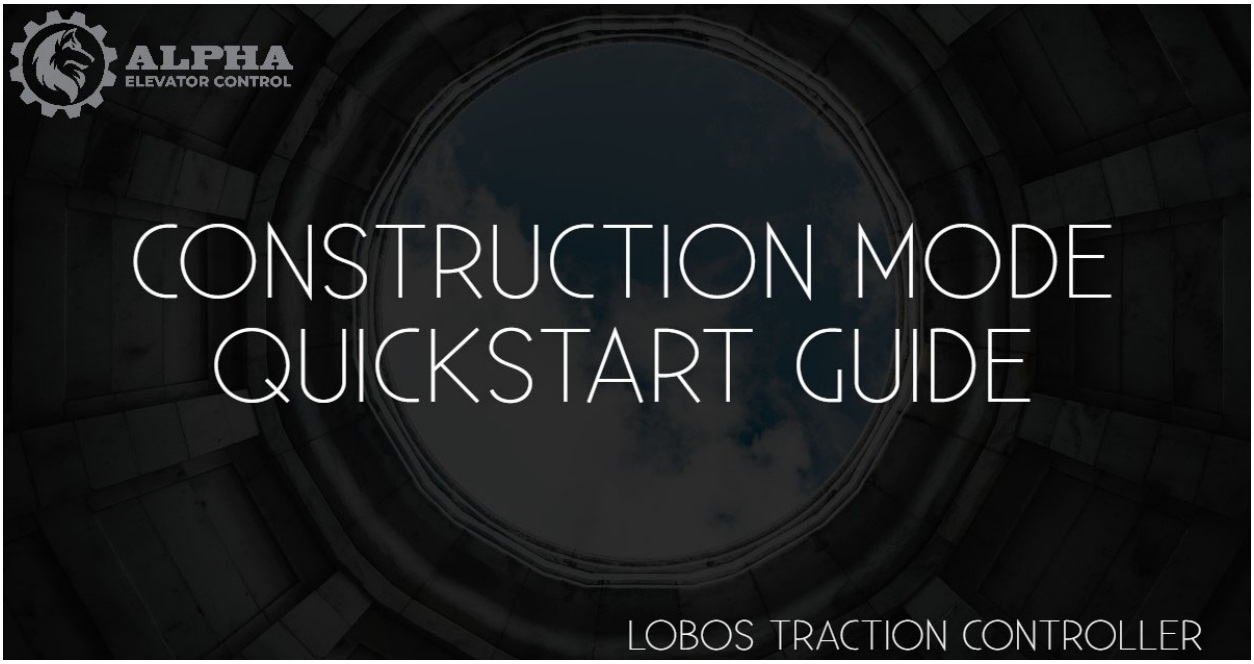
Revision 0.5



ALPHA ELEVATOR CONTROL, INC

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CONSTRUCTION MODE

 *Verify the main line disconnect is off prior to wiring the main line into the controller.*

 *Construction mode wiring can be found on the job schematic. There is a factory jumper (yellow or orange wire) from the* ***SSH-O terminal on the safety board to the SSC-R terminal on the safety board, 120P terminal to GOV terminal on the safety board, and REF terminal to NTS terminal on the terminal blocks****. Remove these jumpers when the elevator has learned the floors and the NTS.*

Main Line and Motor Wiring:

- Connect fan and light disconnect building power wires black and white to the terminals BLK and WHT on the DIN rail.
- Connect the 3-phase mainline power to the terminal block labeled L1, L2, and L3.
- Connect the earth ground to the ground terminal block (green) labeled PE.
- Connect the motor leads to the bottom of the M contactor labeled T1, T2, and T3.

Brake(s)/Rope Gripper Wiring:

- Connect the brake(s) to the following terminals:
    - One side of the main brake to B1- on the DIN rail and the other side of the main brake to B1+.
    - (If secondary brake is applicable) One side of the secondary brake to B2- on the DIN rail and the other side of the secondary brake to B2+.
    - (If rope gripper is applicable)
        - If using a Hollister Whitney rope gripper, wire RG1 of the rope gripper to EBO terminal of the safety board, wire RG2 of the rope gripper to N terminal on the terminal block, and wire GRD of the rope griper to BG terminal on the terminal block.
        - If using a Draka rope gripper, wire RB1 of the rope gripper to EBO terminal of the safety board, wire RB2 of the rope gripper to N terminal on the terminal block, and wire ⏚ of the rope griper to BG terminal on the terminal block.

Required Parameters:

- Go to **MAIN MENU → SETUP → INSPECTION/ACCESS → BYPASS DIRECTIONALS**, set it to **TRUE**, and save the parameter. (This is usually set up to TRUE by default from the factory)

Incremental Common Encoder Wiring:

For specific encoder wiring diagram, reach out to your encoder manufactures.

FUNCTION	KEB F5 TERMINAL	MAGNETEK HPV900 TERMINAL	IH950 INDUSTRIAL	IMPERIAL (35 FT)	IMPERIAL (50 FT/75 FT)	ACCUCODER
0V	8	18	WHITE	BLACK	BLACK	BLACK
+V	7	17	BROWN	RED	WHITE	WHITE
A	1	1	GREEN	WHITE	PURPLE	BROWN
A-	2	2	PINK	WHITE/BLACK	GRAY	YELLOW
B	3	3	YELLOW	BLUE	GREEN	RED
B-	4	4	BLUE	RED/BLACK	BLUE	GREEN

Construction Mode Methods:

Option #1: If using a temporary run box (CT Inspection Mode):

- Connect the following to the safety board:
  - Stop switch to M24 and STOP-IC
  - Up button to CTUP
  - Down button to CTDN
- Turn both the car door and hall door bypass switches from OFF to the BYPASS position.

Elevator is now ready to run on construction mode with the temporary run box.

Option #2: If not using a temporary run box (MR Inspection Mode):

- Make the following connections on the safety board:
  - IECT to M24
  - IEIC to M24 (if applicable)
  - IEHA to M24
  - STOPIC to M24
  - GSWF to 120P
  - LOCKT to 120P
  - LOCKF to 120P
  - LOCKB to 120P
  - GSWR (if rear doors applicable) to 120P
  - LOCKR (if rear doors applicable) to 120P
- Turn the inspection switch on the safety board from NORMAL to the INSPECT position.

Elevator is now ready to run on construction mode with the MR inspection board.

Magnetek HPV900

Figure 1: Magnetek HPV900 Drive

Encoder Wiring:

- If using an induction motor, connect the encoder to the TB1 terminal block on the control board inside the Magnetek drive. (There will be no Endat Board inside the drive if the motor is an induction motor)
- If using a gearless motor, connect the encoder to the TB2 terminal block of the **Endat** board inside the Magnetek drive.

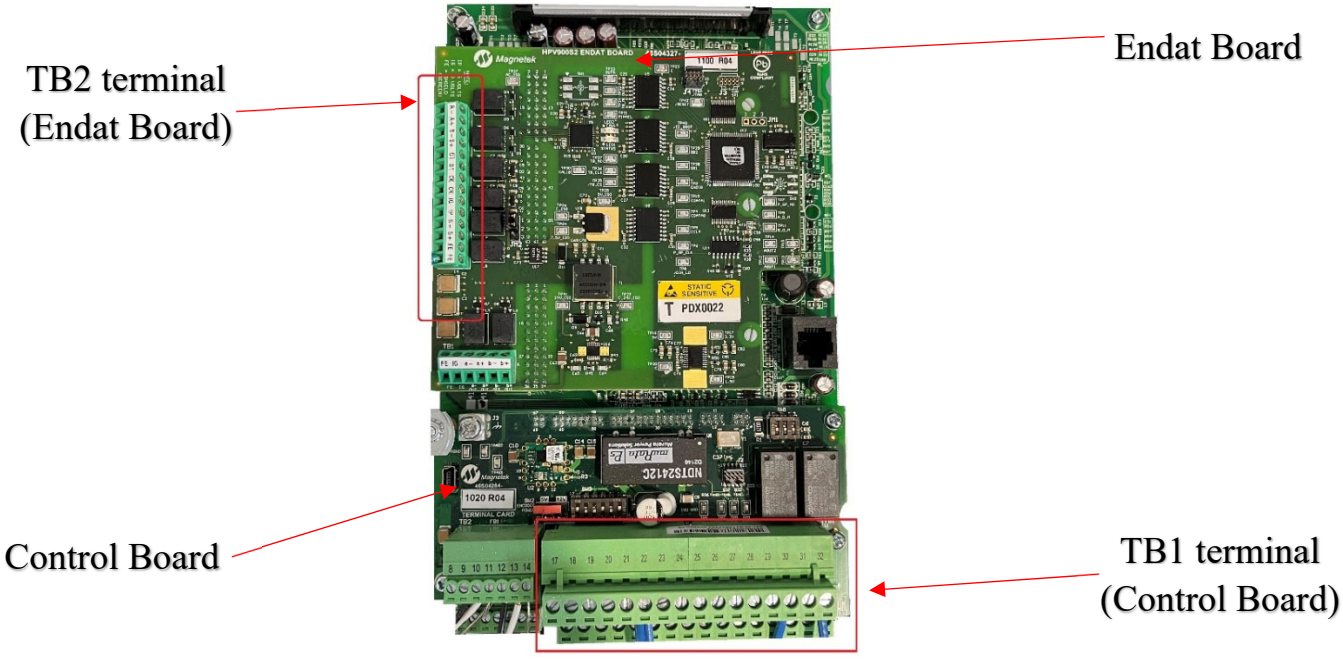

Figure 2: Magnetek Control Board & Endat Board

Autotune Drive Methods:

Magnetek HPV 900 (required only for a PM motor)

 *Refer to the Magnetek Manual if any fault occurs during the drive autotuning method.*

Motor Alignment

1) In the HPV900 drive, go to Utility – U0, scroll down until and select the AUTOTUNE SEL U12 menu, change it from NO to YES, but do not press the enter button until step 3.
2) Press and hold the M contactor in.
3) Press the enter button on the Magnetek drive to start the autotune. The drive should display that the autotune is successful.

Encoder Alignment

4) In the HPV900 drive, go to Utility – U0, scroll down and select the ROTOR ALIGN U10 menu.
5) Go to ALIGNMENT METHOD and change it to HF INJECT and press the enter button.
6) Go to ALIGNMENT and change it from DISABLE to ENABLE.
7) Go to BEGIN ALIGNMENT and change it from NO to YES, but do not press the enter button yet.
8) Press and hold the M contactor in.
9) Press the enter button on the Magnetek drive to start the alignment. The drive should display that the alignment is successful.

KEB F5

Figure 3: KEB F5 Drive

Encoder Wiring:

- If using an induction motor, connect the encoder to the X3A terminal block on the encoder board in the KEB Drive per figure 4.
- If using a PM motor, connect the encoder to the X3A SUBD 15 HD plug per Figure 5.

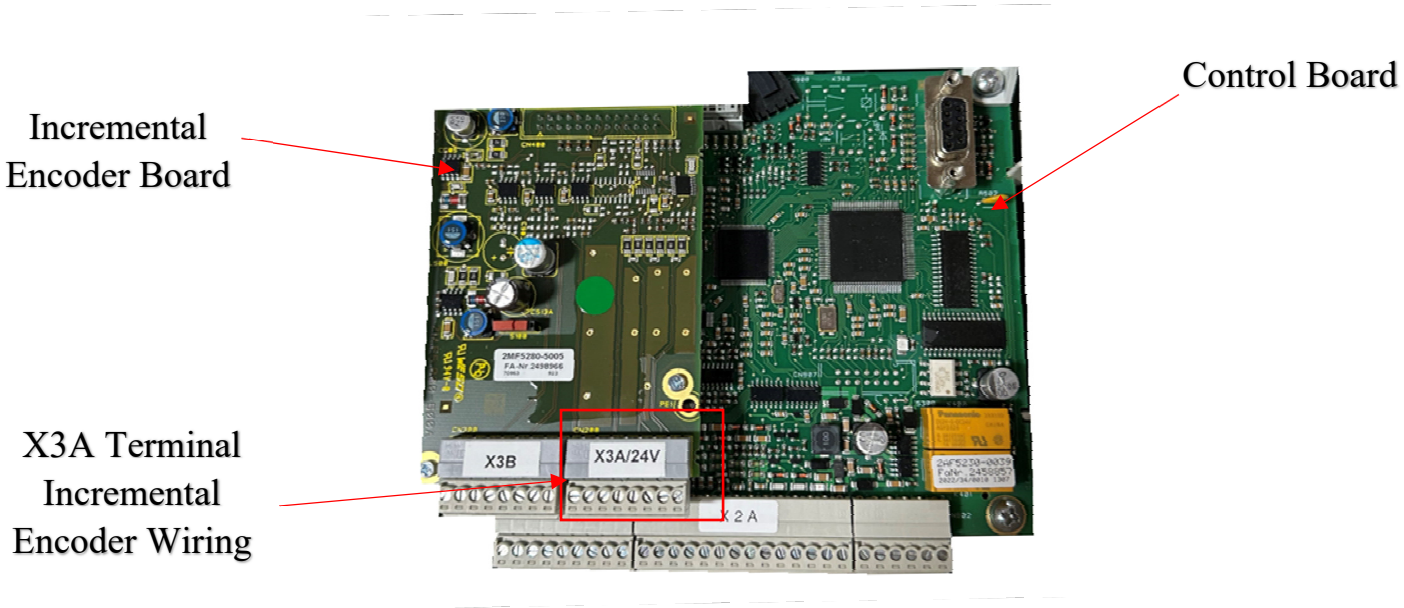

Figure 4: KEB Control Board & Incremental Encoder Strip

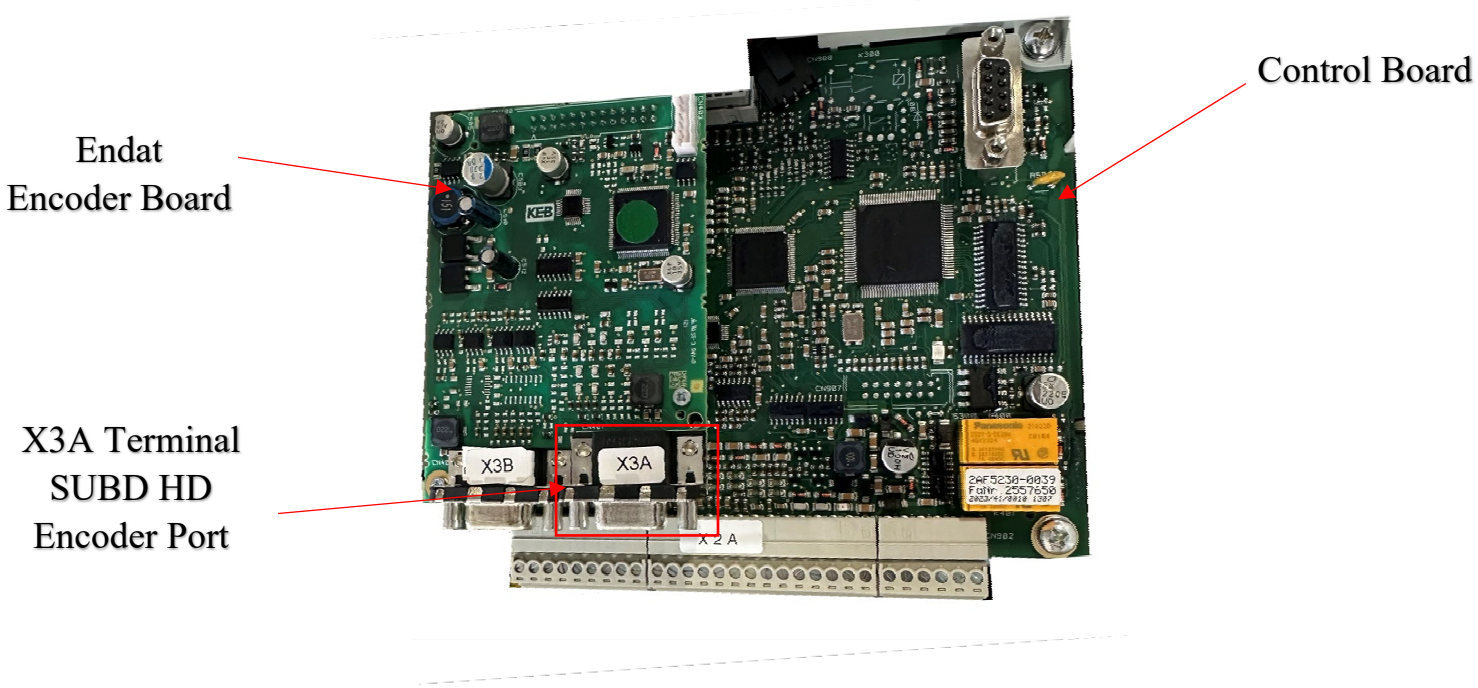

Figure 5: KEB Control Board & Endat SUBD 15 HD

Autotune Drive Methods:

KEB F5 (required for induction and pm motors)

Refer to the KEB Manual if any fault occurs during the drive autotuning method.

Motor Alignment

1) In the KEB F5 drive, from the home screen go to PROG → TUNE PARAMETERS, select LI01 MOTOR TUNING, and change it to START.
2) Turn off the BR1 breaker. If BR2 breaker is applicable, turn off BR2 breaker.
3) Go to MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED, record the value and set it to 0 FPM.
4) On the MR inspection board, press ENABLE + UP until the KEB keypad advised the tune is complete.
5) Turn on the BR1 breaker. If the BR2 breaker is applicable, turn on BR2 breaker.
6) Go to MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED, set the value back that was recorded in step 3.

Encoder Alignment (if PM motor)

1) In the KEB F5 drive, from the home screen go to PROG → TUNE PARAMETERS, select LL05 SPI, and change it to START.
2) Turn off the BR1 breaker. If BR2 breaker is applicable, turn off BR2 breaker.
3) Go to MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED, record the value and set it to 0 FPM.
4) On the MR inspection board, press ENABLE + UP until the KEB keypad advised the tune is complete.
5) Turn on the BR1 breaker. If the BR2 breaker is applicable, turn on BR2 breaker.
6) Go to MAIN MENU → SETUP → GENERAL SETUP → CAR SPEEDS → INSPECTION SPEED, set the value back that was recorded in step 3.