OUT of the Box Startup – Overview

This document is intended as a quick start guide to get familiarity with keypad navigation, changing parameters, and setting the L510 drive up for external start/stop and external potentiometer signal. Please note this document is not a substitute for the L510 User Manual and it is important that you reference the L510 user manual before proceeding.

STEP 1 Check Nameplate and Connect Input / Output Wiring -

Check the inverter nameplate to insure that the information agrees with your order. Also insure that the power available is rated appropriately for the drive being used.

DANGER
Do not apply power until all connections are correct and secure, and all protective covers are in place.

Note: For 1Ø Input use terminals L1 - L3

STEP 2 Power-up the Inverter, check the Digital Operator

In this step, after the initial power-up you will become familiar with the indications and functions of the Digital Operator.

L510 Control Settings (Factory Default)

RUN/STOP Control: Keypad (RUN / STOP key)

Press RUN to start the drive or STOP to stop the drive.

See step 5. to change to RUN/STOP to external switch/contact.

SPEED Control: Keypad (Default 5.00 Hz)

See step 6. to change to external potentiometer control.

Changing Speed Reference

Press </ENT button and use ▲▼ to change reference.

Press </ENT button to save
**STEP 3: Check Motor Rotation**

This test is to be performed solely from the inverter keypad. Apply power to the inverter after all the electrical connections have been made and protective covers have been re-attached. At this point, **DO NOT RUN THE MOTOR**, the keypad should display as shown below in Fig. 1a and the speed reference 5.00 Hz should be blinking.

**Important:** Motor rotation and direction only applies to standard AC motors with a base frequency of 60 Hz. For 50 Hz or other frequency AC motors please set V/F pattern in group 01 before running the motor.

![DANGER]

**Fig. 1a** Fig. 1b

Next press the **RUN** key. The motor should now be operating at low speed running in forward (clockwise) direction. The keypad should display as shown above in Fig. 1b and the speed reference 5.00 Hz should be solid. Next press **STOP** key to stop the motor.

If the motor rotation is incorrect, power down the inverter. After the power has been turned OFF, wait at least ten minutes until the charge indicator extinguishes completely before touching any wiring, circuit boards or components.

Using Safety precaution, and referring to step 1 exchange any two of the three output leads to the motor (T1, T2 and T3). After the wiring change, repeat this step and recheck motor direction.

**STEP 4: How to Change Parameters** (Example 03-03 change to 6)

**Frequency**

<table>
<thead>
<tr>
<th>Press:</th>
<th>Mode</th>
<th>00-01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>00-03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>00-03</td>
</tr>
</tbody>
</table>

**Use ▲ ▼ and </ENT to select parameter**

Press:  2 x

Press: </ENT 2 x

Press: </ENT Once

Press:  3 x

Press: </ENT

Press:  03-03

Press: </ENT

Press:  03-03

Press: </ENT

Press:  03-03

Press: </ENT

Press:  6000

Press: </ENT

**STEP 5: Using Remote Run/Stop**

**Default Setting:** The L510 by default uses the keypad for speed control.

Instructions to change to remote run/stop:
- Power down the drive, wait 10 min.
- Remove the protective covers (See L510 User Manual) and make the connections as shown below in Fig. 2a.
- Verify that all connections are secure, replace covers and power-up the drive.

Do not apply power until all connections are correct and secure, and all protective covers are in place.

After power-up set parameters 00-02=1 (Run Source from Control Terminals).

**STEP 6: Using an external potentiometer for speed control**

**Default Setting:** The L510 by default uses the keypad for frequency reference, follow instructions below to use a remote reference (external potentiometer).

Instructions to change to remote reference:
- Power down the drive, wait 10 min.
- Remove the protective covers (See L510 User Manual) and make the connections as shown below in Fig. 2b.
- Verify that all connections are secure, replace covers and power-up the drive.

Do not apply power until all connections are correct and secure, and all protective covers are in place.

After power-up set parameter 00-05=2 (Speed Reference from Control Terminals).

**STEP 7: Frequently Used Parameters**

**Motor Nameplate Data (Parameter 02-01)**

The motor rated current is set at the factory based on the inverter model. Enter the motor rated current from the motor nameplate if it does not match the value shown in parameter 02-01.

**Setting range:** Varies by model.

**Using Keypad Potentiometer (Parameter 00-05)**

To use the potentiometer on the keypad set parameter 00-05 to 1.

**Acceleration and Deceleration Time (Parameter 00-14, 00-15)**

Acceleration and Deceleration times directly control the system dynamic response. In general, the longer the acceleration and deceleration time, the slower the system response, and the shorter time, the faster the response. An excessive amount of time can result in sluggish system performance while too short of a time may result in system instability.

The default values suggested normally result in good system performance for the majority of general purpose applications. If the values need to be adjusted, caution should be exercised, and the changes should be in small increments to avoid system instability.

**00-14 Acceleration time 1**

**00-15 Deceleration time 1**

These parameters set the acceleration and deceleration times of the output frequency from 0 to maximum frequency and from maximum frequency to 0.

**Factory Reset (Parameter 13-08)**

To reset all parameters back to factory default set parameter 13-08 to 1160.

For the complete L510 parameter listing and descriptions, refer to the L510 Instruction manual on our website www.tecowestinghouse.com

L510 Startup Guide V0.6–05/14/15