



Stock No: 174-8219

ENGLISH

Datasheet

## Inverter 3.7 kW, 5HP, WITH FILTER



0.75KW Three phase picture

**RS510 series inverter drives** from RS Pro.

These single phase inverter drives are suitable for a wide range of drive applications and come with a filter built-in. All Drives are highly reliable and excellent quality.

### Main Product Features

- Compact V/ F & SLV (Sensorless Vector) Control drive.
- Integrated Modbus RS485 & BACnet Communication.
- Integrated Speed potentiometer.
- RJ45 Interface.
- PID feedback Control.
- PTC Interface.

### Main Specifications:

Power Rating	3.7 kW
Phase	3
Supply Voltage	380 → 480 V ac
Output Voltage	3 phase 0-480V ac
Input Current	10.1A
Output Current	9.2A
Output frequency	Up to 599 Hz
IP Rating	IP20
Overall Dimensions	197x129x148 ( HxWxD)
Weight	2.7 Kg
Certifications	CE/UL/cUL/RCM

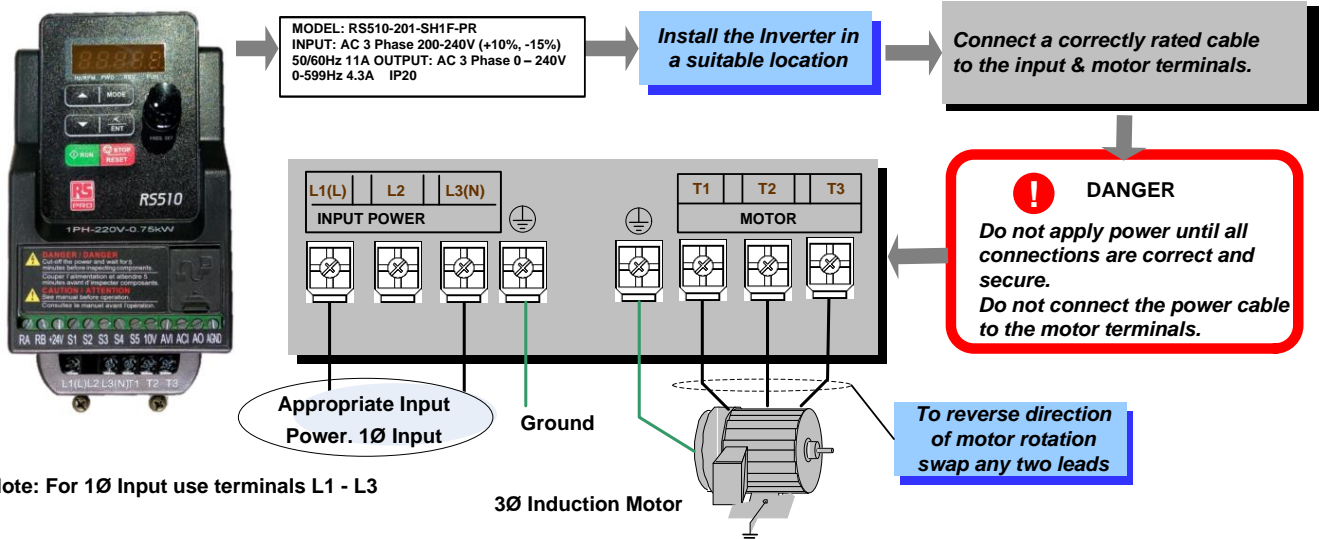
# OUT of the Box Startup – Overview



This document is intended as a quick start guide to get familiarity with keypad navigation, changing parameters, and setting the RS510 drive up for external start/stop and external potentiometer signal. Please note this document is not a substitute for the RS510 User Manual and it is important that you reference the RS510 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.



## 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.



### KEYS (8) Description

**RUN:** RUN Inverter in Local Mode

**STOP / RESET:** STOP Inverter, RESET alarms and faults

**▲:** Parameters navigation Up, Increase parameters or reference value

**▼:** Parameters navigation Down, decrease parameters or reference value

**MODE:** Switches between available displays

**</ENTER:** “<” Left Shift: Used to change parameters or values, ENTER: used to display the preset value of parameters and to save changes

## RS510 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



**Flashing**

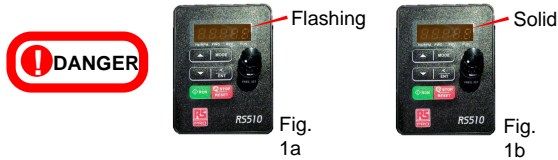
### Changing Speed Reference

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

Press </ENT button to save

## STEP 3 Check Motor Rotatio

This test is to be performed solely from the inverter keypad. Apply power to the inverter after all the electrical connections have been made. 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.



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 5 Using Remote Run/Stop

**Default Setting:** The RSL510 by default uses the keypad to run and stop, follow instructions below to change to a remote start/stop (contact / switch).

### Instructions to change to remote run/stop:

- Power down the drive, wait 10 mins.
- Make the connections as shown below in Fig. 2a.
- Verify that all connections are secure, replace covers and power-up.

**Do not apply power until all connections are correct and secure.**

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

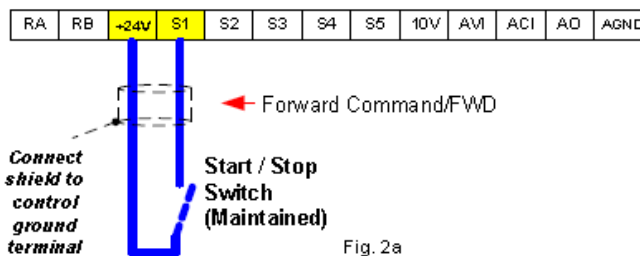
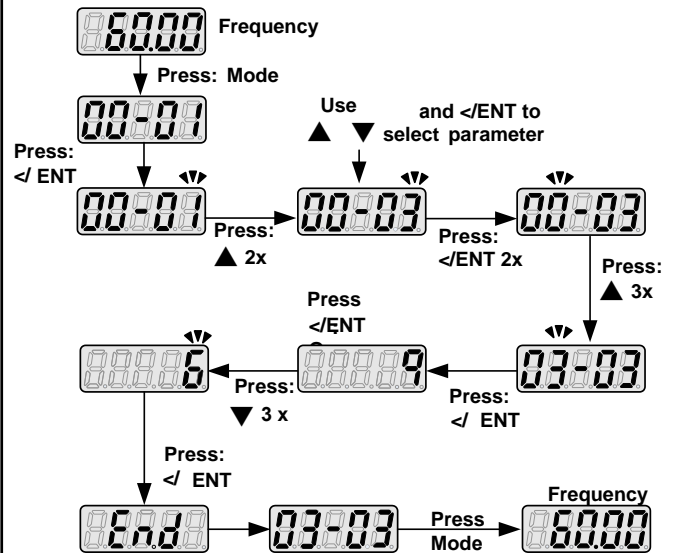


Fig. 2a

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



## STEP 6 Using an external potentiometer for speed control

**Default Setting:** The RS510 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 mins.
- Make the connections as shown below in Fig. 2b.
- Verify that all connections are secure then power-up the drive.

**Do not apply power until all connections are correct and secure.**

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

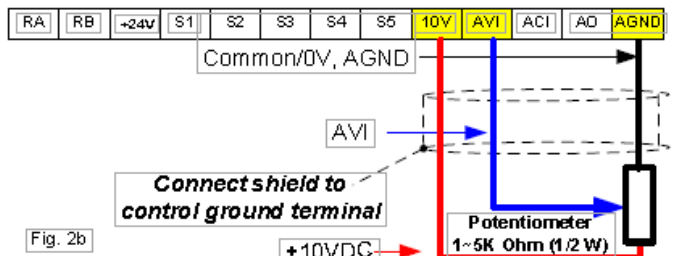


Fig. 2b

## STEP 7 Frequently Used Parameters

### Motor Name Plate 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 name plate if it does not match the value shown in parameter 02-01. Setting Range Varies by model.

### Using Key pad Potentiometer ( parameter 00-05)

To use the potentiometer on the key pad set parameter 00-05=1

### Acceleration and Deceleration times ( parameter 00-14 Acceleration & 00-15 Deceleration.)

These parameters directly control the system dynamic response. In general longer are the settings, slower is the response. An Excessive amount can result in a sluggish system performance, while too short of a time may result in instability. These parameters set the acceleration times from 0 to Max frequency and from Max to 0.

**Factory Reset ( Parameter 13-08)** Refer to the instruction manual for the required settings.