

WEG CFW08 Inverter startup guide

230v 1 Phase to 230v 3 Phase

10/16/08 rev8

A Caution: ...Always verify VBT™ rotation direction before running units!

This guide is intended to act as a simplified convenient reference for those capable of programming and reprogramming an inverter such as a WEG CFW08. The guide is not to be substituted for a licensed electrician qualified to undertake the programming, installation, safe and proper operation of this electrical device and any attached electrical loads such as a motor.

B Programming operation:

Three (3) modes of operation.

The **DISPLAY MODE (READ ONLY)** indicates information about the electrical conditions of the power supply source, the inverter and any connected electrical load, such as a motor, by means of the LED display on the front panel.

The **PROGRAMMING MODE (READ &/WRITE)** requires user input and allows changes to be made to alter the behavior of the electrical supply, the inverter and any connected electrical loads, as an aerator motor.

The **OPERATING MODE (RUN AUTOMATICALLY)** automatically behaves in accordance with conditions entered into the inverter as well as automatically monitors and controls internal and external device operating conditions such as safety constraints, damage prevention, and/or operational control.

C STARTUP:

Each time it is powered up, the inverter will automatically startup in the READ ONLY mode and should display [rdy].

This [rdy] display only verifies that the inverter has normal line power and is ready to be operated.

THIS [rdy] DISPLAY CONDITION DOES NOT INDICATE THAT THIS INVERTER IS PROPERLY PROGRAMMED FOR THE DEVICE ATTACHED. IT IS THE USERS RESPONSIBILITY TO VERIFY THAT THE INVERTER HAS THE PROPER SETTINGS TO SAFELY AND PREDICTABLY OPERATE THE DEVICE ATTACHED!

If uncertain, contact a qualified licensed electrician trained to program, reprogram and operate this inverter before operating this device!

D Normal operation:

After powering up a properly configured and connected WEG CFW08 Inverter with the proper voltage, the red LED display on the front panel will indicate a “ready to run” state by displaying [rdy].

Verify settings while in this “read only” mode:

Press the [PROG] button ONCE on the panel front to turn on the memory read function. **Pressing the [PROG] a second time** turns off the memory read function. The display should indicate up to four digits (letters or numbers) such as [0000], [7.43a] or [401]. These numbers indicate memory or “P” locations and their corresponding settings that allow proper operation and control.

After pressing the [PROG] button once, press the up arrow button or the down arrow button to scroll to a next higher memory location or setting increment. The use of these two buttons allows for selecting and setting of all programmable locations.

NOTE: not all locations can be changed and not all locations are displayed in numerical order. Some memory locations do not apply under certain conditions and are therefore not unnecessarily displayed.

EXAMPLE below IS ONLY APPLICABLE FOR SETTINGS TO BE USED FOR a:

230 volt single (1) phase inverter INPUT used to control

230 volt three (3) phase OUTPUT (e.g. VBT™ motor)

CAUTION: If uncertain, contact a qualified licensed electrician trained to program, reprogram and operate this inverter before operating this device!

E Reprogramming procedure: Scrolling to and changing memory locations:

1 Unlock/enable programming lock: ...make changes as indicated below

P000 Change from [0] to [5] This enables /unlocks changes (writing) to the inverter memory locations P000 to P536. Caution: These changes may immediately affect the device! **NOTE: Press [PROG] repeatedly... until each pressing displays the selected memory location and then the location contents (P000,2, P000, 2... ensuring “ready status” in memory program mode).**

2 Factory default:

P204 from [0 to 4] to [5] **Restores the inverter back to factory defaults.** This allows for a “clean start” and erases any accidental changes that may have been unknowingly made by others. User must make subsequent changes to applicable memory locations to reprogram the proper operating

(continued)

E Reprogramming procedure: Scrolling to and changing memory locations:

configuration to the inverter. This action automatically disables the programming mode and thus return to [P000] and enter (5) to re-enable programming changes.

3 Re-enable programming changes:

P000 from [0] to [5] Enables /unlocks changes (writing) to the inverter memory locations P000 to P536. Caution: These changes may immediately affect the device! NOTE: Press [PROG] repeatedly until each pressing displays the selected memory location and then the location contents e.g. P000,2, P000, 2 ... ensuring that you are in the memory program mode.

4 Keypad reference speed:

P121 from [3.00] to [60.00] **Resets factory default** from 3 Hz (safety feature) to the operational 60 Hz to prevent a device such as this motor from accidentally starting up at full speed. This is a factory default safety feature built into the program to be certain the user is knowledgeable enough to program it to run at full (normal) speed.

5 Display default:

P205 from [0] to [1] Changes the default operating display to read current motor amp draw stored in memory location [0003]. This display can be changed to read line input voltage, frequency, rpm etc. as desired. See manufacturers' programming manual for more details.

6 Lock/ change rotation direction:

P231 from [2] to [0] Locks the motor rotation direction to only be "clock-wise" when viewing the fan rotation from above the fan looking down. This feature disables the [JOG] and [forward/reverse] button to prevent someone from accidentally running the motor in reverse that will damage the motor and void the warranty!

NOTE: If all units are running in the reverse direction, changing P231 to [1] on all units may be used as an alternative to changing the wiring on all units (e.g. ...swapping two phase leads).

7 "Ride-thru":

P310 from [0] to [3] This programs the inverter to "ride through" or wait for a few seconds before automatically shutting down when a brown out condition (drop in voltage) is present. It eliminates unnecessarily having to manually restart all inverters for simple short term voltage drop.

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E Reprogramming procedure: Scrolling to and changing memory locations:

8 Motor FLA:

P401 from [xxx] to [7.43] Programs the inverter with the motor nameplate FLA for the M6T1W2 series units operating at three (3) phase motors at 230v.

9 Re-lock/disable programming:

P000 from [5] to [0] Prevents any one from accidentally making changes (writing) to the inverter memory locations. NOTE: The inverter automatically reverts to this “read only” locked mode upon power down and restart.

E Quick Reference:

- 1 P000 -> 5 **Enable** programming changes
- 2 P204 -> 0 load factory defaults
- 3 P000 -> 5 **Re-Enable** programming changes
- 4 P121 -> 60.00 sets unit to run at 60 Hz /Key pad ref. speed
- 5 P205 -> 1 display amps
- 6 P231 -> 0 rotation lock
- 7 P310 -> 3 ride through brown outs
- 8 P401 -> 7.43 motor nameplate FLA
- 9 P000 -> 0 **Disable** programming changes
- 10 If motor is connected pressing the ON button should start motor.
If motor in not connected, pressing the On button should display [rdy]
If motor in not connected, powering OFF and then ON should display [rdy]

G Trouble shooting operation:

Power failures that allow the power to the keypad to drop to zero will require a manual restart of each inverter/motor. The ride-through feature described in step 6 above at P310 will eliminate some short term disruptions. It is possible to hardwire and program the inverters to automatically restart when power is restored. However this will require additional hardware (e.g. switches, switch enclosure, wiring etc) that the end user must adapt to site conditions. Contact your electrician for more details

Error codes may be displayed when unusual or undesirable conditions are present.

“Non fatal” or temporary error conditions that are displayed and subsequently corrected are reset when the inverter is powered off and back on. An example would be a temporary low voltage supply or high sustained amp/current draw at the site. The inverter shuts down to prevent damage to the motor and displays the error code for that fault. Refer to the specific codes in the manufacturer’s operational manual for more details. The last known fault code is stored in memory location P014 for reference. Record the code and contact your electrician if the problem reoccurs.

...Always verify VBT™ rotation direction before running units!

For advanced questions, operational issues or warranty questions contact:

WEG at (800) ASK4WEG 8-4:30 M-F EST.



Press **[PROG]** button to enter programming mode. Continue to press repeatedly until a memory location (such as P000 shown in this example) and then contents are alternately displayed with each subsequent press.

The first press displays the memory location number, press again ...

the second press displays the content of that memory locationetc.

Press **[UP]** arrow five (5) times to increment to desired value for memory content (e.g. "5" in this example). Press **[Down]** arrow to decrease to desired value.

Memory addresses (e.g. P001, P002, P003 etc.) are located using these up and down arrows.