



# RIVERFLOW PUMP INSTALLATION GUIDE

## ELECTRICAL INSTALLATION OVERVIEW

### Riverflow electrical notes

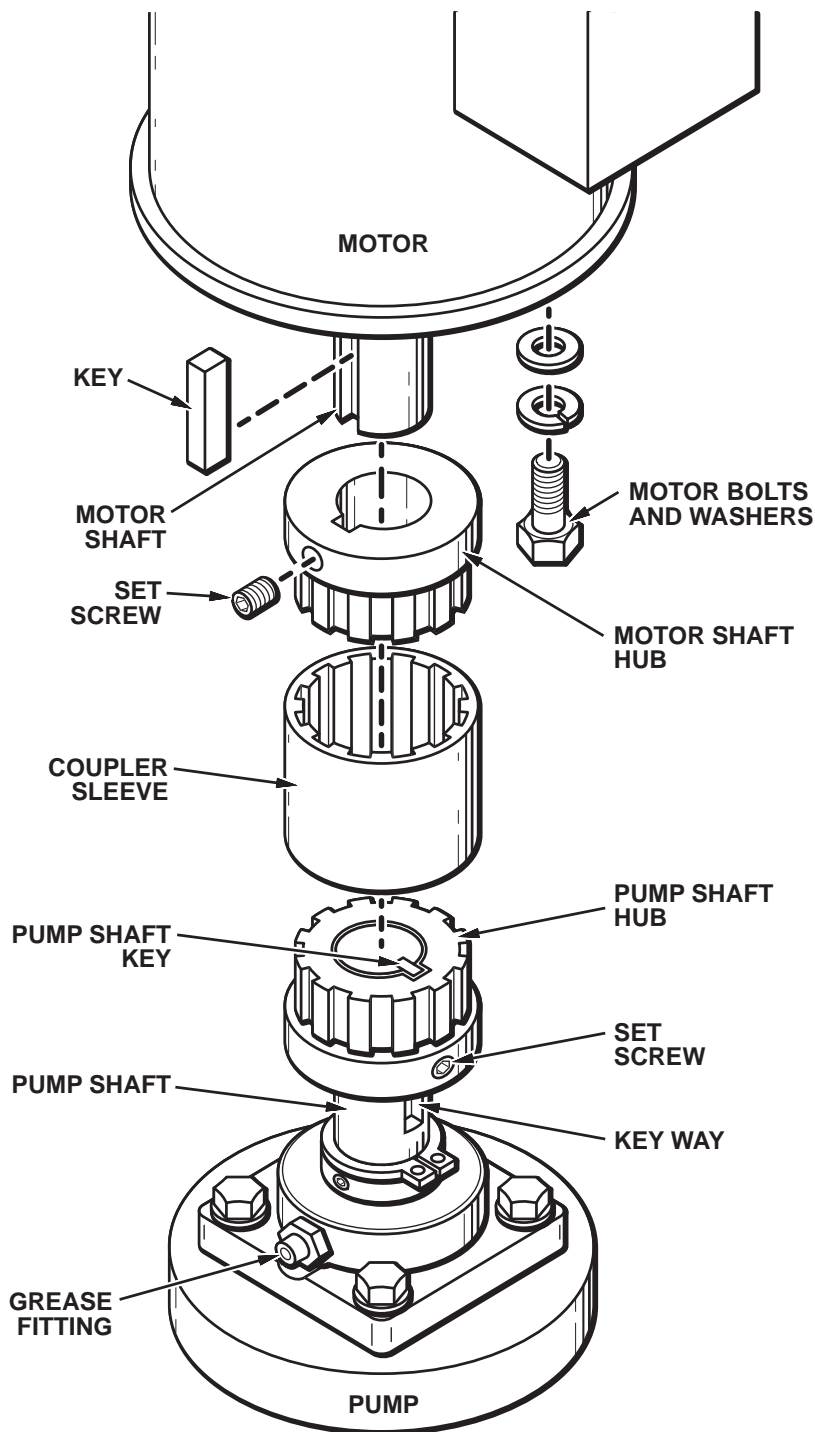
- The variable frequency drive (VFD) converts single-phase to three-phase power – The Riverflow™ Pump is driven by a three-phase industrial duty motor
- The VFD is rated for indoor installation, ventilated closet, garage, equipment room etc. If an outdoor installation is required, the VFD must be mounted in a properly sized outdoor enclosure
- Control wiring requires a shielded, 6 conductor, #18 or #20 gauge cable
- The Riverflow wired remote control box is weatherproof but should not be submerged in water

### Important!

Do not start pump before programming the VFD with an authorized Riverflow technician at, Current Systems Inc. PST (805) 339-9292 or EST (888) 443-4113.

# RIVERFLOW PUMP INSTALLATION GUIDE

## ELECTRICAL INSTALLATION MOTOR INSTALLATION



Follow these steps before wiring or setting motor on motor mount.

1. Starting with the pump, slide a coupler hub onto pump's shaft so the end of the hub and the shaft key are flush with the end of the pump's shaft.
2. Slide the coupler sleeve completely on to the pump shaft hub and tighten the set screw on the hub.
3. On the Motor, slide the remaining hub on to the motor's shaft exposing 1/2-in. beyond the end of the hub pump shaft and tighten set screw.
4. Carefully set the motor into position allowing the coupler sleeve to mesh with the motor shaft hub.
5. Rotate the motor body to verify that it has seated properly in the motor mount recess.
6. Rotate the shaft assembly to verify that the pump and motor turn freely.
7. Install and tighten the 4 motor mount bolts and washers to attach the motor.
8. Loosen the set screw on the motor shaft hub. Slide the hub firmly into the coupler sleeve so that the sleeve is fully captured between both hubs and retighten the motor shaft hub's set screw.
9. Again rotate the shaft assembly. If the shaft rotate freely, the motor installation is complete.

If the shafts do not turn freely, contact Riverflow support at Current Systems Inc. PST(866) 372-8886 or EST(888) 443-4113.

**NOTE:** Grease every 500 hours.

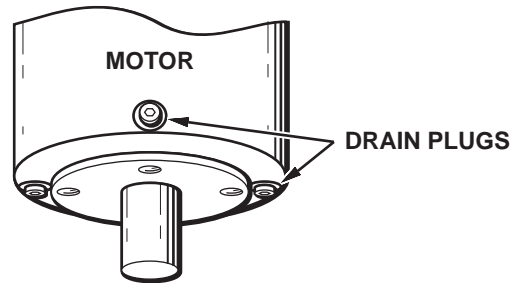
# RIVERFLOW PUMP INSTALLATION GUIDE

## ELECTRICAL INSTALLATION MOTOR DRAIN PLUG REMOVAL

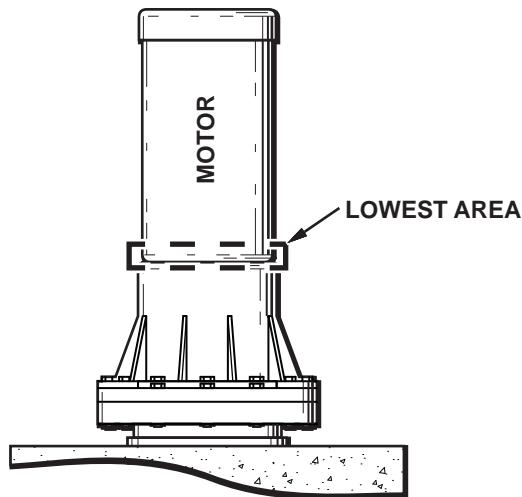
### Drain plug removal

The factory installed drain plug(s) must be removed prior to start up. Locate the drain plug at the lowest point based on the installation orientation as shown below.

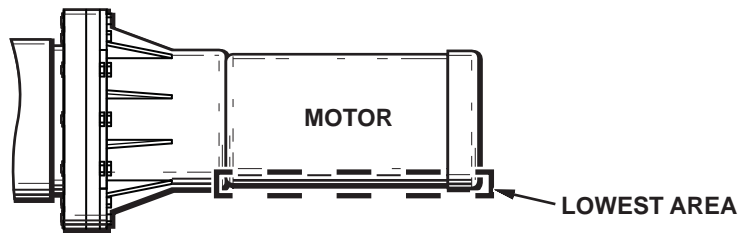
If you are unsure of where drain plug is located on the motor, contact Current Systems Inc. PST (805) 339-9292 or EST (888) 443-4113.



**DRAIN PLUG LOCATIONS**  
LOCATIONS MAY VARY



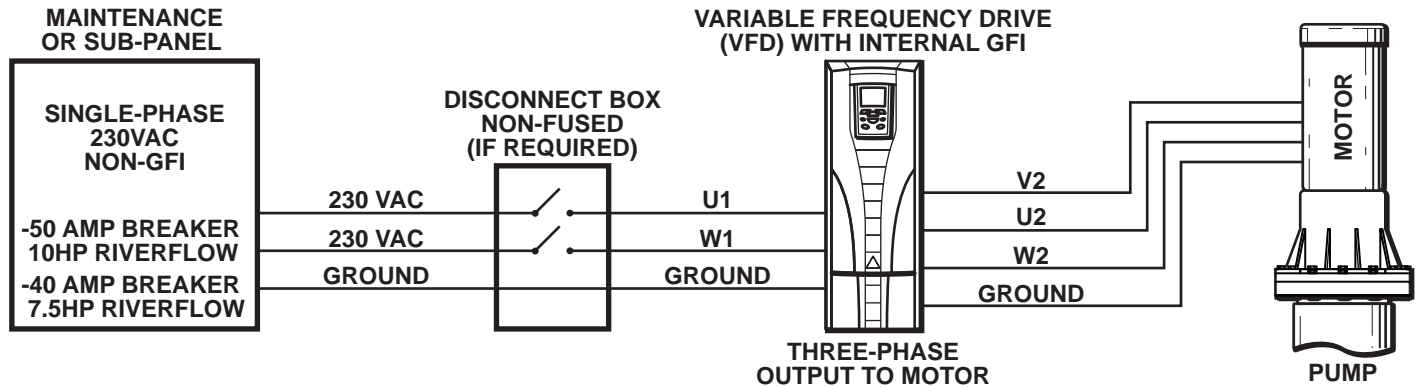
**VERTICAL PUMP INSTALLATION**



**HORIZONTAL PUMP INSTALLATION**

# RIVERFLOW PUMP INSTALLATION GUIDE

## ELECTRICAL INSTALLATION RIVERFLOW VFD & MOTOR WIRING

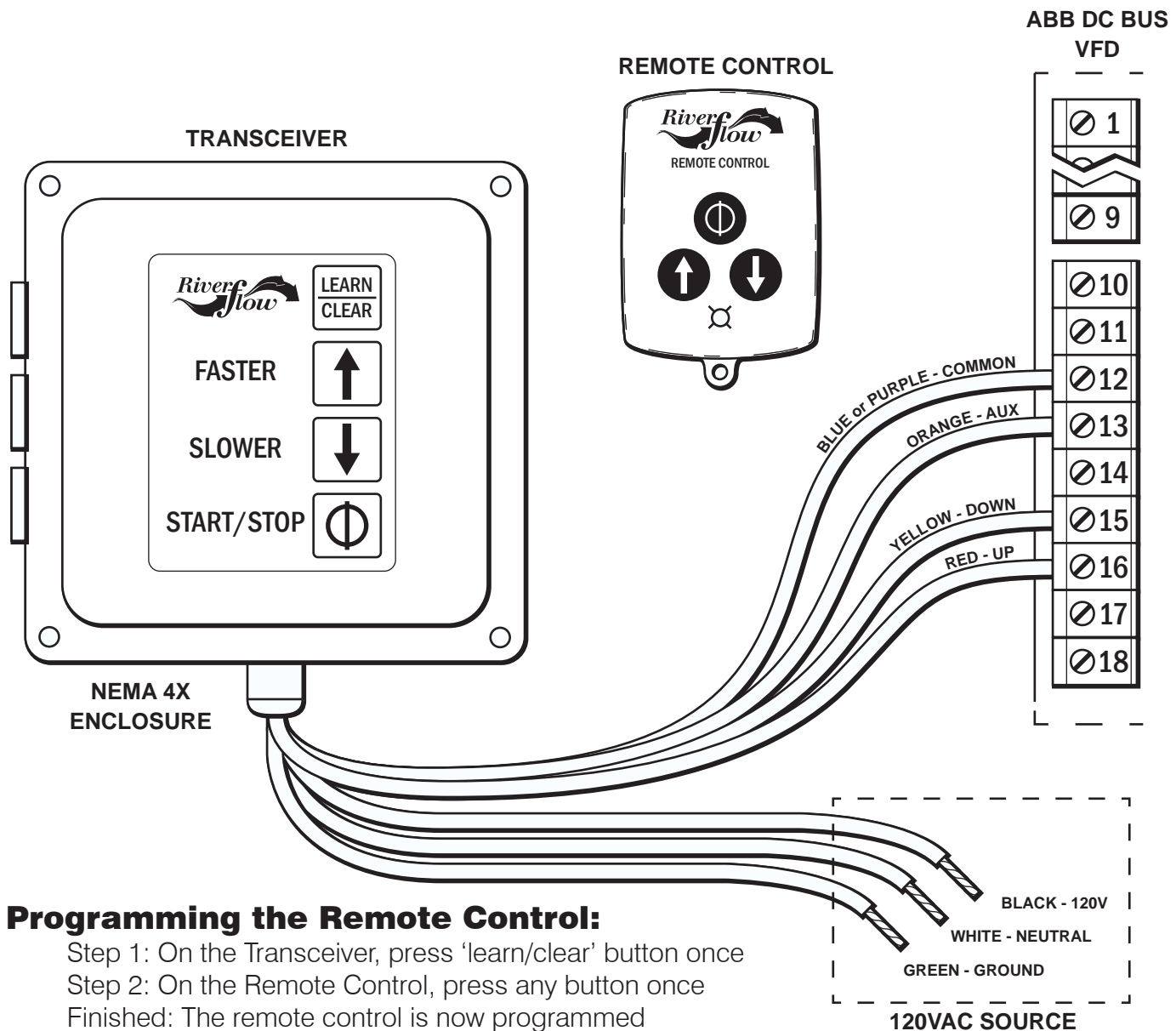


- Motor direction counter clockwise looking at the opposite shaft end of the motor.
- Refer to the wiring diagrams for complete wiring and operation instructions.
- If the motor is covered, allow adequate ventilation with at least 6-in. clearance around the motor. Open area of vents, top and bottom, on the enclosure must total at least 100-sq. in. each.



# RIVERFLOW PUMP INSTALLATION GUIDE

## ELECTRICAL INSTALLATION WIRELESS PUMP CONTROL



### Programming the Remote Control:

- Step 1: On the Transceiver, press 'learn/clear' button once
- Step 2: On the Remote Control, press any button once
- Finished: The remote control is now programmed

### Controlling the pump speed:

- Step 1: Press 'up arrow' to increase pump speed by 5% per push
- Step 2: Press 'down arrow' to decrease pump speed by 5% per push

### Remote Control care:

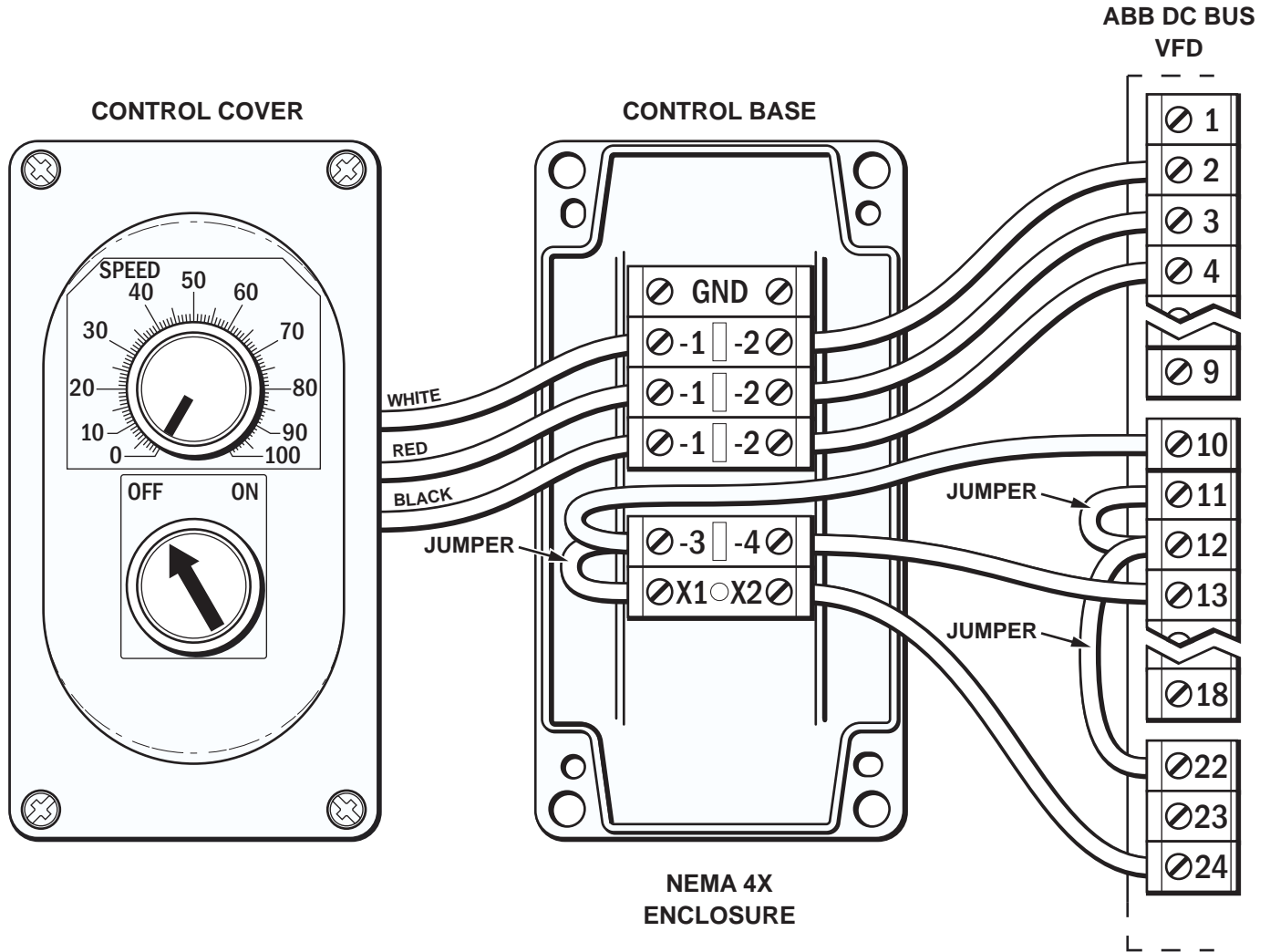
- Do not submerge
- Dry off after use
- Replace batteries with CR2032, Qty. 2

### IMPORTANT:

Parameters on ABB VFD must be set to:  
1001 to DI 1  
1103 to DI 3U, 4D

# RIVERFLOW PUMP INSTALLATION GUIDE

## ELECTRICAL INSTALLATION WIRED PUMP CONTROL



**NOTE:** Use 18-gauge shielded 6-conductor cable to connect the Control to VFD.



# RIVERFLOW PUMP INSTALLATION GUIDE

## RIVERFLOW SYSTEM WARRANTY ACTIVATION REQUIREMENTS

Follow these steps to begin the process of activating the warranty for your Riverflow™ Pump.

Step 1: Current Systems Inc. must have digital photos clearly showing the Riverflow pump installation with:

- Entire pump and motor installed
- A close up view of the shaft coupling
- Motor wiring inside motor junction box
- Line and load wiring of mounted VFD
- Dedicated non-GFI circuit breaker
- Non-fused disconnect (if required)

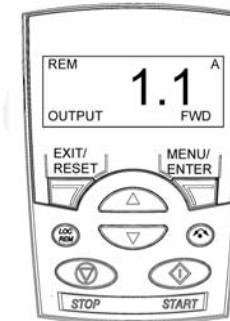
Visit [www.riverflowpumps.com](http://www.riverflowpumps.com) to submit your photos and fill out the warranty validation form.

Step 2: Licensed electrician must call Current Systems Inc. PST (805) 339-9292 or EST (888) 443-4113 prior to applying power to the Riverflow pump motor for start up. A factory authorized technician will instruct the electrician in programming the VFD.

## PROGRAMMING THE ABB DRIVE

### IMPORTANT

- Pool must be filled before running the Riverflow® Pump
- “Bump” start to verify counter clockwise motor rotation
- Select “NO” when prompted to run startup assistant
- Set time and date
- Use the attached check list to edit and confirm parameter values
- Backup parameter settings
- To activate warranty fax or e-mail completed start-up form



### Parameters Mode

1. Select PARAMETERS in the Main Menu.
2. Press UP/DOWN to highlight the appropriate parameter group, then press SEL.
3. Press UP/DOWN to highlight the appropriate parameter in a group.

**NOTE!** The current parameter value appears below the highlighted parameter.

4. Press EDIT.
5. Press UP/DOWN to step to the desired parameter value.

**NOTE!** To view the parameter default value: In the set mode, press UP/DOWN simultaneously.

6. Press SAVE to store the modified value or press CANCEL to leave the set mode. Any modifications not saved are cancelled.
7. Press EXIT to return to the listing of parameter groups, and again to return to the main menu. Use the Parameters mode to view and edit parameter values:

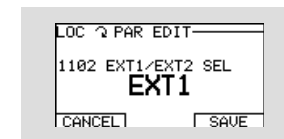
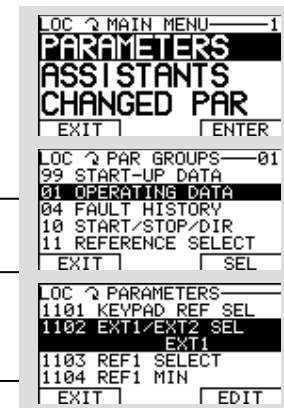
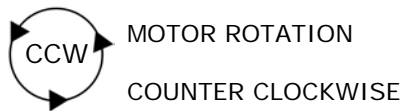


ABB TECH SUPPORT (800) 435-7365  
Press 4 and then 3 and have your model number. 24 Hour 7 Day support

[www.current-systems.com](http://www.current-systems.com)



## PROGRAMMING THE ABB DRIVE



Fax completed form  
to: (805)339-9494  
for warranty activation

Job name \_\_\_\_\_  
Startup Date \_\_\_\_\_  
Model \_\_\_\_\_  
Serial Number \_\_\_\_\_

**Parameters must be set prior to operating system**

Code	Parameter Description	Selected	Check When Completed
<b>Group 99</b>	<b>Enter Values From Motor Data Plate *</b>		
9901	Language	English American (AM)	
9902	Applic Macro	ABB Standard	
9905	Motor Nom Volt	Voltage	*
9906	Motor Nom Current	Motor FLA	*
9907	Motor Nom Freq	Hertz	*
9908	Motor Nom Speed	Motor RPM	*
9909	Motor Nom Power	Motor HP	*
<b>Group 10</b>	<b>Command Inputs</b>		
1001	Ext1 Commands	DI1	
1003	Direction	Forward	
<b>Group 11</b>	<b>Reference Select</b>		
1103	Ext Ref1 Select (Wireless)	DI 3U, 4D	
	Wired Remote Settings	AI1	
<b>Group 12</b>	<b>Constant speeds</b>		
1201	Constant Speed Sel	Not Sel	

Code	Parameter Description	Selected	Check When Completed
<b>Group 20</b>	<b>Limits</b>		
2003	Max Current	Motor FLA	*
2007	Minimum Freq	15 Hz	
2008	Maximum Freq	60 Hz	
<b>Group 21</b>	<b>Start/Stop</b>		
2102	Ramps	Ramp	
<b>Group 22</b>	<b>Accel/Decel</b>		
2202	Acceleration Time 1	10 Sec	
2203	Deceleration Time 1	10 Sec	
2205	Acceleration Time 2	10 Sec	
2206	Deceleration Time 2	10 Sec	
<b>Group 26</b>	<b>Motor Control</b>		
2606	Frequency	8HZ	
2607	Frequency Switch	On	
<b>Group 30</b>	<b>Fault Protection</b>		
3005	Mot Therm Prot	Fault	
<b>Group 34</b>	<b>Display</b>		
3401	RPM's	Speed	

www.current-systems.com