Power Terminals

With ALL Power OFF
A. Connect up the drive
Hook your drive up according to the following diagrams. Ensure power and control wiring are routed in separate conduit/cable trays and wiring meets applicable national and local electrical codes.

Power Wiring Diagram

Control Wiring Diagram

Navigating through the menus

Legend of abbreviations used for keystrokes:
LRUD = Press the specified button EXACTLY once.
8xU = Press the Up button 8 times.
I/D = Use the Up button to increase the value, use the Down button to decrease the value.

Final Power OFF Checks
Recheck all your wiring, especially the drive’s chassis ground. Also, use your multimeter to check the L1, L2, L3, F+, F-, A+ and A- Terminals for short circuits to ground. All readings should be greater than 1 MΩ. Correct any low resistances prior to applying power.

It is essential to perform all of the following steps in their entirety and in the proper sequence! If in doubt, call 1-888-667-7333 (International 410-604-3400).

1. Apply Control Power and Calibrate

Optional Feedback Devices

DC Tachometer

A. Get the supply and motor nameplate data

<table>
<thead>
<tr>
<th>Description</th>
<th>Typical</th>
<th>Actual</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage (VDC)</td>
<td>480</td>
<td></td>
<td>VDC</td>
</tr>
<tr>
<td>Armature Volts (Vdc)</td>
<td>500</td>
<td></td>
<td>VDC</td>
</tr>
<tr>
<td>Armature Current (Aa)</td>
<td>35</td>
<td></td>
<td>ADC</td>
</tr>
<tr>
<td>Base Speed (Rpm)</td>
<td>1750</td>
<td></td>
<td>RPM</td>
</tr>
<tr>
<td>Maximum Speed (Ms)</td>
<td>2300</td>
<td></td>
<td>RPM</td>
</tr>
<tr>
<td>Field Volts (FV)</td>
<td>150</td>
<td></td>
<td>VDC</td>
</tr>
<tr>
<td>Field Current @ Ms (IF)</td>
<td>1.35</td>
<td></td>
<td>ADC</td>
</tr>
<tr>
<td>Field Current @ BS (IFB)</td>
<td>0.8</td>
<td></td>
<td>ADC</td>
</tr>
<tr>
<td>Encoder Device</td>
<td>DC Tachometer (TV)</td>
<td>50</td>
<td>V1000</td>
</tr>
<tr>
<td>Encoder (Ppr)</td>
<td>1024</td>
<td></td>
<td>PPR</td>
</tr>
</tbody>
</table>

Feedback Device
DC Tachometer
Encoder

The green keys are used to setup the drive. In this Quick Start, the required key sequences are displayed to the left of each parameter to be modified. When executed correctly, the display on the drive should match the one shown.

Repeat these steps for the following:

1. LRUD - U/D
2. L,9,D,R - U/D
3. L,9,D,R - U/D
4. L,9,D,R - U/D

Feedback calibration

If you do not have a DC tachometer or encoder, skip this section and go to Step 3.

DC Tachometer Calibration

For a tachometer, initially calibrate the drive for the expected DC voltage at base speed.
Encoder Calibration

Ensure quadrature is enabled and enter the PPR.

From the Diagnostic Screens, go to the CIP Diagnostic.

The CIP’s should match TRJSC in the display indicate the actual Control Input (CIP) terminal status.

Leaving the CSO contact of your Bardac PL/X Digital DC Drive.

Congratulations,

Stevensville MD 21666 USA

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Website: www.bardac.com

Fax: 410-604-3500

Increase this value to reduce the armature voltage. If this parameter does not provide enough adjustment, stop and readjust PIN 8 - Rated Arm Volts from Step 2.

Tachometer Feedback

R,R,U,4xD,R,R - U

Then 4xL

R,R,R,4xD,R - U

Then 4xL

If positive (+), skip to Step 8. If negative (-), stop the drive and invert the encoder sign and recheck.

Encoder Feedback

R,R,U,4xD,R - U/D

Then 4xL

From the Diagnostic Screens, go to the CIP Diagnostic.

11. Setting Up Field Weakening

When using either tachometer or encoder feedback, field weakening may be enabled for a motor which supports an extended speed range.

a) First, stop the drive and enable the field weakening mode.

R,R,7xD,R,4xD,R,R - U

Then 4xL

b) Next, set the minimum field expected (with a 10% safety margin).

Min Field % = [(ftm - 1 lb) x 90]

L,7xD,R - U/D

Then 4xL

11) FLX CUR PRESET

51.25 %

Then 4xL

Finally, adjust the maximum speed as described in Step 10. Again, do NOT exceed the maximum speed (MS) value noted on the motor nameplate.

Again, SAVE PARAMETERS as described in Step 3.

Congratulations, you have successfully commissioned your Bardac PL/X Digital DC Drive.

If you have any questions or do not understand a portion of this Quick Start Manual, please contact us.

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