

## APPENDIX C - ABSOLUTE DELTAMAX MOTOR AND DRIVE APPLICATION NOTE

### OVERVIEW

The DeltaMax Absolute Motor and Drive system consists of the following:

- 1) DeltaMax Controller with integral Absolute Motor Driver.
- 2) Motor with integral Absolute Encoder.
- 3) Battery pack with cable.
- 4) Cabling between Controller and Drive.
- 5) MacroPro II Tool Kit Software Package.

As shipped the absolute position may not be set. This will be indicated by an alarm condition from the drivers display:

<u>Display</u>	<u>Description</u>
Al 27	Alarm 27: ABS encoder error
Al 32	Alarm 32: Absolute position not set or lost.
Al 33	Alarm 33: ABS home position invalid.
Al 36	Alarm 36: Battery missing.

Prior to setting the ABS HOME POSITION, errors 27 and 36 must be corrected by proper installation of the battery and cabling. The battery plugs into the three-prong connector down the side of the controller below the resolver/encoder connector. Connections should be made with the power off to the controller. Also the power must be cycled to the controller to clear most alarm conditions.

The controller will come up with alarm 32 as long as the ABS HOME POSITION has not been set. Setting the ABS HOME POSITION is accomplished through the Macropro II Tool Kit version **2.3** or higher.

## SETTING ABS HOME POSITION

Connect the MacroPro II Analyzer to the DeltaMax controller per procedures in the DeltaMax Manual. Once connected the ABS HOME POSITION may be successfully set as long as the motor is not busy as follows:

- 1) Position the motor to the correct home position manually or otherwise. It is possible to run a program implementing indexes to get to the exact position using the tool kit. To manually get to a position the drive shall have to be off, issue a RESET to the controller using the Tool Kit to accomplish this.
- 2) From the **Parameters** pull down menu select **Set Home Position**; verify that the default selection bullet of **Clear Rotation & Angle** is selected. If not it must be changed from NO EFFECT. To change this setting it may be necessary to RESET the controller from the tool bar first.
- 3) From the Set Home Position window, with the mouse click on the **Set Home** button.
- 4) Within less than a minute the controllers single seven segment display should start flashing a "P", to indicate that power should be cycled at this point.
- 5) Cycle power to the DeltaMax.
- 6) Verify that there are no alarm conditions on the displays.

If alarm conditions persist after a couple of attempts, record the alarms, and then refer to the DeltaMax manual for a corrective procedure. If it is unclear on how to correct the alarm condition or other problems exist, please contact Industrial Indexing System for assistance.