WinPX for *FlexMax*

Using E@syDrivesPX 2.41 for EV

POWERTEC INDUSTRIAL MOTORS

EQUIPMENT:
1) *FlexMax* Brushless DC drive
1) PC operating on Windows 98® (second edition or better), Windows 2000®, or Windows ME® and 2.0 Mb disk space available.
1) Serial cable with PCI-485 interface for connection of PC to drive.
1) E@syDrives and PXBasic software.

Set-up:
1) Connect drive to PC using serial cable and PCI-485 Interface. The PCI-485 Interface should be connected directly to the PC serial port, and the other end of the serial cable connected to the XE connector on the regulation card. Verify the dip switches on PCI-485 Interface are set to **ON.**
2) Apply power to drive. Consult manual as necessary.
3) Insert the 3.5" diskette labeled *E@asyDrives* "Disk 1" into the PC
4) Run the setup.exe file located on the A disk.
5) Accept all the default values. Then Insert "Disk 2" and continue. Then insert "Disk 3" to complete the installation.
6) Insert the 3.5" diskette labeled *PXBasic* "Disk 1" into the PC.
7) Accept all the default values.

Using *E@sydrives*:

1) Launch *E@syDrives* by clicking on the *E@syDrives for FlexMax* icon.
   a. Select "open existing files" then select continue.
   b. Select appropriate PX Basic program (must be ver 4.XX). then open.
   c. Click on the 4th icon on the tool bar "computer".
   d. Verify Tool bar icons are now active.
   e. Click on 5th icon on the tool bar "online" (two arrows chasing each other).
   f. Parameters should turn from red to black (this indicates current vales).
   g. Under the file menu Select "password". Then select "3-service menu".
   h. Enter "9fbf1" (case sensitive) for password then enter.
   i. Select "edit PX-A parameter list". Then continue.
   j. Select 8th icon on the tool bar "read parameters from target".
      (note) Hour glass will appear and parameters will turn from red to black (current readings in drive).
   k. Under the file menu click "save as" then change file appropriately (I.E. Line21.par) then click "save".
2) Save Parameters to keypad
   a. Click on the "plus" next to parameter
   b. Select "Save/Load par".
   c. Highlight parameter 18071 Save param PAD.
   d. In value column select "save now" then click off current parameter.
      (Note: you should hear an audible relay click)
   e. Drive display should have multiple blocks from left to right as the program loads.
   f. When the program is finished loading an "A25 Reset Required" displays on keypad.

g. Click 12th icon over with lighting bolt symbol, then ok.
(Note: you should hear an audible relay click)

3) Download a parameter file into drive:
   a. Open an appropriate PXBasic parameter file. (note ver 4.XX or higher)
   b. Under the file menu select open. (note: open to appropriate PX 4.XX folder).
   c. Select file configuration to download.
   d. Verify drive size then continue.
   e. Select "edit PX-A parameter list". Then continue.
   f. Verify the (+) is next to the parameter menu.
   g. Select "Write all" from the "Parameters" menu (or click on the "Write all parameters" icon).
   h. To save parameters into drive flash memory Select reset (Lightning bolt icon) then select "yes" and "ok" twice.
   i. Then press online icon (arrows chasing each other).

4) Change parameters:
   a. Select desired menu folder from menu tree at left
   b. Select desired parameter value to change in table on the right (parameters with an asterisk after the IPA# are read-only)
   c. Change the highlighted parameter value and press enter
   d. To save parameters into drive flash memory Select reset (Lightning bolt icon) then select "yes" and "ok" twice.

5) Monitor parameters:
   a. Select "Monitor window" from the icon menu. (Video camera icon)
   b. Select the "Monitor" folder from menu tree on left
   c. Left Click and drag the parameter to the Monitor window at the bottom of the screen.
   d. Repeat for as many parameters as you wish to monitor.

6) Recover Fault History Data
   a. On icon bar click on "Active Alarms" (Yellow triangle w/Exclamation)
   b. A window will open, Click on "History".
   c. "Alarm History" will open displaying last 24 faults that have occurred.
   d. Click on "save to File".
   e. Window will open to V4.XX Folder.
   f. Type in file name and save.
   g. "file successfully written" will appear, Click "OK"
   h. Close window (the X in top right of window)
   i. Open "microsoft Excel" or some other program and import the saved document.
   j. Format to size compatible to print.

7) Download file from Keypad
   a. Click the (+) on all parameters
   b. Under Save/Load Par highlight 18070 Load Param PAD
   c. In the Value column select "load now".
   d. Click off the parameter (an audiable click should be heard)
   e. Drive display should have multiple blocks from left to right as the program loads
   f. To save parameters into drive flash memory Select reset (Lightning bolt icon) then select "yes" and "ok" twice.
   g. Then press online icon (arrows chasing each other).

Parameter Management:

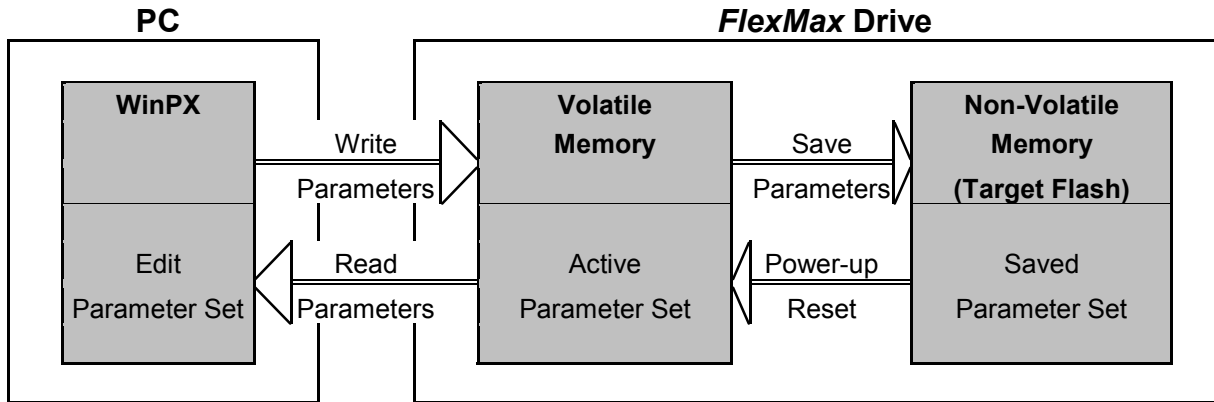**Figure 1** illustrates the parameter management scheme used in the drive.

Figure 1

The set of parameters used by the drive is the "Active Set". On each power up or drive reset, the "Saved Parameter Set" of parameters residing in the drive non-volatile flash memory is copied to the "Active Set".

The drive comes from the factory with a Saved Parameter Set in drive flash memory. If the drive was purchased as part of a motor/drive package, the parameter file is tailored to the specific motor. If the drive was purchased separately, it comes with a default set of parameters that may need to be modified slightly for the specific motor used.

The user can change the parameters in the Active Set by making the changes in the "Edit Parameter Set" in E@sydrives, and using either the "Write parameter" or "Write all parameters" command. The "Write parameter" command writes only the highlighted parameter, while the "Write all parameters" command writes all the parameters in the highlighted menu folder. To write all of the parameters from the Edit Set to the Active Set, highlight "All parameters" in the left hand menu tree, and execute a "Write all parameters" command. If you are in the "On-line" mode, changes to the Edit Set are dynamically written to the Active Set when you press the enter key. Some parameters, such as "Drive configuration", do not become Active until they are Saved, and the drive is reset.

The user can save the Active Set into the drive non-volatile flash memory by executing a "Save parameters" command. Remember, on drive power-up or reset, any unsaved parameters in the Active Set will be replaced by the Saved Set in flash memory.