



PDL ELECTRONICS LTD

SOFTWARE RELEASE NOTE

Elite Series Version 4.1 Production Software Release

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Elite Series Version 4.1 Production Release:

This release note covers the production release of software for the Elite Series drives

Elite Ver 4.1 software covers the product range (refer to screen Z2):

400V Elite from 2.5 to 1250A

500V Elite from 2.5 to 1300A.

The Elite V4.1 software can be used with Control PCBs (PDL Part No. 2001-270) Rev E-M using circuit diagram 0410-201 Rev F to Rev Z and reporting H/W version 1.3 to 3.9 on screen Z2. Version 4.1 software will not work with earlier revision Control PCBs.

Changes from Previous Production Release Software 3.8:

The previous production release of Elite Series software was version 3.8. Changes from this version are:

1. Pre-Torque and brake release added for hoisting applications. See screen change section.
2. Increased the resolution of the process PID gain to two decimal places.
3. Enabled fault trip F02 High Volts if a dynamic brake is fitted. Drive will now trip if the brake has failed or is undersized.
4. Screen X3e Field weakening now defaults to 90%.
5. V/Hz Current Controlled Boost now ignores Torque limits in screens L4 and L5. Current limit in screen L9 is the only active limit.
6. Motorised potentiometer function no longer configures MF14, which is now free for general use.
7. Improved output waveform dead-time compensation so that unstable motors now require less damping with screen X5c. The default value for X5c is now 0%.
Note: Screens X5a, X5b and X5c may need re-tuning if upgrading to version 4.1 software
8. The initial timeout for serial communications has been increased to 10 seconds to allow serial networks to power up without producing a communications time-out fault.
9. Auto tuning in screen X2 enhanced.
10. Interaction between reset and Vysta program initialisation updated.
11. Support added for Magnetic Stirrer functionality.
12. Brake Release function improved when starting from stopped state.
13. Increased slew rate of Motorised Potentiometer in Open Loop Vector mode.

Changes to Screens:

1. S12 Brake release time. This screen provides a timer to allow time for a mechanical brake to release in hoisting applications. The start delay timer should

be set to allow flux to build up in the motor and the brake release time and pre-torque set to give a smooth start.

2. S13 Pre Torque. The screen sets the value of torque to apply to the motor during the start and brake release time periods. The torque is only applied in closed loop vector mode.
3. P3 Process Kc. The resolution of this screen has been increased to two decimal places.
4. Screen list field width fixed

Notes for Vysta Users:

1. Interaction between reset and Vysta program initialisation updated. Vysta program would not initialise correctly when selecting Program 2, if the Vysta program forces the Fault Reset function block high during this time.
2. Added new Read function block (for future Vysta platform development).

Upgrading from Earlier Version Software:

This software requires hardware revisions noted above. The PCB part number and circuit revision are marked on the PCB next to the 24-volt fuse (under display plate).

Upgrading from earlier versions **will** result in an F18 Data Fault. Re-initialisation in screen Y2 is required. Select the INIT ALL option. This will reset the customer settings to the default (factory) values. **Note:** Record all customer settings before upgrading.

If upgrading from a Control PCB of an earlier revision than Revision E, the Control PCB must be replaced. **Note:** Record all customer settings before installing a new control PCB.

New part number is No. 0410AA41

Software can be updated using PDL DriveLink (PDL part number 0407AA) version 2.8 or later. Refer to General Application Note 4216-056, Using DriveLink.

Drivecomm3 parameter sheets (Data Files) for Elite Series 4.1 version software are available from the PDL Electronics Website. Also refer to General Application Note 4216-059, Using Drivecomm.

Serial Communications EDS files for Elite Series 4.1 version software are available from the PDL Electronics Website.

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