



## PowerFlex 700 Drive w/Vector Control Option (Revision 4.003)

These release notes correspond to minor revision 4.003 of firmware for PowerFlex 700 Drive with the Vector Control option.

### Determining Firmware Revision Level

To determine the firmware version for a PowerFlex 700 Drive, view parameter #29 [Control SW Ver].

### Firmware Upgrade Procedure



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**ATTENTION:** Risk of drive damage exists if drive power is removed during the Boot Flash segment of the upgrade/download. To guard against damage, Do Not Remove Power to the drive until the download is complete and the drive has been reset.

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**Important:** Once a flash update has been started, do not remove drive power until the download is complete and the drive has been reset. If power is removed during Boot Flash, the drive may be permanently damaged. A drive that has been damaged in this way cannot be repaired. If power is removed during Application Flash, the drive will remain in Boot and can be reflashed.

Firmware 1.001.01 or later:

1. Remove/disconnect any HIMs before proceeding.
2. Install ControlFLASH file **PF700VCB\_CTRLFLASH\_4\_003\_110.exe**.
3. Run ControlFLASH.

### Enhancements

- Power Loss Ride Thru  
During Power Loss Ride Thru when the drive bus voltage level reaches the precharge open limit the drive coasts to stop.  
The precharge open limit for the Power Loss Ride Thru function was decreased. This allows the drive to meet SEMI F47 - Line Loss Power Specification.
- Pump Jack  
When “PC Oil Well” is selected in [OilWell Pump Sel], parameter 641 then...
  - [Direction Mask], parameter 279 is set to “0” and
  - [Direction Mode] parameter 190 is set to “Reverse Dis” to disable reverse direction.

The user is still allowed to overwrite these parameters.

**Corrected Anomalies**

This section describes the anomalies corrected in this revision.

| Function                       | Anomaly  | Correction   |
|--------------------------------|--|--|
| Copycat                        | The Copycat function does not upload [Excitation Kp].  | The Copycat function will upload [Excitation Kp].<br>Note that this is an Advanced Tuning Parameter. Refer to the PowerFlex 70/700 Reference Manual for a description of this parameter. |
| Copycat                        | The Copycat function may not download the Analog I/O Hi/Lo parameters correctly.<br>If [Anlg In Config] or [Anlg Out Config] are set for "Current" and [Analog In 1 Hi], [Analog In 2 Hi], [Analog Out1 Hi] or [Analog Out2 Hi] is set to 20mA, on the subsequent copycat download, the Hi value is changed to 10mA. | The copycat function will properly download the Analog I/O Hi/Lo parameters.   |
| Sleep/Wake Time Settings       | If [Sleep Time] or [Wake Time] is set less than 1.0 seconds OR if the time is NOT a multiple of 0.5 seconds, the sleep/wake function does not work properly.   | The sleep/wake function will work properly for any time setting that is a multiple of 0.1 seconds, up to a maximum of 1000.0 seconds.  |
| Flux Down                      | If [Stop Mode] is set to "Coast" on a larger HP drive, when STOP is invoked and flux down is active, the drive does not complete flux down.  | The drive will complete flux down.   |
| Flux Braking with Flying Start | If [Flux Braking] and [Flying Start En] are set to "Enabled," the flux braking could influence the flying start.   | Flux braking is disabled for flying start.   |
| Pump Jack                      | The calculated torque limits [Pos Torque Limit] and [Neg Torque Limit] are calculated incorrectly during Startup for Pump Jack.  | [Pos Torque Limit] and [Neg Torque Limit] values are calculated correctly.   |
| Pump Jack                      | The pump process display selections are not saved at power down.   | The pump process display selections are now saved at power down.   |
| Slip RPM @ FLA                 | The max value for [Slip RPM @ FLA] is a dynamically calculated value based on [Motor NP Hertz] and [Motor NP RPM].<br>If [Motor NP Hertz] is decreased slightly below 60, the max value for [Slip RPM @ FLA] calculates to a very large (invalid) value.   | Changed the calculation of the max value for [Slip RPM @ FLA].   |
| MCB Power Up Time              | [MCB Life Time] diagnostic parameter #11 is not retained upon power loss or drive reset.   | [MCB Life Time] diagnostic parameter #11, is maintained upon power loss or drive reset.  |

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