



# PowerFlex 700 Drive w/Vector Control Option (Revision 21.001)

These release notes correspond to firmware version 21.001 for PowerFlex 700 Vector Control Drives with the Pump Jack Pump Off application option. This version of firmware incorporates all functions included in PowerFlex 700 drive firmware version 4.006 and the Pump Jack Pump Off application v20.003.

## Corrected Anomalies

This section describes the anomalies corrected in this revision.

Function	Anomaly	Correction
Assisted Start Up Menu	The motor tests may not be performed and/or the drive may not be allowed to start from the HIM during the start up routine if the Assisted Start Up routine is used and [Pump Off Action] is set to a non-zero value. When [Pump Off Action] is non-zero, Sleep Mode is enabled and prevents the HIM from starting the drive and performing the motor tests.	[Sleep-Wake Mode] parameter 178 is disabled at the beginning of the Assisted Start Up routine motor tests and restored when the motor tests are completed.
Pump Stable Status Bit	[Pump Off Status] parameter 690, bit 6, "Pump Stable" does not reflect the drive status.	Drive status is now correctly displayed. This bit is set to "1" when the drive is not calculating the pump baseline torque.

## Parameter Maximum Value Changed

The maximum value for [Sleep Time] parameter 183 has been changed to 64,800 seconds.

This will allow the pump to stop pumping for up to 18 hours when a pump off condition is detected.

## Enhancements

This section describes the enhancements in this revision.

### Thermal Manager

The drive thermal manager has been improved to reduce nuisance "Trnsistr OvrTemp" faults (F9). The thermal manager improvements provide better control of the peak IGBT junction temperatures during a shock load or at non-default PWM frequencies to help extend the life of the drive.

## Determining Firmware Revision Level

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

## Firmware Upgrade Procedure

This section describes procedures to flash upgrade your drive firmware. Downloads are provided on the Allen-Bradley Web Updates site located at <http://www.ab.com/support/abdrives/webupdate>. For a detailed explanation of the flash procedure, refer to <http://www.ab.com/support/abdrives/powerflex700vc/phase1/firmware/index.html>.



**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.

1. Remove/disconnect any HIMs before proceeding.
2. Install the “**v21.001 Flash Kit**” from the Allen-Bradley Web Updates site. This automatically installs the latest version of the ControlFLASH utility on your computer. ControlFLASH, DriveExplorer or DriveExecutive can now be used to update the drive using the following instructions.

### Using ControlFLASH

**Important:** This method requires RSLinx.

1. Launch ControlFLASH (if it is not already running).
2. Follow the screen prompts until the flash procedure is completed and the new firmware version is displayed.

### Using DriveExplorer Lite/Full

1. Exit the ControlFLASH program (if it is running) and launch DriveExplorer. Make a connection to the drive.
2. In the DriveExplorer treeview, select the appropriate drive. Then select the Information icon.
3. On the Properties screen, select the “Details” tab.
4. Select “Flash Update” and follow the screen prompts until the procedure is completed and the new firmware version is displayed.

### Using DriveExecutive

**Important:** This method requires RSLinx.

1. Exit the ControlFLASH program (if it is running) and launch DriveExecutive. Make a connection to the drive.
2. In the DriveExecutive treeview, select the appropriate drive. Then select the Information icon.
3. On the Properties screen, select “Component Details.”
4. Select “Flash Update” and follow the screen prompts until the procedure is completed and the new firmware version is displayed.

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