



PowerFlex 700L Active Converter Firmware v2.005

This release note describes major revision 2, minor revision 5 of firmware for PowerFlex 700L Active Converters.

Introduction

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Determining Firmware Revision Level

To determine the firmware version for a PowerFlex 700L Active Converter, view parameter 204 - [Control SW Ver]. The firmware version is the data in this parameter.

Example:

Firmware Version 2.004

Firmware revision from parameter 204 - [Control SW Ver] 

Firmware Upgrades

This section describes procedures to flash upgrade your firmware using HyperTerminal. Downloads are provided on the Allen-Bradley Web Updates site located at <http://www.ab.com/support/abdrives/webupdate>.



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

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

1. Remove/disconnect any HIMs before proceeding.
2. Download the flash update file from the Allen-Bradley Web Updates site.
3. Connect to the PowerFlex 700L drive using a 1203-USB or 1203-SSS Series B serial converter and HyperTerminal.
4. Select Flash Upgrade.
5. Select Port 6 to update the PowerFlex 700L active converter.
6. Select Y to proceed.
7. Select the appropriate .bin file for the active converter firmware. Select X-modem for the Protocol.
8. Select send. HyperTerminal should show progress of the flash upgrade and indicate when the flash is complete.

Enhancements

This section describes the enhancement provided in this revision of firmware:

Start Inhibit Under High DC Link Voltage Conditions

If Parameter 50 - [Start Config] is set to "1" (Run On PwrUp), then the active converter will not start running if the DC Link Voltage (shown in Parameter 14 - [DcLink Voltage]) is greater than a threshold value that depends on the value of Parameter 114 - [High Vac Lmt]. If Parameter 114 is set to 528 Vac, then the start inhibit threshold for the DC Link Voltage is 760 Vdc, and the threshold will increase or decrease as the value of Parameter 114 increases or decreases.

If the active converter is inhibited from starting because the DC Link Voltage is too high, then bit 7 of Parameter 214 - [Start Inhibits] will be set to 1. Bit 7 (High dv/dt) is also used to indicate that the DC Link Voltage is not stable enough to allow the active converter to start running.

Corrected Anomalies

This section describes the anomalies corrected in this revision of firmware:

AC Line Loss and Recovery

- Improve detection of low AC line voltage conditions.
- Fix AC line loss handling so that active converter fault 70 (FiltCap Contactr) will no longer occur when the AC line is not present. The input filter capacitor bank contactor, if present, will always open up when AC line voltage is no longer present.
- Decrease likelihood that electrical activity inside the drive will cause the active converter to attempt to synchronize to the AC line while sufficient AC line voltage is not actually present. These failing line synchronization attempts were showing up as occurrences of active converter fault 6 (Precharge Open) when the AC line was not present.
- Fix anomaly that would, under certain circumstances, cause the active converter to fault with active converter fault 52 (Ac Low Frequency). This fault would occur during the recovery from an AC line loss, after the AC line had come back.
- Fix anomaly where the active converter would open and close the precharge contactor control relay several times during the recovery from an AC line loss.

Known Anomalies

Parameter 061 - [kVAR Reference] does not correctly calculate the reactive current limit for commanding kVARs and should not be used.

Restrictions

No restrictions apply to this revision of firmware.

Rockwell Automation Support

Rockwell Automation provides technical information on the web to assist you in using our products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of Frequently Asked Questions (FAQs), technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

Rockwell Automation also provides complimentary phone support for drives, communication adapters, and peripherals. If you experience a problem with the adapter, please review the information in its User Manual. For further help in getting your adapter operational, contact a Customer Support representative:

United States	(1) 262.512.8176 Monday – Friday, 7am – 6pm CST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

Product Satisfaction Return

Rockwell Automation tests all products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

U.S. Allen-Bradley Drives Technical Support - Tel: (1) 262.512.8176, Fax: (1) 262.512.2222, Email: support@drives.ra.rockwell.com, Online: www.ab.com/support/abdrives

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846