



Bulletin 1403 Powermonitor II Firmware V3.xx

Introduction

Read this document before using. Keep this document with publication 1403-IN001A-US-P.

This release note contains information about the new firmware V3.xx.

All publications listed can be found at <http://www.theautomationbookstore.com>.

Version 3.xx Firmware

The information below summarizes the changes that were made to 1403-MM firmware V2.10 to create the new V3.xx firmware.

Enhancements

Expanded Snapshot Log Functionality

Powermonitor II (PMII), V3.xx firmware supports the following 5 new log types:

- 16 parameter x 265 record
- 8 parameter x 489 record
- 4 parameter x 846 record
- 3 and 7 parameter x 845 and 100 record
- 1 parameter x 1861 record

This allows the customer to trade-off between number of parameters per record and number of records in the log. Also, RSEnergy V2.00 uses 3 and 7 log to backfill gaps in its database caused by an unexpected loss of communications or server down-time.

Enhanced Oscillography Functionality

Powermonitor II, V3.xx firmware now supports 6 additional capture modes with up to 7 channel x 67 cycle capture, programmable number of captures, and user-selected sample rate.

Powermonitor II with DeviceNet Support for Motor Control Center IntelliCENTER Software

Ten (10) configurable single parameter read-only assembly instances (class 4, instance 81-90, attribute 3) were added. Instances 79 and 80 are used to write/read the settings for the 10 single parameter instances. Support in IntelliCENTER software estimated to be released Nov/Dec 2000.

Allen-Bradley Drives

Revenue Meter Compliance (ANSI C12.16-1991 and IEC 1036 Class 1)

Improved accuracy of energy results and pulse output. Independent 3rd party certification was performed by Wyle Labs.

Additional Setpoint Types

Four (4) new setpoint types added. Each of the new setpoint types evaluate Total Real PF in one of 4 quadrants. The previous (but still available) PF setpoint type was not useful when real PF varied into 2 or more quadrants. The new setpoint types evaluates for trigger only in the selected quadrant, and releases based on the limit in that quadrant; or releases if PF goes into any other quadrant.

Other Changes

- Changed default demand period length from 1 to 15 (most common in the field)
- Changed default snapshot interval from 3 seconds to 15 minutes (most common in the field).
- Changed oscillograph Buffer Type from Overwrite to Hold (to prevent performance degradation do to inadvertent continuous setpoint based waveform triggers)
- The value that asserted or released a setpoint is now recorded in the event log rather than the configuration limit.
- Fixed potential problem with oscillograph capture #1 bit/ status input bits overwriting each other when they occur.
- Fixed a problem that occurred if you preset the kWh counter to a value greater than the current kWh value and cycle power. On power-up the pulse output would rapidly toggle to the preset value, then operates normally once reaching the preset value.
- Voltage and Current unbalance were returning 0% if one or two phases dropped-out.
- Cause of no limit checking on writes of setpoint type and output action fixed.
- Fixed bug that caused PMII firmware to log a ' new config' event when ENET card containing V2.00 firmware was not talked to within time-out specified. This eventually filled the event log with useless information. The PMII firmware now checks the config data. If has not changed since last time, the data is not saved to eeprom and not logged into event log. This problem began with V2.00 ENET card firmware.
- Fixed snapshot table read logical record # from going negative when reading more records than are in log when reading in reverse chronology mode.
- Snapshot V&I table read now indicates data format ('integer/exponent' or 'floating-point'; for use with 1403-NSC V1.03).

- A snapshot record is now logged immediately after a clear of the snapshot log.
- Fixed compatibility problem with RSEnergy V1.50; Release but no re-trigger would return garbage data. This was actually fetching data while buffer was being filled.
- Corrected what caused metering results to be incorrect when changing from one filter mode to another. (Problem went away when power is cycled on unit or when changing to filter mode 1).
- For 1403-MM w/DeviceNet, fixed cause of Powermonitor II to return Chan A 12-cycle oscillogram data when attempting to read Chan B 12-cycle oscillogram data.
- Fixed problem which caused intermittent or no communications on DF1 port of the 1403-NSC card when an older 1403-MM was upgraded with 1403-NSC V1.03 comm card. Problem was two new comm config parameters (RIO and Serial port data format) were uninitialized in master module. Master modules shipped at or after 1403-NSC V1.03 was released do not exhibit this problem. Units out in the field which do have this problem can be fixed by a firmware upgrade to V3.xx or later, or by changing 'RIO Data format' and '232/485 data fmt' to a valid selection using a DM (not via the 1403-NSC comm card).

Compatibility

As long as the Powermonitor II is not configured into one of the new snapshot or oscillograph modes, this firmware has been tested to be backward compatible with the following software applications:

- RSEnergy V1.03 and V1.50 Beta
- RSPowerRUN V1.11.06C and RSPowerCFG V1.11.05
- RSPower32 V1.00.01

The following software applications will support the new Powermonitor II snapshot, oscillography, and setpoint types available in Powermonitor II firmware V3.xx:

- RSEnergy V2.00 (estimated to be released December 2000)
- RSPowerRUN and RSPowerCFG have been replaced by RSPower32
- RSPower32 V2.00.00 (NSC, NENET support only...estimated to be released September 2000, DeviceNet support in a later version)

Please refer to the Master Module Installation Instructions (1403-IN001A-US-P) and one or more of the following documents that correspond to communication cards you have:

Ethernet Communication Card - 1403-IN005A-EN-P

Smart Communication Card - 1403-5.1

DeviceNet Communication Card - 1403-5.4

Allen-Bradley Drives

Reach us now at www.rockwellautomation.com

Wherever you need us, Rockwell Automation brings together leading brands in industrial automation including Allen-Bradley controls, Reliance Electric power transmission products, Dodge mechanical power transmission components, and Rockwell Software. Rockwell Automation's unique, flexible approach to helping customers achieve a competitive advantage is supported by thousands of authorized partners, distributors and system integrators around the world.

Americas Headquarters, 1201 South Second Street, Milwaukee, WI 53204, USA, Tel: (1) 414 382-2000, Fax: (1) 414 382-4444
European Headquarters SA/NV, avenue Herrmann Debroux, 46, 1160 Brussels, Belgium, Tel: (32) 2 663 06 00, Fax: (32) 2 663 06 40
Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 1403-RN001B-EN-P - April 2001

Supersedes Publication 1403-RN001A-EN-P - October 2000



**Rockwell
Automation**

PN 40055-209-01(B)

© 2001 Rockwell International Corporation. Printed in the U.S.A.