

Production Firmware History (Since Version 4.08)

Description

This document is intended for end-user informational purposes. It describes the changes between revision levels of the primary control board firmware used in the 9395P product line. This document will be changing periodically and reposted on Eaton.com to reflect new production level firmware changes. In all cases, the "Changes and Enhancements" listed under a given production release are automatically transferred into the next production release.

Version 4.20 / Dec. 2018

Notes

The Battery Time Remaining (BTR) algorithm was changed to follow what has been used in other product lines for several years and proven to be more accurate. This corrects issues with BTR times being overly sensitive to state of voltage and removes the issue of the displayed value changing rapidly during a discharge. This algorithm utilizes a "bucket approach" to "charge-in" versus "charge-out" to show how filled the bucket is at any point in time.

Changes and Enhancements

- Improved voltage regulation issue when exiting ESS mode for 400V units
- Removed displayed voltage to center point (neutral) from HMI display on 480V units (i.e., now only displays line to line voltages)
- Corrected HMI display overload text
- Corrected HMI display EAA screen Chinese display error
- Corrected active alarm condition when UPS enters ESS mode
- Keeping previous displayed kWh after flashing of 4.20 series firmware
- Changed phone number when in UK for contacting Eaton
- Updated HMI to properly show the MBS line in active one-line display
- Corrected issue with battery hardware current limit when transitioning from ESS to Double Conversion
- Corrected issue with battery hardware current limit when in VMMS mode and power anomalies are occurring
- Updated Service Reminder events so they include descriptions of the event
- Corrected issue with Service Reminders so that they continue to count when UPS is operating in ESS mode
- Corrected issue with UPM getting stuck in PowerShare mode when "Enable Input Ramp on Generator" is active and UPS has an active "On Generator" alarm



Powering Business Worldwide

Version 4.18 / December 2017

Notes

Released in support of "Service Reminder / Service Pop-Up" *functionality.

- Both Predict Pulse **Insight** and Service Reminders cannot be **active** on the same unit / system at the same time; Both can coexist in the firmware on a machine, however Eaton must disable the Service Reminders if Predict Pulse **Insight** is installed and active.
- There are no conflicts / issues with Predict Pulse (Basic) and Service Reminders being active at the same time on a given unit.

Changes and Enhancements

- Battery Hardware Current Limit and potential for load loss when transferring online from ESS (applies to 400V models).
- The Battery Chargers do not turn on automatically after manually turning off a charger at any UPM Level / location; corrected.
- The "Consumption Meter" on the HMI was made more clear.
- History Log messages were made consistent for "Close Battery Switchgear K2" vs. "Battery Breaker Open".
- DC Link voltage was dropping too low in ESS mode (applies to 400V 3-wire models); corrected.
- Parallel Redundant Distributed Bypass (two-module configurations) operating in ESS mode was not recovering correctly when opening either of the Bypass input breakers; corrected.
- Transfer to ESS mode too quickly when returning from Battery mode triggering nuisance alarms; corrected.

Version 4.16 / September 2016

Notes

Released in support of the new "Generation 2" version of Battery Converter Power Module and the DC Flywheel application.

Changes and Enhancements

- Complete support of UPS operation with DC Flywheels and no batteries.
- Complete ESS operation with HRG source of supply (except 400V 3-wire applications).
- Added protection when operating in ambient conditions above 40° C
- Enhanced operation of the UPS when the battery breaker is open and charger is turned off, including associated alarming.
- Improved mimic display accuracy when battery breaker is opened.
- Improved Ambient Over Temperature alarm while on bypass.
- Improved Easy Capacity Testing operation.

Version 4.14 / February 2016

Notes

Final release to support 480V 3-wire and 400V 4-wire Parallel Redundant Distributed Bypass system configurations, to include support of internal parallel, external parallel ESS (Energy Saver System), VMMS (Variable Multi-Module System), and HRG (High- Resistance Ground).

Changes and Enhancements

- Option added when transferring out of ESS to Battery mode in order to alleviate Static Switch SCR failure; Note that this is intended to be site specific and should be reviewed by Eaton Engineering prior to activation.
- Improved ESS operation under a sequential “dip” and “sell” bypass power anomaly.

Version 4.12 / January 2016

Notes

Initial release for 480V 3-wire Parallel Redundant Distributed Bypass system configurations, to include support of internal parallel, ESS, VMMS, Distributed Bypass external parallel, and HRG; 900 kVA and 1200 kVA 480V systems were validated (still undergoing testing on 400V units).

Changes and Enhancements

- Auto-update Battery Converter current levels for protection and metering.
- Improved operation of ESS under and HRG application to include ground fault conditions.
- Improved transfer operation of Distributed Bypass under 0.9 Power Factor Capacitive loads.
- Added timer to limit battery run time for 300 kW models for Battery Converter protection.
- Improved VMMS operation under power outage condition at no load.

Version 4.10 / October 2015

Notes

Initial release for 400V basic single module configurations with ESS and VMMS applications.

Version 4.08 (and lower) / September 2015

Notes

Initial release for 480V basic single module configurations with ESS and VMMS applications.