



Electrical Power Generation – Regulators D700 Firmware Application Update

Dear customers,

You are currently using a 1.2.46 Application Firmware on D700 or a previous version. Version V1.3.0 delivers a major stabilization milestone for the product firmware.

This release includes significant improvements to the Power System Stabilizer (PSS), consolidates multiple enhancements introduced during the V1.2 lifecycle, and integrates numerous reliability fixes across regulation, communication, data logging, memory handling, and system diagnostics.

1. Key Enhancements in V1.3.0

- Power System Stabilizer (PSS) Improvements

This version introduces a full update and correction cycle for the PSS module.

These changes significantly improve PSS robustness and accuracy in dynamic grid conditions.

2. Summary of Changes Since V1.2.46

2.1 Limitation Modules Irotor

These changes enhance thermal protection and ensure more stable regulation behaviour when the limitation is operating.

2.2 Fault Monitoring System

Major upgrades have been applied to the Fault Monitor:

Introduction of a backlog of the last five faults

Manual fault reset functionality by pressing "OK" button 5s on HMI.

New parameter allowing inhibition of fault related actions

Addition of a new Excitation Chain fault that monitor the real excitation current value with the expected one.

These improvements make system diagnostics more powerful, readable, and customizable.

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2.3 Communication Interfaces (HMS-Profibus, Ethernet)

Significant communication-layer improvements:

Full compatibility with M40 HMS modules

Correction of a Profibus cyclic parameter activation bug

Web server reports now when write operations are blocked when the D700 is configured in write lock status.

2.4 EEPROM and Memory Management

Memory operations were optimized for speed and endurance:

New incremental save mechanism (only modified parameters are written)

Improved handling of long strings sent in multiple segments

EEPROM address map updated for HMS compatibility

Several initialization fixes preventing possible write failures

These updates significantly increase memory reliability and reduce communication dropouts.

2.5 Regulation Systems (Voltage / PF / KVAR / SoftStart / Redundancy)

Enhancements across regulation modules include:

Addition, start on threshold mode

Addition, possibility to disable fault protection with field current regulation mode

Grid PF regulation now runs in cascade with generator KVAR regulation

Optional ability to start in manual mode without frequency detection

Updated default PID parameters for PF and GridCode modes

Improved handling of quality-factor update inhibition in redundancy mode

Improvement of communication in redundancy mode

Redundancy mode locked

Addition, second configuration

2.6 HMI and Database Improvements

User interface and data structure adjustments:

Correct display of accented characters

More configurable 2 monitors screens (via EasyReg Advanced)

Correction of setpoint display issues (e.g., PFgrid)

Addition, temperatures monitor page

2.8 Data Logger Reliability

Multiple fixes ensure stable logging behaviour:

Logger starts improvement after USB/24V power cycles

Correct operation after repeated power toggling

Data is now properly saved even during sudden power loss

3. Compatibility Notes

EEPROM layout modifications may cause older units to reinitialize unused memory areas after update.

4. Conclusion

Version V1.3.0 delivers major improvements in:

- Reliability
- Control accuracy
- Communication stability
- Fault diagnostics
- User experience

It consolidates more than two years of continuous enhancements and prepares the firmware for future functional expansions.

This new firmware can be uploaded directly to your D700 by using the EasyReg Advanced application. Please contact technical support for further information.

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