

AC10 4.xx Release Note

This firmware is only suitable for IP66 AC10s. These have the following product codes:

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| 16G-XX-XXXX-XX |
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Available releases

| | F105 | F770 | DSElite | Templates |
|----------------|-------|-------|---------|---|
| 4.32 (patch 2) | 4.32 | 4.322 | ✓ | V432_DFT.A10; V432_AM.A10; V432_PID.A10; V432_PRS.A10; V432_RL.A10 |
| 4.32 (patch 1) | 4.32 | 4.321 | | |
| 4.32 | 4.32 | 4.320 | | |
| 4.31 (patch 3) | 4.31 | 4.313 | ✓ | V431_DFT.A10; V431_AM.A10; V431_PID.A10; V431_PRS.A10; V431_RL.A10 |
| 4.31 (patch 2) | 4.31 | 4.312 | | |
| 4.27 | 4.27 | -- | | V427_DFT.A10 |
| 1.12 | 1.12 | -- | ✗ | ** can be upgraded to 4.31 ** |
| 1.04 (patch 4) | 1.044 | -- | | ** <u>cannot</u> be upgraded either to 1.12 or 4.31 ** |
| 1.04 (patch 2) | 1.042 | -- | | |

Release Details

4.322 (4.32 patch 2) *latest*

Bugs fixed:

- 1) Default values for European mains supply adapted
- 2) F930 = 1 sometimes led to communication timeout error (CE1)

4.321 (4.32 patch 1)

Bugs fixed:

- 3) Bug Fix in new estimator for PMAC improvements
(*bug introduced in 4.32 release with new PMAC control functionality*)

4.32

New features:

- 1) Improved PMAC control with additional “advanced” parameters:
 - (F883) CURRENT LOOP Kp
 - (F884) CURRENT LOOP Ki
 - (F479) ESTIMATOR Kp
 - (F480) ESTIMATOR Ki
- 2) New feedback diagnostic for Sensorless Vector Control:
SVC SPEED FEEDBACK (FG16)
- 3) Existing parameters that can now also be changed on-the-fly. Previously only changeable when motor stopped.
 - (FC00) TORQUE CONTROL MODE - switching between speed control and torque control
 - (F822) SVC CURRENT LIMIT

Bugs fixed:

- 1) Positive Low Limit configuration of the PID block led to unexpected output value

4.313 (4.31 patch 3)

Bugs fixed:

- 4) Corrected current display and auto-tuning for frame 6 (75kW and 90kW).

4.312 (4.31 patch 2)

Bugs fixed:

- 1) Remote Setpoint sign ignored when RUN signal from SEQUENCING LOGIC block
(bug introduced in 4.311 release, was OK in 4.31)

4.311 (4.31 patch 1)

Bugs fixed:

- 1) VALUE FUNC OFF DELAY and ON DELAY not initialised correctly, so timing immediately after power-up may be wrong.
- 2) LOGIC FUNC LATCH, input is inverted.
- 3) Analog input scaling etc. did not affect AI1 (FK54) and AI2 (FK55).
- 4) VALUE FUNC $((A*B)/100) + C$ calculation not working.
- 5) Raise/Lower Block Inputs (Raise, Lower, Reset) not persistent.
- 6) SEQUENCING LOGIC Run Reverse runs forward when latched (Not Stop = TRUE).
- 7) SEQUENCING LOGIC Reverse does not change sign of setpoint when (F207) Select = "Z".
- 8) SEQUENCING LOGIC Power-Up Start ignored.
- 9) Switches off if Speed Setpoint is below 0.1Hz

4.31

New features, including full DSElite support:

- 1) New Sequencing Logic block to allow run/stop commands from the block diagram.
- 2) New PID block to allow setpoint and feedback to be derived from block diagram as signed values. This is the same as the AC650 PID.
- 3) New Raise/Lower block, not hard-wired to the DIGITAL (keypad) reference. This is the same as the AC650 RAISE/LOWER.
- 4) Additions to Multi-Stage Speed Control to allow block diagram connectivity.
- 5) Additions to Ramp to allow block diagram connectivity
- 6) Additions to Analog Input 1, Analog Input 2, Analog Output 1 and Analog Output 2 to allow easier, more consistent, block diagram connectivity.
- 7) FILTER and DX/DT added as new VALUE FUNC TYPES. Same as AC650.
- 8) IP20 remote keypad supported.

The built-in applications. BASIC, AUTO/MANUAL, PRESETS, RAISE/LOWER and PID, are now provided as DSE Lite default templates. The F228 Application Selection will not need to be used.

The firmware is backward compatible with existing applications, i.e. no existing features are removed.

Bugs fixed:

- 1) VALUE FUNC MINIMUM PULSE not working.

4.27

New features:

- 1) Limited support for DSE application added consisting of VALUE FUNC, LOGIC FUNCS, MULTIPLEXER, DEMULTIPLEXER, PRESETS and LINKs.

1.12

No DSE support. Upgrade to the latest. Note: IP66 keypad may also need to be upgraded to operate correctly with firmware version 4.xx

1.044

No DSE support. Cannot be upgraded.

- 1) Fixed occasional failure to memorize current when Over-Current trip (OC) occurs.

1.042

No DSE support. Can only be upgraded to 1.044

- 1) Maximum Frequency limited to 590Hz.

Updated 11/03/19