AC10 2.xx Release Note

This firmware is only suitable for AC10 IP20 0.2kW~22kW (excluding 3Ph 230V 4kW~15kW). These have the following product codes:

10G-X1-XXXX-XX
10G-X2-XXXX-XX
10G-43-XXXX-XX
10G-44-XXXX-XX
10G-45-XXXX-XX

Available releases

	F105	F770	DSElite	Templates
2.33 (patch 1)	2.33	2.331	✓	V233_DFT.A10; V233_AM.A10; V233_PID.A10; V233_PRS.A10; V233_RL.A10
2.33	2.33	2.330		
2.32 (patch 2)	2.32	2.322		V232_DFT.A10; V232_AM.A10; V232_PID.A10; V232_PRS.A10; V232_RL.A10
2.32 (patch 1)	2.32	2.321		
2.32	2.32	2.320		
2.31 (patch 2)	2.31	2.312		V231_DFT.A10; V231_AM.A10; V231_PID.A10; V231_PRS.A10; V231_RL.A10
2.31 (patch 1)	2.31	2.311		
2.31	2.31	2.310		
2.27	2.27	--		V227_DFT.A10
2.11	2.11	--	✓✖	V2_DFLT.A10 (very limited functionality)
2.10	2.10	--		

Release Details

2.331 (2.33 patch 1), *latest*

Bugs fixed:

1) V/Hz protection mode F607 is switched off per default instead of current / voltage limitation (= 3). Voltage limitation might lead to unexpected behaviour with 480V power supply, e.g. high voltage during stop phase or at the end of acceleration phase. (Motor is running with max speed +5Hz in this case, it's only possible to stop the motor with Stop key pressed for 3sec.)
   If the protection mode is needed for the application, it must be activated by parameter F607.

2.33

New features:

1) Microcontroller is obsolete, therefore the microcontroller was changed from ST to ARM type. New firmware is compatible with old ST and new ARM microcontroller.

2.322 (2.32 patch 2)

New features:

1) Raise Lower Output FK28 is persistent.
2) Speed Trim Input (FK06)

Bugs fixed:

1) Direct connection between AI1/AI2 and AO1/AO2 is now working (F431 / F432 = AI1 / AI2).
2) PCE-Trip is added to error history.
3) DSE LINK values clamped to destination limits (have been rejected before, if values have been out of range)
4) Run-Signal now aborts DC-Brake Sequence.

5) DC brake was not running in mode F208=1.

2.321 (2.32 patch 1)

Bugs fixed:

1) Torque Limitation: For torque limits below 16%, the motor did not start
2) Positive Low Limit configuration of the PID block led to unexpected output value

2.32

New features:

1) Extra 10 LINKs. Now a total of 40 available.
2) Improved PMAC control with additional “advanced” parameters:
   (F823) CURRENT LOOP Kp
   (F825) CURRENT LOOP Ki
   (F479) ESTIMATOR Kp
   (F480) ESTIMATOR Ki
   (F475) POSITION OFFSET
3) New feedback diagnostic for Sensorless Vector Control:
   SVC SPEED FEEDBACK (FG16)
4) Existing parameters that can now also be changed on-the-fly. Previously only changeable when motor stopped.
   (FC00) TORQUE CONTOL MODE - switching between speed control and torque control
   (F152) VOLTAGE AT BASE FREQUENCY
   (F822) SVC CURRENT LIMIT

2.312 (2.31 patch 2)

Bugs fixed:

1) Remote Setpoint sign ignored when RUN signal from SEQUENCING LOGIC block
   (bug introduced in 2.311 release, was OK in 2.31)
2) (F122) INHIBIT REVERSE ignored
3) DC Injection Braking should only be applied when stopping, not when changing direction

2.311 (2.31 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
10) IP20 Keypad version 1.6 incompatibility.

2.31

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) IP66 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.

2.27

1) Limited support for DSE application added consisting of VALUE FUNC, LOGIC FUNCS, MULTIPLEXER, DEMULTIPLEXER, PRESETS and LINKs.IP20 remote keypad supported.

2.11, 2.10

May be parameterised using DSE. No DSE blocks and no LINKs.

Updated 26/04/22