Firmware Release Log

NFO Sinus Optimal

Firmware Releases

The current application firmware version of DSP (motor control), COP (communication and process control) and GUI (user interface) are shown on inverter's display during start-up, and can be viewed in parameter group Versions at any time. For update of firmware, please refer to instruction 190010_Optimal_Fw_Update_Guide available at www.nfodrives.se

Version	Date	Release note
5133	2026-11-06	General update: • Improved measurement accuracy of voltage for full tuning functionality.
5132	2026-10-15	General update: Update for 11kW and 18.5kW models associated with production test and ability to automatically use basic tuning when full tuning is not suitable.
5131	2026-09-03	Market request update: • Add selectable option "Energy" to relay output functions, which when activated will issue pulses at a selectable rate of one pulse per 1Wh, 10Wh, 100Wh or 1kWh.
5130	2026-08-17	Market request update: • Lower minimum limit of acceleration ramp from 0.5 to 0.2 seconds. General update: • Adapt read/write permissions of selected parameters for production test. Show one decimal for voltage values.
5129	2026-04-30	Market request update: • Suppress start if not tuned. Fail LED is lit up and status message "Start inhibit" appears on display for a few seconds, if attempt to start without performed tuning.
5128	2026-01-27	General update: • Update specific default values and min/max limits of parameters for 11kW model. Update internal test point usage for factory test and monitoring.
5127	2025-11-10	Improvement: • Add ability to inhibit any type of bus master (e.g. Modbus, Profibus, Profinet) from gaining control over inverter and putting it into Bus Mode. This is done by either activating a configurable terminal input, or by configuring the priority of the local MAN/AUTO button versus commands received through bus communication.
5126	2025-09-16	General update: • Change usage of test point signals for monitoring during functional test. Less restrictions on bit set/clear sequence in Profidrive control word.
5125	2025-06-02	General update: • Controlling fan startup throttle setting for 5,5kW model. Further customizations of parameter default values.
5124	2025-03-31	Improvement: • Correct detection of communication timeout on USB and RS485 channels when used together with Auto Stop option.
5123	2025-03-21	General update: • Production release with full support for 5.5kW and 18.5kW models. Presetable max fan speed, customizations of specific parameter default values.
5122	2024-10-22	Improvement: • Better accuracy in motor overload estimation calculation, when using together with parameter ForceCool.
5121	2024-09-20	Market request update: • Add parameters for implementing a detector that raises an alarm condition when PI regulator is running at full throttle but still unable to reach setpoint. • Add parameter for adjusting response time of PI regulator Turn off / Turn on logic. • Add parameter for selecting threshold level of ground fail current during operation.

		Improvement: • Inhibit detection of AC-fail if operating below DC low nominal, to suppress unwanted AC fail while surviving blackout on DC low control from high inertia load. • Adjust default accel./decel. ramps for application "Ventilation/Other", for smoother performance on models in range 5.5kW – 18.5kW.
5120	2024-05-31	Market request update: • Add parameters to list of cyclic communication with ABCC module when using Profibus or Profinet. Improvement: • Update GUI texts to “Imagn Fail” and “Analog Fail” for better readability. • Parameter update for p/n NFO4A4E3580D related to input current measurement.
5119	2024-04-24	Improvement: • Update NfoClassic communication protocol implementation with correct response when reading/writing specific 32 bit parameters. Modbus correction when writing specific 16 and 32 bit values in transmissions where Modbus Master uses a register length that is less than parameter.
5118	2024-02-16	Improvement: • Events detected by DSP with error type *Indication* are also written to error log.
5117	2024-02-02	Improvement: • Forward compatibility with future parameters and voltage levels.
5116	2024-01-16	Correction: • Some GUI menu items in Temperature menu could show erroneous values or cause spontaneous navigation change to run screen.
5115	2023-12-11	Market request update: • For Modbus communication over RS485 and USB: Remove restriction to read or write only one ADI parameter (1 – 4 Modbus registers) on each data transfer. Increase buffer sizes to allow up to 16 ADI parameters (64 consecutive Modbus registers) read or write in one transmission.
5114	2023-12-01	Improvement: • Production test functionality and parameter updates for p/n NFO4A4E3580D. Correction: • On RS485 communication channel, using 9600 bps or lower speeds, the minimum packet interval time was to low and could cause spurious communication errors.
5113	2023-11-10	Improvement: • Update default parameter for p/n NFO4A4E3580D. • Retain current tuning status when updating from 5110 and all previous versions. Tuning status when updating from 5111 – 5112 will instead be NotTuned.
5112	2023-10-31	Correction: • GUI submenu CurrLow was blank due to missing initializer.
5111	2023-10-30	Improvement: • Support for new product p/n NFO4A4E3580D (1.5kW 230V) Correction: • Safe Torque Off related parameters now receives their correct default values also if a firmware update is performed from a previous version older than 5110, without the need of performing a factory reset.
5110	2023-10-05	Market request update: • Updated settings which are enabled when selecting application type (from v.5108) Improvement: • Handles adjustable compensation limits for current sensors in production test.
5109	2024-02-16	Improvement: • Events detected by DSP with error type *Indication* are also written to error log.
5108	2023-08-23	Market request update: • Firmware branch based on version 5106 with additional and updated custom settings which are enabled when selecting application type OEM Vacuum Pump.
5107	2023-08-14	New functionality: • Firmware with support for control board article no 201700 including: • Safe Torque Off • Configurable digital input functions • Software configurable analog voltage/current inputs

		• Fire mode • Digital increment/decrement of fixed setpoint • Backward compatible with control board 201400

5106	2023-03-29	Correction: • Update AnyBus Compact Com variable map according to order of appearance in corresponding .gsd-file for use with ABCC M30 communication modules. • Add single fault tolerance for internal communication to cover for occasional missed packets which could occur when using AnyBus Compact Com M40 modules. • GUI error log view screen now displays negative frequencies and negative active power correctly in alarm detailed information.
5105	2023-02-08	Improvement: • Await engagement of mains power soft start relay before performing internal cooling fan spin-up after power on, which is useful for units with additional external load connected to inverter's 24V supply to reduce risk of power surge at start up. • Faster execution of saving internal data to non-volatile memory at power down, for better accuracy at power blackouts. • Raise default thresholds levels for internal high voltage detection, for additional headroom when used on 480Vac supplies. • Improve filtering of unstable RUN signal from digital input that may interrupt power stage start up and pre magnetization at beginning of a run sequence. • Update/corrections of parameter name definitions in AnyBus communication stack, used in web page access through Profinet connection. • Pre-set filter variables for switching frequency
5104	2022-10-04	Adaptation: • The tolerance of internal clock oscillator in DSP, which is used when erasing flash memory during firmware update, was found to vary more than anticipated. For some DSP chips with slow oscillator, the delay in COP and GUI was not sufficient. This delay time is now increased. For correct firmware update when going from [5100...5103] → 5104 the sequence must be first COP, then GUI, and lastly DSP.
5103	2022-09-28	Improvement: • If installer fails to set *Application type* at first power up after installation of the unit, a correct tuning will set Application to *Ventilation/other*, thereby omitting the need for user to deal with the Application select pop-up screen next time power is applied. • Added tuning command *Confirm* to let installer or user confirm motor parameters without actually performing a tuning. Correction: • If firmware was updated from 5100 to 5102 (skipping 5101), the user needed to perform a factory reset for parameters from 5101 get their correct default values.
5102	2022-08-19	Improvement: • Wider min/max range of motor parameter *sigma* which is calculated and evaluated during tuning. This is mostly needed for motor types with $\cos\varphi \geq 0.85$. Correction: • When error log is viewed in GUI display and timestamp is ≥1000 h, the line was previously shown with an unwanted linefeed which made the display look garbled.
5101	2022-05-25	Market request update: • Selectable analog output ranges (0-10V, 2-10V, etc.) for voltage/current outputs. • Improved scaling of analog output voltage when selecting I_{RMS} or P_{OUT} for output. • Default (selectable) limitation of setpoint to 50 Hz when running in manual mode. • Option to show setpoint and actual value in % instead of Hz. • Improved accuracy for PI-reg process regulator when regulating on low values.
5100	2021-11-22	First release of product application firmware ver 5100.