ENGINEERING
TOMORROW

Danfoss

Technical Paper

Overview – Danfoss Link™ and *living* software versions

Danfoss Link™ CC Mk II (with miniSD card) software

Version Number	Release Date	Changes and New Features
Version 2.1.35	01-12-2010	The initial Danfoss Link™ CC software: • Supports all features from the original Devilink™ software. • New functionality providing control of *living connect*® radiator thermostats, Danfoss Link™ HC (Hydronic Controller) and Danfoss Repeater Unit (CF-RU). • Includes a Danfoss Design Line background as default skin setting.
Version 2.3.27	04-10-2011	• Austria, Belgium and Switzerland added in the Country List. • Flush functionality to force *living connect*® and TWA actuators fully open in order to flush and remove air in the system. • Control of Thermia and Danfoss Heat Pumps with DCM02 (code no. 086L0474). • Support of Danfoss Link™ BR (Boiler Relay) - only Automatic On/Off control is supported. *Note: It is recommended to use software version 2.4.51 or later for boiler control.*
Version 2.4.51	20-03-2012	• Support of Danfoss Link™ BR with TPI (Time Proportional Interval) control. A duty cycle is calculated by the Danfoss Link™ CC and is used to control the boiler. • Improved network test to make sure that there is sufficient signal strength between to/from the devices communicating with the Danfoss Link™ CC. The requirements for getting a valid and positive network test is higher than in the previous software versions. • Disable rooms for cooling (via a Danfoss Link™ HC). If the consumer uses his hydronic floor heating to cool down the house during warm days the disabling function makes it possible to deselect single rooms and keep a higher temperature in some rooms. Rooms not selected for cooling are not heated. The Danfoss Link™ HC can only be in heating mode or cooling mode, but it is possible to enable different modes for the different Danfoss Link™ HCs in the same Danfoss Link™ system. • User selectable load management on a Danfoss Link™ HC where it is possible for the user to select between "Spreading" and "Stacking" for Danfoss Link™ HC load management. When spreading is enabled the Danfoss Link™ HC will spread the load of hot water between the TWA. A feature also known from CF2+. • Turkey added in the Country List.
Version 2.5.57	12-06-2012	• Remote sensor support, so temperature control using *living connect*® and Danfoss Link™ RS can be configured for special heating needs. • External Away functionality: Support of Danfoss Link™ SCM (Simple Communication Module). The Danfoss Link™ SCM can wirelessly enable and disable Away mode (Holiday mode) on the Danfoss Link™ CC. Danfoss Link™ SCM will be introduced in September/October 2012. • The Away icon (suitcase) is only displayed for 10 minutes to avoid showing that nobody is at home. After 10 minutes the normal standby screen with the clock is shown.
Version 2.7.42	01-02-2014	• During installation in a room with both *living connect*® and Danfoss Link™ RS, the user will be prompted to select "Visible" or "Covered" radiators. This only applies if there's no *living connect*® with version 2.06 in the room. The existing radiator mode "Trench" will no longer be available and in systems with this setting, it will be changed from "Trench" to "Covered" upon upgrading the software on the Danfoss Link™ CC. • During installation the user will be prompted to select Moderate or Quick heating control after adding the last *living connect*® or Danfoss Link™ RS to the room. This only applies if there's no *living connect*® with version 2.06 in the room. In rooms with *living connect*® 3.04 it only applies if the room has a Danfoss Link™ RS. • Improved room sensor application. • Improved network test algorithm. • Added set-point functionality, so the user can select whether or not a change to a set-point in economy and/or comfort modes should be saved for next economy/comfort period in the room. • Italian language added.

Danfoss Link™ CC Mk III (with USB) software

Version Number	Release Date	Changes and New Features
Version 3.0.12	09-09-2013	• New faster hardware with USB-port for software upgrades. • Added Setpoint Memory functionality, so the user can select whether or not a change to a setpoint in economy and/or comfort modes should be saved for next economy/comfort period in the room. • Support for Danfoss Air units.
Version 3.1.42	01-02-2014	• During installation in a room with both *living connect*® and Danfoss Link™ RS, the user will be prompted to select "Visible" or "Covered" radiators. This only applies if there is no *living connect*® version 2.06 in the room. The radiator setting "Trench" will no longer be available and in systems with this setting, it will be changed from "Trench" to "Covered" upon upgrading the software on the Danfoss Link™ CC. • During installation the user will be prompted to select "moderate" or "quick" heating control after adding the last *living connect*® or Danfoss Link™ RS to the room. This only applies if there is no *living connect*® version 2.06 in the room. In rooms with *living connect*® version 3.04 it only applies if there is a Danfoss Link™ RS in the room.

Version 3.2.4	29-05-2014	• Added support for Danfoss Link Gateway
		  • DLG v. 1.01 can be connected to the Danfoss Link CC if connected to the ECL 110.
		• Integration with ECL 110 Comfort Weather Compensator
		  • ECL 110 can be connected using the Danfoss Link Gateway.
		  • ECL 110 outdoor temperature statistics are available on the Central Controller.
		  • ECL 110 is activated when flushing.
		• ECL 110 is controlled based on system demands
		  • ECL is automatically adjusted based on system demands and schedule.
		  • ECL temperatures are reduced when there is no need for heating in system.
		• ECL 110 alerts and issues are displayed on the CC
		  • Alert is displayed if return temperature is too high for a period of 2 hours.
		  • Alerts are displayed if sensors or sensor cables are faulty.
		• Various bug fixes.

Version 3.3.1	17-11-2014	• Improvements on Heat Pump integration
		  • It is possible to exclude rooms for heat pump optimization.
		  • Increases of heat pump curve is logged
		  • System informs about rooms, which causes problems for the heat pump optimization.
		• ECL 110 complete language pack
		• Various bug fixes

Danfoss Link™ CC Mk IV (with Wi-Fi connectivity) software

Product Code	Name	Description

Version 4.0.12	01-07-2015	• New hardware with build in Wi-Fi module
		• App connectivity
		• Automatic software update
		• Added Living Zone functionallity - Multiple rooms with the same weekly schedule
		• The following terms have been changed:
		  • Comfort to At Home
		  • Economy to Away/Asleep
		  • Away to Vacation
		  • Frost Protection to Pause
		• Added functionality of room temperature visible for rooms with living connect only
		• Historic Alarms - in the service area it's possible to see either the active alarms or a log of historic alarms
		• Added functionality of alarms marked as read meaning that if all alarms are read, the yellow exclamation mark no longer appears on the screensaver.

Version 4.0.13	13-07-2015	• Translation fixes for the following languages: Danish, Estonian, German and Swedish.
Version 4.0.36	19-10-2015	• Improved Wi-Fi functionality • Better Wi-Fi status overview • New feature added - Link CC automatically reconnects to a router if it has been turned off and on again • Improved translations for all languages

Danfoss Link™ Heat Pump kits

Product Code	Name	Description
086L2381	Danfoss Link™ 2.1 HP kit	Heat pump integration kit, for integration with Danfoss Link™ CC. Supports Danfoss DHP OPTI-range produced from year 2009, from software version 1.34.
086L2383	Danfoss Link™ 2.1 kit AQ	Heat pump integration kit, for integration with Danfoss Link™ CC. Supports Danfoss DHP AQ-range from software version 2.2.

Danfoss Link™ Air Unit Integration

Version Number	Release Date	Description
CCM 2.07	09-2013	CCM unit, for integration with Danfoss Link™ CC. Supports Danfoss Air Units A2, A3, W1, W2.

Danfoss Link™ Gateway for ECL

Product code	Release Date	Description
087H3241	05-2014	Danfoss Link™ Gateway (DLG) for ECL integration. Supports ECL Comfort 110.

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Danfoss Link™ Compatibility Overview

Legend: 🟢 = compatible (green), 🔴 = not compatible (red), numbers refer to Notes below.

	Danfoss Air Unit older than Sept. 2013	Danfoss Air Unit newer than Sept. 2013	Danfoss Heat Pump older than 2009	Danfoss Heat Pump DHP OPTIrange after 2009 SW v1.24 ->	Danfoss Heat Pump DHP-AQ SW v2.2 ->	*living connect®*	*living eco®*	Danfoss Link™ HC	Danfoss Link™ RS	Danfoss Link™ FT(S)	Danfoss Link™ HR	Danfoss Link™ PR	Danfoss Link™ BR	CF-RU	Danfoss Link™ MPB (incl. Danfoss Link™ SCM)	Danfoss Link™ SCM	Danfoss Link™ Gateway for ECL	Built-in Wi-Fi module and App connectivity
Danfoss Link™ CC SW v2.1.35	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🔴	🟢	🔴	🔴	🔴	🔴
Danfoss Link™ CC SW v2.3.27	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢 (3)	🟢	🔴	🔴	🔴	🔴
Danfoss Link™ CC SW v2.4.51	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴	🔴
Danfoss Link™ CC SW v2.5.57	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Danfoss Link™ CC SW v2.7.42	🔴	🔴	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Danfoss Link™ CC SW v3.0.12	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Danfoss Link™ CC SW v3.1.42	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Danfoss Link™ CC SW v3.2.4	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🔴
Danfoss Link™ CC SW v3.3.1	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴
Danfoss Link™ CC SW v4.0.12	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Danfoss Link™ CC SW v4.0.13	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Danfoss Link™ CC SW v4.0.36	🟢 (1)	🟢	🔴	🟢 (2)	🟢 (2)	🟢	🔴	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢

Notes:
1. Requires that CCM is version 2.07 or newer.
2. Separate heat pump kit required *(see section: "Danfoss Link™ Heat Pump kits" for product code)*.
3. Update to software version 2.4.51 or later for optimized boiler control *(see section: "Version 2.3.27")*.

*If your DHP-AQ software is older than 2.2., please contact your installer in order to change the display card.

living connect® software

Version Number	Release Date	Changes and New Features
Version 1.06	12-07-2010	• The first batches of *living connect*® are marked with SW 1.06, but the software version is actually version 2.06.
Version 2.06	11-03-2011	• The initial software for *living connect*® - can be controlled by Danfoss Link™ CC or by a 3rd party Z-wave controller.
Version 3.02	25-05-2012	• Standard Z-wave functionality removed, meaning that *living connect*® no longer can be controlled by a 3rd party controller. • Improved (quicker) temperature control. • Works also in covered radiator applications (this requires use of Danfoss Link™ CC with software version 2.5.57 or later - temperature control in Installation Mode must be set accordingly).
Version 3.04	04-11-2012	• Valve exercise function changed to minimize the risk of motor stalling.
Version 4.02	01-02-2014	• Heating control include capability to select between Moderate (no overshot on room temperature, low return temperature) and Quick (fast reaction with room temperature overshot, high return temperature). Heat control is selected from Danfoss Link™ CC. • Improved room sensor application. • New motor design with modification to software.

living connect® Z software

Version Number	Release Date	Changes and New Features
Version 2.50		• Includes standard Z-wave functionality, but can not communicate with Danfoss Link™ CC. • Improved (quicker) temperature control.
Version 2.51		• Valve exercise function changed to minimize the risk of motor stalling.
Version 1.00	01-01-2014	• New code number: 014G0013 • Z-wave module updated to version 4.55 • Quick guide updated
Version 1.01	07-03-2014	• Faster heat response with manual interactions. • General PID improvements • New motor design

Overview of differences between *living connect*® and *living connect*® Z

Feature	*living connect*® old 014G0002	*living connect*® new 014G0002	*living connect*® Z 014G0012 / 13
SW version	2.06	3.02 / 3.04 / 4.02	2.50 / 2.51 / 1.00 / 1.01
Z-wave protocol	Yes	No	Yes
To be controlled by Danfoss Link™ CC	Yes	Yes	No
To be controlled by 3rd party	Yes	No	Yes
Hidden radiator application	No	Yes	No
Temperature control algorithm	Good	Better	Better

living eco® software

Version Number	Release Date	Changes and New Features
Version 1.12	12-07-2010	• Initial software version for *living eco®*.
Version 1.13	19-09-2011	• Fixing leap year problem.

Version 1.14	07-11-2011	• Display improvements:
		  • Extra clock numbers and dots in display.
		  • Saving period is no longer highlighted as an empty box in the "wheel".
		  • When turning the thermostat to MAX or MIN the according icon is displayed.

Version 1.15	24-07-2012	• Child lock preserved during battery change. • Optimized constants for PID control. • Adaptive learning (forecast) algorithm updated to latest version.
Version 1.19	19-11-2012	• Valve exercise function changed to minimize the risk of motor stalling. • Optimized constants for PID control. • Adaptive learning (forecast) algorithm updated.
Version 1.20	01-06-2013	• No functional changes, from customer point of view. • Orientation functionality is changed, ensuring that *living eco®* cannot accidentally be programmed to vertical.
Version 1.22	Not produced	• Special version with the Intelligent Control (Forecast) deactivated as default. Can be enabled by using the menu.
Version 1.24	01-02-2014	• Faster reaction to user change to set temperature. Changes of more than 1 °C and two consecutive changes within two hours are considered a big change and will result in immediate reaction. • Frost protection changed to an individual programme. • Heating control include capability to select between Moderate (no overshot on room temperature, low return temperature) and Quick (fast reaction with room temperature overshot, high return temperature). Heat control is selected in the Advanced Menu by choosing Hc. • Behaviour at low battery is changed, the unit displays the word "SAFE" when the batteries have reached critical voltage. The Frost protection icon is no longer shown in this situation.
Version 1.25	01-02-2014	• Special version with the Intelligent Control (Forecast) deactivated as default (can be enabled by using the menu). • Quick Heating Control is activated as default.
Version 1.26	13-03-2014	• Replaces version 1.24. • New motor design.
Version 1.27	25-02-2014	• Replaces version 1.25. • New motor design.