



Danfoss Link HC Hydronic Controller Installation Guide

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Danfoss Link HC Hydronic Controller



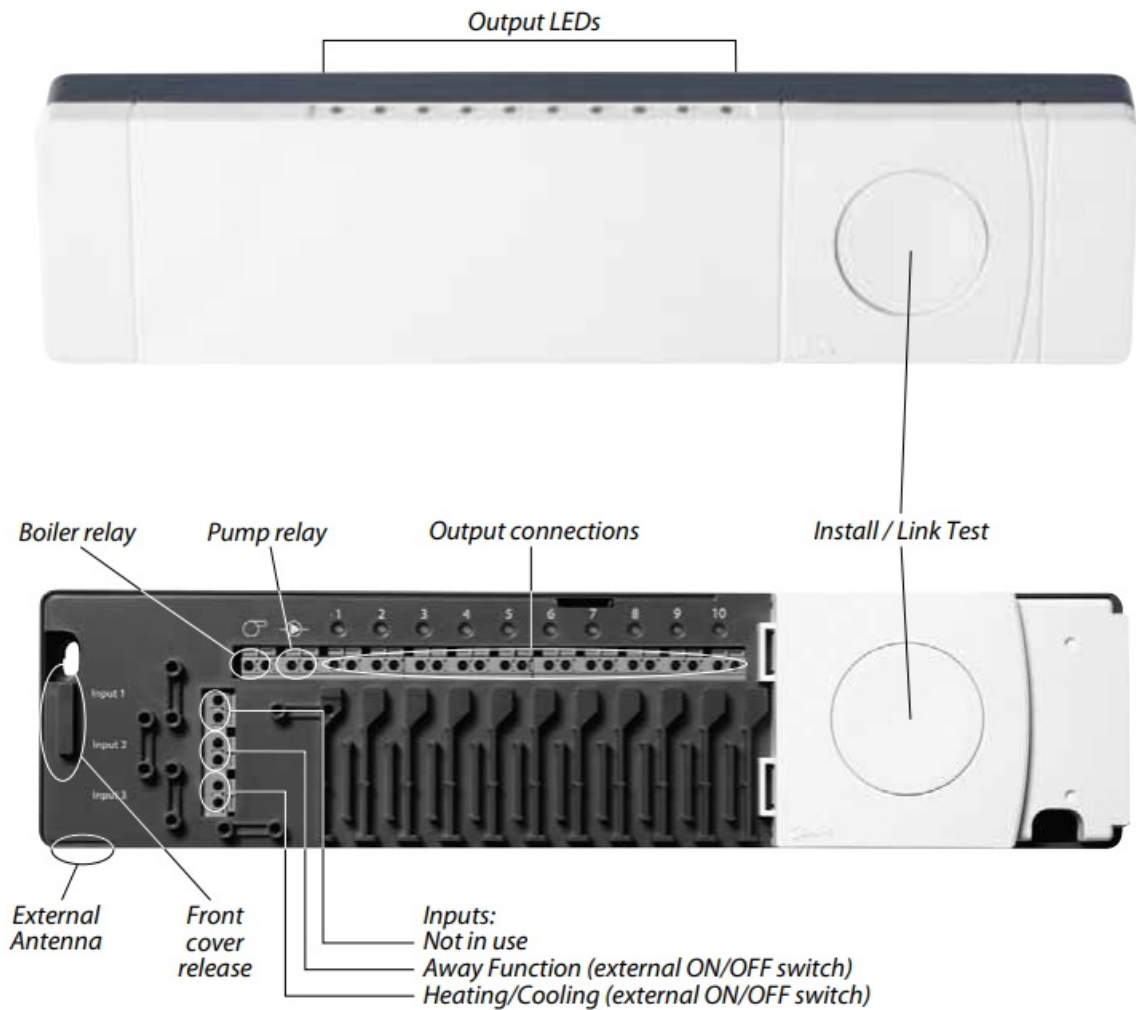
Specifications

- Product Name: Danfoss Link™ HC Hydronic Controller
- Wireless control system for various heating systems
- Allows wireless control of manifolds for water-based floor heating/cooling
- Output LEDs: Boiler relay, Pump relay, Output connections
- Features Install/Link Test, External Antenna, Front cover release
- Inputs: Away Function (external ON/OFF switch), Heating/Cooling (external ON/OFF switch)

Introduction

Danfoss Link™ is a wireless control system for a variety of heating systems.

The Danfoss Link™ HC (Hydronic Controller) is a part of this system allowing wireless control of manifolds for water based floor heating/cooling.



Mounting

The Danfoss Link™ HC should always be mounted in an horizontal upright position.

Mounting on wall



1. Remove front and side covers and mount with screws and wall plugs.

Mounting on DIN-rail



1. Mount DIN-rail parts.



2. Click on DIN-rail.



3. Release from DIN-rail.

Connections

Make sure that all connections to the Danfoss Link™ HC are completed, before connecting to a 230 V power supply.

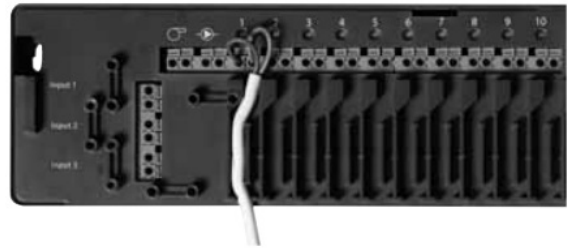
1. Connecting actuators (24 V)

If NC (normally closed) actuators are installed for ON/OFF regulation, no further actuator output configuration is needed.

2.



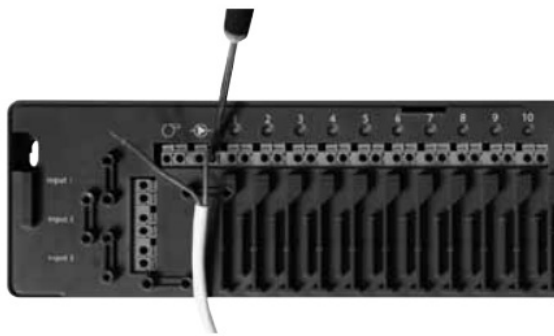
1. Connect actuator wires to an output.



2. Fix the cable.

Connecting pump and boiler controls

The relays for pump and boiler are potential free contacts and can thus NOT be used as direct power supply. Max. load is 230 V, 8 (2) A.



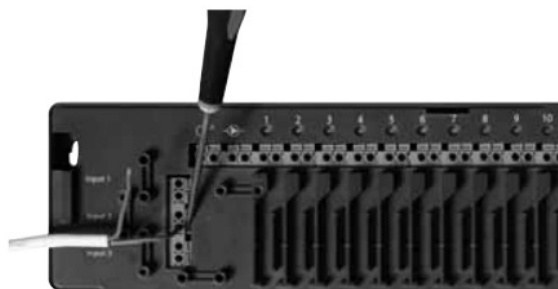
1. Connect wires for pump and boiler controls to their respective output.



2. Fix the cable.

3. Connections for Away Function

The Away Function ensures a set room temperature fixed at 15°C for all Room Thermostats, but it can be changed with the Danfoss Link™ CC.



1. Connect an external ON/OFF switch to the terminals for Away Function. When this switch is closed (ON) the system will override all room thermostat set points and change it to 15°C.



2. Fix the cable.

4. Connections for Heating & Cooling

When the system is in cooling mode the actuator output will be activated (ON for NC actuators / OFF for NO actuators) when the temperature in a room exceeds the set point.

When the system is in cooling mode an independent dew-point alarm function should be installed.



1. Connect an external ON/OFF switch to the terminals for Heating & Cooling. When this switch is closed (ON) the system will switch from heating to cooling.



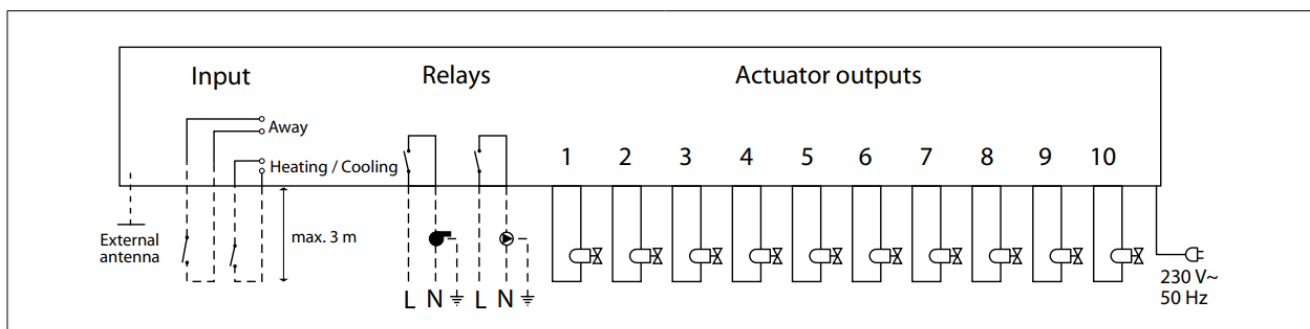
2. Fix the cable.

5. Power supply

When all actuators, pump and boiler controls and other inputs are installed, connect the supply plug to a 230 V power supply.

If the power supply plug is removed during installation, make sure that the connection is made according to existing law/legislation.

6. Wiring diagram



7. External antenne

The external antenna is installed as diverter when there is no transmission possible through a large building, heavy construction or metal barrier, e.g. if the Danfoss Link™ HC is located in a metal cabinet/box



1. Remove the plastic cover from the antenna connection.



2. Connect the external antenna and place it on the other side of the transmission barrier.

Configuration

1. Adding Danfoss Link™ HC to the system

Adding Danfoss Link™ HC to a system is made from the Danfoss Link™ CC Central Controller. For further information, see the Danfoss Link™ CC instruction manual: Configuration 7: Adding service devices.

2.

1. Select "Rooms and Devices".	2. Select "Add Service Device".	3. Select "Begin Registration".
4. Select Install / Link Test on HC.	5. If wanted, edit room name with the letter keys.	6. End with pressing "OK/Return".

Configure Danfoss Link™ HC

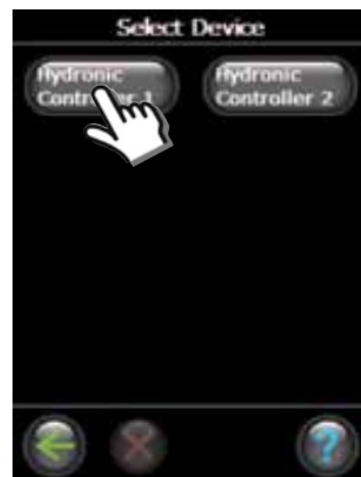
Configuration Danfoss Link™ HC to a system is made from the Danfoss Link™ CC Central Controller. For further information, see the Danfoss Link™ CC instruction manual: Configuration 7: Adding service devices.



1. Select "Rooms and Devices".



2. Select "Manage Devices".



3. Select device to configure.

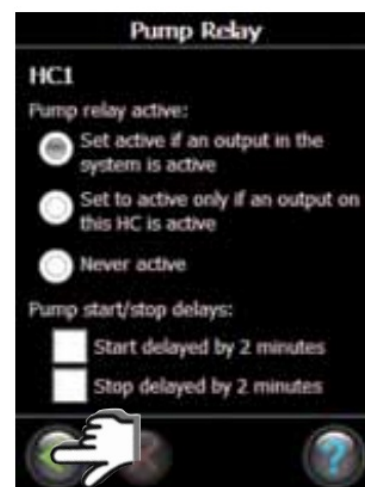
2a: Configure outputs



1. Select "Set up Relays".



2. Select "Boiler Relay" or "Pump Relay".



3. Choose your settings and press "OK/Return".

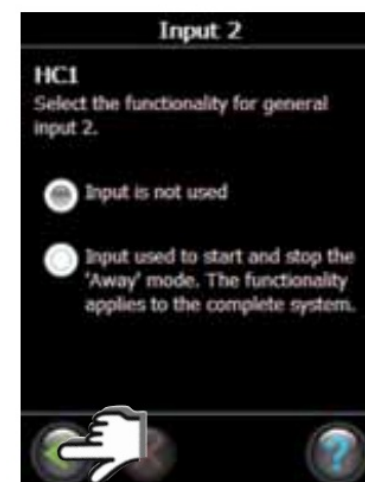
2b: Configure inputs



1. Select "Setup Inputs".



2. Select input to configure.



3. Choose your settings and press "OK/Return".

3. Add an output to a room

Configuration Danfoss Link™ HC to a system is made from the Danfoss Link™ CC Central Controller. For further information, see the Danfoss Link™ CC instruction manual: Configuration 7: Adding service devices.



1. Select "Room devices".



2. Select "Add a device".



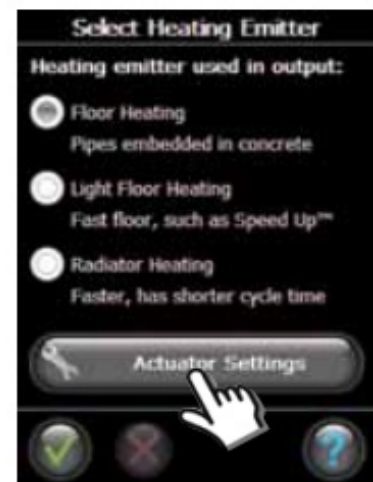
3. If Danfoss Link™ HC is installed, a selection screen appears.



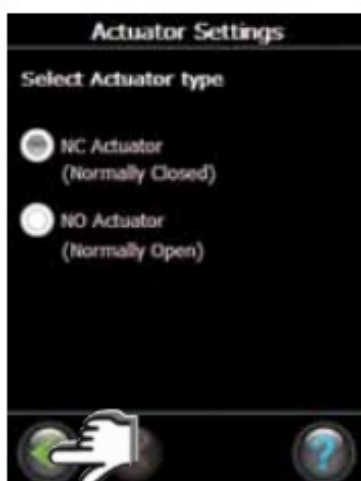
4. If more devices are installed, select a device.



5. Select output. Only available outputs are selectable.



6. Select heating emitter and press "Actuator Settings".

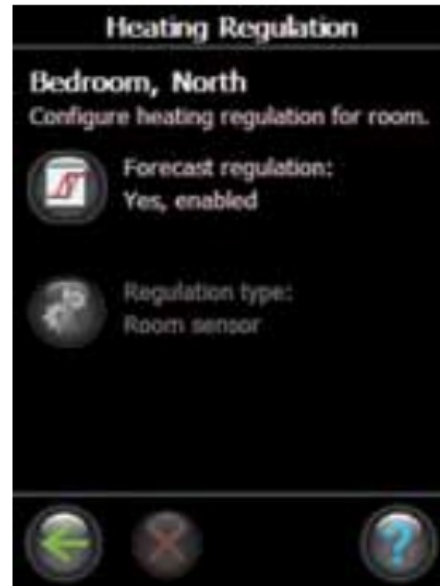


7. Select actuator type and press "OK/Return".

4. Configure a room



1. Select "Heating regulation".



2. Select type of regulation.

- **Forecasting method:**

by activation of the forecast method, the system will automatically predict the heating start-up time necessary to reach desired room temperature at desired time.

- **Regulation type:**

only in connection with electrical heating systems.

5. Remove an output



1. Select "Rooms and Devices".



2. Select "Manage Devices".



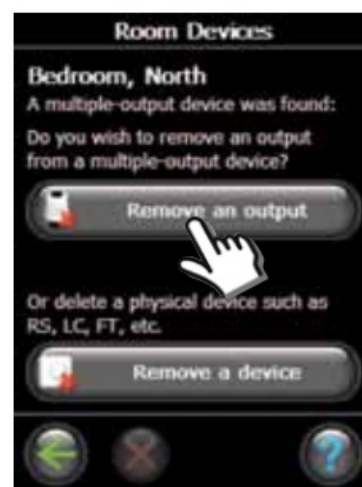
3. Select an existing room.



4. Select "Room devices".



5. Select "Remove a device".



6. Select "Remove an output".



7. Select "Yes, remove an output now".

6. Factory reset

- Disconnect the power supply for Danfoss Link™ HC.
- Wait for green LED to turn off.
- Press and hold the Install / Link Test.
- While holding the Install / Link Test, reconnect the power supply.
- Release the Install / Link Test, when the LED's are on.



Danfoss Link™
HC Install / Link Test

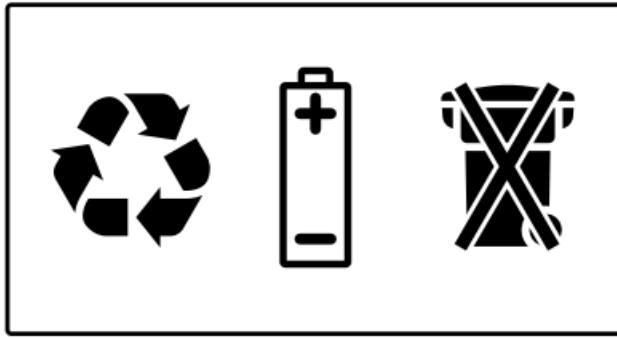
Troubleshooting

Degraded mode	The actuator will be activated with a 25% duty cycle, if the signal from the room thermostat is lost.
Flashing output / alarm LED(s)	Output or actuator is short-circuited or the actuator is disconnected.

Technical specifications

Transmission Frequency	862.42 Mhz
Transmission range in normal constructions	up to 30 m
Transmission power	< 1 mW
Supply voltage	230 VAC, 50 Hz
Actuator outputs	10 x 24 VDC
Max. continued output load (total)	35 VA
Relays	230 VAC / 8 (2) A
Ambient temperature	0 – 50°C
IP class	30

Disposal instructions



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FAQ


- **Q: Can the Danfoss Link™ HC control both heating and cooling systems?**

A: Yes, the Danfoss Link™ HC can control manifolds for both water-based floor heating and cooling systems wirelessly.

- **Q: What is the maximum load for pump and boiler controls?**

A: The maximum load for pump and boiler controls is 230 V, 8 (2) A.

Documents / Resources

	<p>Danfoss Link HC Hydronic Controller [pdf] Installation Guide AN10498646695101-010301, Link HC Hydronic Controller, Link, HC Hydronic Controller, Hydro nic Controller, Controller</p>
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References

-  [Danfoss Climate Solutions for heating | Efficient solutions for superior comfort | Danfoss](#)
- [User Manual](#)

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