

Danfoss
CF Wireless
Floorheating
Controller and
Room Thermostat



Danfoss CF Wireless Floorheating Controller and Room Thermostat Instruction Manual

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Danfoss CF Wireless Floorheating Controller and Room Thermostat

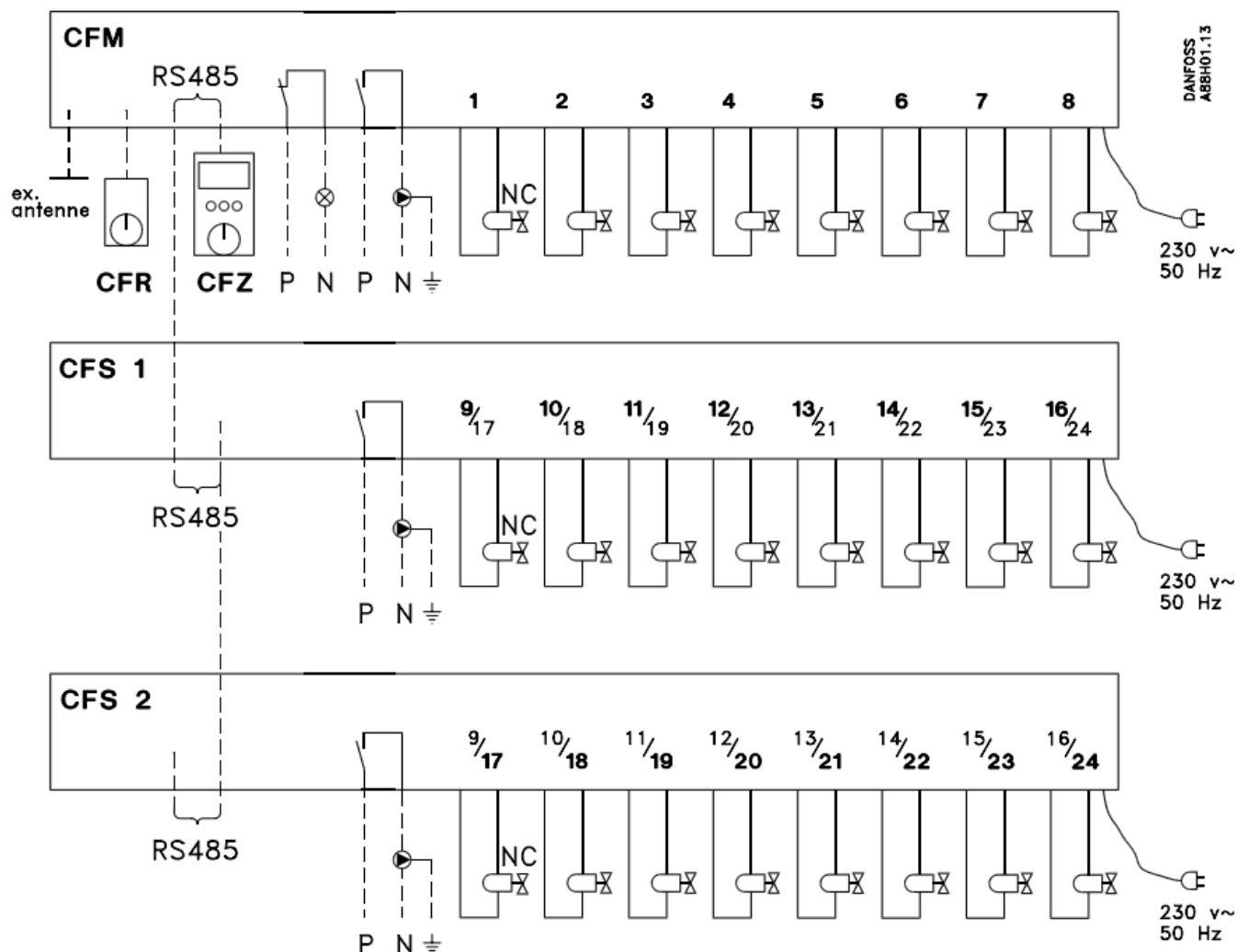


Specifications

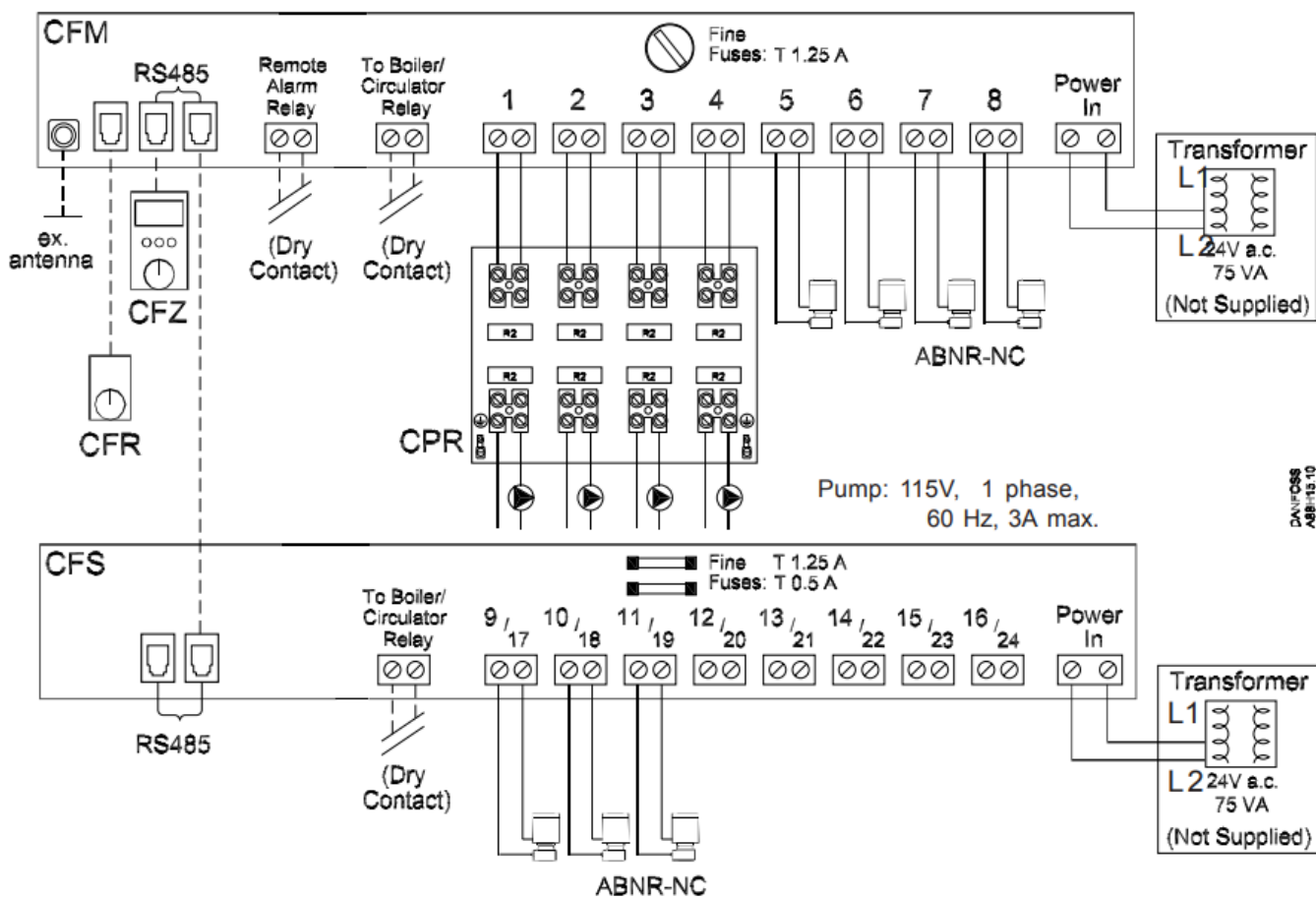
- **Product Name:** Wireless Floorheating Controller and Room Thermostat
- **Type:** CF
- **Maximum Load for CFM:** 6W
- **Maximum Load for CFS:** 3W
- **Frequency:** 433.92MHz
- **Manufacturer:** Danfoss
- **Model Number:** 088R0221

Wiring Diagram

Typical wiring diagram (Europe)



Typical wiring diagram (Applies to the USA & Canada)



T 1.25 A protects outputs
T 0.5 A protects controller

Operation

1. To test the room thermostat, set it to the highest temperature and move the function switch to a new position.
2. If troubleshooting is needed, follow the steps outlined in the manual based on the specific issue.
3. Ensure proper distance between the room and master controllers for optimal signal strength.
4. Reposition the external antenna if needed to improve signal clarity.

Temperature setting

Set the room temperature on the thermostat dial. On the right-hand side of the thermostat is a function switch with 3 possible settings:

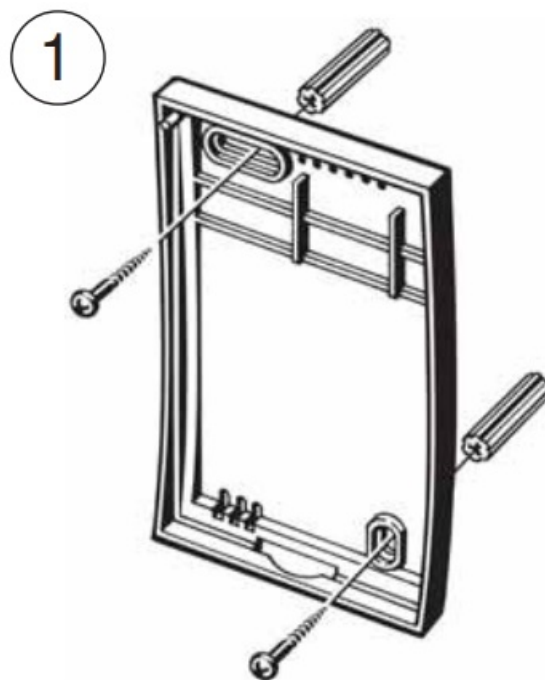
Sun: The room temperature will be as set on the thermostat.

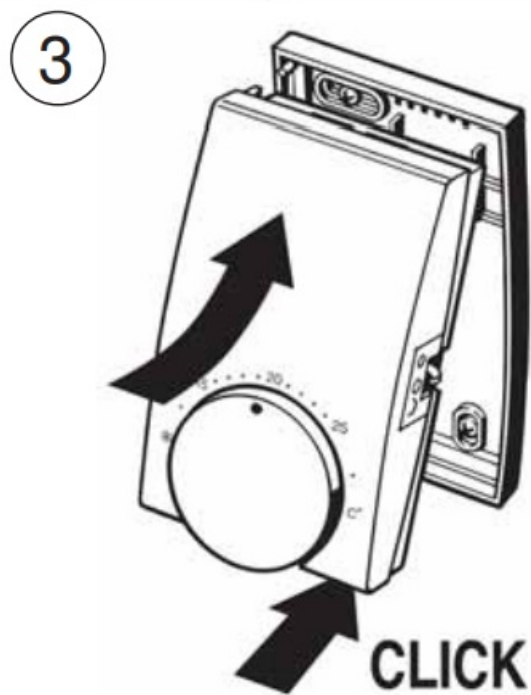
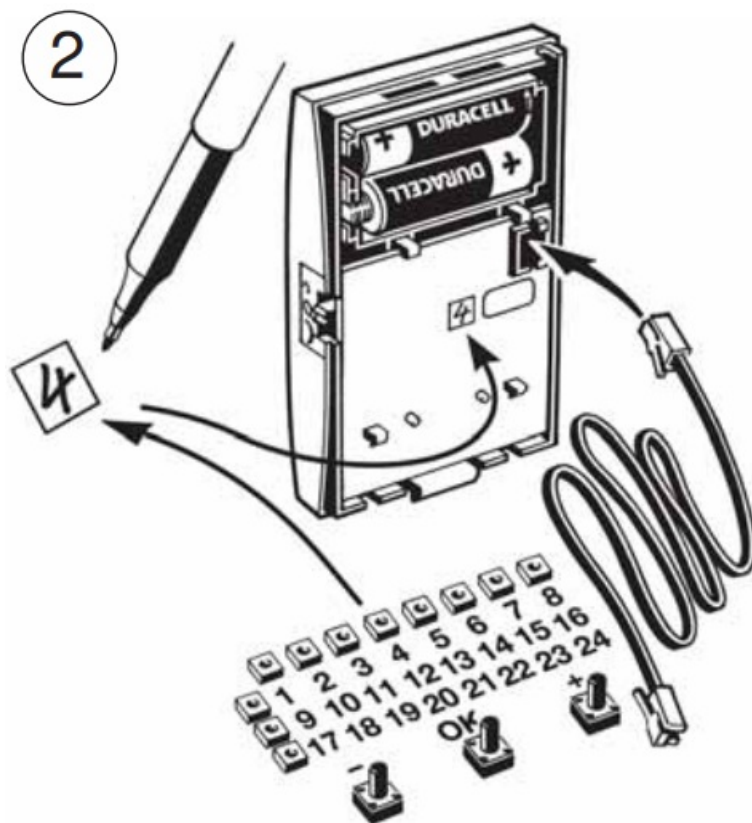
Clock: Used only if the zone regulator is engaged. The temperature will be set on the room thermostat according to the consumption pattern entered. The consumption pattern in the zone regulator can be overridden by moving the switch to sun or moon.

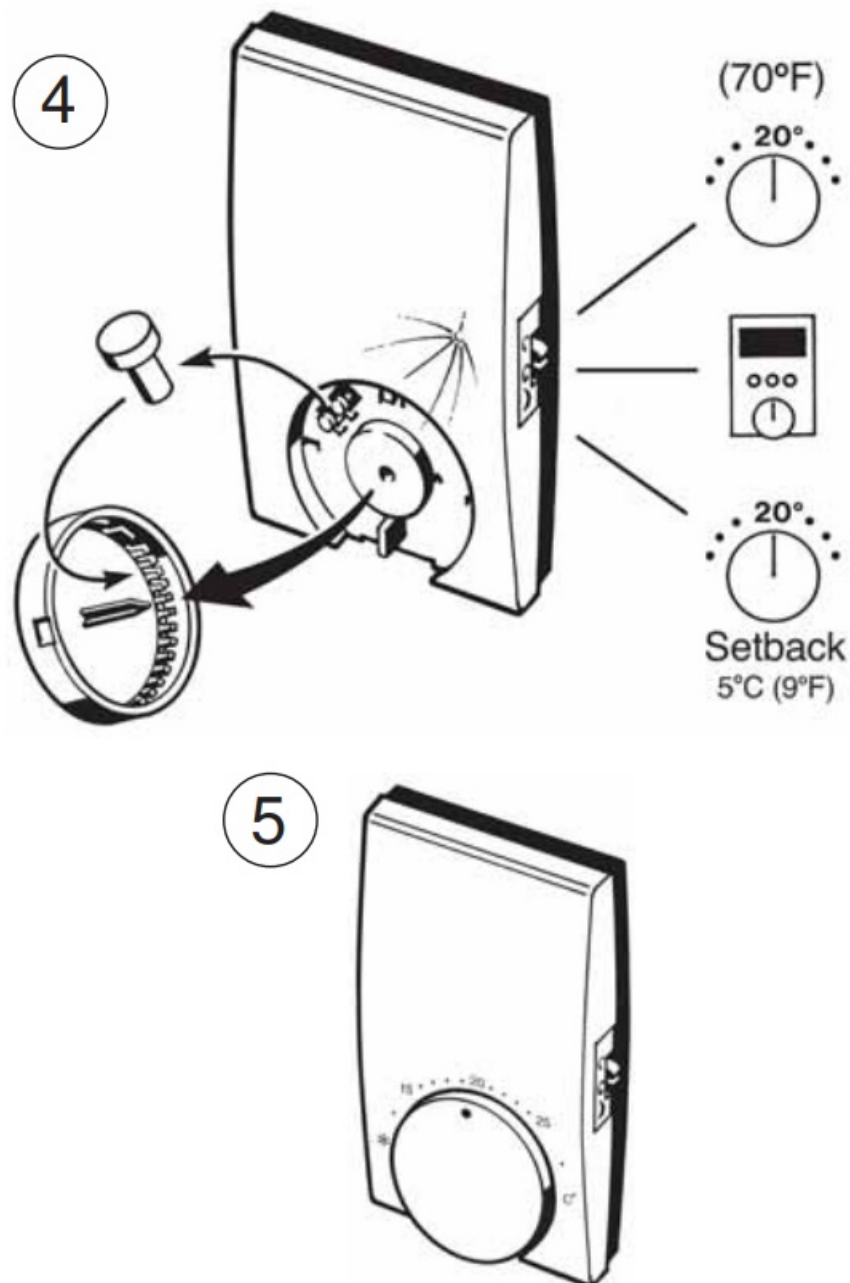
Moon: The room temperature will be as set on the thermostat, minus 5°C.

Limitation of the setting range

Behind the button for temperature setting are two lock pins. These can be placed in the setting knob as shown in fig. 4 if the thermostat setting range is to be narrowed.







Putting into operation

Each room thermostat has a unique ID number, preventing conflicts with other thermostats. A single room thermostat is capable of regulating several heating outputs, provided these outputs are assigned to the thermostat.

Assigning thermostats to output(s)

- The installation cable between room thermostat and CFM (fig. 2) must be connected in assigning each thermostat to the respective output(s).
- In the LED array, the first available output will flash. The LED in the CFR will also flash. Outputs already assigned will not be lit (fig. 2). By pressing O, K, the thermostat will be assigned to that output. If the room thermostat is to be assigned under another lit output, scroll to the output using the +/- keys, then press OK.
- When the installation cable is removed, the red LED behind the front panel (fig. 4) will flash for at least 4 minutes. See "Test of room thermostat"

Removal of the assigned thermostat

- It is not necessary to have the installation cable in place when removing an assigned thermostat. Once a thermostat has been removed, it may be reassigned to another output.
- Removal of room thermostat is done by pressing OK for 5 seconds, then the entire LED array will be lit. Scroll to the specific room thermostat to be removed with the +/- button, and press OK for 5 seconds. The thermostat has now been removed.

Test of room thermostat

If a defect in a room thermostat is suspected, the following test may be carried out:

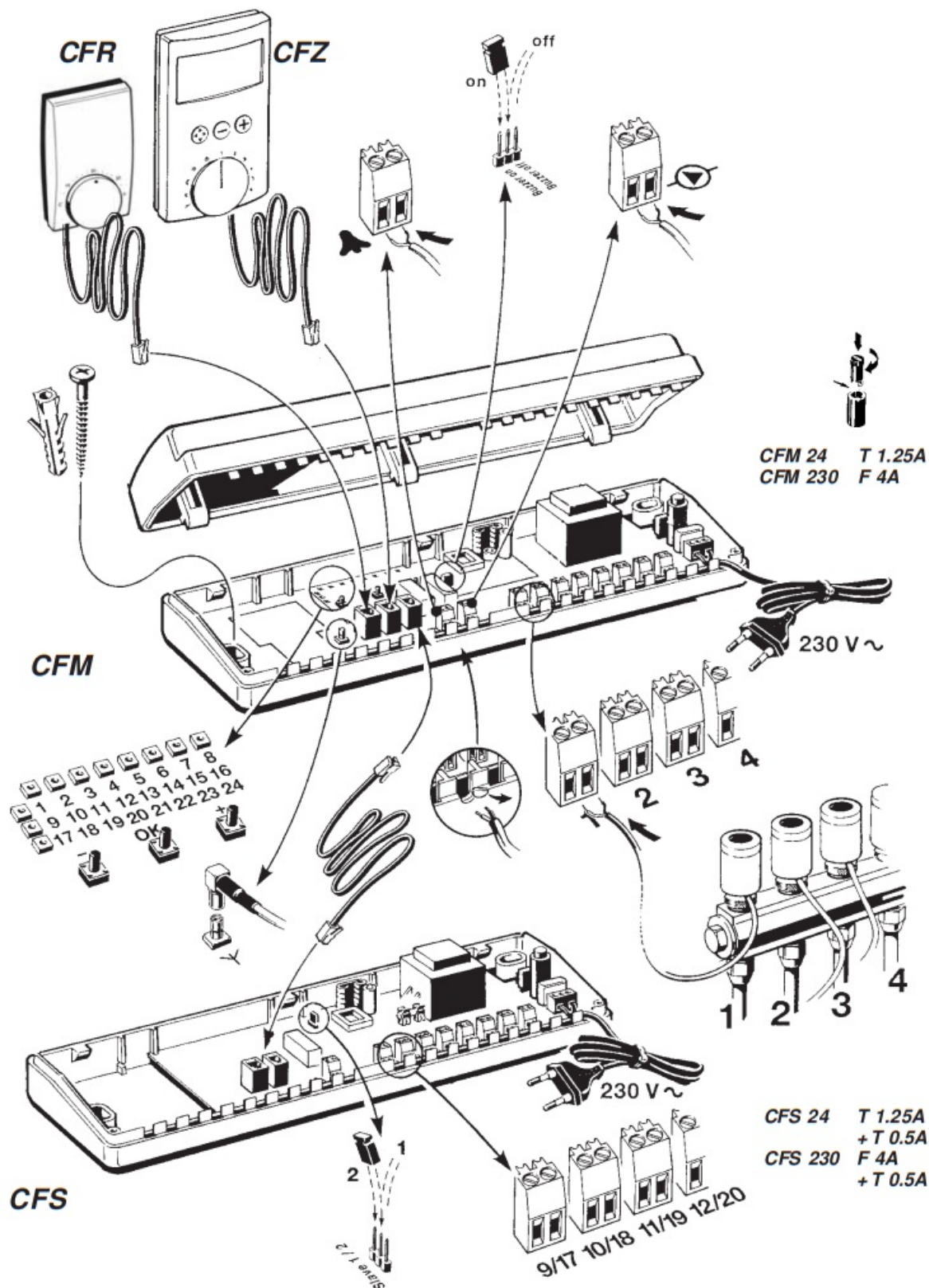
- Set the thermostat to the highest temperature.
- Move the function switch on the side of the room thermostat to a new position.
- If the LED behind the front panel (fig. 4) flashes quickly for 4 minutes, the room thermostat is OK.

Battery change

If the battery is getting low, the LED will flash 6 times every 6 seconds. See fig. 4.

Master regulator CFM

This regulator governs the individual heat circuits via wireless communication with the associated room thermostats. Connection of 8 heat circuits is enabled. If more heat circuits are required, connect one or max. Two slave regulators, CFS, each with a connection for 8 circuits. This allows max. 24 heat circuits to be governed. The master/slave is to be fitted immediately above the distributor pipe on the wall or in a distribution cabinet. Easy access to plugs and terminals should be ensured. If two slave regulators are connected, move the jumper in "slave 2" to position 2. See the instruction drawing. The connection cable for the slave regulator is 1 m. Cable lengths of up to 100 m are enabled (available from your electrical items wholesaler)



Alarm

There are 2 options concerning alarms given by the master regulator:

- The integral acoustic signal can be selected by moving the jumper marked "buzzer" from OFF to ON. See installation drawing.
- The external alarm generator can be connected to the output marked ☎.

Zone regulator CFZ

The zone regulator governs a maximum of 6 heat zones. For each heat zone, individual timing programmes can

be connected. For reading and operating convenience, it is recommended to place the regulator at eye height. The connection cable is 5 m. Cable lengths up to 100 m are permitted (available from your electrical items supplier).

Troubleshooting

Appearance	Problem	Reason/cause	Solution	Comments
<p>CFM controller output array blinks specifically from a row and column(s)</p> <p>Alarm symbol in zone controller, CFZ flashes</p> <p>Acoustic alarm buzzes (provided jumper is set to "ON")</p>	Lack of or excessive heat in the floor heating system	<p>The distance between the room and the master is too far.</p> <p>Degradation of signal due to reinforced concrete or foil-faced insulation between floors.</p> <p>External antenna mounted close to metal parts or wires.</p> <p>Master control is placed in a metal enclosure.</p> <p>Interference from electronic equipment using the same frequency, 433.92 MHz (i.e., baby monitors, portable or wireless headphones)</p>	<p>Reposition the thermostat in the room until the signal is clear.</p> <p>Reposition the external antenna; however, if the signal is still unclear, move the external antenna to the same floor as the thermostat(s)</p> <p>Reposition the room thermostat and run test mode</p> <p>Mount the external antenna if not already installed.</p> <p>Eliminate interfering electronic equipment</p>	If the signal is continuously poor, contact Danfoss
	Room temperature is below 6°C (43°F)	<p>Low battery</p> <p>Problem in the heating system or signal to the thermostat</p>	<p>Replace the battery and test the thermostat</p> <p>Check the heating supply to the system and the circulator pump</p> <p>Check master control, CFM is properly wired.</p>	Max. load for CFM 6W, max. Load for CFS 3W
Master or slave controller row(s) and entire columns lit on master output array	No heat	<p>Blown fuse in master/slave</p> <p>Loose wire connection between the master and slave controller</p>	<p>First, check the actuators for proper wiring, then replace a fuse in master/slave controller, 1.25A</p> <p>Check the wire and connection between the master and the slave</p>	
Constant light in the LED array	No heat	<p>Defective zone actuator</p> <p>Lack of heated fluid in the system</p>	<p>Replace the zone actuator</p> <p>Check the heating supply to the system and the circulator pump</p>	

LED on the back of the room thermostat does not blink during test mode	Lack of or excessive heat in the floor heating system	Faulty battery Bad contacts between the battery and the thermostat Defective room thermostat	Replace battery/ Adjust the connection in the thermostat to ensure better contact with the battery. Replace the room thermostat Check the wiring of the power to CFM	The
All output LEDs are unresponsive	No heat	Improper wiring The master controller is defective	Replace the master controller.	
CFM controller output array blinks rapidly 3 times, specifically from a row and column(s)	None	Normal operation during a test of the room thermostat		

FCC ID: PGBTYPE-CFR15, CAN: 3934A-PGBCFR15

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada and with RSS-210 of Industry

Canada:

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FAQs

Q: What should I do if the room temperature is below 6°C (43°F)?

A: Reposition the room thermostat and run a test mode to check for proper functionality.

Q: What could be the reason for a lack of or excessive heat in the floor heating system?

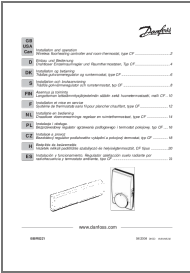
A: Possible reasons include distance issues between the room and master controllers, signal degradation due to obstacles, low battery, or problems in the heating system itself.

Q: How can I address constant LED lights with no heat?

A: Check for defective zone actuators or lack of heated fluid in the system. Replace zone actuators if needed and ensure proper heating supply.

Q: What should I do if all output LEDs are unresponsive?

A: Check for improper wiring and replace the master controller if necessary.



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CFM, CFZ, CF Wireless Floorheating Controller and Room Thermostat, CF, Wireless Floorheating Controller and Room Thermostat, Floorheating Controller and Room Thermostat, Controller and Room Thermostat, Room Thermostat, Thermostat

References

- [User Manual](#)

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