1. Information about this manual
Please read this manual completely and carefully before starting to use the device. The manual contains important information about the intended use of the device. Especially observe the safety notes. Keep the manual for later consultation. If you hand over the device to another person for use, please hand over the operating manual as well.

Symbols used:
⚠️ Attention! This indicates a hazard.

Note: This section contains important additional information.

2. Package contents
1x radiator thermostat
1x adapter Danfoss RA
1x adapter Danfoss RAV
1x spigot extension Danfoss RAV
1x adapter Danfoss RAVL
1x support ring
1x nut M4
1x cylinder head screw M4 x 12 mm
2x 1.5 V mignon/LR6/AA
2x operating manual (English and German)

3. Operation and display
A Bar chart of programmed heating phases
B Eco/comfort temperature
C Open-window function
D (Menu) manual mode
E Holiday function, week day,
F empty battery symbol
G Menu/Mode button
H Switch between auto mode, manual mode and holiday function
I press button briefly
J open setup menu
K Activity symbol
L Display of temperature, time and date, menu options
M Control wheel briefly
N Button for at least 3 seconds
O Holiday function (press button briefly); open setup menu (press button for at least 3 seconds)
P Adapters for Danfoss valves
Q Support ring
R RA and RAV adapters
S The union nut attached to the radiator thermostat can be used universally and without accessories for valves of the most popular manufacturers with a thread size of M30 x 1.5 mm.

4. Function
With the Radiator Thermostat Model M you can convenient-ly regulate the room temperature. Thanks to pre-programmed or individually tailored heating and non-heating phases the de-sired temperature can be comfortably adjusted. The device moves a valve to control the flow of heat to the radiator. The radiator thermostat fits to all common radiator valves and is easy to install without having to drain any water or intervene in the heating system. The additional boost function enables quick, short-term radiator heating by opening the valve for 5 minutes. This immediately brings a comfortable warmth to the room.

5. Safety instructions
⚠️ The device is not a toy, do not allow children to play with it.
Do not leave packaging material lying around, as it can be dan-gerous in the hands of a child.
Do not open the device: it does not contain any components that can be serviced by the user. In the event of failure, please return the device to our service department.

6. Disposal instructions
Do not dispose of the device with regular domestic waste.
Electronic devices must be disposed of in accordance with the Waste Electrical and Electronic Equipment Directive via local disposal points for electronic waste.
The CE sign is a free trading sign addressed exclusively to the authorities and does not include any warranty of any proper-ties.

7. Inserting (replacing) batteries
Upon delivery, the batteries are already inserted with an insu-lator strip. For the device to function, please remove this strip.

8. Set date and time
After inserting batteries, the date and time is automatically request-ed after a brief display of the firmware version number and short mo-tor run ("INS").
Set the year, month, day, hour and minute with the control wheel and confirm by pressing the control wheel briefly (E).
You can also adjust the time and date in the menu under "DAT".

The motor moves the control pin backwards during the setting of date and time.

If "INS" and the rotating activity symbol (L) are displayed, the mo-tor is still reversing. When only "INS" is shown in the display, the radiator thermostat can be installed on the valve.
The week program and other settings can be adjusted before instal-lation. Press the Mode/Menu button for this, while "INS" is shown in the display. You will find further information in chapter 11. Setting week program.

If the programming has been completed, "INS" is shown again in the display and installation can take place.

9. Installation on the radiator
The radiator thermostat is easy to install where thermostatic valves are not hot.
The union nut attached to the radiator thermostat can be used uni-versally and without accessories for valves of the most popular man-ufacturers with a thread size of M30 x 1.5 mm.

10. Adaption run
After the batteries have been inserted the motor reverses. Meanwhile, "INS" and the activity symbol (L) are displayed. As soon as "INS" is displayed without the activity symbol (L), the radiator thermostat can be installed. This is followed by an adaption run ("AdA") to adapt the thermostat to the valve.

⚠️ Always check the new position manual mode, (Auto) auto mode

The assignment of the suitable adapter ring to the relevant valve can be found in the following illustrations.
The Danfoss valve bodies have elongated notches (L) around their cir-cumference (see arrow), which also ensure that the adapter is prop-erly seated when it snaps on.
⚠️ If required, place the provided support ring (L) into the flange before installing the radiator thermostat.

⚠️ During installation, please ensure that the pins inside the adapt-er (L) are lined up with the notches (L) on the valve. Ensure that the adapter is properly clipped on.
⚠️ Take care during installation that you do not trap your fingers between the two halves of the adapter!

The RA and RAV adapters have been manufactured with pre-tension in order to provide a better seat. Use a screwdriver during installation if necessary, and bend it open slightly in the vicinity of the screw. Af-ter clipping onto the valve body, please attach the adapter using the provided screw and nut.

The spigot extension (K) must be fitted to the valve pin of RAV valves prior to installation.

The adapter RAVL does not have to be screwed.

Support ring
The valves from different manufacturers may have tolerance fluctua-tions that make the radiator thermostat more loosely seated on the valve. In this case, the provided support ring (L) should be placed into the flange before installing the radiator thermostat.
If the adaption run has been initiated prior to installing, please press the control wheel briefly and the motor reverses to the "INS" position. If an error message (F1, F2, F3) is displayed, the motor similarly travels back to the "INS" position (see section 25).

11. Setting the program for the week
For each day, up to 3 heating phases (7 change settings) can be set separately. The programming is carried out for the selected days, whereby temperature settings have to be set for the entire period between 00:00 and 23:59.

The device is pre-programmed with a schedule for the week (see section 11.1). To set your own schedule, please follow the instructions below:

- Press the Mode/Menu button for at least 3 seconds. „PRO“ appears in the display. Confirm by pressing the control wheel briefly.
- Choose the menu item "P" by pressing the control wheel. Confirm by pressing the control wheel briefly.
- Now set the temperature which is desired from 00:00hrs.
- Confirm by pressing the control wheel briefly.
- The next switching time point is displayed. You can adjust this by rotating the control wheel.
- Now set the temperature which should prevail from the selected time.
- Repeat this procedure until all the other desired temperatures for the time period from 00:00 to 23:59 have been stored.
- If all 7 switching time points have been allocated, 23:59 is displayed as the final switching point to be confirmed.

Bars for switching time periods for every second time interval are shown in the display.

In auto mode, the temperature can be changed at any time using the control wheel. The modified temperature will then remain the same until the next point at which the program changes.

11.1 Week program: Example
For each day of the week up to 3 heating phases (7 change settings) with individual temperature settings can be saved with the radiator thermostat.

Two heating phases from 6:00 to 9:00 and from 17:00 to 23:00 for all weekdays alike are saved as factory settings:

<table>
<thead>
<tr>
<th>Time</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:00</td>
<td>17.0 °C</td>
</tr>
<tr>
<td>09:00</td>
<td>21.0 °C</td>
</tr>
<tr>
<td>17:00</td>
<td>23.0 °C</td>
</tr>
<tr>
<td>23:59</td>
<td>17.0 °C</td>
</tr>
</tbody>
</table>

In this example, bars are displayed only for the intervals 06:00 to 09:00 and 17:00 to 23:00.

12. Display content in normal mode
Switching time periods, operating mode, programme temperature and week day are displayed in normal mode.

The bars for switching time periods of the week program will be displayed for every second time interval (please see "11.1 Week program: Example").

13. Boost function
The boost function makes use of human sensations of heat. When activating the boost function, the heating valve is immediately opened to 80 % for 5 minutes (factory setting). The heating of a room takes longer than 5 minutes, but the heat given off by the radiator can be felt immediately. If, for example, you arrive home earlier than usual or you need some extra heat in the morning in the bathroom, the boost function will help you to heat the room up quickly.

- Press the control wheel briefly to activate the boost button.
- The remaining time for the function will be counted down in seconds ("8299" to "8000").
- After these 5 minutes have elapsed, the device changes to the mode which was previously active (auto/manual) with the previously set temperature.
- The function can be deactivated prematurely at any time by pressing the control wheel again.

The boost function will not have an immediate effect if the radiator is covered or concealed (e.g. by a sofa). The open-window function is deactivated while the boost function is active.

14. Setting the holiday function
If you want to maintain a fixed temperature for a certain period, e.g. during your holidays or a party, the holiday function can be used.

- Briefly press the Mode/Menu button repeatedly, until the suitace symbol (CFM) appears in the display.
- Change the time until which the temperature shall remain with the control wheel and confirm by pressing the control wheel briefly.
- Then set the date and confirm by pressing the control wheel briefly.
- Set the temperature and confirm by pressing the control wheel briefly.

The display will flash to confirm.

The set temperature will remain until the set end time. Afterwards, the radiator thermostat will switch back to auto mode.

15. Comfort and eco temperature
The comfort and eco temperature button (Q) makes switching between comfort and eco temperature simple and user friendly. The factory setting for the comfort temperature is 21.0 °C and the eco temperature 17.0 °C. They can be adjusted as follows:

- Press and hold the comfort/eco button (Q) for at least 3 seconds.
- The sun symbol (S) and the currently stored comfort temperature appear in the display.
- Change the temperature with the control wheel and confirm by pressing the control wheel briefly.
- The moon symbol (M) and the currently stored eco temperature appear in the display.
- Change the temperature with the control wheel and confirm by pressing the control wheel briefly.

Even in auto mode, the temperature can be changed at any time using the button. It will then remain the same until the next point at which the program changes.

16. Display of valve position
You can request the current position of the valve. To do this, proceed as follows:

- Press the Mode/Menu button for at least 3 seconds.
- Choose the menu item "POS" by rotating the control wheel.
- Confirm by pressing the control wheel briefly.
- The display will show the current position of the valve drive.

17. Child safeguard/operating lock
The operation of the device can be locked.

- To activate/deactivate the operating lock, press the Mode/Menu and (Q) button at the same time.
- After it has been successfully activated, "LOC" appears in the display.
- To deactivate the operating lock, press both buttons again.

18. Activate heating pause (battery saving)
Battery life can be prolonged by switching the heating off in summer. To achieve this, the valve is opened fully. The de-calcification protection continues to run. To activate the heating pause, proceed as follows:

- Press the Mode/Menu button for at least 3 seconds.
- Choose the menu item "PAUS" by rotating the control wheel.
- Confirm by pressing the control wheel briefly.
- The display will show the current position of the valve drive.

19. Set frost protection mode
If a room is not to be heated, the valve can be closed.

- Turn the control wheel in manual mode (MAN) to the left until "OFF" appears in the display.

The valve is only opened if there is a risk of frost. The de-calcification protection continues to run.

- To end it, exit the manual mode (MAN) or turn the selector dial to the left.

20. Switch between summer and winter time
The automatic switching between summer and winter (and vice versa) as the final switching point to be confirmed.

21. Open-window function
With a rapidly reducing temperature, the radiator thermostat automatically detects that a room is being ventilated. In order to save heating costs, the temperature is then regulated down for a certain period of time (15 minutes, set at the factory). Whilst this function is active, the open-window symbol (CFM) appears on the display.

To configure the function, proceed as follows:

- Press the Mode/Menu button for at least 3 seconds.
- Select the menu item "AER" with the control wheel and confirm by pressing the control wheel briefly.
- The temperature and time can be set with the control wheel. The function can be deactivated by selecting "OFF" for the time.

22. Set offset temperature
As the temperature is measured at the radiator, the temperature distribution can vary throughout a room. To adjust this, a temperature offset of up to ± 3.5 °C can be set. If a nominal temperature of e.g. 20 °C is set but the room presents with only 18 °C, an offset of -2 °C needs to be set.

To set the offset temperature proceed as follows:

- Press the Mode/Menu button for at least 3 seconds.
- Select the menu item "TDF" with the control wheel and confirm by pressing the control wheel briefly.
- Turn the control wheel for as long as necessary until the desired temperature offset appears.
- Confirm by pressing the control wheel briefly.

23. Restoring the factory settings
The factory settings of the radiator thermostat can be restored manually. If you do this, you will lose all your settings.

To do this, proceed as follows:

- Press the Mode/Menu button for at least 3 seconds.
- Select the menu item "RES" with the control wheel and confirm by pressing the control wheel briefly.
- "CFM" then appears in the display.
- Confirm by pressing the control wheel briefly.

24. Intended use
The programmable radiator thermostat is used to control a conventional thermostatic radiator valve. Only operate the device in indoor rooms and avoid the influence of moisture, dust and sunlight or external heat radiation. Using the radiator thermostat for any purpose other than that described in this operating manual does not fall within the scope of intended use and shall invalidate any warranty or liability. This also applies to any conversion or modification work. The device is intended for private use only.

25. Troubleshooting and maintenance

<table>
<thead>
<tr>
<th>Error code on the display</th>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery symbol (CFM)</td>
<td>Battery output too low</td>
<td>Replace batteries</td>
</tr>
<tr>
<td>Valve drive sluggish</td>
<td>Check installation, check the heating valve</td>
<td></td>
</tr>
<tr>
<td>Adjustment range too wide</td>
<td>Check the fastening of the radiator thermostat</td>
<td></td>
</tr>
<tr>
<td>Adjustment range too small</td>
<td>Check the heating valve</td>
<td></td>
</tr>
</tbody>
</table>

The radiator thermostat performs a routine descending run once a week on Saturday at 12:00 to protect against calcification of the valve. During this "CAI" appears in the display.

26. Technical characteristics

<table>
<thead>
<tr>
<th>Device short description</th>
<th>CC-RT-M-EQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>2x 1.5 V 68/Mignon/AA</td>
</tr>
<tr>
<td>Current consumption</td>
<td>100 mA (max.)</td>
</tr>
<tr>
<td>Battery life</td>
<td>3 years (typ.)</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
<tr>
<td>Degree of pollution</td>
<td>2</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>0 to 50 °C</td>
</tr>
<tr>
<td>Surface temperature</td>
<td>90 °C (at the radiator)</td>
</tr>
<tr>
<td>LCD</td>
<td>85 segments</td>
</tr>
<tr>
<td>Connection</td>
<td>M8 x M10</td>
</tr>
<tr>
<td>Method of operation</td>
<td>Type 1</td>
</tr>
<tr>
<td>Linear travel</td>
<td>4.3 mm</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>58 x 63 x 122 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>176 g (incl. batteries)</td>
</tr>
</tbody>
</table>

Subject to technical changes.