

INSTRUCTIONS

Type MCC2-1991/MCD2-1991

Product program

This user manual covers following electronic thermostats
 MCC2-1991-CO. Incl. floor sensor 3m
 MCC2-1999-CO. With built-in room sensor
 MCD2-1999-CO. With 2 sensors; built-in room sensor and incl. floor sensor 3m

Introduction

The thermostat is capable of switching on your heating system at pre determined times on different days of the week. It is possible to set 4 periods called events each day with different temperatures. From factory a default schedule is programmed suitable for most installations. Unless you change these settings the thermostat will operate to this default program.

Working with lower temperatures during times that the room is unoccupied will lower your energy costs without reducing the comfort. The thermostat has an adaptive function that automatically changes the start time of a heating period so that the desired temperature is reached at the time that you set. After 3 days the adaptive function has learned when the heating must be switched on.

Type MCC2-1991-CO has an external temperature sensor that is normally placed in the floor construction. In this configuration the thermostat controls the temperature of the floor and not the temperature within the room.

Type MCC2-1999-CO has a built-in temperature sensor. In this configuration the thermostat controls the temperature of the room.

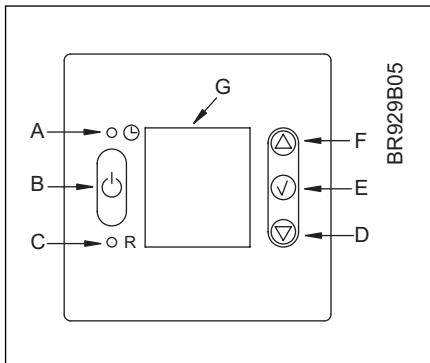
Type MCD2-1999-CO has a built-in temperature sensor and an external temperature sensor. In this configuration the thermostat controls the temperature within the room and use the external temperature sensor as limit sensor avoiding to high or to low temperatures in the floor construction.

The thermostat has a pin button marked R, allowing you to reset the thermostat to factory settings. These are listed at the end of this manual with space for you to record your own weekly schedule.

The display is backlit when operating the buttons. The heating element is switched off when the light is on in the display

The heating system can be switched off on the built-in interrupter. The Microprocessor taking care of the time will still be supplied with power whereby time and day will be maintained. When the heating is required and the thermostat is switched on, it will continue the 4-event program based on present time and day.

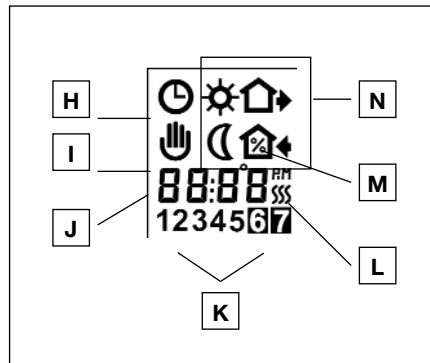
1. Getting started



A:	B:	C:	D:
Pin button adjust of clock	On/off	Reset to factory setting	Adjustment down

E:	F:	G:
OK - accept	Adjustment up	Display

Display symbols



H:	I:	J:	K:
Clock function	Manual mode	Time and temperature	Day number

L:	M:	N:
Heating on	% Monitoring of switch-on time	4-event symbol Out In Home Night

Setting the thermostat into operation

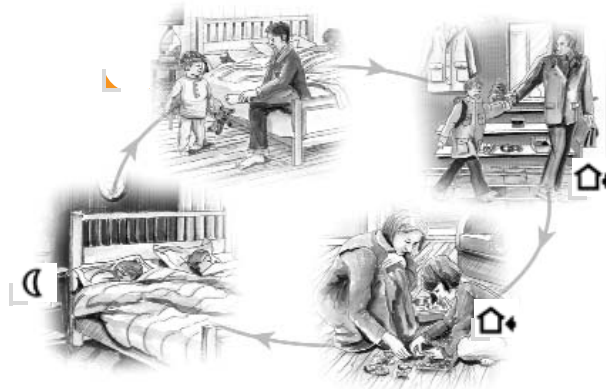
First time power is connected the clock and day will be flashing and must be set. If you need to adjust the time of the thermostat at a later date, insert a pin into the hole for setting of time and day. Adjustment must be made for summer and winter time.

		Press the UP () or DOWN () buttons to select the correct time and press OK button () button.	
		Then press the UP () or DOWN () button to select the correct day and press OK () button.	1-7

2. Daily use of the thermostat

4-event clock mode

The day has been split into 4 events describing a typical day. When the thermostat is in 4-event mode it will automatically adjust the temperature according to the required temperature to the required time. As standard the thermostat has 5 days with 4 events, and 2 days with 2 events. Programming see 3.



4-event clock mode:		The clock function symbol (🕒) and one of the 4-event symbols (🏠, 🏠, 🏠, 🌙) will be indicated. Programming see 3.
		Temporary override To temporarily override the temperature in the 4-event schedule program, press the UP (▲) or DOWN (▼) button once, to show the temperature, and press again to increase or decrease the temperature. The display will flash for 5 seconds, and will then revert to the time. The override will operate until the next programmed event when the unit will resume the automatic program.
		Cancel comfort mode To cancel the override state, press the OK (✓) button twice.
Manual mode:		Permanent override: During holidays, the scheduled 4-event program can be overridden. Press the OK (✓) button, and then the UP (▲) or DOWN (▼) button until the override temperature is set. The unit will now operate to this temperature permanently.
		Cancel manual mode To cancel the permanent override state press the OK (✓) button once, and the unit will resume automatic function.

3. Programming

4-event time and temperature

For each event, the start time and required temperature must be set.

For example, in the morning you wish the heating to start at 07:00 and the temperature to rise to 25°C. Press OK (✓) button for 3 seconds and the start time is displayed. Change this to 07:00 with the UP (▲) or DOWN (▼) button. Press OK (✓) to confirm.

The temperature is now displayed. Change this to 25°C with the UP (▲) or DOWN (▼) button. Press OK (✓) button to confirm. This action can now be repeated for the second event.

These settings will be valid with days 1-5 showing on the display. To program the days 6 and 7, repeat the above. Days 6 and 7 are usually Saturday and Sunday, and only have two events.




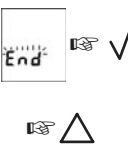

The temperature can be set within the range of +5 to +40°C. It is also possible to select the heating OFF at that event by reducing the setting to 5°C, and then pressing the (▼) once more.

Press OK (✓) button for 3 secs. to begin programming		
Day 1 - 5		
		☀️ : Time and temperature
		🏠 : Time and temperature
		🏠+ : Time and temperature
		🌙 : Time and temperature
Day 6 - 7		
		☀️ : Time and temperature
		🌙 : Time and temperature

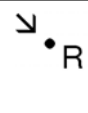
4. Advanced settings and read-out

	<p>Press both UP (Δ) and DOWN (∇) buttons together for 3 seconds. INFO is displayed. Press UP(Δ) button until you reach the desired sub menu. Select the sub menu with the OK (✓) button.</p>
	<p>Monitoring of energy consumption The thermostat calculates average time it has been switched on allowing you to monitor your energy consumption. In the thermostat you can read out: Total switch-on time in percentage in the latest 2 days, 30 days or 365 days. Calculation of operational costs per day: (switch-on time:100) x kW x kWh-price x 24 h per day Example: Read-out: 30 % in the latest 365 days Size of heating system: 1.2 kW (ask the installer) Cost of power: 0.2 AUD / kWh Calculation: (30:100) x 1.2 kW x 0.2 AUD / kWh x 24 h = 1.7 AUD per day</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="244 421 842 705"> </div> <div data-bbox="850 421 1476 705"> <p>Press UP (Δ) or DOWN (∇) button to show the different readouts. No changes can be made here. Use the OK (✓) button to end.</p> </div> </div>
	<p>4-event sequence The present event sequence flashes: Days 1-5, followed by days 6-7. To change, press the UP (Δ) button until you have days 1-6 and then day 7 flashing, or all 7 days are flashing. Select the required sequence with the OK (✓) button.</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="244 795 842 1041"> </div> <div data-bbox="850 795 1476 1041"> <p>5-2: 4 events in 5 days + 2 events in 2 days. 6-1: 4 events in 6 days + 2 events in 1 day 7-0: 4 events in 7 days</p> </div> </div>
	<p>Selection of type (only visible in type MCD2) Type MCD2-1999-CO has a built-in temperature sensor and an externally temperature sensor. In this configuration the thermostat controls the temperature within the room and use the externally temperature sensor as limit sensor Type MCD2 can be changed into type MCC2-1991-CO with an external temperature sensor that normally is placed in the floor construction. In this configuration the thermostat controls the temperature of the floor and not the temperature within the room. MCD2 can also be changed into type MCC2-1999-CO with a built-in temperature sensor. In this configuration the thermostat controls the temperature of the room, and the external temperature sensor should not be installed.</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="244 1220 842 1444"> </div> <div data-bbox="850 1220 1476 1444"> <p>MCD2-1999-CO With 2 sensors; built-in room sensor and incl. floor sensor 3m MCC2-1991-CO Incl. floor sensor 3m MCC2-1999-CO With built-in room sensor</p> </div> </div>
	<p>Max and min allowed temperature range The temperature setting range of +5° to 40° C can be limited to prevent a too high or too low temperature being selected under manual or comfort mode. For MCD2 with limit sensor the max and min temperature range refer to the temperature of the limit sensor. For example: A wood floor covering should not be allowed to exceed a maximum of 27°C. Low limitation is used where the temperature of the floor is required never to fall below the minimum set temperature.</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="244 1590 842 1825"> </div> <div data-bbox="850 1590 1476 1825"> <p>Maximum allowed temperature setting. Use the UP (Δ) or DOWN (∇) button to increase or reduce, and OK (✓) button to accept. Next is displayed LoLi. Press OK (✓) button to continue. Minimum allowed temperature setting. Use the UP (Δ) or DOWN (∇) button to increase or reduce and OK (✓) button to accept.</p> </div> </div>
	<p>Time and temperature scale selection</p> <div style="display: flex; justify-content: space-between;"> <div data-bbox="244 1870 842 2076"> </div> <div data-bbox="850 1870 1476 2076"> <p>You can select either °C or °F scale, and 12 or 24 hour clock as follows: Press UP (Δ) or DOWN (∇) button to change settings. Confirm the required scale with the OK button (✓) button.</p> </div> </div>





4. Advanced settings and read-out - *continued*

	<p>Adaptive function: This function enables the thermostat to calculate when it needs to switch ON so that the required temperature is reached at the set time. With a start time of 07:00 therefore, the thermostat may switch ON as early as 06:00 so that the desired temperature of 25°C is achieved by 07:00. Without this function set, the thermostat will start to heat at the time you set.</p>
	 <p>Press the DOWN (▽) button to switch between on and off. Press OK (✓) button to confirm.</p>
	 <p>Press OK (✓) button to end programming and to return to scheduled programme.</p>

5. Reset to factory setting

	<p>Press the pin button and the thermostat returns to factory settings. Time and day is also reset and must be set according to "Setting the thermostat into operation". Note that a MCD2 that has been modified to a MCC2 (see 4. Advanced settings and read-out, selection of type) will return to a MCD2. Failure code E2 will be displayed if the external sensor has been removed.</p>
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Factory settings

4-event time and temperature					
Day 1-5	Time	Temperature			
		MCC2-1991	MCC2-1999	MCD2-1999	
	06:00	25°C	20°C	20°C	
	08:00	20°C	15°C	15°C	
	16:00	27°C	22°C	22°C	
	22:30	20°C	15°C	15°C	
Day 6-7					
	08:00	27°C	22°C	22°C	
	23:00	20°C	15°C	15°C	
Hi-Low temp.		OFF/OFF	OFF/OFF	28°C/15°C	
4-event sequence	5:2				
Scale	24 H / °C				
Adaptive control	ON				

6. Failure codes

- E0 = Internal failure, replace thermostat
- E1 = Built-in sensor short-circuit or disconnected, replace thermostat
- E2 = External sensor short-circuit or disconnected



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EASY SET UP for MCC Digital Thermostat

SET UP - Set the date and time when the thermostat is turned on for the first time

Turn thermostat on with the on/off button - display will flash
Set the time with the up and down arrow keys
Confirm the time with the tick button
Set the day of the week (1-7 at the bottom of the display) with the up and down arrow keys
(1=Monday - 7=Sunday)
Confirm the day with the tick button

The thermostat is now set to factory default settings and is fully operational.
Can be left in default mode or changed with program setup.

Default settings:	
weekdays (day 1-5):	on at 6am - 25°C off (set back) at 8am - 20°C on at 4pm - 27°C off (set back) at 10.30pm - 20°C
weekdays (day 6-7):	on at 8am - 27°C off (set back) at 11pm - 20°C

note: thermostat does not "tun off" but changes to a "set back" temperature. This set back temperature can be changed.

PROGRAM SET UP - Set on/off times and temperature settings

The MCC digital thermostat allows you to set up a fully personalised time schedule of on/off times and temperature settings. Please refer to the instructions manual provided with the thermostat.

- : set on/off times and temperature settings monday-friday and weekends.
- : set on/off times and temperature settings of each day separate
- : switch at any time to manual mode
- : modify temperature range
- : monitor energy consumption

MANUAL MODE SETUP - Thermostat does not automatically turn on /off at set times

Press the tick button once
Adjust the temperature to desired temperature using the up and down arrows.
The display will then flash with the hand showing on the screen and then stop.

Thermostat is now in manual mode.

To get the thermostat back to automatic mode - press the tick button again