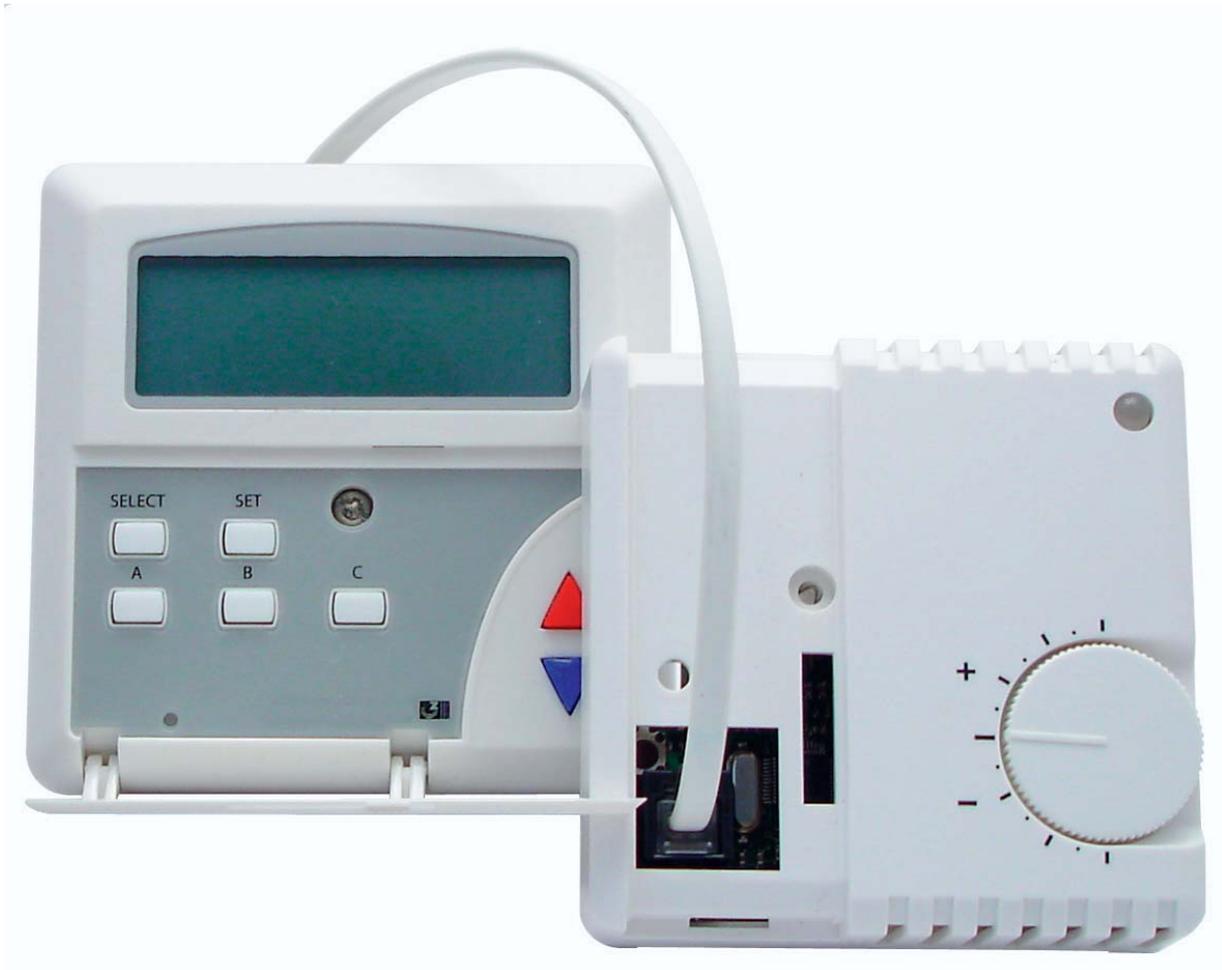


Manual for room temperature controller LUNA c RE and configuration device LUNA b T-CU (versions v1.10 - v1.19)



Manual LUNA c RE / LUNA b T-CU

Manual v1.1

Contents

1. Room temperature controller LUNA c RE

1.1 LED (light emitting diode)	page 4
1.2 Function button.....	page 4
1.3 Set-point knob	page 4
1.4 Sensor calibration.....	page 5
1.5 Resetting the controller.....	page 5
1.6 Invert the heating outputs	page 5

2. Jumper settings

2.1 Jumper settings	page 7
2.2 Input functions	page 7
2.3 System with external temperature sensor	page 8
2.4 System with external temperature sensor and occupancy sensor	page 8
2.5 System with occupancy sensor and condensation sensor	page 9

3. Configuration device LUNA b T-CU

3.1 The configuration device in general.....	page 11
3.2 Configuration device modes	page 12
3.3 The buttons.....	page 13
3.4 The display symbols	page 13
3.5 Menu navigation	page 13
3.6 Changing values.....	page 13
3.7 Menu overview	page 14-15
3.8 Default view	page 16
3.9 Main view.....	page 16
3.10 Timer and measure values menu	page 16
3.11 Timer function	page 17
3.12 Set point values	page 17
3.13 Settings menu.....	page 18
3.14 Menu "Log"	page 19
3.15 Menu "Control parameters"	page 19
3.16 Menu "Outputs"	page 20-21
3.17 Menu "Inputs"	page 22
3.18 Menu "Occupancy"	page 23
3.19 Menu "Calibration"	page 23
3.20 Menu "Button functions"	page 24
3.21 Menu "Test"	page 25-26
3.22 Menu "Type"	page 27



1. Room temperature controller LUNA c RE

1.1 LED (light emitting diode)

The controller LUNA c RE has an LED that indicates the current operation mode of the controller and different functions when using the function button.

The LED on LUNA c RE indicates:

1. Blue = Cooling demand
2. Red = Heating demand
3. Blue blink = Condensation (only if this function is activated, and the controller's cooling output is activated)

1.2 Function button

The picture to the right shows where the function button is located. It has the following functions:

- Calibration of the built-in and external temperature sensors
- Reset the controllers memory.
- Invert heating output

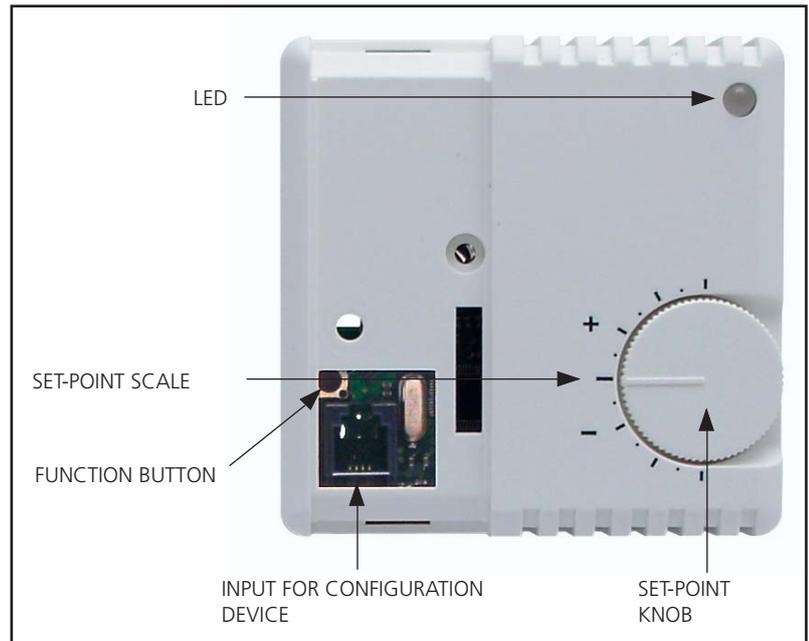
All the functions above are described in this manual.

1.3 Set-point knob

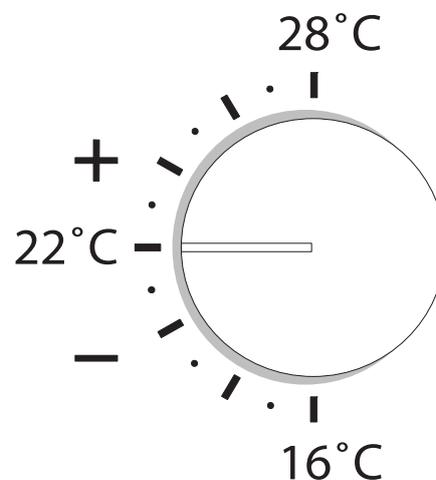
The set-point knob function:

- Turn to +: Warmer
Turn to -: Cooler

The default set-point setting of the controller is:
Set-point range 16°C-28°C, and 22°C at scale centre.



Functions



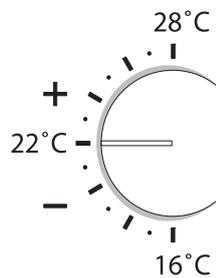
1.4 Sensor calibration

A default calibration of the built-in sensor in the controller is already done when delivered. This calibration was measured 2 cm below the controller, near the sensor.

If the controller needs to be recalibrated, it's simply done by setting the set-point knob at the actual temperature (measured with a thermometer). Then press and release the function button. The LED will blink to confirm the calibration.

The set-point range is always 16-28°C when you perform a calibration. Even if other values are set (the controller calculates these values when the function button is pressed and released). Every line and a dot at the set-point scale is a increase/decrease of the set-point temperature with 1°C from the scale centre.

Try to be as exact as possible when you are performing a calibration.



1.5 Resetting the memory of the controller

It's possible to reset the memory of the controller to its factory default. This can be useful if there was an error trying to configure the controller etc.

Performing a memory reset:

1. Switch off the power to the controller.
2. Press and hold down the function button and switch on the power. After that, release the function button
3. The LED of the controller is now purple until you release the function button. When this is done, the controller will perform a memory reset, and go back to its normal operation mode.

1.6 Inverting the heating outputs

The cooling and heating outputs controls normally closed actuators by default. If normally open actuators are required in a system, it's easy to invert the heating outputs. This can only be done for the heating output. To invert the cooling output, a configuration device is required.

Invert the heating outputs:

1. Turn the set-point knob to maximum cooling demand.
2. Press and hold the function button down for approximately 5 seconds, until the LED is turned off or lit purple. The LED indicates if the inversion function is activated or deactivated. Purple LED = Inversion activated. LED turned off = Inversion deactivated.
3. Now release the function button. The controller will now control the heating outputs according to the selected function.

2. Jumper settings of the controller and input functions

2.1 Jumper settings of the controller

The following pages describe different functions of the controller LUNA c RE. The controller can be configured with jumpers and by settings in the memory that can be configured with the configuration device LUNA b T-CU.

Be careful when handling the printed circuit board. Never touch anything while the power is on. Do not touch any components on the circuit board. The components can be destroyed by an electrostatic discharge. If possible, use an ESD-wrist strap connected to protective ground.

The pictures to the right show different signal, and functions of the jumper block, and also the standard configuration.

Always check that you are looking at the circuit board with the correct orientation, by locating pin 1 on the jumper block J1 as shown on the picture to the right.

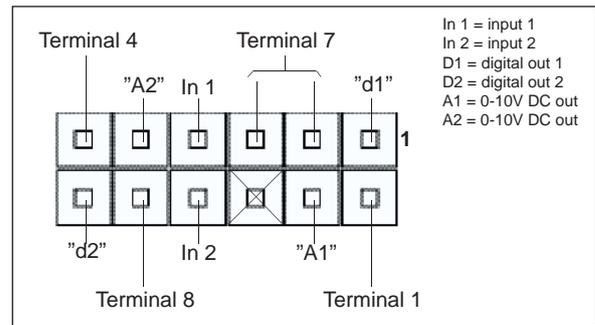
All handling of the circuit board is done at your own risk!

2.2 Input functions

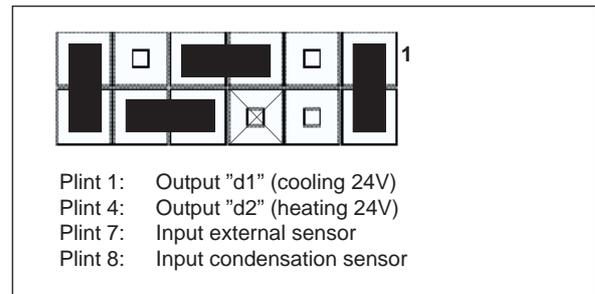
Different types of sensors can be connected to the digital input 1 and 2. The table below shows the different combinations that can be activated in the controller with the configuration unit.

External temperature and condensation sensor is default setting from the factory.

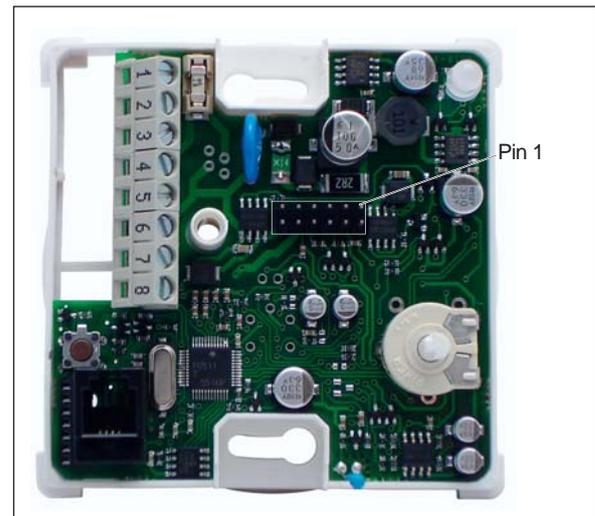
The column **Deactivate** shows what functions that has to be deactivated to avoid any collision with active functions.



Signals in jumper block "J1"



Standard jumper configuration



Controller LUNA c RE circuit board

Terminal 7 (in1)	Terminal 8 (in2)	Deactivate
Occupancy	Condensation	-
Operation mode override	Condensation	Occupancy
External temp. sensor	Condensation	Occupancy, Operation mode override
Operation mode override	Occupancy	Condensation
External temp. sensor	Occupancy	Condensation, Operation mode override
External temp. sensor	Operation mode override	Occupancy, Condensation

The table below shows where to find input function menus in the controller, and descriptions of these in the manual.

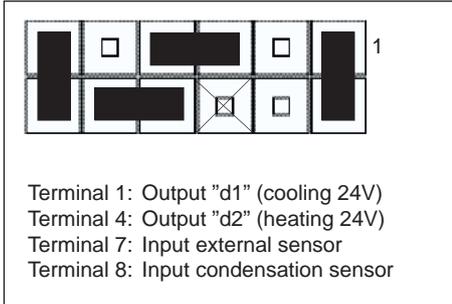
Function	Menu	Description
Occupancy	6, Occupancy	Chapter 3.18
External temp. sensor	5, Inputs	Chapter 3.17
Condensation	"	" "
Operation mode override	"	"

2.3 System with possibility to connect a temperature and condensation sensor (standard setting)

Settings in the controller memory

Parameter	Value	Menu	Description
COND	1	INPUT	Activates the condensation function
R1+R2	2	INPUT	If an external temperature sensor is connected, the controller will only read the external temperature sensor.

Jumper settings



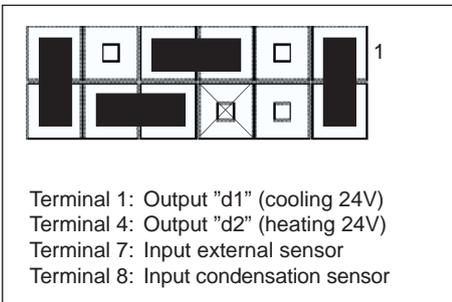
Jumper settings for systems with an external temperature and condensation sensor.

2.4 System with possibility to connect a temperature and occupancy sensor.

Settings in the controller memory

Parameter	Value	Menu	Description
ACTIV	1	OCC.	Activates the occupancy function
R1+R2	2	INPUT	If an external temperature sensor is connected, the controller will only read the external temperature sensor.

Jumper settings



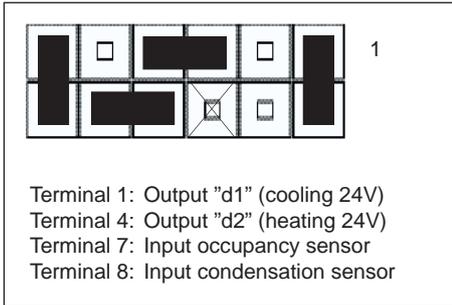
Jumper settings for systems with an external temperature and occupancy sensor.

2.5 System with possibility to connect a occupancy and condensation sensor.

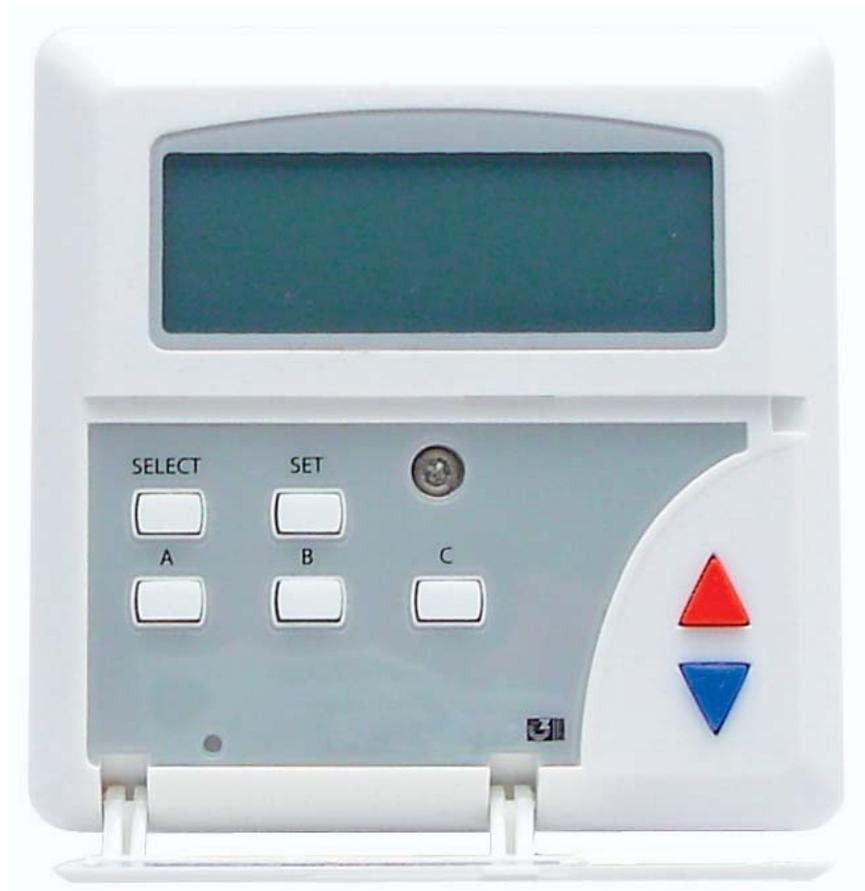
Settings in the controller memory

Parameter	Value	Menu	Description
COND	1	INPUT	Activates the condensation function
ACTIV	1	OCC.	Activates the occupancy function

Jumper settings



Jumper settings for systems with an occupancy and condensation sensor.



3. Configuration device LUNA b T-CU

3.1 The configuration device in general

The configuration device is used to read and change settings in the controller. It communicates with the controller via a modular cable. The configuration device is supplied with power from the controller. The configuration device can also be supplied with 12V DC if the controller is disconnected from its power supply.

The values in the configuration device's can be changed locally, and then be transferred to the controller. Or the values in the controller can be read in to the configuration device and be changed in the configuration device and the controller simultaneously.

The values are organized under menus for different function areas, and can be shown on the display.

Memory reset in configuration device LUNA b T-CU

Before you use the configuration device, it needs to be reset so that no old values etc remains in its memory. See instructions below.

Quick info about usual applications

Reset the configuration device

Hold down the A, B and C buttons at the same time, and then switch the power on while still holding the buttons down. When you release the buttons, a reset is done and the configuration device gets its initial standard values.

Changing values locally in the configuration device

Press the A button. All the settings will only be changed in the configuration device, and are stored in a firm memory, that does'nt change after voltage failure.

Read data from the controller to the configuration device

Press button B. When the digit 1 is shown, the values in the controller can be read from the configuration device's display. Please note that the values are not stored in the configuration device's firm memory. Therefore the values can't be transferred to another controller. When the power is disconnected, the configuration device will lose its settings and return to its initial values.

Change values in the controller

Read the data from the controller to the configuration device by pressing button B. Then change the values with the configuration device. The changes are transferred to the controller, and also stored in the configuration device's firm memory.

Transmit all data from the configuration device's firm memory to a controller

Press button C down for 3 seconds, until a zero is shown on the display . After a few seconds the number one is shown, this indicates that the transfer was successful, and the configuration device's firm memory has been transferred in to the connected controllers memory.

Transfer all data from a controller to another.

Press button B. Perform a P (0)-reset at the RESET function under the menu TEST, and all the settings that has been transferred from the controller are stored in the configuration device's firm memory.

Connect the configuration device to another controller, press the button C for 3 seconds, until a zero is shown on the display. After a few seconds the number one is shown. This indicates that the transfer was successful, and the configuration device's firm memory has been transferred to the connected controller.



3.2 Configuration device modes

The configuration device operates in two different modes:

LOCAL MODE

This is the default mode of the configuration device after voltage failure. The SUN or MOON symbols are NOT shown on the display. All settings made in the configuration device are stored in its firm memory, that doesn't change after voltage failure.

To change operation mode to the local mode when in read mode, press the button A. "LOCAL1" is now shown on the display.

READ MODE

This mode is activated by pressing button B or C.

Button B:

When the button B is pressed, the display shows "READ 0" a few seconds when it's reading the controllers memory, and then shows "READ 1" when it's done.

The SUN or MOON symbols are now shown on the display. The controllers settings are NOT stored in the configuration device's firm memory, and can therefore not be transferred to another controller. The configuration device will NOT save the values at voltage failure, it will return to its default settings.

To transfer settings to the configuration device's firm memory, a P(0) reset is required. This is done at the RESET function under the TEST menu. Settings made in the READ MODE is transferred to the controller and also to the configuration device's firm memory.

Button C:

When button C is pressed for 3 seconds, "PRO! 0" is shown on the display and the configuration device is transferring the settings from its firm memory to the controller. When the transfer is successful the display shows "PRO! 1" and the SUN or MOON symbol.

3.3 Buttons

The picture to the right shows the different function buttons placement on the configuration device. All the functions and settings are available directly with the configuration device's buttons.

Button functions:

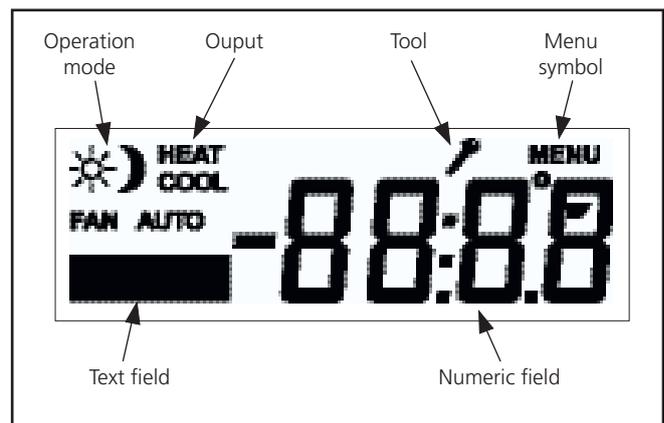
- SELECT** = select menu at main menu
- SET** = select value to be changed
- UP** = increase a value, or move to next menu or function
- DOWN** = decrease a value, or move to next menu or function
- A** = Sets the configuration device to LOCAL MODE
- B** = Sets the configuration device to READ MODE.
Transfers all the settings from the controller to the configuration device.
- C** = Sets the configuration device to WRITE MODE.
Transfers all the settings from the configuration device to the controller.



Configuration device.

3.4 Display symbols

The display has a text field, a numeric field and different symbols. The text field shows brief explanations of which menu you are about to enter, and the value you are about to change in the numeric field.



Display.

The symbols different functions:

- 1. Sun = day operation mode
- 2. Moon = night operation mode
- 3. Sun + moon = save operation mode
- 4. HEAT = heating output active
- 5. COOL = cooling output active
- 6. Tool = Indicates that you are at a menu that can be configured.
- 7. MENU = indicates that you are at the main menu, or at a top of a menu view.

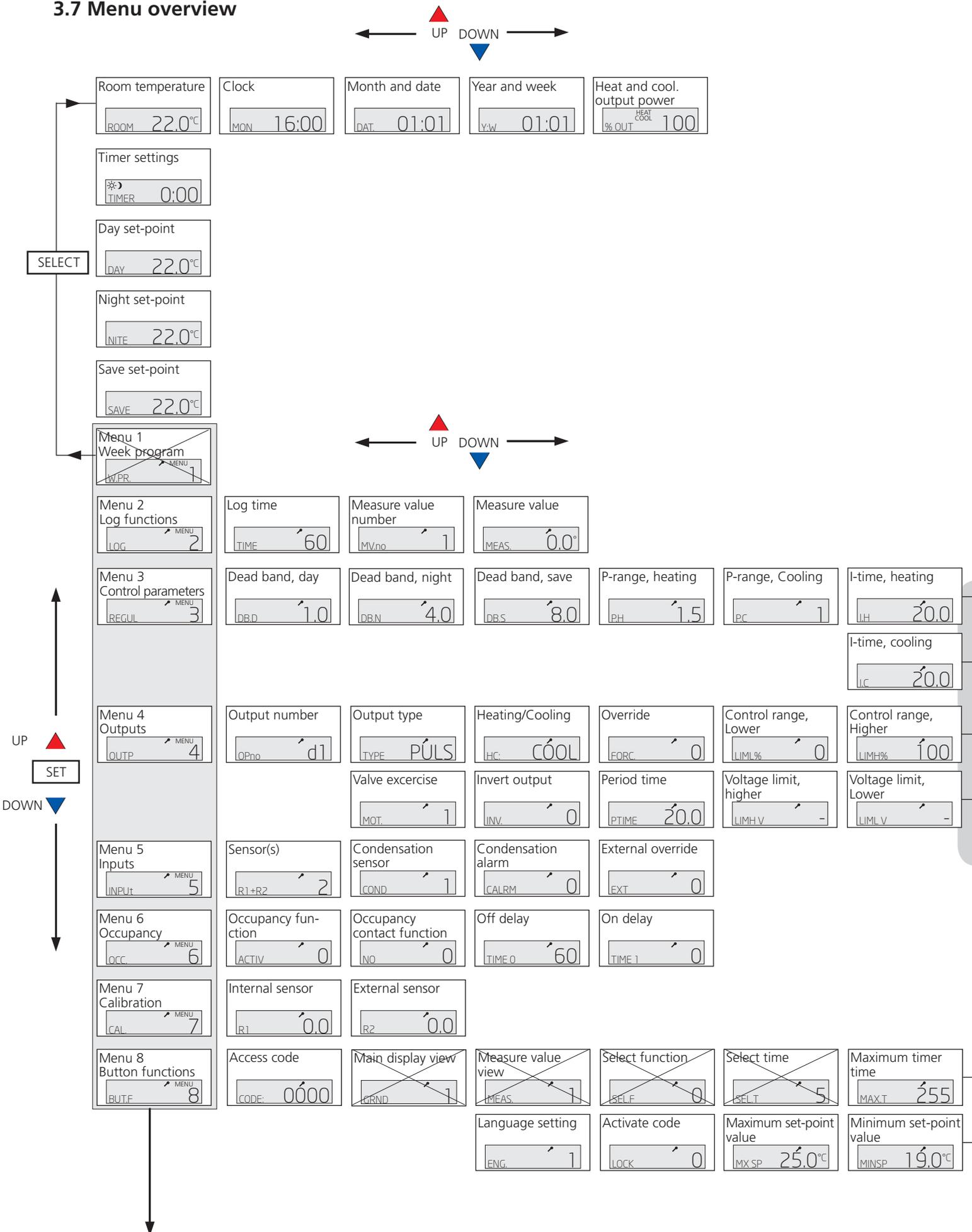
3.5 Menu navigation

To go forward in steps in the main menu, press the SELECT button. Every menu choice has different functions and they are described in this manual. Some menu choices are built up as sub menus, where you can enter them by pressing the UP or DOWN buttons

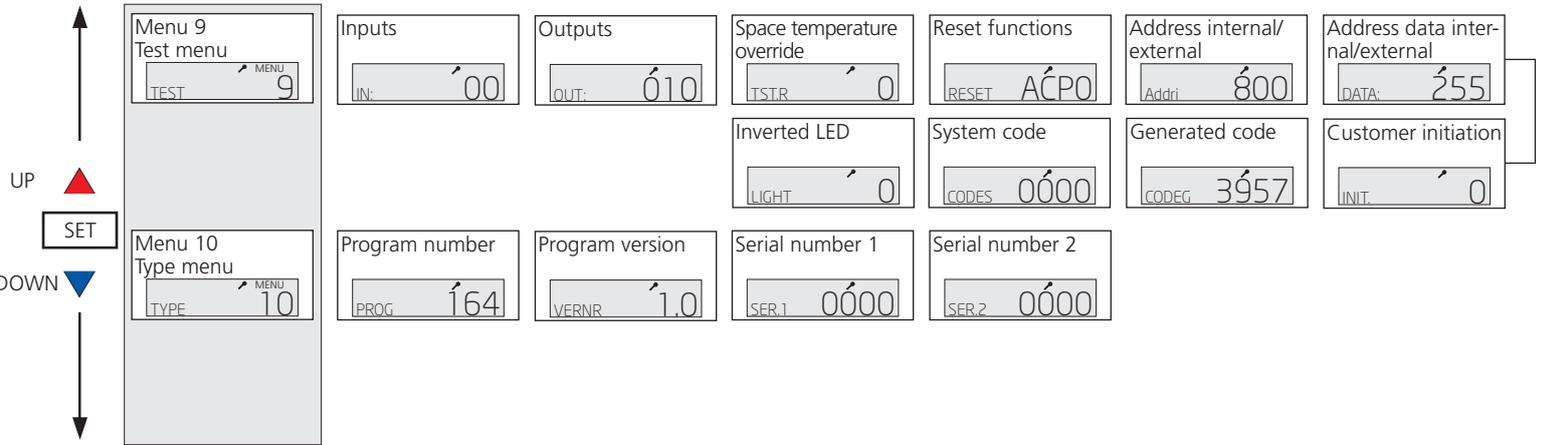
3.6 Change values

To change a value, press the UP or DOWN buttons. If there are more than one value to be changed, you can select the value you want to change by pressing the SET button. One of the values starts to blink, and to change that value press the UP or DOWN buttons. To jump to the next value, just press the SET button again.

3.7 Menu overview



Continues on the next page

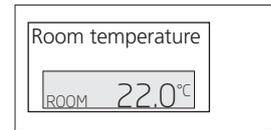


3.8 Default view

Default view shows normally the actual room temperature and the active output and current operation mode.

The configuration device will return to this view automatically.

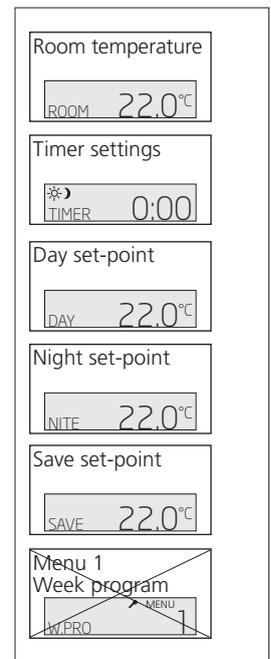
To enter the main menu, press the SELECT button.



3.9 Main menu

The main menu has the following menu selections:

- "ROOM" Times and measure values (sub meny)
- "TIMER" Timer function
- "DAY" Day mode set-point
- "NITE" Night mode set-point
- "SAVE" Save mode set-point
- "W.PRO" Settings menus (sub menu, the text "W.PRO" and number "1" may differ depending on which menu that was last displayed, before going back to default view).

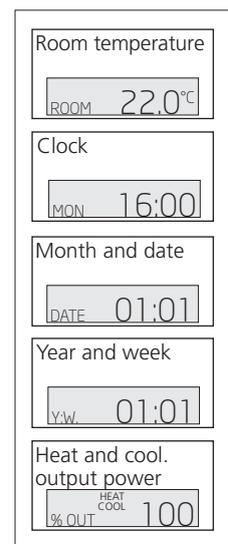


3.10 Timer and measure values menu

This sub menu has the following selections:

- "ROOM" Actual room temperature
- "MON" Day and time
- "DATE" Month and date
- "Y:W" Year and week number
- "%OUT" Output signal power, in percent to outputs

To jump between different menu views press the UP and DOWN buttons. All values in the menu "Timer and measure values" can be changed except week number and "%OUT". Press the SET button and one of the values starts to blink. To change the value press UP or DOWN buttons. To jump to the next value press the SET button. The clock can be set, but the controller can not store the clock settings at voltage failure. Time and date will be reset at voltage failure.



3.11 Timer function

With the timer function, the controller can change its operation mode during a selected period of time.

The display shows number of days to the left and the colon, and hours to the right. The SUN and the MOON symbols shows which operation mode that the timer function activates during the selected period of time.

To set the time, press the UP or DOWN buttons. If the time 0:00 is set, the timer function is off.

To set a operation mode for the timer to activate, press the SET button. The available operation modes are DAY (SUN), NIGHT (MOON) and SAVE (SUN and MOON).

When the timer function is activated, the operation mode symbol starts to blink (at all display views except the timer view).

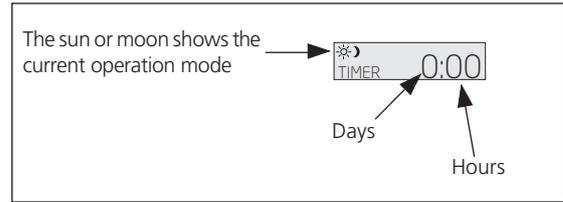
Alternative timer function

If the override function is activated for any of the outputs (see menu "outputs"), the timer is instead used to activate the selected outputs during the selected period of time.

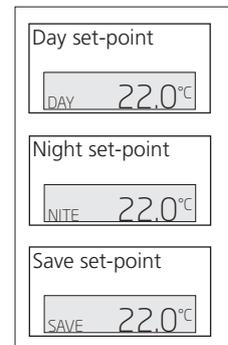
3.12 Set-point values

There are three different set-points in the controller, one for each operation mode, day, night and save mode.

Night and save mode's set-point values can be changed by entering each display view and press the UP and DOWN buttons. Day mode can not be changed with the configuration device, this is changed with the controller's set-point knob.



Timer view



3.13 Settings menu

This menu has 10 different sub menus for setting up the controller's control functions.

- "W.PRO" Week program (no function)
- "LOG" Room temperatuer log
- "REGUL" Control parameters
- "OUTP" Outputs
- "INPUT" Inputs
- "OCC." Occupancy sensor
- "CAL" Calibration
- "BUT.F" Button functions
- "TEST" Test functions
- "TYPE" Type (program, version and serial no.)

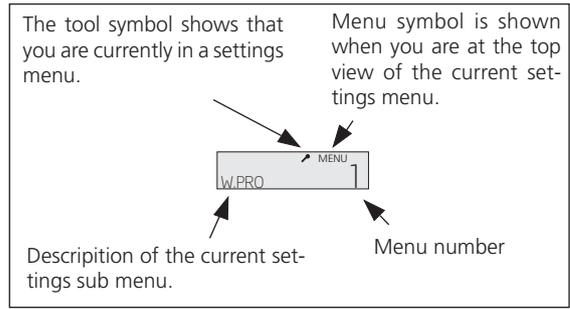
To enter another sub menu at the settings menus, check that both the tool and menu symbols are shown, and then press the SET button so that the menu number starts to blink. Then use the UP and DOWN buttons to select a sub menu. Confirm your selection by pressing the SET button again.

to enter the settings at the selected sub menu, press the DOWN button. Every sub menu has different views, and when you are in a sub menu, only the tool symbol is shown, not the MENU symbol.

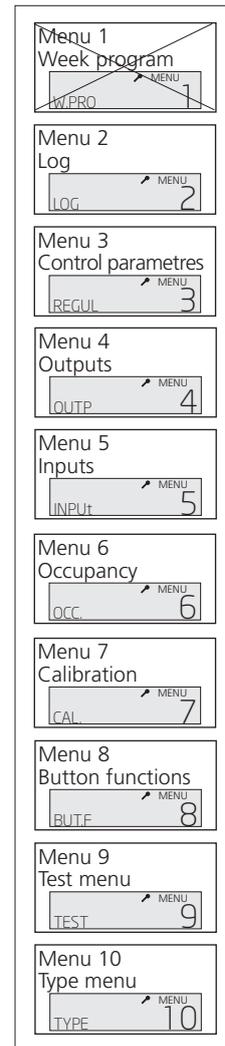
To make changes in the different display views, press the SET button.

To go back to top view, press and hold the UP button.

The configuration device will automatically go back to the top view in steps, and stop there.



Settings menu, the top view



Settings menu

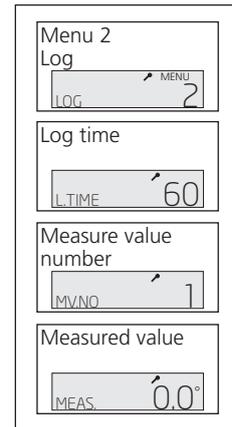
3.14 Menu "Log"

The controller has a built-in log function, where it can store the room temperature with the set up interval. The interval is set to 1 time/hour as default.

The controller can store up to 75 log values.

The interval is set at the view "L.TIME", and can be set from 0-255 minutes. The value 0 deactivates the log function.

To read the logged values, set the desired log number (from 1-75) at the "MV.no" view where point 1 is the latest logged value. The logged value can then be read at the "MEAS." view.

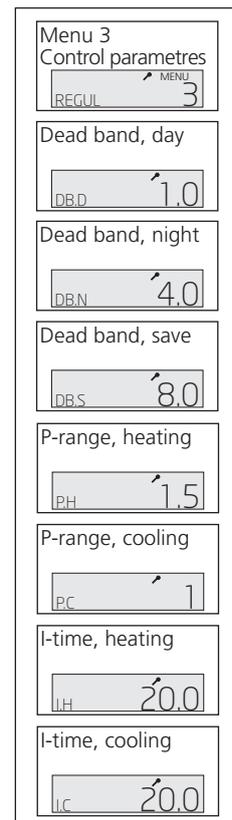


Menu "Log"

3.15 Menu "Control parametres"

All the controllers control parameters can be set under this menu. The parametres are:

"DB.D"	Dead band, day mode	0.5 - 20.0 K
"DB.N"	Dead band, night mode	0.5 - 20.0 K
"DB.S"	Dead band, save mode	0.5 - 20.0 K
"P.H"	P-range, heating	0.5 - 99.5 K
"P.C"	P-range, cooling	0.5 - 99.5 K
"I.H"	I-time, heating	0.5 - 99.5 minutes
"I.C"	I-time, cooling	0.5 - 99.5 minutes



Menu "Control parametres"

3.16 Menu "Outputs"

This menu allows you to select different functions for all the controller's outputs. There is two 24V outputs and two 0-10V outputs. These are designated as "d1", "d2", "A1" and "A2".

d1 and d2 are digital on/off outputs.
A1 and A2 are analog outputs.

The terminal on the circuit board has a limited amount of in and outputs. As default there are two 24V outputs and two inputs (external sensor and condensation sensor) available. To be able to change this, the changes have to be made in the output menu first, and then change the jumper settings on the controller as described on page 7.

To select an output, select the display view "OUT.no".

Press the SET-button, and "d1" starts to blink. Use the UP and DOWN buttons to select an output. Press the select button again to confirm the selection. All the views, "TYPE" to "MOT" are now valid for the selected output.

"TYPE" Output type

Selectable output types:

- | | |
|----------------------------------|--------|
| - On /off | "OnOF" |
| - Time proportional on/off (PWM) | "PULS" |
| - 0-10V | "0-10" |
| - No output | "_" |

Depending on the selected output, only the applicable signal types is shown for each output. Output "d1" has also a signal type "3P", but this has no function in this version of the controller.

"HC:" Heating or cooling output

Select if the output should be a heating or cooling output. It is possible to control both heating and cooling, for mixing dampers etc. The output can also be affected directly by the room temperature by setting desired limit values on the "LIML" and "LIMH" display views.

- | | |
|------------------------|--------|
| - Cooling output | "COOL" |
| - Heating output | "HEAT" |
| - Heating/cooling | "HC" |
| - Absolute temperature | "DIFF" |

Menu 4
Outputs

OUTP MENU 4

Output number
OPNo d1

Output type
TYPE PULS

Heating/Cooling
HC COOL

Override
FORC 0

Control range, lower
LIML% 0

Control range, higher
LIMH% 100

Voltage limit, lower
LIMLV -

Voltage limit, higher
LIMHV -

Period time
PTIME 20.0

Invert output
INV. 0

Valve exercise
MOT. 1

Menu "Outputs"

The controller detects automatically all the output functions and adapts the set-point function, if there are no outputs set up as heating outputs, the controller will control directly without a dead band to the set-point temperature. If the controller has both heating and cooling outputs set up, the controller will use dead bands for both outputs.

"FORC." Override output

The override forces an output to be activated by the timer function at the main menu.

0= Override off
1= Override on

"LIML%" and "LIMH%" Control range set up

The controller has a PI function that calculates a PI output power. The PI output is then added to a physical output. A normal setting e.g. is that the outputs "d1" and "A1" are set up to control between 0 to 100% of the PI cooling output (the whole cooling output range).

To set up the outputs as two cooling outputs in sequence, it's possible to set up the output "d1" to 0-50% of the PI output and "d2" to 50-100%. The outputs will then operate in sequence from 0-100% of the total PI cooling output.

On the example above, the outputs are set up to these values:

"d1"	HC:	=	COOL
"d1"	LIML%	=	0%
"d1"	LIMH%	=	50%
"d2"	HC:	=	COOL
"d2"	LIML%	=	50%
"d2"	LIMH%	=	100%

If the output function is set to "diff", the display view is changed to "LIM.-1" and "LIM.-0". The room temperature that should result in the highest output signal is entered at the "LIM.-1" view, and the lowest possible signal at the "LIM.-0" view.

"LIML V" and "LIMH V" Setting voltage limits for the analog outputs "AN1" and "AN2"

Example: "LIML V" is set to 2,0 Volts and "LIMH V" is set to 7,4 Volts. The output value is then scaled to modulate between 2,0 - 7,4 Volts for the selected control range.

If the override or valve exercise function is activated, the output voltage will be same as the value in "LIMH V", and then to "LIML V" when inactivated.

"LIML V" and "LIMH V" can also be used to calibrate the output voltage.

"PTIME" Set the time proportional period time

If the output has been set to type "PULS", the output's time proportional period time is set here. Default setting is 20 minutes.

The time proportional function is also known as "PWM" (Pulse Width Modulation). The controller transforms an output signal between 0-100% to pulses in certain time periods. If the "PTIME" is set to 20 minutes and the output has a 50% output demand, the output pulses a 24V signal 50% of the selected period time. The output will be active for 10, and inactive for 10 minutes.

"INV." Inverting an output signal

Sometimes the output needs to be inverted, e.g. when using normally open actuators. All outputs can be inverted.

"MOT." Automatic valve exercise

Sometimes the valves can stay closed for long periods of time and get jammed.

The automatic valve exercise opens the actuator to fully open once a day in three minutes, regardless normal output signal to prevent the valves from getting jammed.

The valve exercise is active at nights at:
01:00-01:03 for output "d1" and "A1"
01:30-01:33 for output "d2" and "A2"

The interval can be set from 0 to 30 days. If the value 0 is set, the exercise function is deactivated.

3.17 Menu "Inputs"

This menu allows you to select the temperature sensor to be used for controlling the temperature, activate a condensation sensor and condensation alarm and activate an input for overriding the current operation mode. There are two inputs available. How to use them is described in chapter 2.1 in this manual.

"R1+R2" Select temperature sensor

Select the temperature sensor that is used for controlling the temperature.

Value 1 = Built-in temperature sensor

Value 2 = External temperature sensor

Value 3 = Mean value between the sensors

If value 2 is selected, the controller will use the external sensor to measure the actual room temperature. If value 3 is selected the controller will check if there is a functional room temperature sensor connected and then calculate a mean value between the built-in and external room temperature sensors.

"COND" Condensation function

It is possible to activate an input for a condensation sensor (1= active). If condensation occurs, the controller blocks the cooling outputs, and if the controller still has a cooling demand, the LED will blink blue. When the condensation has disappeared, the cooling outputs will control normally and the LED stops blinking.

"CALRM" Condensation alarm

If this function is activated, the controller will activate 10V DC output on the "AN1" (analog 1) output if condensation occurs. This function is active even if the condensation function is inactivated.

This is useful when an external unit is used to react with the 10V signal.

"EXT." Override operation mode

This function can activate an operation mode by connecting a relay with a normally open/closed function.

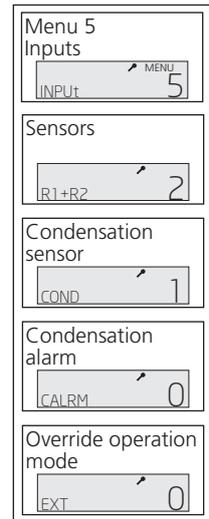
Relay open = Activate the override function

Relay closed = Deactivate the override function

Value 1 = Activates the "DAY" operation mode

Value 2 = Activates the "NIGHT" operation mode

Value 3 = Activates the "SAVE" operation mode



Menu "Inputs"

3.18 Menu "occupancy"

The controller has functions to override the operation mode with a occupancy detector. A simple passive IR detection unit can be used, if it has a potential free relay or equivalent.

"ACTIV" Occupancy function activation

To activate this function, this value is set to 1.

If the override isn't affected by the timer or an external override function, the operation mode will change from "DAY" to "NIGHT".

When occupancy is detected, the operation mode will change to "DAY".

"NO" Normally open contact

To suit the most common IR detection units, a contact function can be selected for the IR detection unit's relay.

NO = 0 relay open at detection

NO = 1 relay closed at detection

"TIME 0" Off delay

An off delay time can be set for the occupancy sensor input. The value can be set from 0 to 990 minutes with steps of 1 up to 100 minutes. The steps will after that change to 10 minute steps. As soon as the occupancy sensor contact stops indicating, the off delay starts it's countdown. After the delay is timed out the controller will change it's operation mode back to "NIGHT".

"TIME1" On delay

The on delay time is set as a time delay before the controller activates the operation mode "DAY" when occupancy is detected. The value can be set from 0 to 99 minutes.

When occupancy is detected, the controller receives an impulse from the detector, and the on delay starts to count. If no new impulses are received, the current operation mode will not change. If the controller recives one or more impulses, the "DAY" operation mode will be activated when the controller has completed it's countdown of the set up on delay time.

This function is useful if you wan't to prevent the controller from changing it's operation mode from "NIGHT" when you just pass the room quickly.

3.19 Menu "Calibration"

The calibration menu allows you to calibrate the controller's built-in (R1) or external temperature sensor (R2).

Menu 6 Occupancy	MENU 6
Occupancy function	ACTIV 0
Occupancy contact function	NO 0
Off delay	TIME 0 60
On delay	TIME 1 0

Menu "Occupancy"

Menu 7 Calibration	MENU 7
Built-in sensor	R1 0.0
External sensor	R2 0.0

Menu "Calibration"

3.20 Menu "Button functions"

At this menu you can set the controllers main view functions, enter an access code and set max/min limits to the "DAY" operation mode.

"CODE:" Access code

An access code can be set to prevent unauthorized access to the controller. A system code can be set to prevent access to the settings menu. By default the code is set to "0000", this code also inactivates the code function.

"MAX.T" Maximum timer time

It's possible to set a maximum limit for the timer's time function, in hours between 0 to 255. If the value 0 is set, the function is inactive and can't be activated from the main menu. Default value is 255.

"MINSP" and "MX SP" Set-point scale limit

"MIN B" is the lowest set-point value for the set-point scale, default value is 16°

"MX SP" is the highest set-point value for the set-point scale, default value is 28°

"LOCK" The "lock" function for the clock etc.

A lock function can be activated to different values at the main menu. If the value 1 is set, all the menu view's is still visible, but the following values can not be changed:

- Day, time, date, year
- "NIGHT" operation mode set-point value
- "SAVE" operation mode set-point value

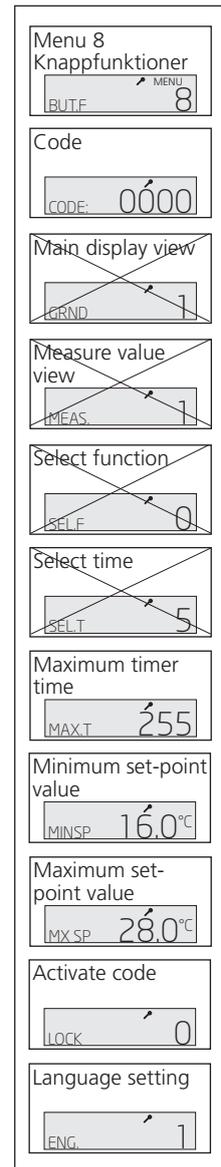
"ENG." Language setting

Select language:

0 = Swedish

1 = English

The value is also saved to the controller next time you connect. If the controller is reset, the language settings resets to the controllers default value (1).



Menu "Button functions"

3.21 Menu "Test"

This menu allows you to monitor the controller's in and outputs, make temperature simulations, reset the software etc.

"IN:" Input status

Reading the input status IN1 and IN2.

0 = inactive, 1= active

If IN1 is used for an external sensor, the number 1 is shown if the sensor is connected.

"OUT:" Output status

At this view you can see the status of the controllers two 24V outputs. The number to the right shows the status of output "d2", and the number at the center shows the status for output "d1"

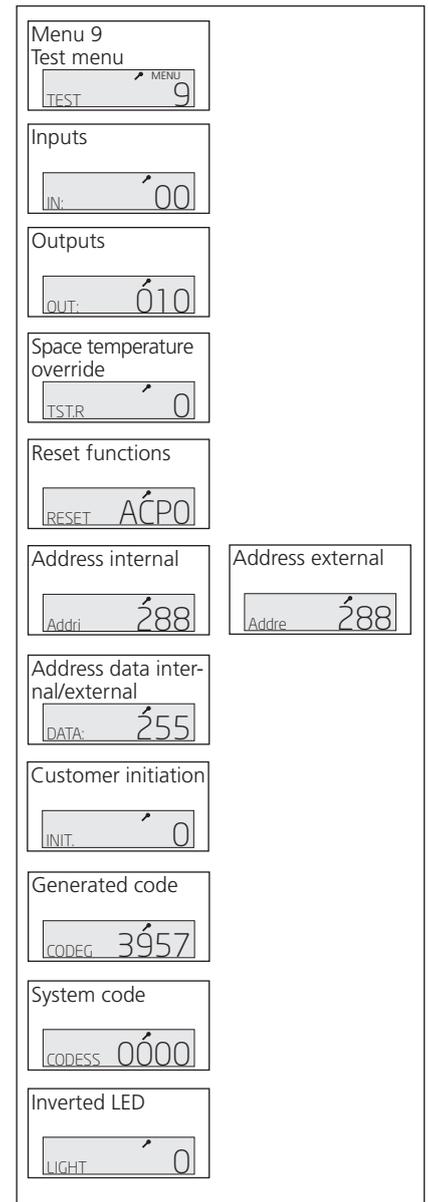
The number to the left can be set to 1 if you wish to force any of the outputs to be active by pressing the SET button and then the UP button (the control functions are automatically turned off). Then press the SET button again to jump to the next number (output). The value can be set to 1 or 0 to force the action of the outputs. If any of the outputs has been activated by force, the symbol AUTO will blink. The function will deactivate automatically after 2 hours, or at voltage failure.

"TST.R" Space temperature override

To make simulations and tests of the control functions in the controller, the room temperature sensors reading can be deactivated. Instead, you can enter a (simulated temperature) value manually at the main menu view by first activating the override at the "TST.R" view, and the return to the main view and press the SET button, and enter a (simulated room temperature) value. The function will deactivate automatically after 2 hours, or at voltage failure.

"RESET" Reset

The controllers reset functions can reset the controllers software or all the controller's values to factory default. The reset functions are:
(continues on the next page)



Menu "Test"

ACPO

- A = All reset (all values are reset to factory default)Note!Thiscanonlybedonewitha special code, contact Swegon.
- C = Resets all, except the clock and certain important system parameters.
- P = "Regular" reboot. Values read from the controller is copied to the configuration unit's firm memory.
- 0 = Not used. Has to be 0!

Press the SET-button to jump between the different reset functions, and confirm your selection by pressing the UP button.

"Addri" and "DATA"

Reading the values in the configuration device's RAM.

To be able to perform some types of fault localisation it may be necessary to read some of the values in the RAM. The address is entered at the view "Addri", and the value can then be read at the view "DATA".

When you are at the menu view ("Addri"), you can press the SET button twice, and with the UP button change to menu view ("Addre"). This indicates that the will read the controller's RAM directly, instead of the configuration device's RAM. Press the SET button again to confirm the selection.

"INIT" is only used to program some customer specific initiation values, contact Swegon.

"CODEG" and "CODES" Special code for protected system functions.

Some functions are protected to prevent that any hardware related settings are done incorrectly. But sometimes it may be necessary.

The view "CODEG" generates a temporary code. Write this code down, and then contact Swegon to get the access code. The access code is then entered at the display view "CODES".

3.22 Menu "Type"

This menu identifies the product and program version and displays the products serial number, if this has been entered.

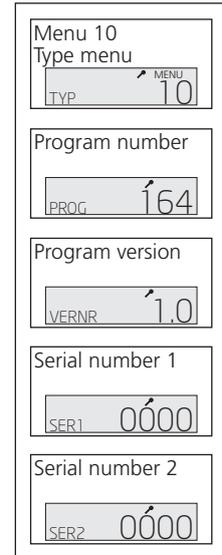
"PROG." Program number

"VER" Program version

"SER.1" Serial number 1

"SER.2" Serial number 2

To read out the serial number, the figures should be interpreted from right to left on "SER.1". The right-most figure is the singular, followed by ten, hundred and thousand. The figures of the menu "SER.2" is from right to left ten-thousand, hundred-thousand, million and ten-million.



Menu "Type"