

## Modulating room thermostat

# qSense



## Installation and Service Manual

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# 1 Preface

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## 1.1 General

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The Remeha qSense is a simple modulating room thermostat based on the OpenTherm SmartPower protocol. Certain Remeha boiler types offer other functions in addition to the room thermostat function. These functions include setting parameters. See the installation and service manual for the boiler.



This installation and service manual describes all the functions of the qSense.



### WARNING

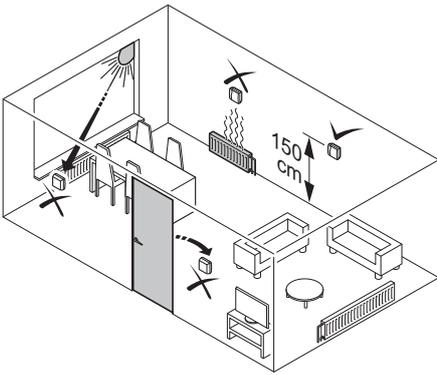
OpenTherm SmartPower is required for the backlight. In boilers without OpenTherm SmartPower, qSense is functional but without backlight.



## 2 Location of the installation

### 2.1 Position of the regulator

The controller works using room control. This means that the inside temperature is used to control the central heating.



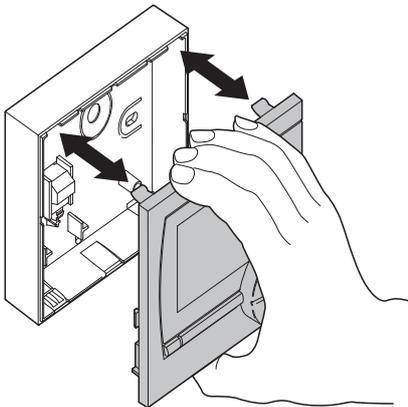
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- ▶ Install the regulator in the reference room (generally the living room).
- ▶ Do not locate the controller too close to heat sources (fireplace, radiator, lamp, candles, direct sunlight etc), or in places where it may be draughty.

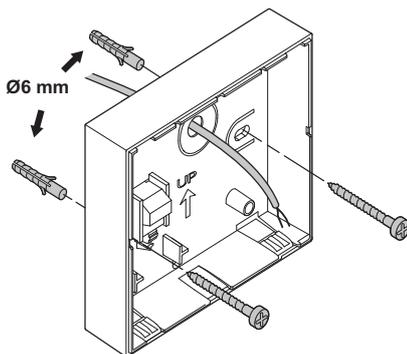
### 2.2 Installation and connection

Before you can connect the controller, you must first:

1. Adjust the boiler so that it can be connected to a OpenTherm controller. See the installation and service manual for the boiler.
2. Shut down the boiler.
3. Open the housing by pulling the front and the base plate apart.

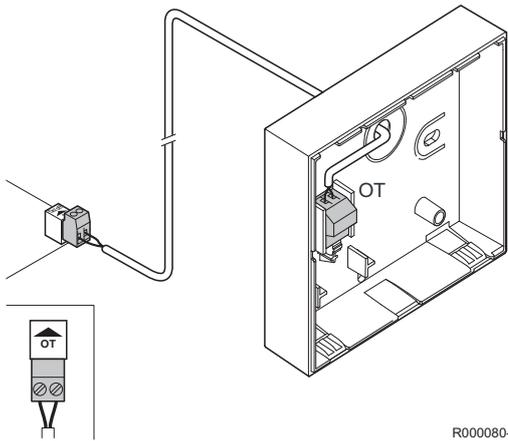


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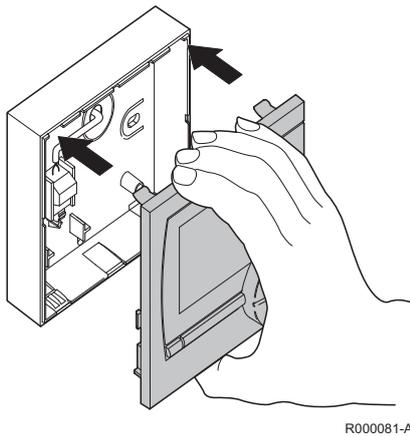


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4. Attach the base plate to the wall using the screws and plugs supplied. Ensure that the OpenTherm connecting wires for the boiler are poking through the hole in the base plate.



5. Connect the controller to the OpenTherm connection of the boiler, and to the OT connection of the controller. OpenTherm is not sensitive to polarity. The wires are interchangeable.

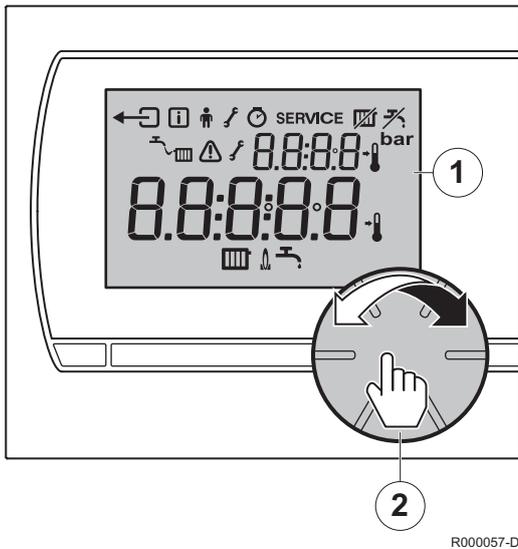


6. Place the front panel back in the housing.

# 3 Start-up

## 3.1 Fitted control unit

### 3.1.1. Controls and Symbols



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- 1 Display
- 2 Rotary and push button for setting the controller

The controller is menu-controlled, which means it is very simple to operate.

The controller has just 1 button.

- i**
  - ▶ The button is both a rotary button and a push button.
  - ▶ By turning it you can perform various tasks such as scrolling through menus or changing values such as.
  - ▶ You press it to confirm choices (Such as menu selections).

Symbols		Menu Symbols	
	ECO mode on		Back
	Water pressure too low		Information menu
	Fault		User menu
	Boiler service required		Service menu
	Current temperature		Hour counter menu
	Set temperature	<b>SERVICE</b>	Maintenance message
	Central heating mode on		
	Burner on		
	Domestic hot water mode on		

### 3.1.2. Default setting

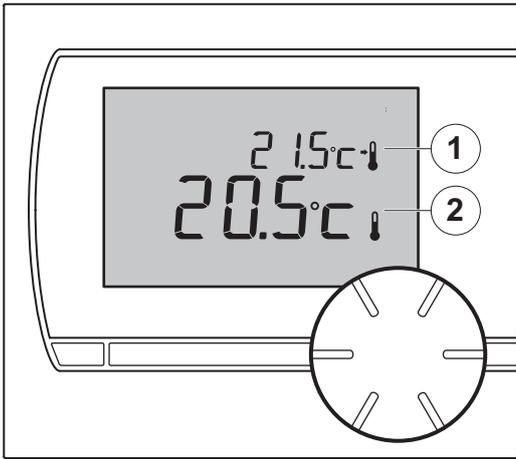
The controller works using room control (Central heating is controlled on the basis of the inside temperature).

- i** This is the default setting:
  - ▶ Set temperature **15°C**
  - ▶ **ECO AUTO**
  - ▶ The most recent set temperature is saved

# 4 Setting

## 4.1 Changing the settings

### 4.1.1. Modifying the temperature



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- 1 Set temperature
- 2 Measured temperature

- ▶ Turn the button to set the ambient temperature.
- ▶ Press the button to confirm.

### 4.1.2. Menu structure General

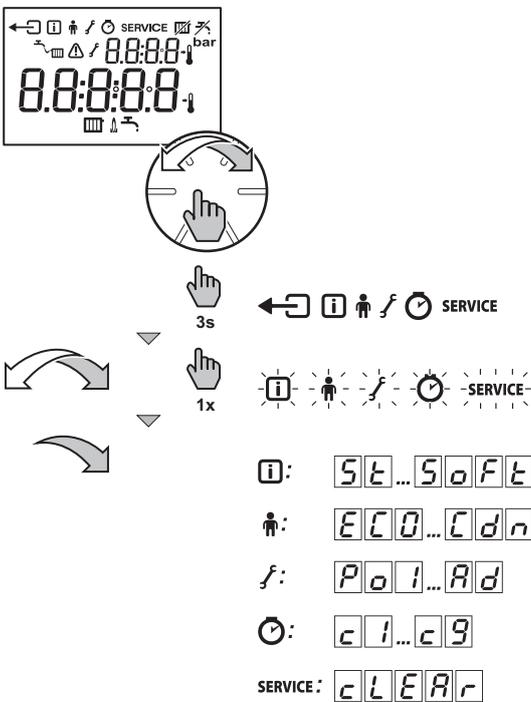
To gain access to the menu, proceed as follows:

- ▶ Press the rotary and push button at least 3 sec.
- ▶ Turn the button until you reach the required menu.
- ▶ Press the button to confirm.
- ▶ Amend the selected menu item.
- ▶ Press the button to confirm.
- ▶ Exit the menu by pressing



#### WARNING

The values to be read may differ depending on the connected heating unit. See the installation and service manual for the boiler.



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### 4.1.3. "User" settings by default

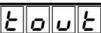
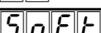
#### User menu

Code	Meaning	Information	Settings	Factory setting
	Mode ECO	The ECO mode turns off the DHW standby function. In combi boilers the waiting time increases. Boilers are no longer kept warm.	 =Automatic position  =Start  =Stop	
	DHW standby function	Setting the desired tap water temperature, possibly for domestic hot water tanks with a temperature program.	30 to 75°C	60°C 
	Maximum central heating water temperature	Setting the desired central heating water temperature.	0 to 100°C	90°C 
	Heating rate	Setting how fast or slow the controller responds.	 = Fastest  = Faster  = Normal  = Slower  = Slowest  = Extra Slow	
	Cooling rate	Indicate how fast or slow the house cools down. A well insulated house will cool down slower.	 = Fastest  = Faster  = Normal  = Slower  = Slowest	

# 5 Installer settings

## 5.1 Information menu

Various information about the boiler and any connected accessories can be requested here.

Information menu 	Meaning of the symbols
	State
	Sub-status
	Usual display Flow temperature (°C)
	Usual display Return temperature(°C)
	Usual display Calorifier temperature (°C)
	Usual display Outside temp (°C)
	Usual display Solar boiler temperature (°C)
	Current ionization current display
	Usual display Fan speed omw/min
	Usual display Water pressure in the installation
	Current output of the boiler
	Control system software version

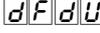
## 5.2 Fitter mode

In this mode, the installer can, depending on the boiler, adjust some of the functions and request information.



- The following is applicable to all installer settings:
- ▶ The values to be read may differ depending on the connected heating unit.
  - ▶ The meaning of the various codes may differ for different boilers.
  - ▶ After selection of a parameter, it takes 1 sec before it is retrieved.

### Settings > Fitter mode 0012

Settings	
	Use the boiler manual, when changing the boiler parameters. If an invalid value is entered,  appears on the screen.
	Revert to the factory settings. See the installation and service manual for the boiler.
	Carrying out an auto-detect. See the installation and service manual for the boiler.

## 5.3 Counters

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The history of various boiler functions can be checked here.

**Settings > Counters** 

Counters 	Information
 1	Unsuccessful starts
 2	Number of times with no or low flame
 3	Number of successful starts
 4	Central heating Pump starts
 5	DHW Pump starts
 6	DHW Number of burner startups
 7	Total operating hours
 8	Central heating Pump operating hours
 9	DHW Pump operating hours

## 5.4 Service menu

Boiler service messages can be reset here.

### Settings > Service SERVICE



#### WARNING

Reset the service message after the boiler service has been carried out. The active message or the next message can be reset.



If     is displayed in the service menu, the boiler will not show a service code.

The Clear message indicates that a (pre-) service reset is possible. Message Clear A, B, or C indicates that service message A, B, or C can be reset. The boiler determines which service message can be reset

Service	Meaning
<input type="text" value="c"/> <input type="text" value="l"/> <input type="text" value="e"/> <input type="text" value="r"/>	Service reset



Only a qualified engineer may carry out the following operations.

By pressing the button when Clear is displayed. You can select either Clear No or Clear Yes by turning the button. If Clear No is selected, the relevant service message will remain. And you will be returned to the Clear screen. If Clear Yes is selected, the relevant service message will be reset. The controller will then return to the     screen.



Multiple resets are not possible.

Operations to be carried out		
<b>SERVICE</b> <input type="text" value="c"/> <input type="text" value="l"/> <input type="text" value="e"/> <input type="text" value="r"/> <input type="text" value="a"/> <input type="text" value="b"/> <input type="text" value="c"/>	<b>SERVICE</b> <input type="text" value="a"/> <input type="text" value="c"/> <input type="text" value="l"/> : <input type="text" value="n"/> <input type="text" value="o"/>	<b>SERVICE</b> <input type="text" value="a"/> <input type="text" value="c"/> <input type="text" value="l"/> : <input type="text" value="y"/> <input type="text" value="e"/> <input type="text" value="s"/>

# 6 Messages

## 6.1 Error messages

Below is an example of a fault message:



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Error codes	Fault indication	Probable causes	Solution
F203	⚠ is lit up.	Faulty connection to boiler.	Check the boiler's connection to the controller.
F214	⚠ is lit up.	Incorrect room temperature reading.	Room temperature measurement is incorrect. The temperature sensor may be defective if the room temperature is between -5°C and 65°C. Contact your installer.
F215	⚠ is lit up.	Controller failure	Contact your installer
F217	⚠  is lit up.	Water pressure too low	Top up the water in the central heating system. See the installation and service manual for the boiler.
	⚠ is lit up.	Your boiler may not support the OpenTherm SmartPower.	OpenTherm SmartPower is required for the backlight. In boilers without OpenTherm SmartPower, qSense is functional but without backlight. To clear the message, press the button.

# 7 Technical data

## 7.1 Technical data

<b>Dimensions</b>	
	80 x 90 x 32,5 (l x b x h) mm
<b>Power supply</b>	
OpenTherm regulator	OpenTherm
<b>Electrical connection</b>	
OpenTherm regulator	OpenTherm communication. Connection for low-voltage wires
<b>Ambient conditions</b>	
Storage conditions	Temperature: -25°C +60°C
	Relative humidity 5% - 90% no condensation
Operating conditions	0°C - 60°C
<b>Temperature</b>	
Room temperature	Measurement range: -5°C +65°C
	Maximum temperature deviation at 20°C : 0,3 °C
Temperature control area	5 - 35°C
Adjustment	Modulating temperature control
	The control can be optimised
Room control	Overshoot: Maximum 1°C after pre-heating
	Temperature variation: Less than 0,25°C
Adjustment strategies	Adjustment of the room temperature
<b>Features of the controller</b>	
Backlight	Colour: blue
Control precision	Temperature: 0,5 °C
Controls	Rotary and push button
Mounting	Directly on the wall using screws. Or built-in junction box as per standards
Quality marks and compliance with standards	<ul style="list-style-type: none"> <li>▶ EMC: 2004/108/EC, 55014</li> <li>▶ Emission: EN61000-6-3</li> <li>▶ Immunity: EN61000-6-2</li> <li>▶ Drop test: IEC 68-2-32</li> <li>▶ RoHS compliant</li> <li>▶ OpenTherm V3.0 Smartpower</li> </ul>
Protection classification	IP20





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