



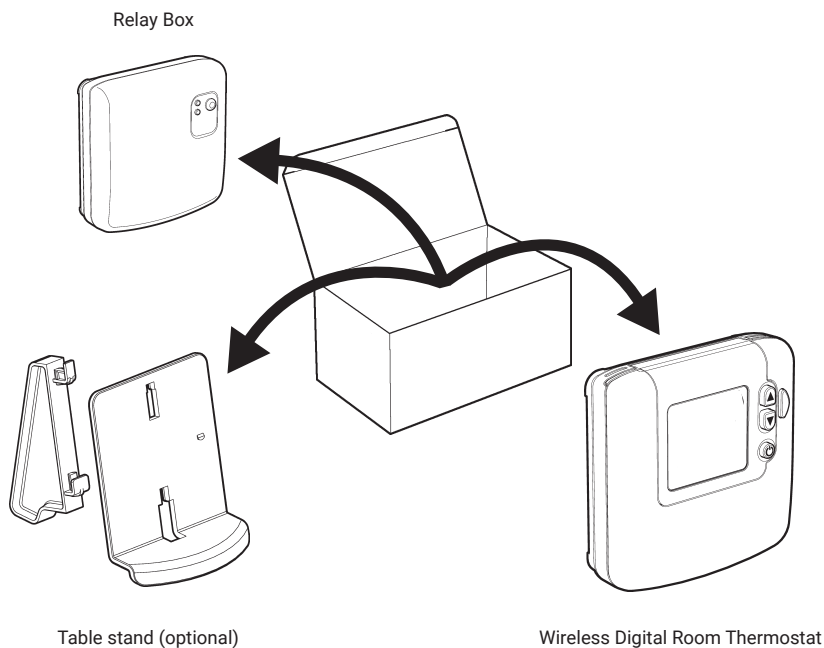
# WIRELESS DIGITAL ROOM THERMOSTAT

## Installation Guide

### TTHWFD (Room Thermostat / Relay Box)



The Wireless Digital Room Thermostat comprises a Room Thermostat and a Relay Box. These devices communicate on an 868MHz Radio Frequency (RF) band to control a single heating system component such as a boiler, pump or zone valve. RF communication is 2-way, allowing high performance energy efficient control, display of boiler information, and easy setup and communications check features.



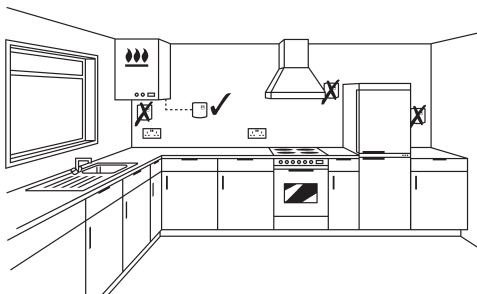
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# 1 Installation Notes

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- The RF link between the Wireless Digital Room Thermostat and the Relay Box in this pack is pre-configured at the factory and therefore should be installed at the same site.
  - If products from individual system packs are separated, or mixed with other pre-configured system packs during installation, or a faulty unit is being replaced, the desired units must be specially configured to allow them to communicate with each other. This process is called Binding. Please refer to section 6) Binding / Rebinding Procedure.
  - The Wireless Digital Room Thermostat or Relay box will not communicate with other RF products that use different frequencies or communications protocols.
  - The Wireless Digital Room Thermostat requires no power source other than the batteries provided.
  - The Relay Box requires a permanent 230V~ supply.
  - The Relay Box should be installed before commencing the Wireless Digital Room Thermostat installation.
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## 2 Installing the Relay Box



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For best performance, install in an open space. Leave at least 30cm distance from any metal objects including wall boxes and boiler housing. Do not mount on metal wall boxes.

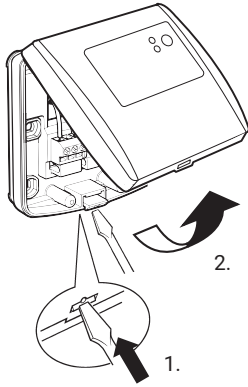
### EMC compliance considerations

Keep AC mains supply/load cables separate from signal wiring.

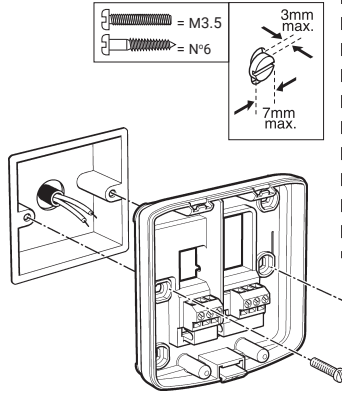
Refer to Code of Practice standards EN61000-5-1 and -2 for guidance.

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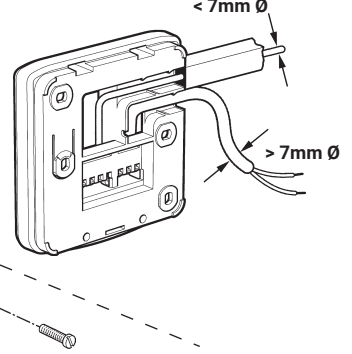
## 2.1



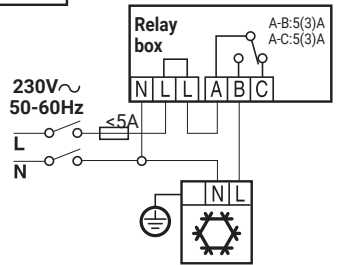
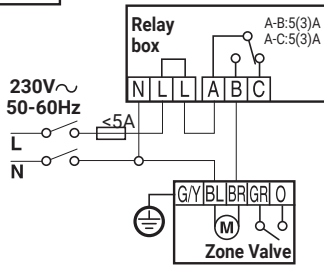
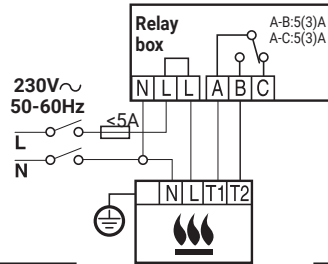
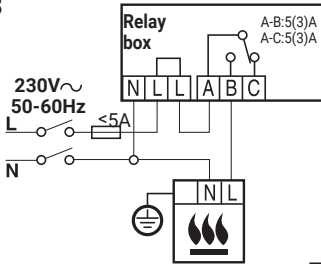
## 2.2 a.



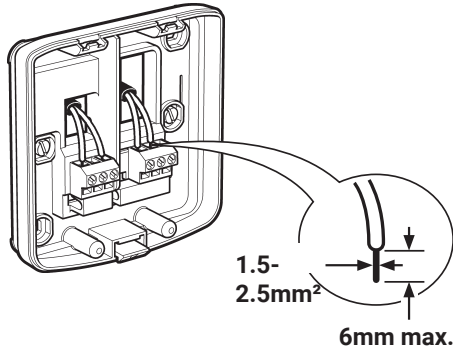
## b.



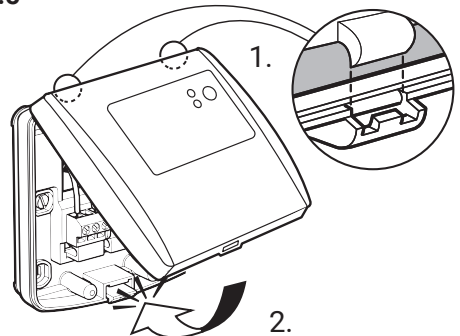
## 2.3



## 2.4



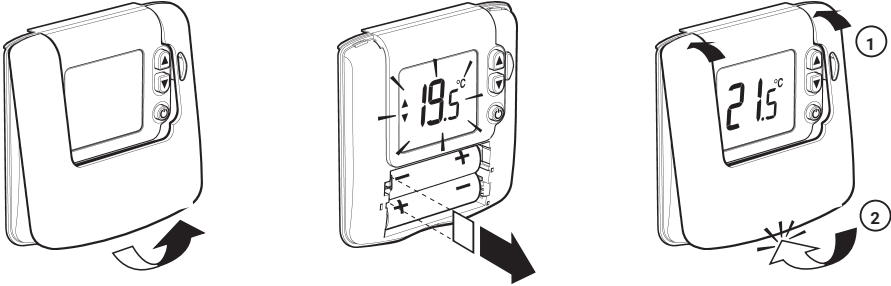
## 2.5



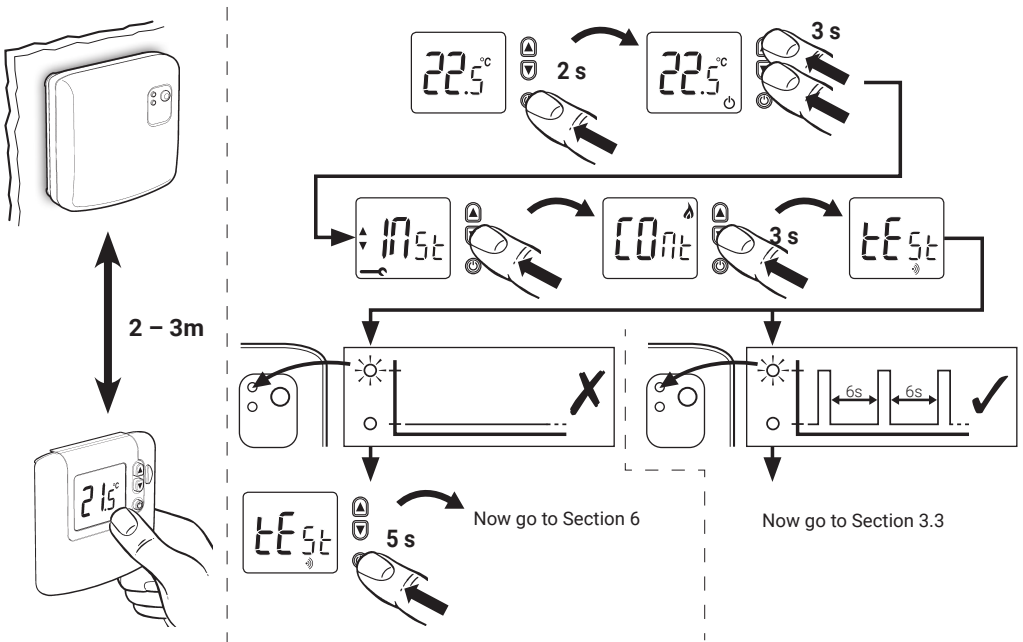
### 3 Installing the Wireless Digital Room Thermostat

! Before mounting Wireless Digital Room Thermostat onto the backplate

#### 3.1 Power up



#### 3.2 RF Communication Test



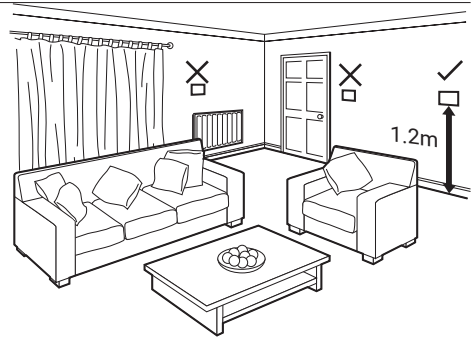
### 3.3 Locating the Wireless Digital Room Thermostat

For best performance, install in an open space where Wireless Digital Room Thermostat can sense the room temperature, and where the signal strength is high.

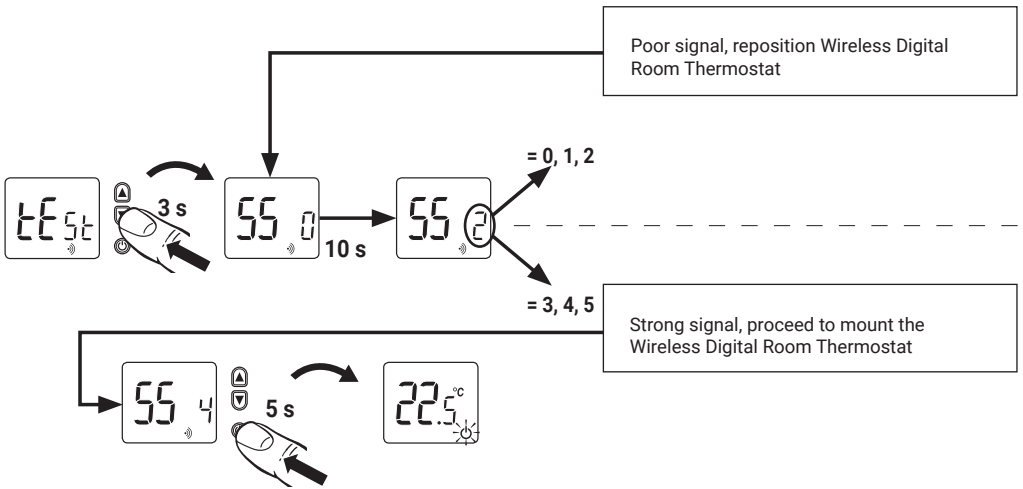
The Wireless Digital Room Thermostat can be mounted on a wall or on the optional table stand.

Leave at least 30cm distance from any metal objects and at least 1 metre from any other electrical equipment.

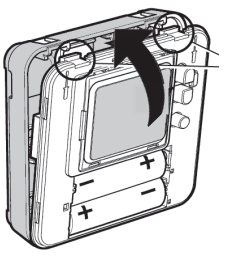
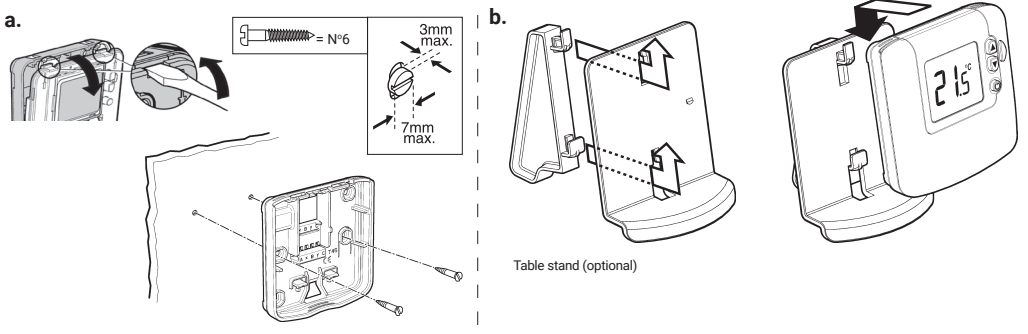
Select the preferred location and test the Signal Strength before installation.



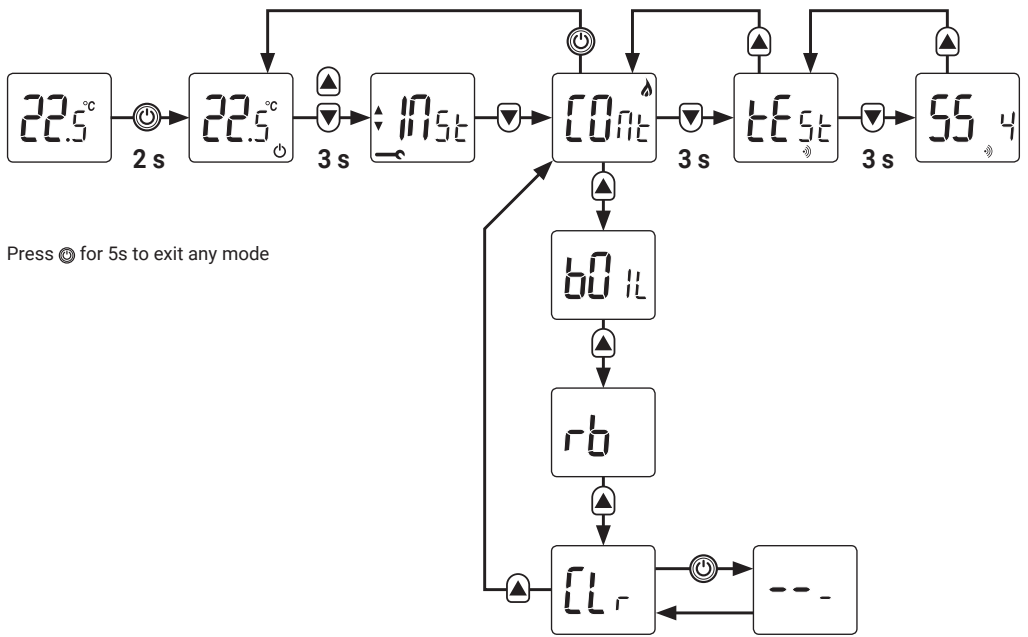
### 3.4 Signal Strength Test



### 3.5 Mounting the Wireless Digital Room Thermostat



### 3.6 Test & Binding Flow-chart



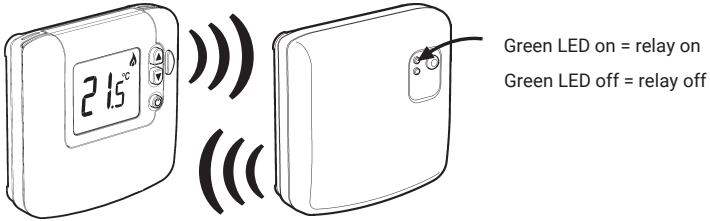
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## 4 Basic System Operation

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### 4.1 Automatic Operation

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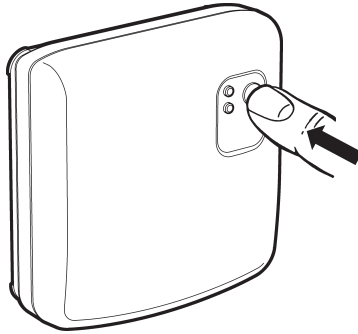
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### 4.2 Temporary Manual Override

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Press button to temporarily override the current relay position

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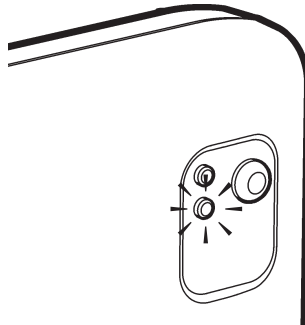
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### 4.3 Loss of RF communications

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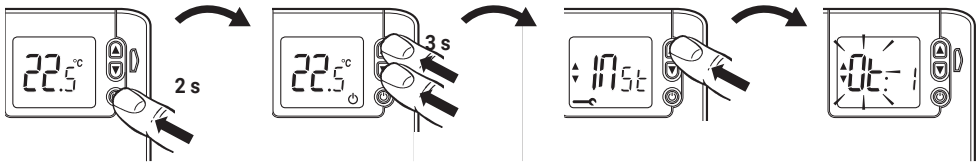
If RF communication is lost, red LED lights and Relay Box operates in failsafe mode, as set in Installer Mode

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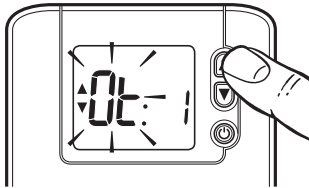


# 5 Installer Mode

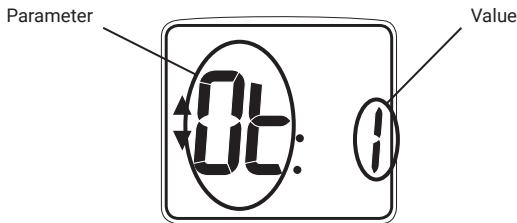
## 5.1 To enter Installer Mode



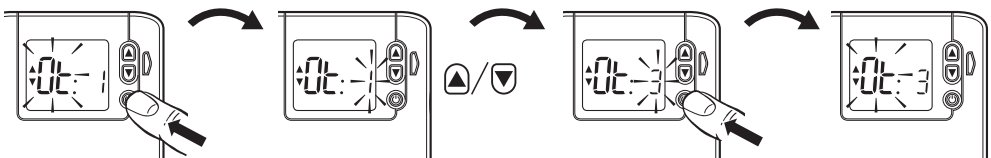
## 5.2 To select a parameter



## 5.3 Display

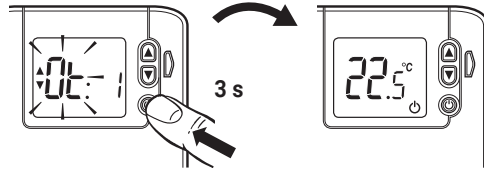


## 5.4 To change a parameter

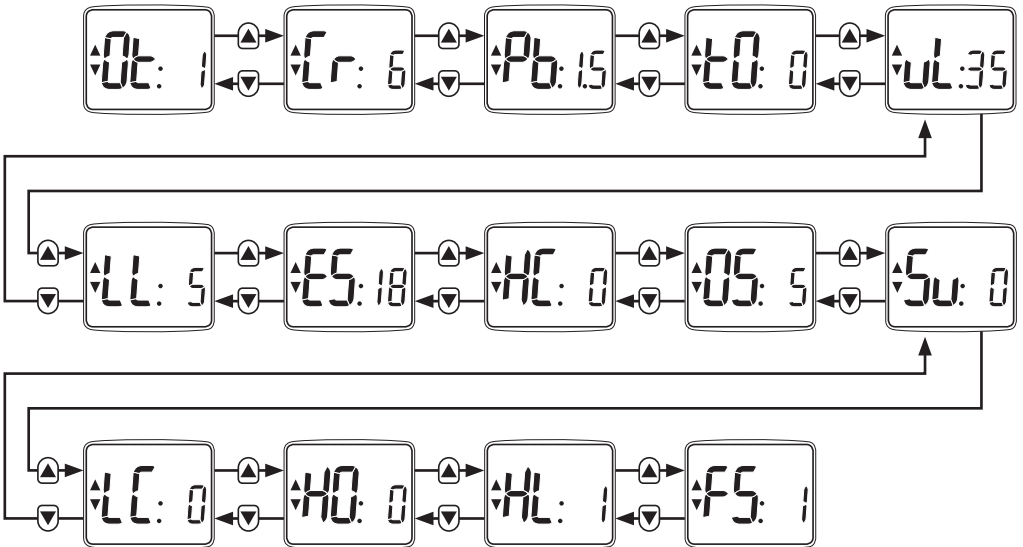




## 5.5 To exit Installer Mode



## 5.6 Parameter flowchart



## 5.7 Parameters

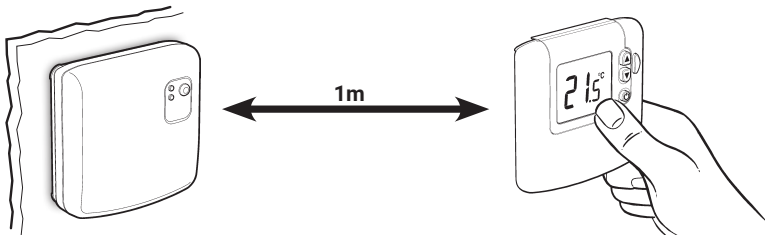
Description	Parameter	Range of values	Default
Minimum ON/OFF time	Ot	1,2,3,4,5 m	1 m
Cycle rate	Cr	{3,6,9,12}	6
Proportional band width	Pb	1.5 ... 3.0 K	1.5K
Temperature measurement offset	tO	-3 ... 3 K	0 K
Upper setpoint limit / Límite superior de temperatura	uL	21 ... 35 °C	35°C
Lower setpoint limit	LL	5 ... 21 °C	5°C
ECO temperature	ES	5 ... 35 °C	18 °C
Heat/cool changeover	HC	0 / 1 0 = Disable 1 = Enable	0 0 = Disable 1 = Enable
Off setpoint adjust	OS	-- (= Off), 5...16°C	5°C
Failsafe mode (loss of RF communications)	LC	0 = Off 1 = On 20%	0 = Off
Reset parameters	FS	0 / 1	1 (factory)

## 6 Binding/Rebinding Procedure

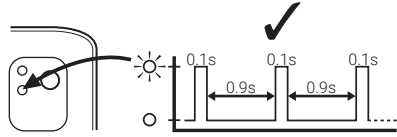
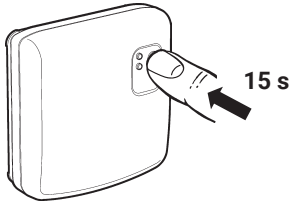
The binding operation shown is required if:

- any of the system components (Wireless Digital Room Thermostat or Relay Box) are replaced
- Relay Box has incorrect or no binding data stored (for example, when pre-bound system pack components have been mismatched).

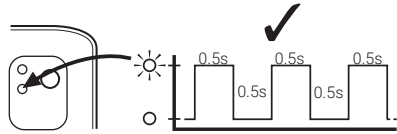
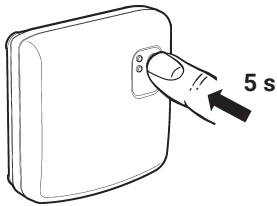
### 6.1



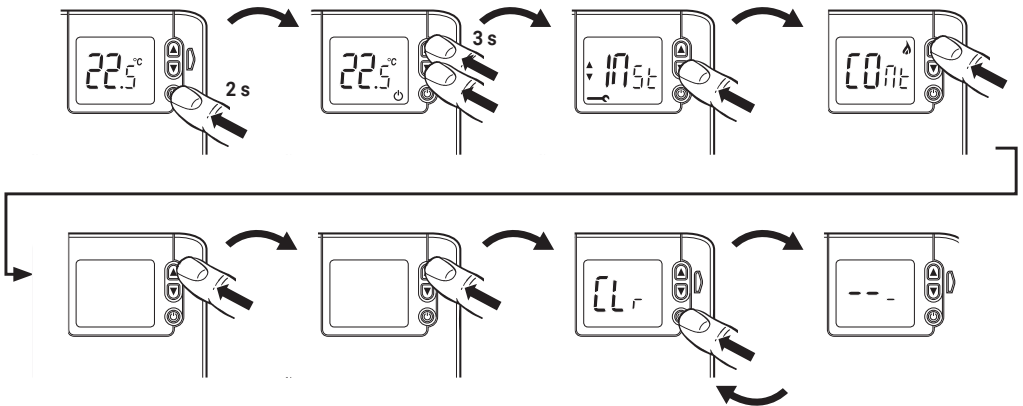
## 6.2 Reset stored data in Relay Box



## 6.3 Put Relay Box into Binding Mode



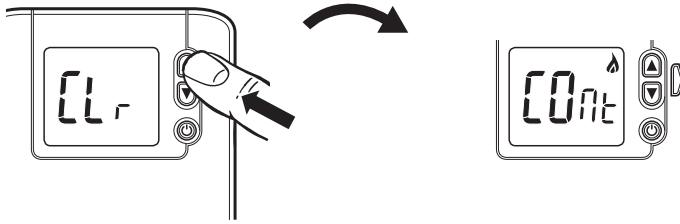
## 6.4 Reset stored data in Wireless Digital Room Thermostat



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## 6.5 Put Wireless Digital Room Thermostat into Binding Mode

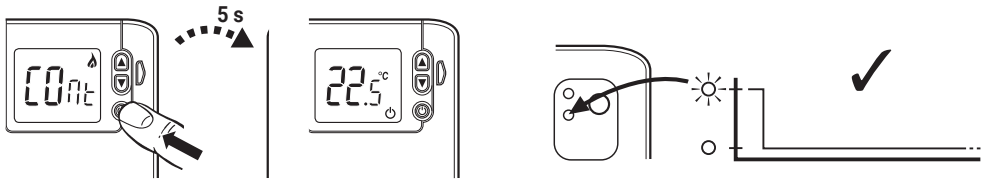
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## 6.6 Bind Wireless Digital Room Thermostat to Relay Box

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## 6.7 Now go to Section 3.2 RF Communication Test

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