



## Smart radiator valve

Translation of the original Installation and Commissioning Manual

Item no. 13601001



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...describes how to install, commission and operate the Smart radiator valve.

### How to use this manual

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- ◆ Before you begin, please read this manual through completely and follow all the safety instructions.
- ◆ Please also read the instruction manuals for the logged-on DuoFern devices and the respective connected appliance.
- ◆ This manual is part of the product. Store the manual in an easily accessible place.
- ◆ When passing the Smart radiator valve on to a third party, this manual must be passed on as well.
- ◆ Damage resulting from non-compliance with these instructions and safety instructions will void the warranty. We assume no liability for any consequential damage.



## 2. Hazard symbols



**Danger area / dangerous situation**



### 2.1 Symbols and depictions used

**Depiction**

**Description**



Further useful information



Please read the respective manual.



## 3. Safety instructions



**The use of defective devices and improper use can lead to property damage.**

- ◆ Never use defective or damaged devices.
- ◆ Check the Smart radiator valve for damage.
- ◆ Consult our customer service department in the event that you discover damage, see page 32.
- ◆ Train all persons to use the Smart radiator valve safely.
- ◆ Children must not play with the device.

Only use the Smart radiator valve for controlling a heating valve.

### Operating conditions

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- ◆ Only use the Smart radiator valve in dry rooms.
- ◆ The installation and operation of radio systems is only permitted for systems and devices where a malfunction in the transmitter or receiver would not cause a danger to persons or property or where this risk is already covered by other safety equipment.



Radio systems that transmit on the same frequency can cause interference.

### DuoFern

- ◆ HOMEPILOT radio system for controlling compatible products.

### Premium gateway

- ◆ The Premium gateway is a central controller unit for HOMEPILOT radio products.



## 4. Included in delivery

EN

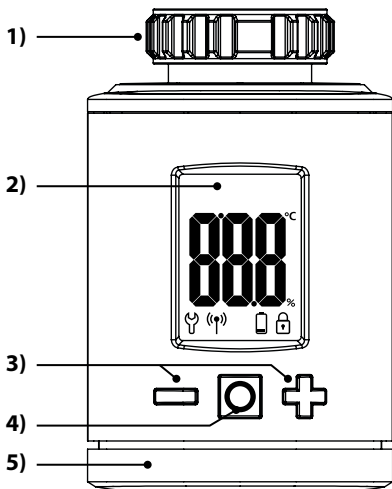
- 1 x Smart thermostat premium
- 1 x cover
- 3 x Danfoss adapter (RA / RAV / RAVL)
- 1 x screw with nut
- 2 x AA batteries 1.5 V / LR6
- 1 x installation and commissioning manual

### **After unpacking please check and compare...**






... the contents of the package with those specified above.



## 5. General view



- 1) Union nut
- 2) Display
- 3) Control buttons and navigation in the menu
- 4) Menu and set button
- 5) Battery compartment

Symbol	Description
	Target value / actual value or setting parameter
	Menu / settings
	Automatic mode
	Low battery
	Child protection function / operating lock

## 6. Product description

The Smart radiator valve is an electronic radiator thermostat for controlling a radiator valve and for regulating the room temperature.

The operation and setting of the Smart radiator valve can be performed on site directly on the device, via a smartphone app. The Premium gateway is also required as a central controller (not included in delivery) for control via an app.

The Smart thermostat premium be used as a central control for up to 20 Smart radiator valve in a stand-alone solution or can also be controlled centrally via Premium gateway.



General information	
Supply voltage:	2 x 1.5 V (DC), AA, alkaline
Battery life: <i>Observe the information on page 11.</i>	approx. 2 years <i>with three switching times daily and a set transmission interval of 15 minutes</i>
Mechanical loading capacity:	70 N
Linear stroke:	2 - 3 mm
Connection thread:	M 30 x 1.5 mm
Permissible ambient temperature:	0 to 40°C
Frost protection temperature:	4 °C
Automatic limescale protection:	once a week
Protection class:	IP20 (only for use in dry rooms)
Dimensions (W x H x D):	56 x 68 x 89 mm
Weight (incl. battery):	176 g
DuoFern radio technology	
Transmission frequency:	434.5 MHz
Transmission power:	max. 10 mW
Maximum number of DuoFern devices:	1 x Premium gateway or 1 x Smart thermostat premium



## 8. Initial commissioning

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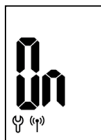


### 8.1 Insert the enclosed batteries



**The use of rechargeable batteries or incorrect batteries can damage the Smart radiator valve.**

- ◆ Only use leak-proof 1.5 V AA batteries (LR6).
- ◆ If a battery has leaked, we recommend replacing the Smart radiator valve with a new device.
- ◆ Pay attention to the correct polarity when inserting the batteries.



2 x AA 1.5 V (LR6)

Registering mode is then active.



If the Radiator Actuator 2 is already connected to the Premium gateway or with a Smart thermostat premium, registering mode is bypassed and the drive moves automatically to the installation position, see page 13.

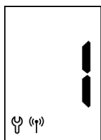
If no login is to take place, continue with **8.4**.

1.



Switch the Premium gateway to registering mode. Login takes place automatically.

2.



The logged-on Premium gateway appears as “1” on the display after a successful login.

If no login takes place within 2 minutes, “0” appears on the display.



The Smart radiator valve must be installed immediately after logging on to the Premium gateway. Otherwise, “not ready for operation” is displayed in the Premium gateway.



If you regulate your heating system, for example, with night setback (or longer periods of temperature setback), you need to set up an appropriate scene for the temperature setback. This prevents unnecessary battery consumption.

If no login is to take place, continue with **8.4**.

1.



Switch the Smart thermostat premium to registering mode. Login takes place automatically.

2.



The logged-on Smart radiator valve appears as “1” on the display after a successful login.

If no login takes place within 2 minutes, “0” appears on the display.



If you regulate your heating system, for example, with night setback (or longer periods of temperature setback), you must set up the temperature setback with two setpoints and two switching times. This prevents unnecessary battery consumption.

1.



**Activate installation mode by briefly pressing the button.**



The drive then moves to the installation position (**POS**). The display flashes as soon as the installation position is reached.



If a Premium gateway or Smart thermostat premium was already logged-on before the batteries were inserted, the installation mode is activated directly.



## 8.5 Mounting on the radiator valve

EN

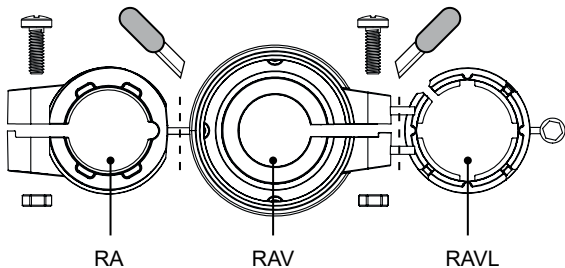
1. Attach the Smart radiator valve to the valve or the adapter and tighten the union nut.



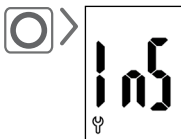
The Smart radiator valve has minimal flexibility after the installation in order to be able to optimise the view on the display. You should therefore not over-tighten the union nut.



You can use one of the enclosed adapters for mounting on Danfoss radiator valves.



1.



Activate installation mode (**InS**) by briefly pressing the menu button.

The drive then automatically performs an installation run to define the end positions.

2.



The normal display appears with the set target temperature after a successful installation run.

The Smart radiator valve is now ready for operation.

The display switches off automatically to save energy.

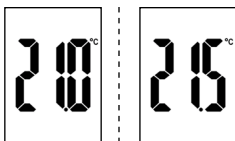


Pressing any button switches on the display again and switches the Smart radiator valve to operating mode.



The normal display then appears with the set target temperature.

## 9.1 Setting the target temperature



You can adjust the desired target temperature in 0.5 °C steps by briefly pressing the button.

Pressing and holding a button causes the numbers to progress quickly.



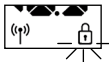
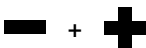
The room temperature measured by the Smart radiator valve may vary from the perceived temperature depending on the installation location.



First activate the normal display by pressing any button, see page 16.

### Activating the child protection function

---



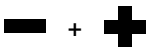
Press briefly 1 x,

until the lock symbol flashes. Manual operation is still possible.

After the display goes off and is re-activated, the lock symbol is displayed continuously and the device cannot be operated.

### Switching off the active child protection function for a short time

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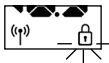
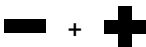


Press briefly 1 x,

until the lock symbol flashes. The child protection function switches off for a short time to enable the device to be operated.

### Deactivating the child protection function

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Press briefly 1 x,

until the lock symbol flashes.

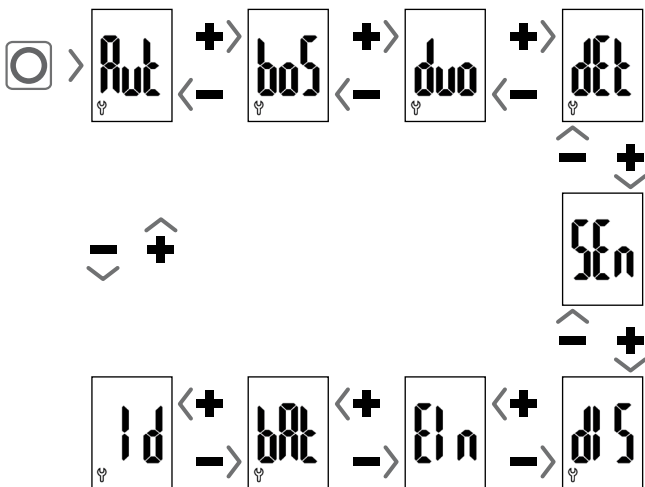
Briefly release and press 1 x again at the same time,



until the lock symbol disappears.

Different settings can be made and functions can be activated (**On**) or deactivated (**OFF**) in the Smart radiator valve menu.

### Navigation in the menu

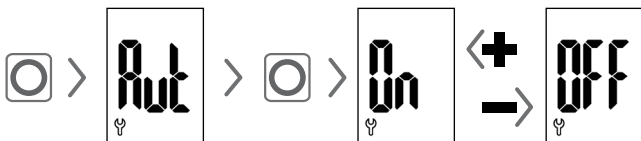


### Setting parameters, see next chapter

The settings are saved by pressing the menu button.

### Return to the normal view

- ◆ Automatically after approx. 10 seconds without any input.
- ◆ By pressing and holding the menu button.



### Automatic mode On (factory setting)

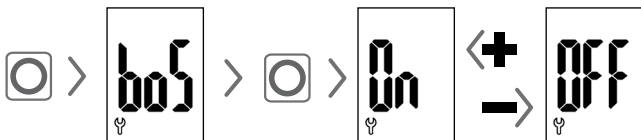
All control commands from a thermostat premium smart are allowed.

### Automatic mode OFF = manual mode

Only changes on site or manual changes are implemented by the thermostat premium smart.

Please note: In combination with the gateway premium, the settings made here have no function.

## 10.2 Boost function (boS)



The boost function enables the room to be heated for a short time and is automatically deactivated after 15 minutes.

You can activate the boost process in the normal display with **+** or **-**.



The boost process cannot be started if “Window open” has been detected by the internal window open detection (see page 22). Incoming automatic control commands are executed at the end of the process.

You can log the Premium gateway or the Smart radiator valve onto the Smart thermostat premium in this menu (**duo**).



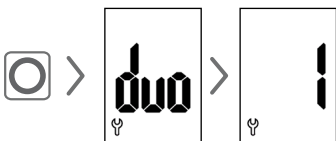
You can log on a maximum of one Premium gateway or one Smart thermostat premium. Observe the information on battery consumption on page 11.



Please refer to the instruction manual for the registered device.

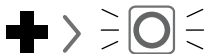
### Logging on to / logging off the Premium gateway or Smart thermostat premium

1.



Open the DuoFern menu (**duo**) in the Smart radiator valve. A logged-on device is displayed, if available.

- 
2. Switch the Premium gateway or the Smart thermostat premium to registering or log-off mode as required.
- 
3. Activate the desired function on the Smart radiator valve, see next page.



Logging on to the Premium gateway or  
Smart thermostat premium



### LED signals when logging on



- ◆ Flashes green: during the login
- ◆ Lights up green for 2 seconds: after a successful login
- ◆ Lights up red for 2 seconds: if the login has not taken place within 2 minutes or an error has occurred



Logging off the Premium gateway

or

Smart thermostat premium

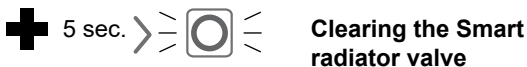


### LED signals when logging off

- ◆ Flashes red: during the login
- ◆ Lights up green for 2 seconds: after a successful log-off
- ◆ Lights up red for 2 seconds: if the logout has not taken place within 2 minutes or an error has occurred



You can cancel the login or log-off at any time by pressing **+** or **-**.



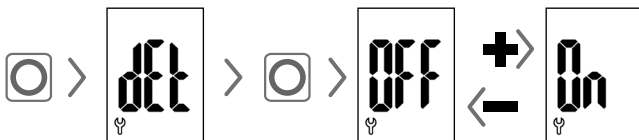
The radio connection to a Premium gateway or Smart thermostat premium that can no longer be accessed is deleted.



#### LED signals during the clearing process

- ◆ Flashes red: during the clearing process
- ◆ Lights up green for 2 seconds: after completing the clearing process

### 10.4 Internal window open detection (dEt)



#### Factory setting = OFF

If the internal window open detection is active, the drive regulates to the frost protection temperature for 15 minutes if a drop in temperature is detected. Once this time has elapsed, the drive attempts to regulate back to the previous target temperature.

Window open detection takes place irrespective of whether the Smart radiator valve is in manual or automatic mode.



If an open window is detected, this message (**OPn**) appears for the duration of the process.



Alternatively, you can also use an external Smart door and window contact (Item no. 14771002) for control purposes via the Premium gateway or Smart thermostat premium in case of an unfavourable installation position (e.g. in a niche).

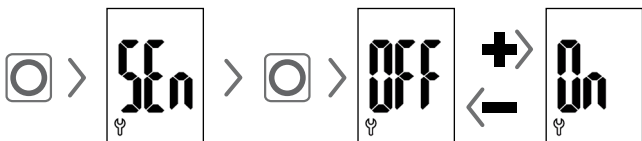


## 10.5 External window open detection



If an open window is detected by an external Smart door and window contact, this message (**OPn**) appears for the duration of the process.

You can cancel the message and switch the Smart radiator valve back to normal mode by pressing **+** or **-**.



### Factory setting = OFF

This menu is only visible in connection with a Smart thermostat premium. Optionally, the measured actual (IST) temperature of a Smart thermostat premium can be used as the controlled variable of the Smart radiator valve.

This can be useful, for example, if the Smart radiator valve is mounted in a niche and the temperature detection is not sufficient there.

OFF

The temperature determined by the Smart radiator valve itself is used for control.

On

The temperature determined by the Smart thermostat premium is used for control.

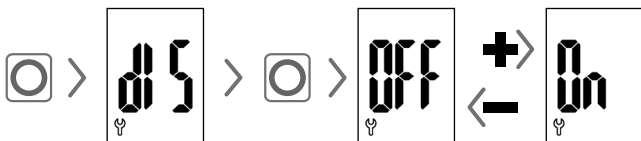


The Smart thermostat premium should be in the same room as the Smart radiator valve.



The quality of the regulation depends on the reception interval (see chapter 10.8, page 26).

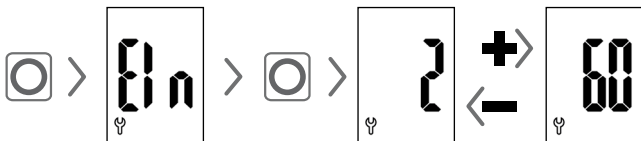




### Factory setting = OFF

It may be beneficial to rotate the information shown on the display through 180° depending on the installation. The display is rotated only after confirming with the menu button, see page 18.

## 10.8 Reception interval (EIn)



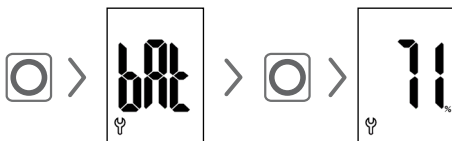
### Factory setting = 15 minutes

Here you can set the frequency of communication between the Smart thermostat premium and Premium gateway or Smart radiator valve.

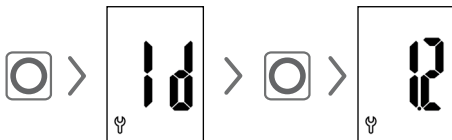
The set value describes the time in minutes that the Smart radiator valve waits before it automatically asks for new information.






If the value is set small, the system quickly checks for changes on the Premium gateway or Smart thermostat premium. However, the battery life is also reduced.





Observe the information on battery consumption on page 11.



1. First activate the normal display by pressing any button, see page 16.
2. Deactivate the child protection function if it is active, see page 17.

3.  Press and hold, additionally  
 +  press and hold.  
Be sure to follow the specified sequence.

4.  Release the buttons only when the text on the display appears.

5.  Confirm the reset by pressing the button.

6. The Smart radiator valve restarts with the factory settings, see page 10 “Initial commissioning”.



If no confirmation is made after pressing the menu button, the menu is automatically closed after 10 seconds and no reset is performed.

Errors that have occurred are shown on the display with an error code.

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**E1 = The drive is not installed**

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- ◆ Install the Smart radiator valve at a suitable place.

---

**E2 = Error in the mechanics**

---

*An error has been detected during the installation run.*

- ◆ Repeat the installation run.

---

**E3 = Installation run too short**

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- ◆ Check the installation position of the Smart radiator valve.
- ◆ Adjust the installation with an adapter if necessary.
- ◆ Replace a defective device.

---

**E4 = Error in the DuoFern network**

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*The logged-on Premium gateway or the Smart thermostat premium are no longer accessible via radio.*

- ◆ Ensure that there is no disruptive radio source nearby.
- ◆ Ensure that the Smart radiator valve is in the radio range of the Premium gateway or Smart thermostat premium.

**Information about E1 - E3**

You can start a new installation run by reinserting the batteries, see page 10.



## 13. Cleaning / maintenance

EN



**Chemical solvents may damage the Smart radiator valve.**

- ◆ Use only a soft, slightly damp cloth to clean the device.



## 14. Simplified EU declaration of conformity



DELTA DORE RADEMACHER GmbH, hereby declares that the Smart radiator valve complies with the Directive **2014/53/EU (Radio Equipment Directive)**.

The full text of the declaration of conformity is available at the following website:

[www.homepilot-smarthome.com](http://www.homepilot-smarthome.com)

### Warranty terms and conditions

Information on the warranty conditions is enclosed with the product.



## 15. Information about environmental protection



Information on disposal is enclosed with the product.





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