ENGINEERING TOMORROW



# DEVIreg™ Smart – Smart App





#### How to install and operate



#### Contents:

Installation & commissioning Use About the APP - Version



#### Start up

DEVI®



### Set-up wizard, p1





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#### Read the text on the screen. Help function available in start up.

Press the green pulsating button on the thermostat to confirm the connection

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		<	Thu
Congratulations on your new DEVIreg Smart system You have a choice between 3 options to get the system started. To get full benefit of your thermostat, you need to spend up to 5 minutes to connect your phone and setup the thermostat.	Are you replacing a DEVIreg <sup>™</sup> Touch? If your DEVIreg <sup>™</sup> Smart is to replace an existing DEVIreg <sup>™</sup> Touch, it is possible to copy the configuration using "Replace DEVIreg <sup>™</sup> Touch"	Mount your DEVIreg Smart into the wall	) J J
Demo mode Receive house	Replace DEVIreg <sup>™</sup> Touch		<ul> <li>Thermostat not found</li> <li>Thermostat is open for connection the button in the upper left corner will be pulsating blue. The thermostat will open for connections when turned on.</li> <li>If your thermostat is already turned on but no</li> </ul>
Start setup	Setup new DEVIreg <sup>™</sup> Segart	Next	on again. To turn the thermostat off press and hold th upper left button for 3 seconds while the thermostat counts down on the display. Afterwards press the upper left button again to turn it on. Wait for the thermostat to start and the button to pulsate blue, this might tak up to 30 seconds. Note: The thermostat is open for connection in 2 minutes after being turned on.
Start page			Fault screen



### Set-up wizard, p2





#### Surface type Room type Room type Chose sensor **Choose Output** Saving screenshot. 🗑 🔋 🖊 97% 💈 18:02 - 12 🗑 🚡 🖌 100% 🖬 18:59 🗑 🗊 🖌 97% 🖬 18:03 K ł 🖸 🔋 📶 97% 🗗 18:03 Room type < Sensor type Regulation Flooring Heating output Choose type of installed floor sensor Choose sensor for temperature regulation Choose the room type where the system is Choose the installed floor type Select installed heating power installed aube 10 kOhm (25°C) Floor Tiles 100 W Bathroom DEVI 15 kOhm (25°C) Floor + room Hardwood 125 W Bedroom Eberle 33 kOhm (25°C) 150 W Laminate Living room Ensto 47 kOhm (25°C) 175 W Carpet Kitchen FENIX 10 kOhm (25°C) 200 W OJ 12 kOhm (25°C) 225 W Raychem 10 kOhm (25°C) 250 W Help Help Help Help Help Next Next Next Next Next 🗑 🗊 🔏 96% 🗗 18:05 Ł ł 🗑 🗊 🖌 96% 🗗 18:05 🗑 🗊 🖌 96% 🖬 18:05 🗑 🗊 🥖 96% 🖪 18:04 Ł Ł 🗑 🗊 🖌 96% 🖪 18:04 ł × × × × × Information Information Information Information Information Sensor type Regulation Flooring Room type Heating output Select the installed floor sensor. If the Select whether room temperature should be Select the flooring used to set default Select the room type to set default comfort Select the approximate load of the heating installed sensor is not available, select a controlled using a room + floor sensor or a comfort, eco, min, and max floor temperatures and eco temperatures (°C). Living room: 21 element (W) to estimate installation power similar type. Sensor resistance and current floor sensor only. and 17. Bedroom: 19 and 17. Bathroom: 23 (°C). Tiles: 27, 20, 23, and 35. Hardwoord: 25, consumption (kWh). measured temperature are shown in 20, 22, and 33. Laminate: 24, 20, 21, and 33. and 17. Kitchen: 20 and 17 parentheses (). Carpet: 23, 20, 20, and 35.

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#### Set-up wizard, p3

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Note: The thermostat is open for connections

in 2 minutes after being turned on.

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#### Android connects automatically to thermostat. Just choose DEVIreg Smart Wi-Fi.



If user experiences a screen like this, it's necessary to go to:

Settings



And Choose one of the following Wi-Fi connections:

Dominion App / Smart App / Devi App



#### Operation mode

### APP View Step by step operation





### LEFT ICON Settings Overview, p1

# DEVI°



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## LEFT ICON Settings, p2

# DEVI®

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Edit houses

Share house

Receive house

Add thermostat

Users

System Information

System Information

EULA

Leave demo mode

Leave demo mode

Deleting rooms Deleting houses Share house (or a room) Receive HEXA Code with a room Back to Thermostat start Disconnect users

App version Disclaimer

Back to blue start screen

## LEFT ICON Settings, p3

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÷	Edit rooms						
Livir	ng room						
Kitc	hen						
Dinii	ng room						
Con	servatory						
Mas	ter bedroom						
Mar	ys room						
Pete	ers room						
Path	wipe to discon Select to	nec	t ai iam	nd ne.	delet	e.	
-		0	\$n])		100% 💼	19:	53
÷	Edit houses						
Dem	10						

Swipe to disconnect and dele	te.
Select to rename.	

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← Users	
Living room	
Kitchen	
Dining room	
Conservatory	
Master bedroom	
Marys room	
Peters room	
Bath	
Garage	
Select a user to disconnect and delete.	
	þ
Status	_
App version 1.0.011710-TEST (11710)	
App build time 2016-06-25T06:50Z	

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#### EULA

Danfoss Link - End User License Agreement and Disclaimer

#### 1. License

This end user license agreement and disclaimer ("Agreement") is entered into between Danfoss A/S or its Affiliates (each of which is referred to as "Danfoss") and you as an end user ("You" or "User"). In this Agreement "Affiliate" shall mean an entity directly or indirectly controlled by Danfoss A/S whether by shares or voting rights.

Upon acceptance of this Agreement Danfoss grants You a limited, non-exclusive, non-transferable, royaltyfree, worldwide license ("License") to install and use the Danfoss Link ("Application"), for User's use on any device that User owns or controls. The License is granted subject to User's compliance with the following:

a) The terms of this Agreement

b) Danfoss Terms of Use (available at www.Danfoss.com)

c) Danfoss Privacy Policy (available at www.Danfoss.com)

#### 2. Consent to use of data

By installing and using the Application you agree that Danfoss may collect, use, register and store information concerning your heating requirements, user set-points, IP-addresses, software and hardware attributes, connection errors and user interaction. Such information is used by Danfoss to improve default settings and enhance the performance of the Application.

### **RIGHT ICON** Operation Menu, p1

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Living Zone	17 00	And temperatures can be adjusted up or down	⊒ ি ্ ← Living room	a 100% <b>1</b> 20:32
17.0°	17.0	When tapped, gives access To deeper level of settings	Choose preferred temp	eratures for
Kitchen 17.0°	17.0°		() At Home	∠ی.⊳ 26.0°
Dining room 17.0°	17.o°			10.0
Individual Rooms			🕒 🖉 Away	18.5°
Conservatory 23.0°	23.0°		Manual Mode	
Master bedroom	17 .0		Forecast	

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## RIGHT ICON Deeper level of settings, p2



#### On / Off for Manual mode

On / Off for Forecast

On / Off for Open Window Function

On / Off Temper proof protection (no manual change of settings on thermostat, only via APP)

Setting up Timer for Living Zone

Software & hardware version, Serial number. **Power consumption**. Relay click count.

Se Following slides





## RIGHT ICON Advanced Settings, p3

	100% 20:44
← Living room	
Floor configuration	
Min floor temperature enabled	ON
Min floor temperature	7.0°
Max floor temperature	7.0°
Advanced temperatures	
Vacation temperature	10.0°





#### Receive a house

#### Receive a house, p1

# DEVI®









### Additional information

#### Re-set

# DEVI°

#### Factory reset / restore



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← devi k	ælder	
i ene ter	nperatur	10,5
Frost be	skyttelse	5,0°
Om termost	at	
Software	version	0.1 (29)
Hardware	version	3.1
Sluk termo	ostat	
Genstart t	ermostat	

To remove all paired smart devices and restore all factory parameters except:

- Count turn heating relay on->off.
- Relay on time the time the relay has been in on state.
- System runtime & resets.
- Sum of power consumption for: 7 30 Days & total power consumption
- Push and hold: Up arrow [2] and power button [1] for
   **5 sec**.. Countdown starts. Hold for all countdown. When display clears, confirm by touching power button [1] inside of 1 sec., to re-set.
- From Smart device
  - In: Advanced settings
  - After control button [1] turns green (for 5 sec. only), confirm by pressing the button.
- Soft re-set = restart
  - To clean all dynamic data
    - Every time a heating mode is changed



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Commissioning

### DEVIsmart.com





## Adaptation to foreign sensors

#### How to find right brand

- Remove the sensor from the conduit to identify
- Identify brand of thermostat to be replaced
- Use customer knowledge to describe or identify
- Estimate floor temperature and make use of this in the sensor choice in APP.



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## Adaptation to foreign sensors

When uncertain or when sensor is not listed?



- Measure the sensors resistance, e.g. shows:  $\sim 22k\Omega$ ,
- Installer estimates the floor temperature to be: ~15°C
  - DEVI sensor would measure 17°C
    - Floor will physically be 2 degrees colder than set point displayed
  - OJ would measure 12°C
    - Floor will physically be 3 degrees warmer than set point displayed





## Adaptation to foreign sensors







## DEVIreg<sup>™</sup> Smart Filed tests results

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Contents:

FAQ Wishes



# DEVI®



- Can vi set up e.g. APP as Master, so changes in device will not get into effect, if "Master" = APP doesn't allow it? Not currently, can be developed if interest is present.
- Can "OPEN window function" be enabled/disabled via APP? Yes. Will be available from APP version released in week 25.
  - How is user informed about: event of Open Window? There will be an icon in the room list of the app showing if window open are detected.
- When are intelligent features of Smart (like Forecast, Backcast) OFF? Can be turned OFF in APP, in the future.
- Where does the thermostat get it's current time from? During the setup the time will be set by the app. In normal operation: Thermostat will synchronize the time continuously with the secure server.
- Is software updatable via WiFi, and will thermostat update it's software automatically? **APP updates**, every time, there is an **APP available**. Thermostat firmware will update automatically.
- How long time does the display stay on, without interaction? 20 sec.
- How long time does an internal battery keep an internal time? 24 hours
- When electricity disappears, what information is kept in the unit? All, except internal time, if the internal battery is drained.
- If I add a sensor (e.g. floor sensor) at later date, how do I update the settings? Via APP, it will be updated to support the setting change later.
- When a smart device is connected with DEVIreg Smart, without Wi-Fi connection, How far away can I been from the thermostat (line of sight)?
   The connection without Wi-Fi are only available during setup.
- What version of Os/Android do I need for my smart device, to work with DEVISmart APP? **OS v. 7.0 (works with lack on updated iPhone 4)**, **Android v. 4.3**.

## Possible improvements Findings from Test





- No visual points for interface (touch) on thermostat. **Designed that way.** Easy to blend in.
- Feels, as it is sticking quite far out of a wall. Needed for ventilation.
- Possibility for floor regulation only. Included in software. Show floor temp.
- Extreme difficult to dismount, possible with screwdriver only. 24 week.
- Set timer: We need **3 time schedule per day**, because you have rooms like kitchen which are used to three different time slots. **Possibility for update**. **Currently, not planned in development schedule after release**.
- Glass surface is not sensitive enough. Will be changed.
- End user wants to know: how many energy the floor heating is using? **Will be installed in coming relies.**
- Installation process (I phone)

A) It was not clear enough described that I have to go to general settings and to search for the specific WLAN from Smart. **Video**.

B) on the screen from my I phone the cursor was not set to the line if I have to enter something (like my Home WLAN net or security code) please make visible! Will be solved for sales version.

c) By connecting the Thermostat with your I phone the blue light is flashing, but you not see any interaction with your phone, so you are not sure what is ongoing. Blue light blinking = ready to connect/connecting.

- Connection from Danfoss WLAN was not always possible, why? **Danfoss** high security settings.