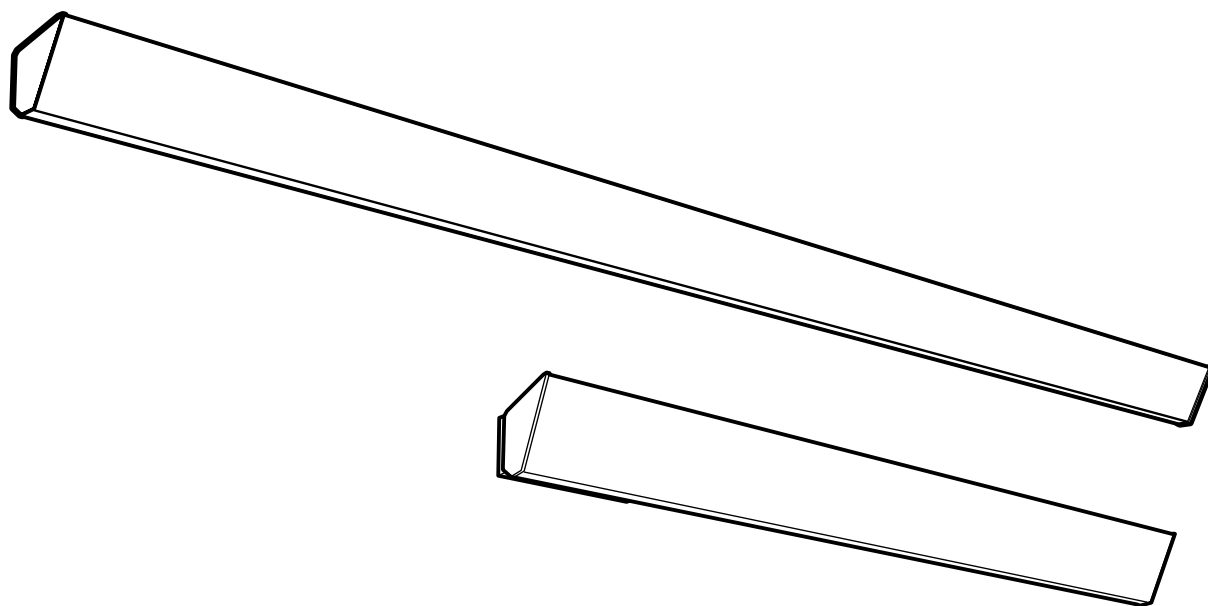


Original instructions

## Thermoplus



SE ... 7

GB ... 17

NO ... 27

FR ... 37

DE ... 47

FI ... 57

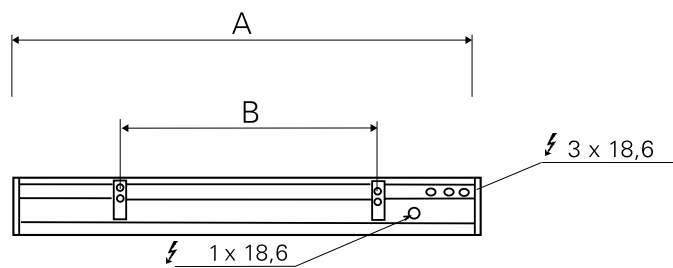
NL ... 67

PL ... 77

RU ... 87

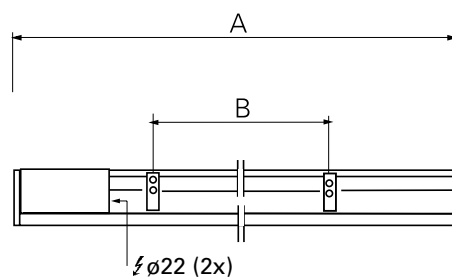
# Thermoplus

## Thermoplus EC



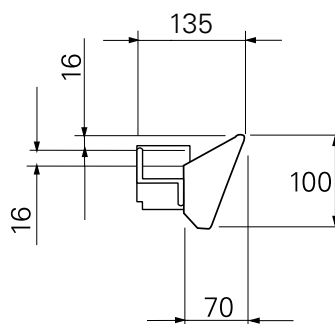
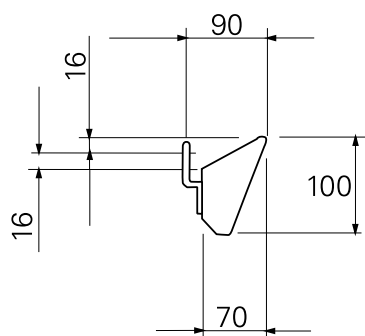
Type	A [mm]	B [mm]
EC450	1076	600
EC600	1505	900
EC750	1810	1200
EC900	2140	1800

## Thermoplus ECV/ECVTN



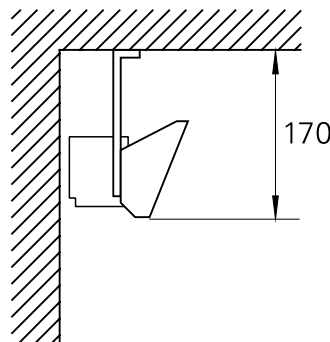
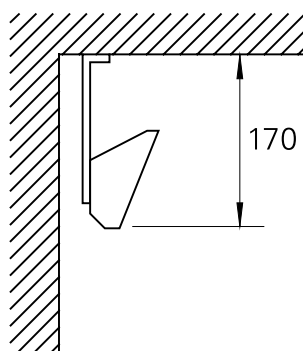
Type	A [mm]	B [mm]
ECV/ECVTN300	870	400
ECV/ECVTN550	1505	900
ECV/ECVTN700	1810	1200

## Mounting on the wall

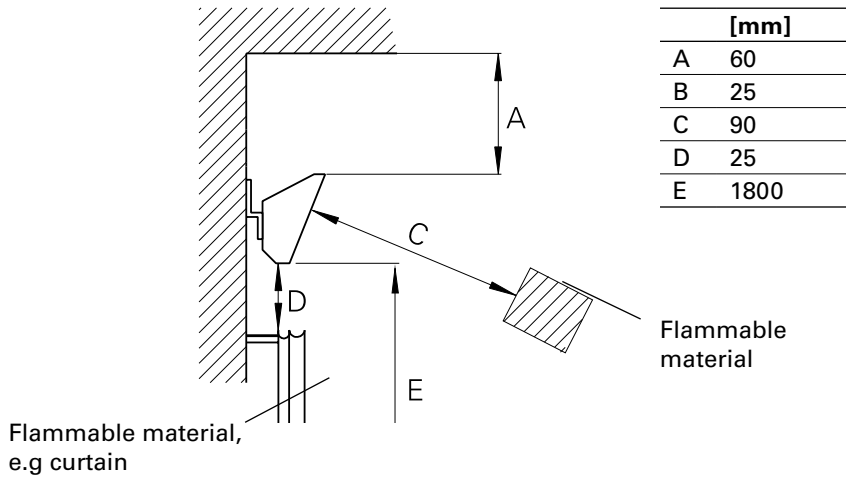


## Mounting on the ceiling

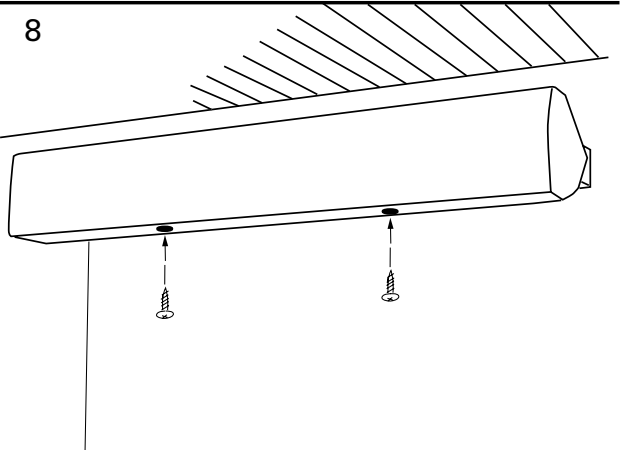
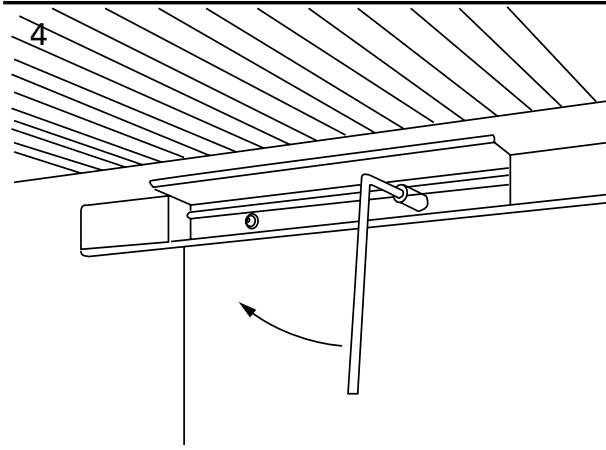
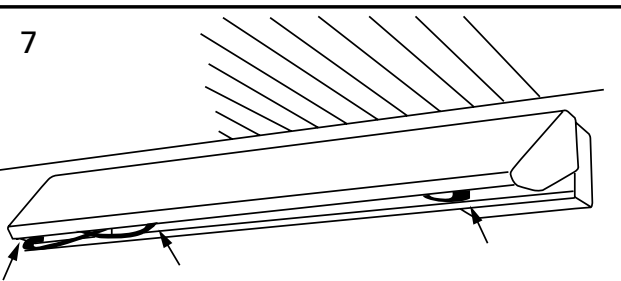
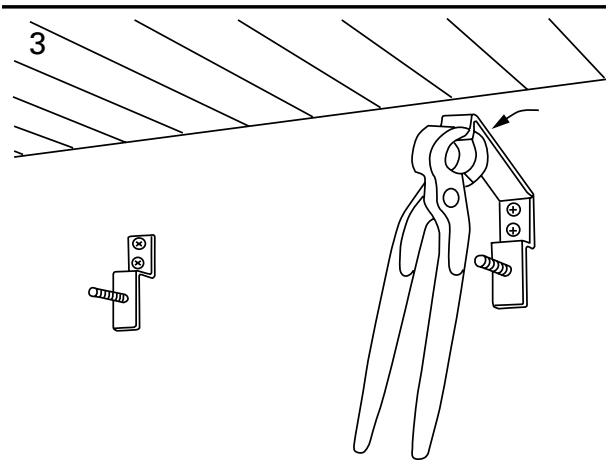
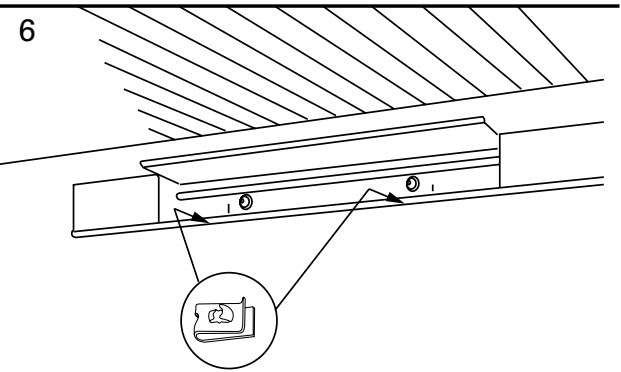
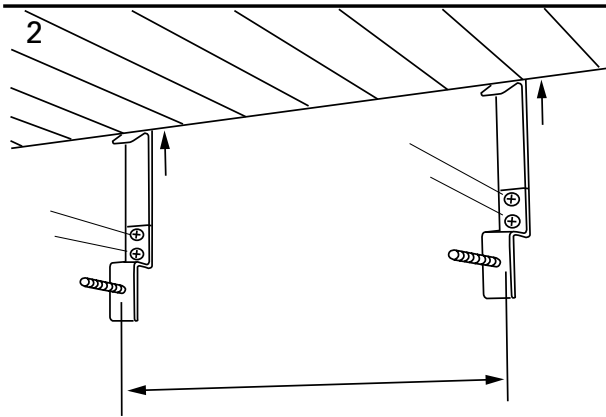
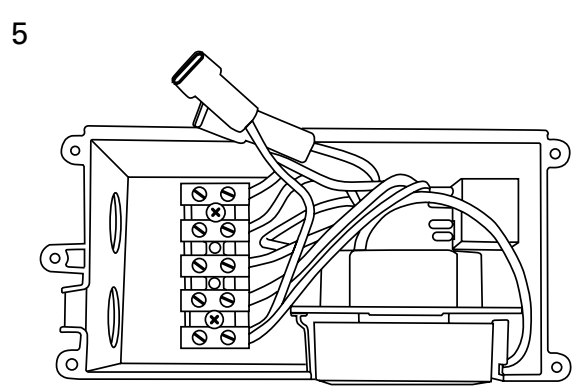
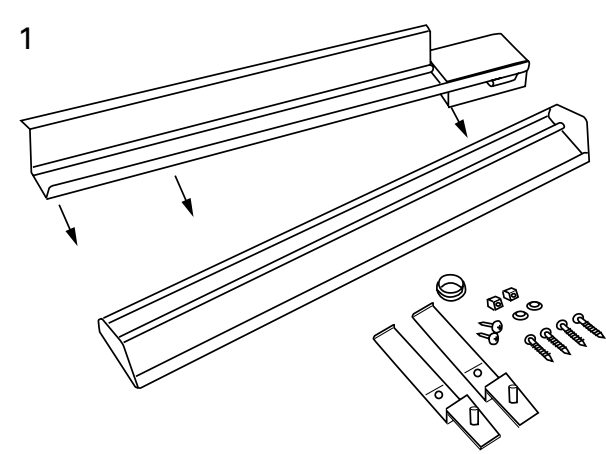
Ceiling fixture TF1



## Minimum mounting distance



# Thermoplus



## Technical specifications

### Thermoplus EC (IP20)

Type	Output (1) [W]	Voltage (2) [V]	Amperage (3) [A]	Max. surface temp. (4) [°C]	Weight (6) [kg]
EC45021	450	230V~	2,0	180	2,6
EC60021	600	230V~	2,6	180	3,7
EC75021	750	230V~	3,3	180	4,4
EC90021	900	230V~	3,9	180	4,8
EC90031	900	400V2~	2,3	180	4,8

### Thermoplus ECV (IP44)

Type	Output (1) [W]	Voltage (2) [V]	Amperage (3) [A]	Max. surface temp. (4) [°C]	Weight (6) [kg]
ECV30021	300	230V~	1,3	180	2,3
ECV55021	550	230V~	2,4	180	4,0
ECV55031	550	400V2~	1,4	180	4,0
ECV70021	700	230V~	3,0	180	4,7
ECV70031	700	400V2~	1,8	180	4,7

### Thermoplus ECVTN (IP44)

Type	Output (1) [W]	Voltage (2) [V]	Amperage (3) [A]	Max. surface temp. (4) [°C]	Weight (6) [kg]
ECVTN30021	300	230V~	1,3	180	2,3
ECVTN55021	550	230V~	2,4	180	4,6
ECVTN70021	700	230V~	3,0	180	5,0

(1)	(3)	(5)
SE: Effekt	SE: Ström	SE: Vikt
GB: Output	GB: Amperage	GB: Weight
NO: Effekt	NO: Strøm	NO: Vekt
FR: Puissance	FR: Intensité	FR: Poids
DE: Heizleistung	DE: Stromstärke	DE: Gewicht
RU: Мощность	RU: Ток	RU: Bec
FI: Lämmitysteho	FI: Virta	FI: Paino

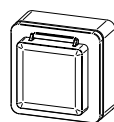
(2)	(4)
SE: Spänning	SE: Maximal ytemperatur
GB: Voltage	GB: Max. surface temperature
NO: Spenning	NO: Maksimal overflatetemp.
FR: Tension	FR: Température de surface
DE: Spannung	DE: Max. Oberflächentemperatur
RU: Напряжение	RU: Max. температура поверхности
FI: Jännite	FI: Suurin pintalämpötila

## Accessories

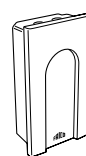
Type	HxWxD [mm]
TAP16R	87x87x53
TEP44	87x87x55
RB3	155x87x43
RTX54	82x88x25
TF1	



TAP16R



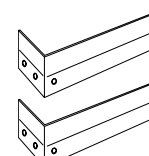
TEP44



RB3



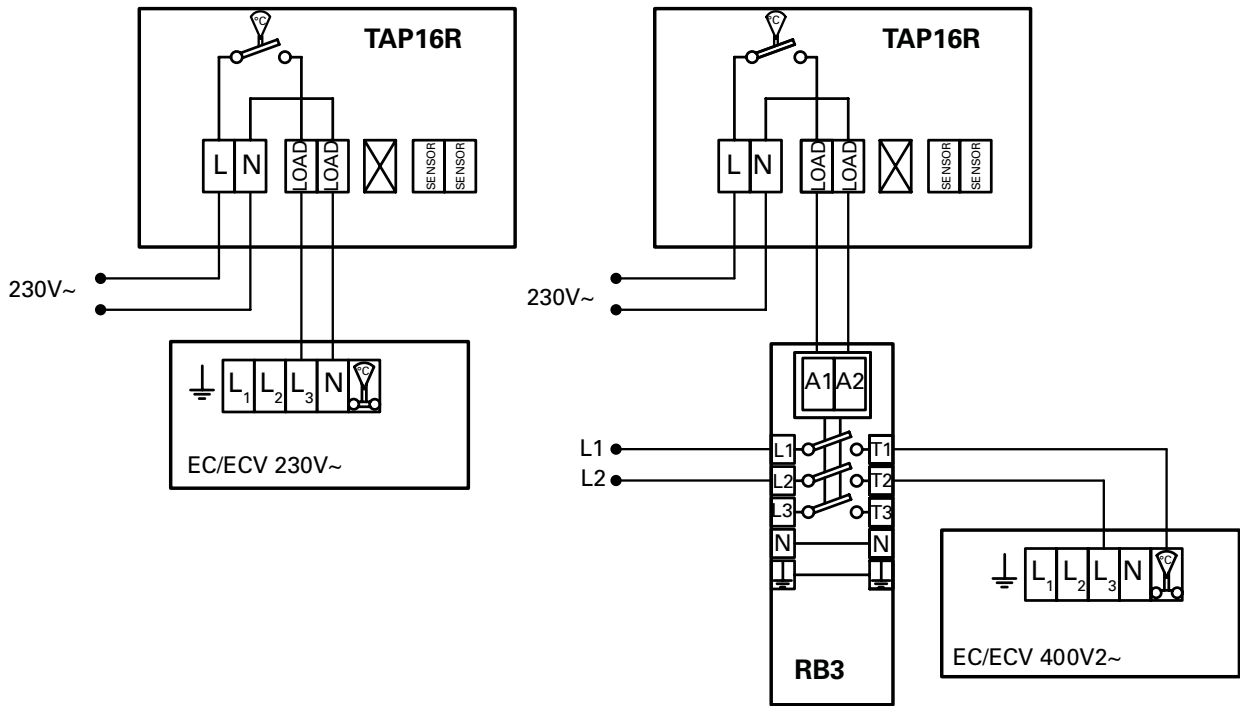
RTX54



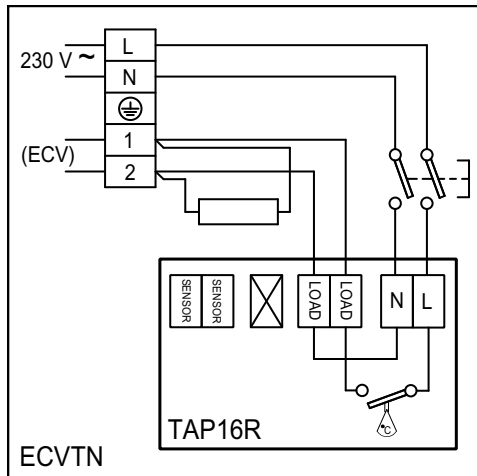
TF1

## Wiring diagram

### Control by thermostat



### Control by built-in thermostat



## Installation and operating instructions

### General Instructions

Read these instructions carefully before installation and use. Keep this manual for future reference.

*The product may only be used as set out in the assembly and operating instructions. The guarantee is only valid if the product is used in the manner intended and in accordance with the instructions.*

### Application area

Thermoplus is mounted above windows and gives an efficient protection against cold draught. The slim shape also makes it suitable for heating areas with limited space, like for example bathrooms. Thermoplus can furthermore be a cost-effective and flexible alternative to floor heating.

- Thermoplus is available in following versions:
  - Type EC, for dry rooms. IP20.
  - Type ECV, for wet rooms. IP44.
  - Type ECVTN, for wet rooms. With a built-in thermostat (+5 – +37 °C). IP44.
  - Can also be connected to control over ECV, max. total load 10A/3200W.

### Connection

Thermoplus is intended for permanent installation. Thermoplus is equipped with extra terminal board sections for further current distribution. A junction box is therefore not required.

### Mounting

Thermoplus among other things is used to protect against cold draughts from windows and is mounted horizontally above the window. Two wall mounting brackets are included as standard. Fixtures for ceiling mounting are extra, TF1. For minimum mounting distance, see p.3.

1. Remove the front plate, and detach the electrical connections from the back plate.
2. Fit the brackets to the wall below the coving. See Table B for distance between brackets. Allow 15 mm for heater expansion.

3. Break off the top spacing part of the brackets at the break mark.
4. Fasten the back plate to the brackets.
5. In the connection box on the heater there are additional plinths to make it possible to further connect to a slave device (ECVTN).
6. Press the two u-nuts into place in the bottom flange of the backplate.
7. Re-connect the wiring, be sure to place the joints in the connections box. Hook the front panel onto the top flange of the backplate.
8. Lower the front plate and screw into place via the two u-nuts.

### Control

When using this product as a local space heater according to Ecodesign Regulation (EU) 2015/1188, it must be supplemented with one of the following approved controls. Please note that a relaybox RB3 is required for 400V~ products.

- TAP16R, electronic thermostat that includes:
  - Electronic room temperature control plus week timer
  - Room temperature control with open window detection

The product can be controlled in a different way, e.g. by an overall control system (BMS), but in that case the responsibility lies with the installer to ensure that the control system is programmed to make the installation meet the requirements of Ecodesign Regulation (EU) 2015/1188. For ECVTN with a built-in thermostat, see separate chapter about control.

### Start-up

When the unit is used for the first time or after a long period of disuse, smoke or odour may result from dust or dirt that has collected on the element. This is completely normal and disappears after a short time.

### Maintenance

In all electrical heating appliances, small clicks can occur due to movement when the material expands and contracts with changes in temperature.

### Residual current circuit breaker

When the installation is protected by means of a residual current circuit breaker, which trips when the appliance is connected, this may be due to moisture in the heating element. When an appliance containing a heater element has not been used for a long period or stored in a damp environment, moisture can enter the element.

This should not be seen as a fault, but is simply rectified by connecting the appliance to the main supply via a socket without a safety cut-out, so that the moisture can be eliminated from the element. The drying time can vary from a few hours to a few days. As a preventive measure, the unit should occasionally be run for a short time when it is not being used for extended periods of time.

### Packaging

Packaging materials are chosen with consideration to environment and are therefore recyclable.

### Handling of product at end of working life

This product may contain substances necessary for functionality of product but potentially dangerous for the environment. The product should not be disposed mixed with general household waste but delivered to a designated collection point for environmental recycling. Please contact local authority for further details of your nearest designated collection point. Recycling of used products saves earth's resources and reduces global footprint.

### Safety

- *For all installations of electrically heated products should a residual current circuit breaker 300 mA for fire protection be used.*
- *The unit must not be fully or partially covered as overheating can result in a fire risk!*
- *This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.*
- *Children of less than 3 years should be kept away unless continuously supervised.*
- *Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.*
- *Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.*

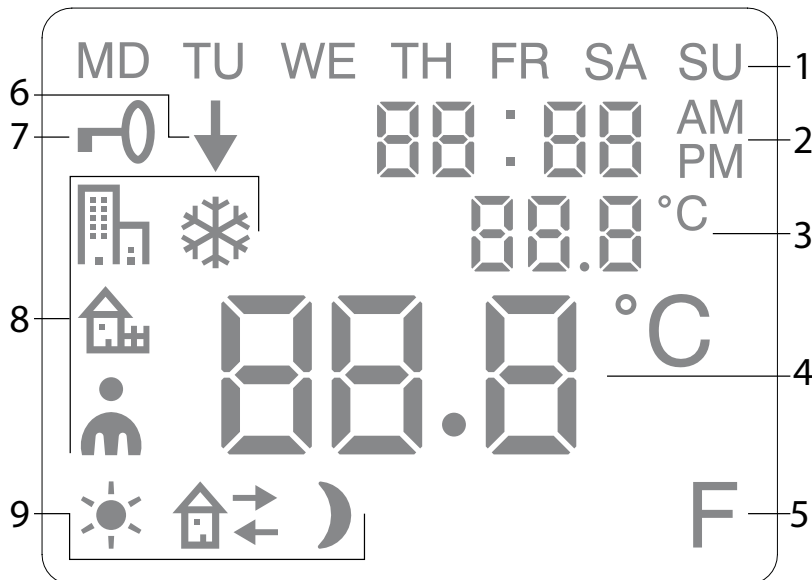
**CAUTION — Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.**



## Control ECVTN

Thermoplus ECVTN has an integrated thermostat with digital display on which all settings are made.

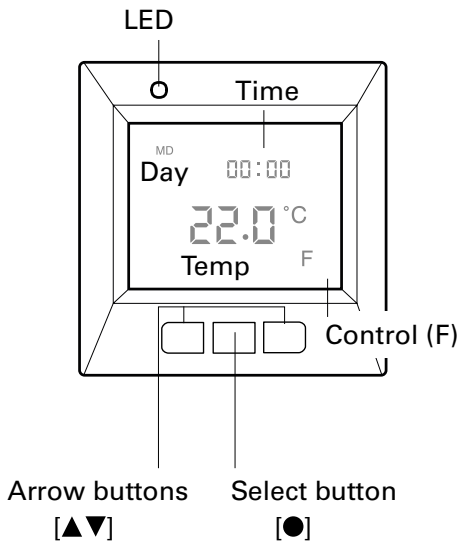
### Symbols on the display



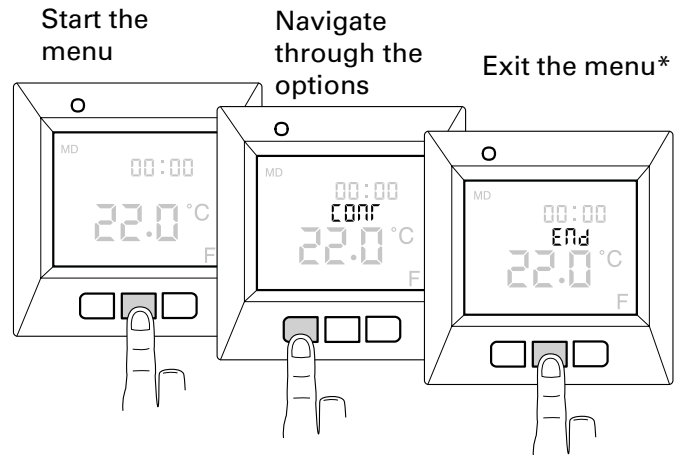
1. Day of the week
2. Time and date
3. Selected menu/Current temp (actual value) °C
4. Set temp (set point) °C
5. Control (F) = sensor selection ECVTN
6. Shows that a program is running
7. Lock symbol
8. Program
9. Event functions for personal settings

**Start up**

This is what the display looks like at first start.

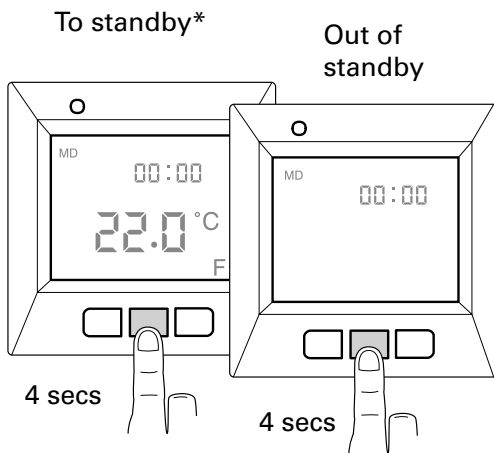


**Using the menu**

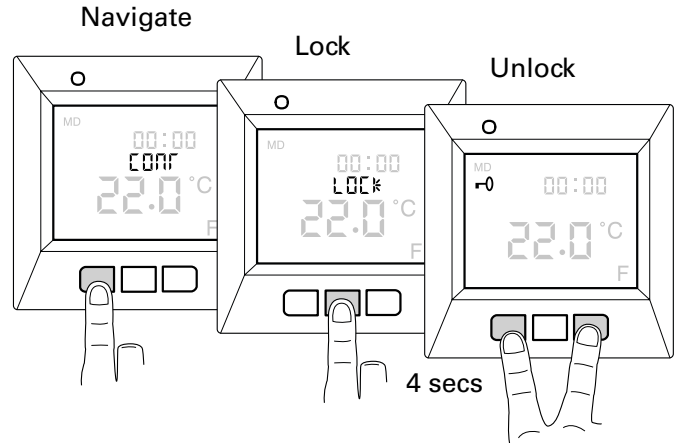


\*Or wait 30 secs and exit automatically.

**Turning off and on**



**Locking the keypad**

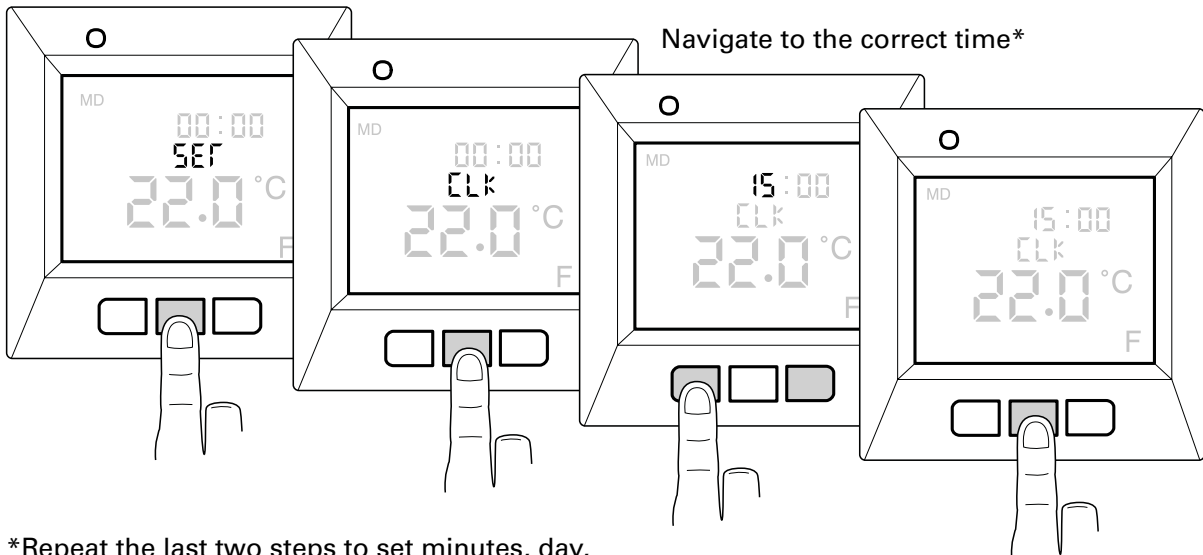


\*The heat is not being regulated. The clock is running and the programming is saved in the memory.

## Basic settings

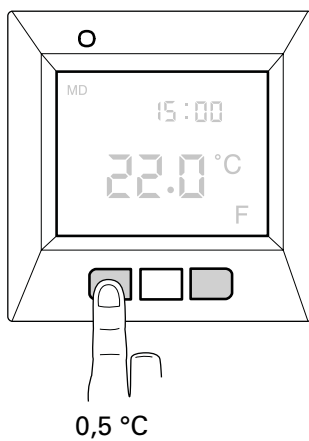
### Time and date

To be able to use all the functions you need to set the time and date first.



\*Repeat the last two steps to set minutes, day, month and year. The correct day of the week is set automatically.

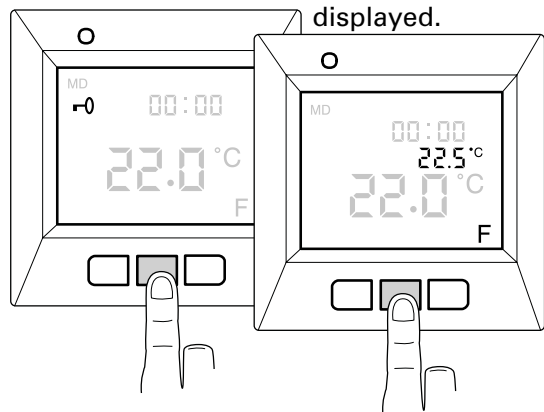
### Desired temperature



### Show actual temperature

Lock buttons first

The measured temperature is displayed.



**Other settings****Time and date***Set time format*

Press ●

and navigate to SET.

Select with ●

Navigate to DISP and  
select with ●

Navigate between 12- and 24-hour format.

Confirm with ●

*Turn off DST*

The calendar switches to DST automatically.  
This function can be turned off.

Press ●

and navigate to SET.

Select with ●

Navigate to S and  
select with ●

Navigate between ON/OFF.

Confirm with ●

**Light and contrast***Set the light intensity of the LED*

Press ●

and navigate to SET.

Select with ●

Navigate to LED and  
select with ●

Navigate between LED L (weak light) and LED  
H (strong light).

Confirm with ●

*Set display contrast*

Press ●

and navigate to CONT.

Select with ●

The display shows a number between 1 and 8  
depending on the current setting. Navigate to  
regulate the contrast.

Confirm with ●

**Reset**

You use the Reset function to make the  
thermostat revert to default factory settings.  
All your personal settings will be deleted.

Press ●

and navigate to SET.

Select with ●

Navigate to RST and  
select with ●

Navigate between YES/NO, then confirm with ●  
YES deletes the settings, NO returns to the  
menu.

**Adaptive function**

The thermostat has a function which works out when the heating should start to give the correct temperature at the correct time. It is activated on delivery, but can be turned off:

Press ●

and navigate to SET.

Select with ●

Navigate to AF,

Select with ●

Navigate between ON/OFF.

Confirm with ●

**Ventilation mode**

If the room temperature falls by more than 3 °C in a single minute, e.g. when airing the room, the ventilation mode is activated.

The thermostat will then stop heating for 15 minutes before returning to normal mode.

This function is always active.

**Delay between turning off and on**

There is a built-in delay in order to avoid unnecessary wear and tear on internal components and to extend the life of the thermostat. If you raise the desired temperature so that the thermostat comes on, and then lower it shortly afterwards, it takes 30 sec before it goes off again.

**Operation time**

The thermostat can display the operation time as a percentage for the last 24 hours and 7/30/365 days.

Press ●

and navigate to UTIL.

Press ●

to select. The display now shows the operation time as a percentage for the last 24 hours. You can then navigate between the

operation time as a percentage for the last 7/30/365 days.

**LED**

The LED allows you to see the current status of the thermostat.

Green light – the thermostat is on and the heat is turned off.

Red light – the thermostat is on and the heat is turned on.

Flashing green and red lights – error indication. The heat is turned off. The thermostat shows the error message until it is turned off.


No light – the thermostat is switched off or is not getting any power.


### Energy saving programs

Save energy cleverly and easily! With these programs the heating is adapted to your actual needs and the heat is turned down when it isn't needed. There are four program options:

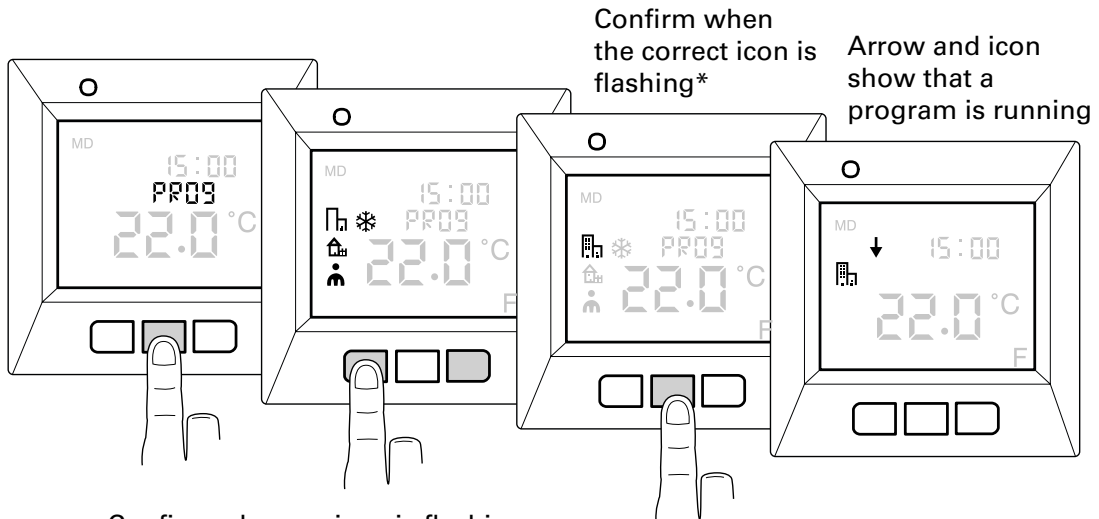
- 

Preset for office environments
- 

Preset for home environments
- 


Program your own personal settings
- 

Frost protection for premises which stand empty for long periods




Confirm when the correct icon is flashing\*  
 Arrow and icon show that a program is running

\*Stop program: Confirm when no icon is flashing.

- 

Program for office environment

The temperature is automatically reduced by 5 °C at all times except for: Mon – Fri 6:00 – 18:00
- 

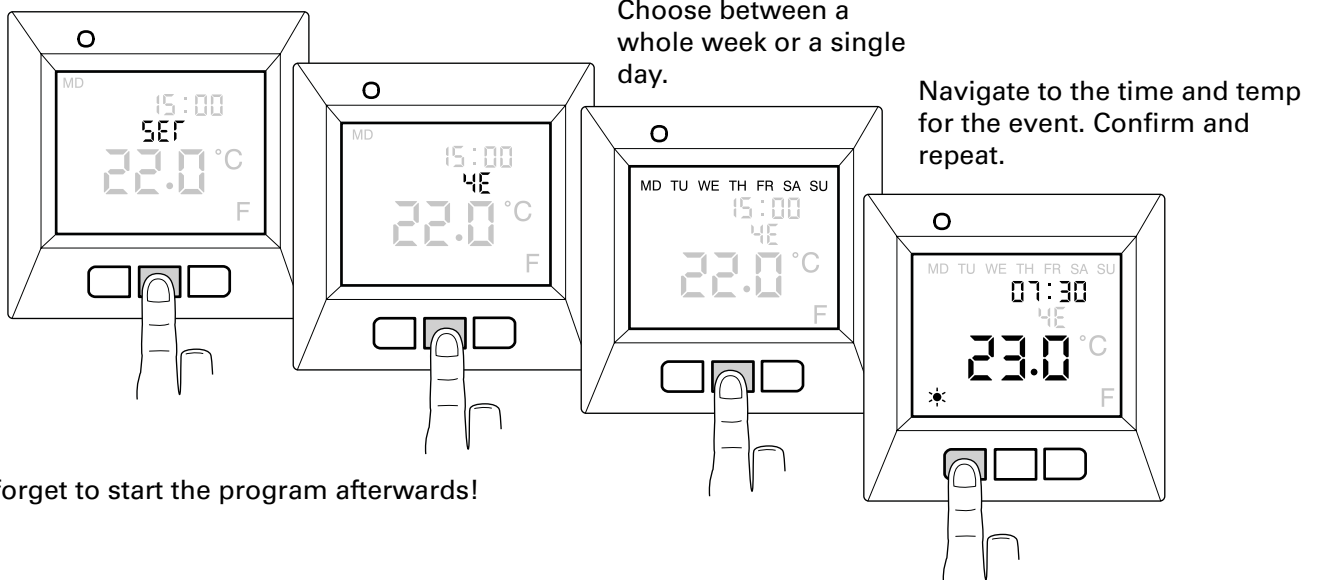
Program for home environment

The temperature is automatically reduced by 5 °C during the following periods:  
 Mon – Fri 08:30 – 15:00  
 Mon – Sun 23:00 – 05:00

### Program personal settings

Tailor the heating to your own needs! You have the option of programming time and temperature for four events every day:

-  wakeup
-  out
-  home
-  night



Choose between a whole week or a single day.

Navigate to the time and temp for the event. Confirm and repeat.

Don't forget to start the program afterwards!

## Frost protection program

This program is ideal for when you want to protect against frost damage in premises which are standing empty or unused for long periods, such as holiday homes and warehouses, or when you will be away from your main home for longer than usual. You set a desired value (set point) and the thermostat regulates the temperature in line with this. The normal settings remain in the memory and the thermostat reverts to them when the frost protection program is deactivated. Temperature can be set to a level between 5 °C and 15 °C, the factory setting is 10 °C.

Press ●

and navigate to SET.

Select with ●

Navigate to FP,  
select with ●

The set temperature will flash, navigate to the desired temperature.

Confirm with ●

## Trouble shooting

### *Important*

The heating system is a highvoltage system and any faults must therefore be corrected by an authorised electrician.

### *Error codes*





When a fault occurs, the thermostat turns the heating off. The LED flashes red and green alternately. The LCD display shows a flashing error code as follows:

Error 3: Short circuit sensor.

Error 4: Interruption sensor.

## Sitemap of the menu

This is how the menu in the thermostat is structured. Here you can quickly see where all the functions and settings are.

<p><b>CONT</b> Set the display's contrast</p>	<p><b>PROG</b> Start/stop program</p>	<p><b>UTIL</b> Show connected time in %</p>
<p>1-8</p>	<ul style="list-style-type: none"> <li> Home program</li> <li> Office program</li> <li> Personal program</li> <li> Frost protection program</li> </ul>	<p>24 HR</p> <p>7 D</p> <p>30 D</p> <p>365 D</p>
<p><b>SET</b> Various settings</p>		
<p><b>CLK</b> Set time and date.</p> <p><b>S</b> Turn off and set to automatic change to DST.</p> <p><b>RNF</b> F (sensor ECVTN)</p>	<p><b>FP</b> Turn off and turn on the frost protection program.</p> <p><b>4E</b> Set the personal program, time and temperature for up to four events per day.</p> <p><b>DISP</b> Set how the time will be shown, 24- or 12-hour format.</p> <p><b>LED</b> Set the strength of the display's backlight.</p>	<p><b>AF</b> Turn off and turn on the adaptive function.</p> <p><b>RST</b> Reverts to factory settings and deletes all personal settings.</p> <p><b>END</b> Exit the menu and return to basic mode.</p>
<p><b>LOCK</b> Locks the keypad</p>	<p><b>END</b> Exits the menu</p>	





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