Smart heating system
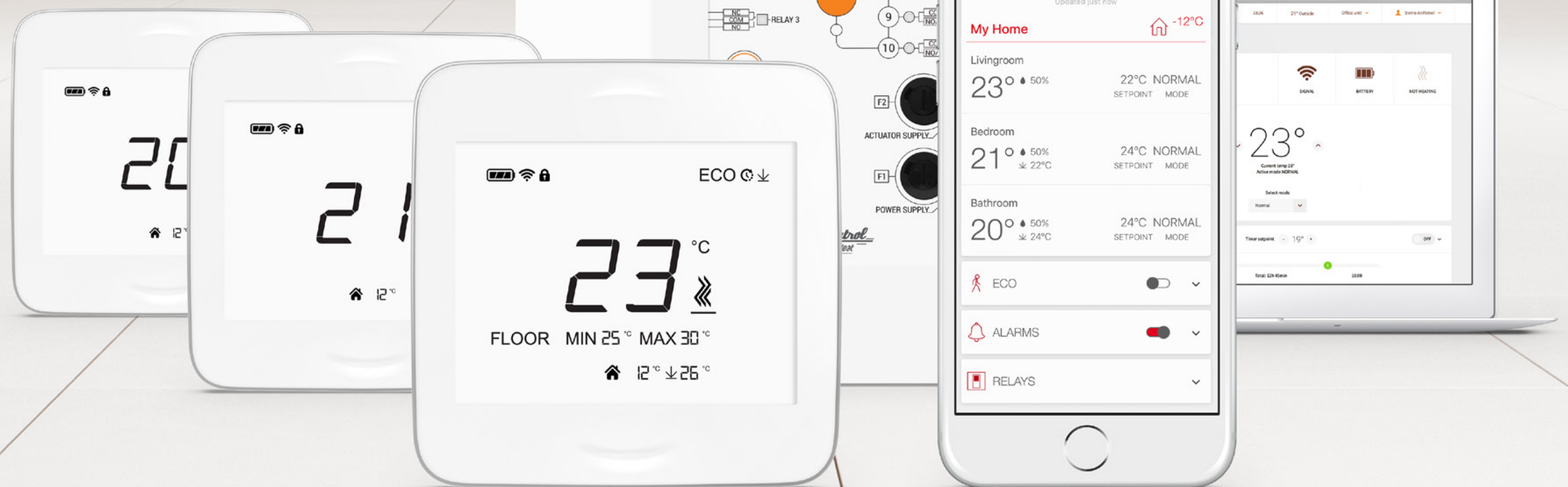
with wireless thermostats & smartphone control for every room

Get the most out of any water based underfloor heating

ECO

23°C
FLOOR   MIN 25°C   MAX 30°C
12°C   26°

AirPatrol SmartHeat

Updated just now

My Home   -12°C

Livingroom
23° 50%   22°C NORMAL
                      SETPOINT MODE

Bedroom
21° 50%   24°C NORMAL
     22°   SETPOINT MODE

Bathroom
20° 50%   24°C NORMAL
     24°C   SETPOINT MODE

ECO

ALARMS

RELAYS

SIGNAL   BATTERY   NOT HEATING

23°

AirPatrol
SmartHeat

DETAILED OVERVIEW

Control the heating in your home from anywhere.
SmartHeat is on the web, iOS and Android.
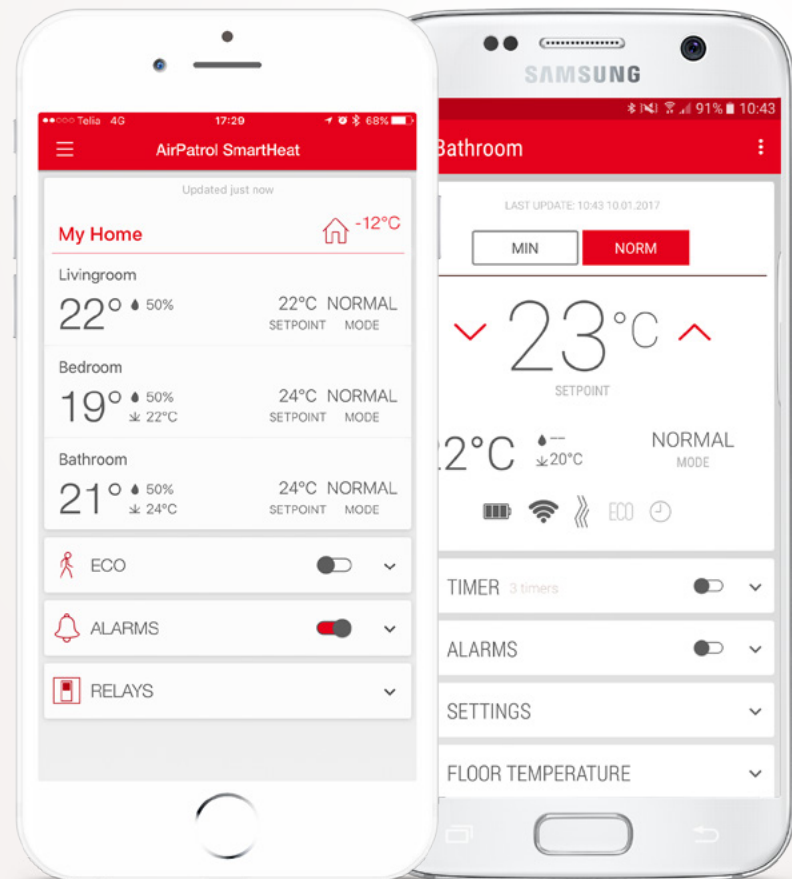
MOBILE APPLICATION

This is the ideal tool to monitor and control your home heating system.

AirPatrol SmartHeat application is the most intuitive heating control app ever.

Everything you need to know about your home heating system is with you whereever you go.

WEB APPLICATION

This is the master control tool. Web application will give the most advanced experience of the system.

Everything about SmartHeat can be set, customized, monitored and controlled from this master control center.
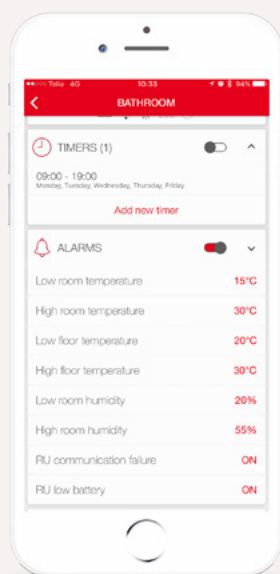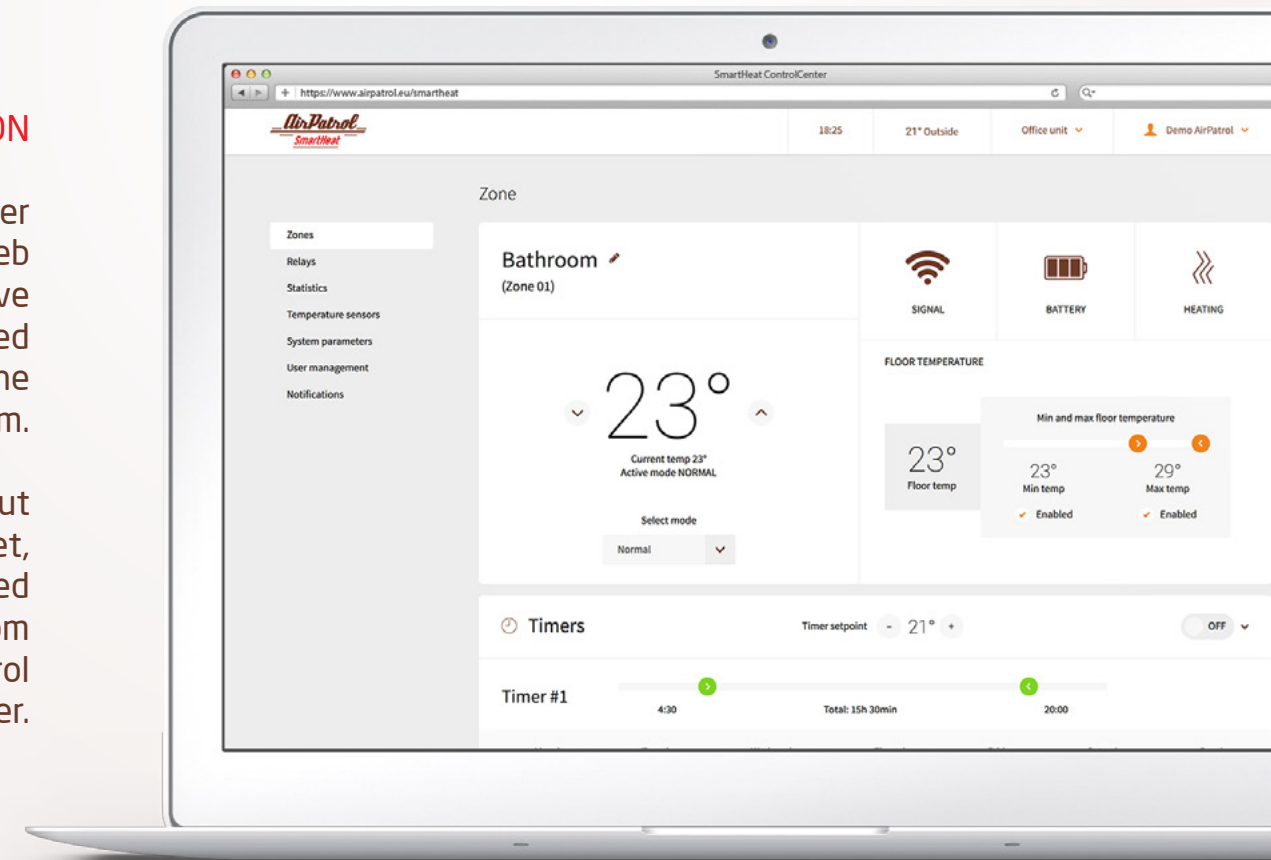
NOTIFICATIONS FOR EACH ZONE / ROOM

Set timers for each room so you have perfect temperature at all times.

Enable notifications and relax, the system will let you know if anything is out of limits.

CONTROL ANY ELECTRICAL DEVICE

Easily connect the back-up heater for those extreme weather conditions. Now it will automatically turn on based on outside temperature or set timers or just control it manually with your phone.
Boiler, circulation pump and other devices can be controlled as well.
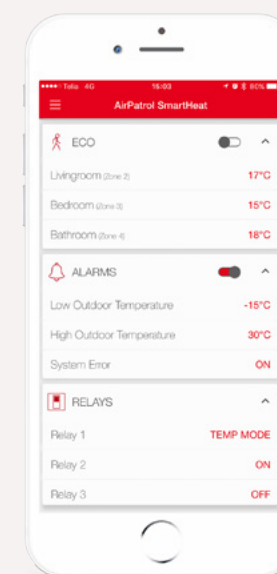
EVERYTHING IS DONE WITH JUST A SIMPLE CLICK

All most important things are on the first screen.

ECO - turn on/off away mode when leaving home for longer period.
System notifications
Relay control

GET THE SMARTHEAT APP!

Download on the App Store

GET IT ON Google Play

Sleek and smart way to control temperature in any room

WITH AND WITHOUT INFRARED FLOOR SENSOR

SmartHeat RoomUnits

SmartHeat RoomUnit thermostats are plug-and-play devices that monitor and control the temperature of your rooms.

Any room, any floor

There are two types of SmartHeat wireless thermostats – with and without an infrared floor sensor. RoomUnit thermostat with infrared floor sensor makes sure that your bathroom floor is set to the ideal and that the more demanding floor surfaces are kept safe. The regular wireless thermostat will take care of every other room.

Fantastically easy to use

Clear back-lit display makes checking the readout easy on the eyes. The elegant buttonless design will fit right in to any interior style. Changing the settings is intuitive and can also be done on a smartphone or web application.
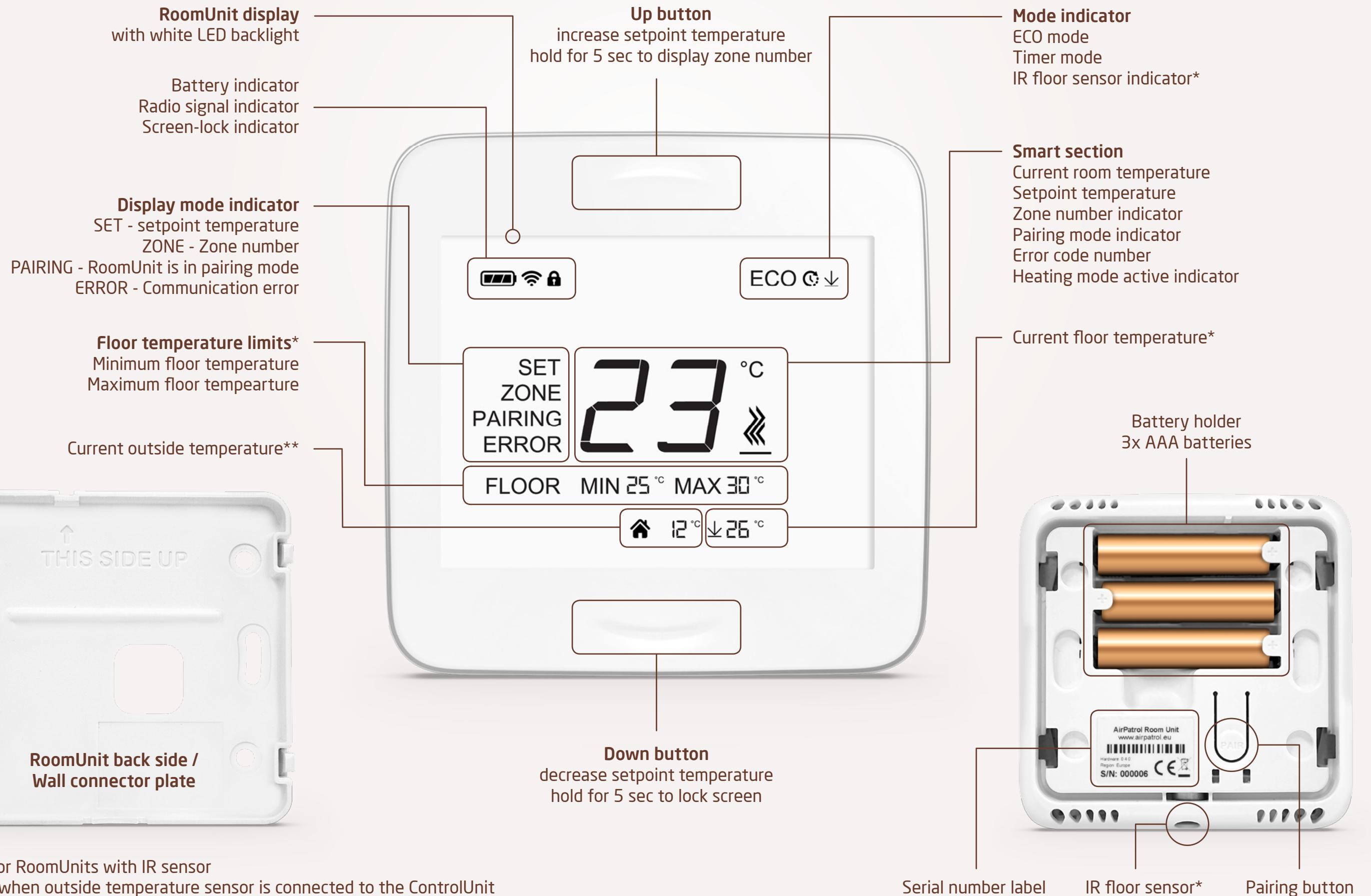
All included

SmartHeat wireless thermostats use 3 AAA batteries for power source. The batteries as well as everything else that you need to set the thermostat up is included in the package. A set of batteries will last for about 2 years and the RoomUnit will let you know when it is time to change them.

Technical specifications

RoomUnit Thermostat types	2: Normal / With and without InfraRed floor sensor	
Communication channel	Radio, 868MHz sub-GHz	
Communication range	up to 300m* / 50m**	* In open field / **Indoors
Power source	3xAAA batteries	Included in package
Battery life	~2 years	
Screen	LED backlight	White LED
Sensors	Temperature sensor	-30..80 ℃
	Humidity sensor	0-100%
Display information	Room temperature	
	Set-point temperature	5..30 ℃
	Outside temperature	-30..80 ℃
	Floor temperature (IR sensor)	5..40 ℃
	Mode	Normal, ECO, Timer, MIN
	Battery level	4 levels
	Wireless signal	3 levels
Protection type, IP class	IP20	
Dimensions	88x88x26mm (LxWxH)	
Weight	155g (125g without batteries)	
Package dimensions	134x122x55mm (LxWxH)	
Package weight	300g	
Storage temperature / humidity	-30..+70 ℃ / 10..95%, non-condensing	
Operating temperature / humidity	-10..+50 ℃ / 10..95%, non-condensing	
RoomUnit Thermostat EAN code	4742859012136	
RoomUnit Thermostat with IR EAN code	4742859012143	

WIRELESS THERMOSTATS

RoomUnit display
with white LED backlight

Battery indicator
Radio signal indicator
Screen-lock indicator

Display mode indicator
SET - setpoint temperature
ZONE - Zone number
PAIRING - RoomUnit is in pairing mode
ERROR - Communication error

Floor temperature limits*
Minimum floor temperature
Maximum floor tempearture

Current outside temperature**

Up button
increase setpoint temperature
hold for 5 sec to display zone number

Mode indicator
ECO mode
Timer mode
IR floor sensor indicator*

Smart section
Current room temperature
Setpoint temperature
Zone number indicator
Pairing mode indicator
Error code number
Heating mode active indicator

Current floor temperature*

Battery holder
3x AAA batteries

SET
ZONE
PAIRING
ERROR

23 °C

FLOOR   MIN 25 °C   MAX 30 °C

🏠 12 °C   ↓ 26 °C

ECO ☾ ↓

**RoomUnit back side /
Wall connector plate**

THIS SIDE UP

Down button
decrease setpoint temperature
hold for 5 sec to lock screen

AirPatrol Room Unit
www.airpatrol.eu
S/N: 000006

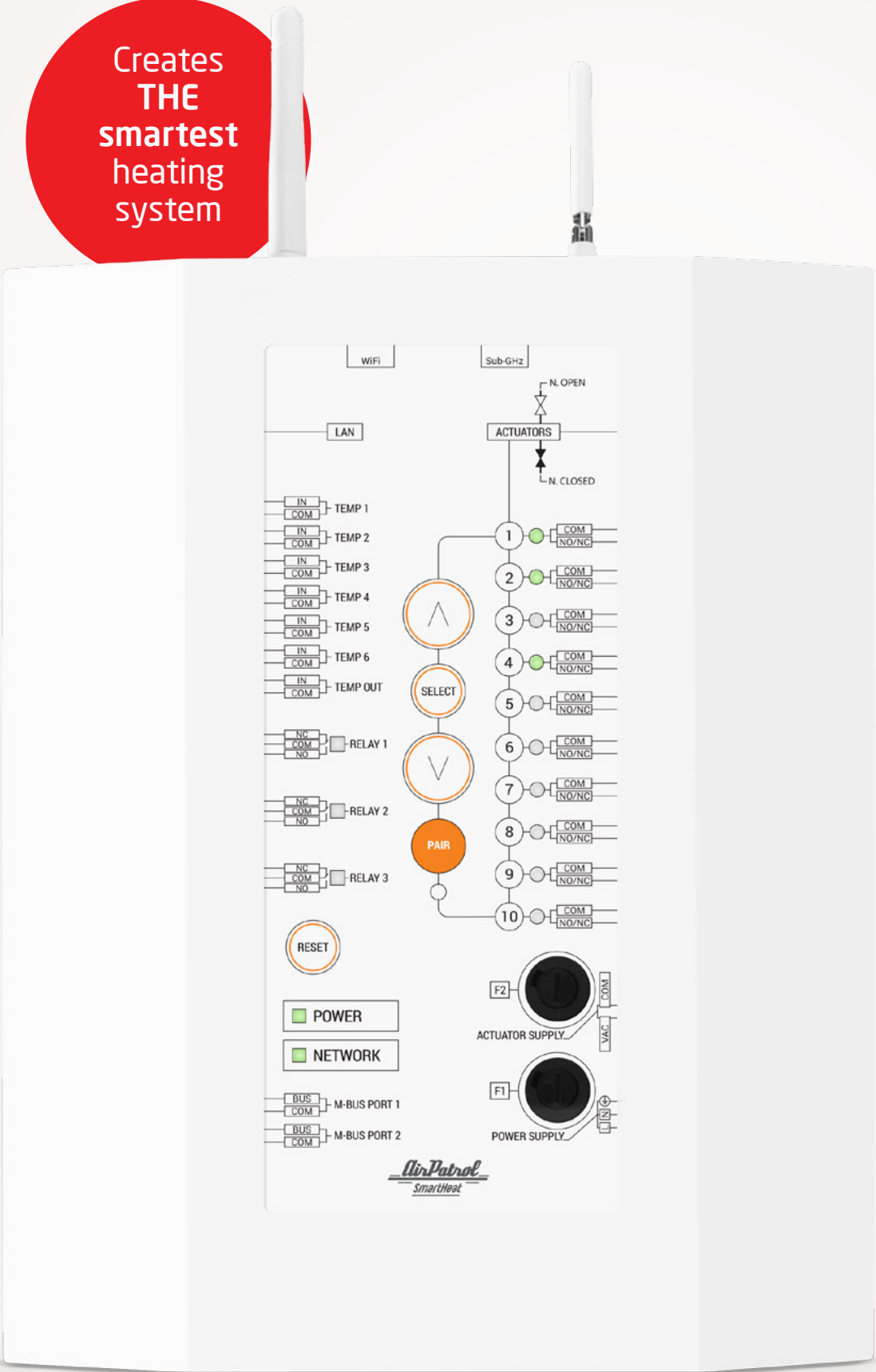Serial number label   IR floor sensor*   Pairing button

* Only for RoomUnits with IR sensor
** Only when outside temperature sensor is connected to the ControlUnit

SMARTHEAT ALL-IN-ONE CONTROLUNIT

Creates **THE smartest** heating system

Wiring Center, Gateway, Relays, Temperature Sensors, M-Bus Connections
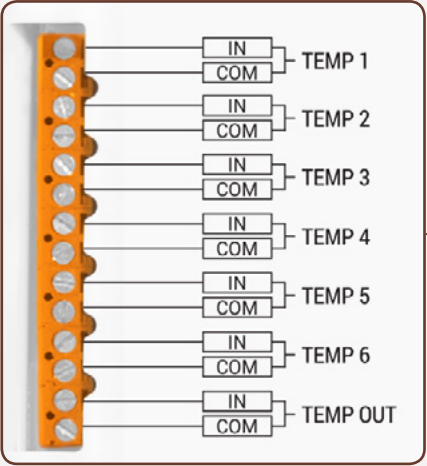
ControlUnit is at the center of AirPatrol SmartHeat system. It can be connected to any water based underfloor heating system's manifold. It can then begin to control each room's heating individually, creating ideal temperature throughout your home while helping you save on energy costs.
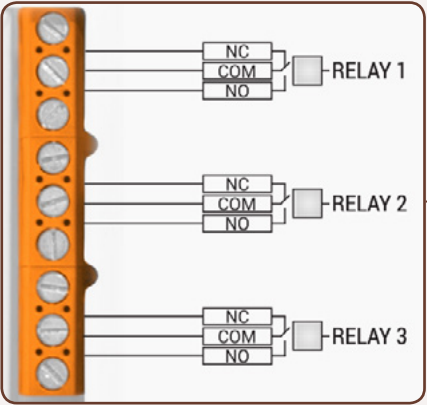
Technical specifications

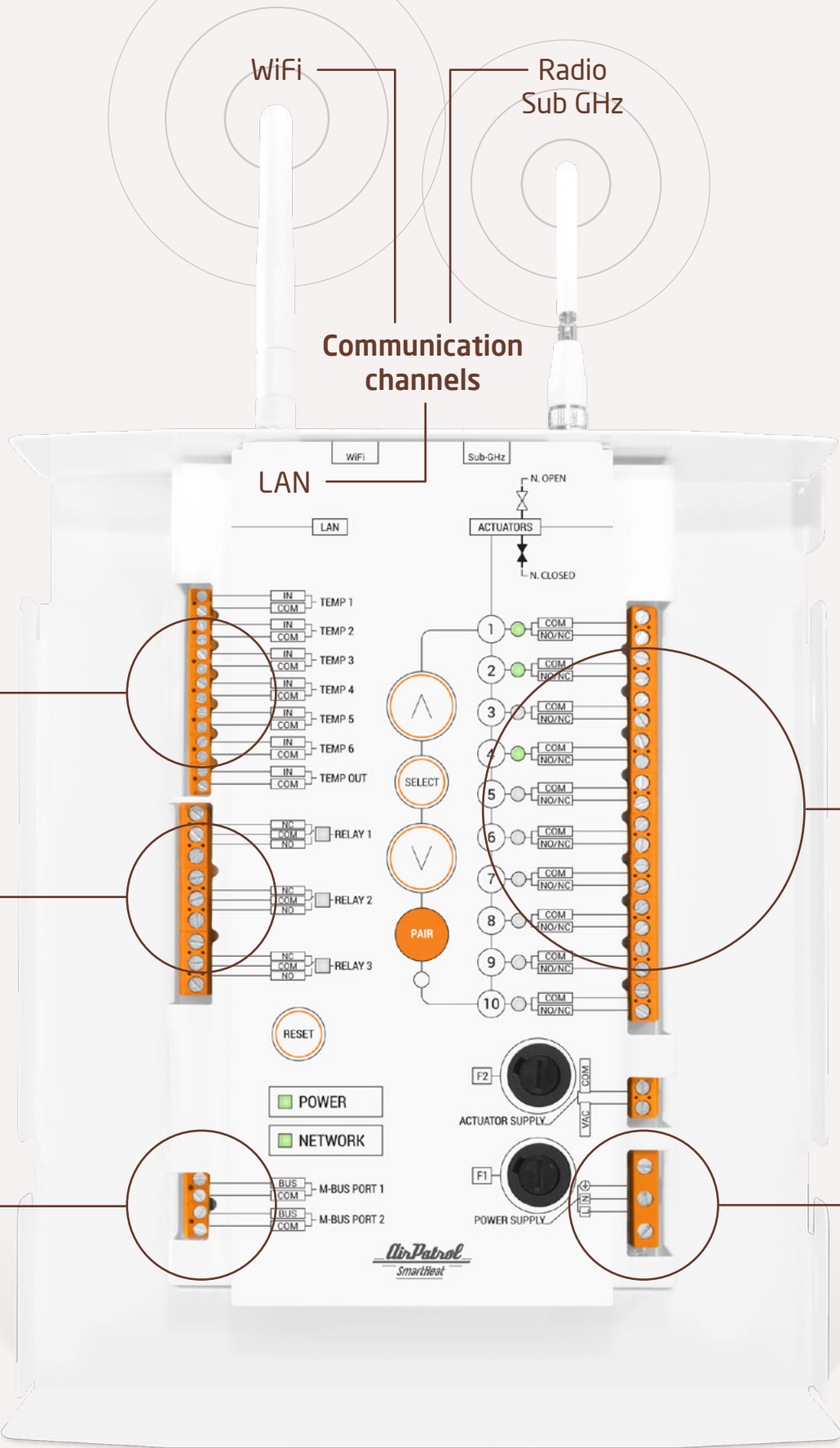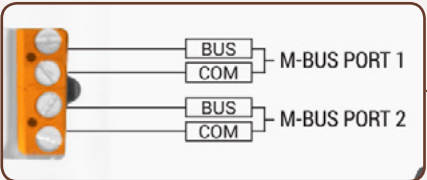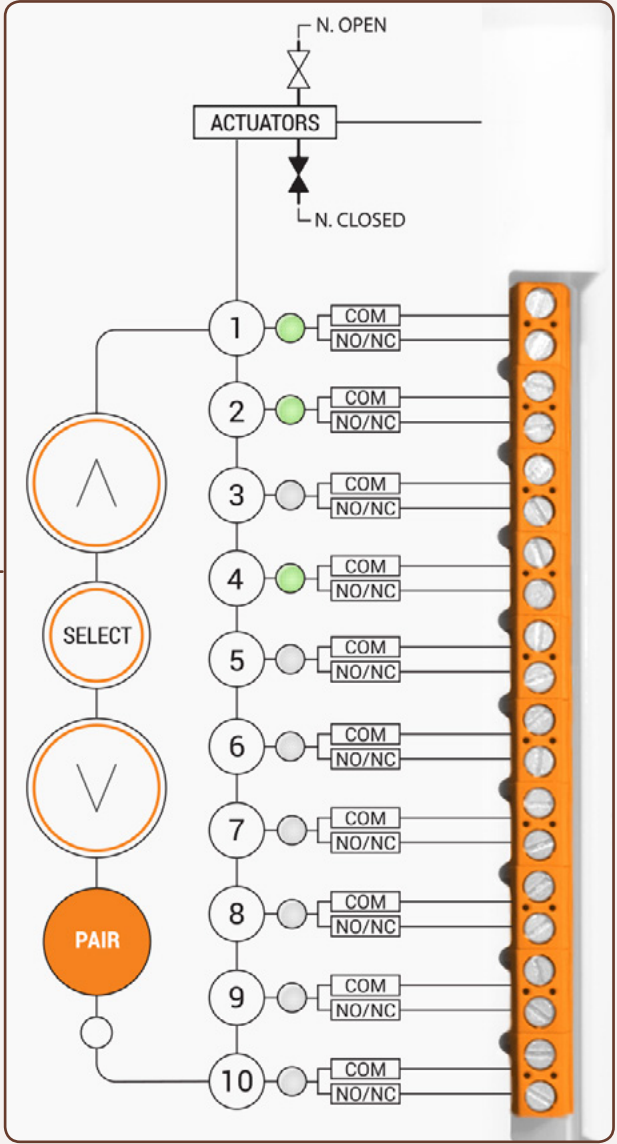|		
Number of heating zones	10	up to 10 different zones / RoomUnits
Min / Max number of RoomUnit Thermostats	1 / 10	at least 1 RoomUnit is required
Max number of actuators	1 room = 2 actuators	up to 2 actuators per one connection port
	10 rooms = 20 actuators	Maximum 20 actuators per one ControlUnit
Connection ports for temperature sensors	1x Outside temperature	1x included in package, 5m cable, -30..+80 °C
	6x Various temperatures	3x included in package, 3m cable, -30..+80 °C
Actuator type	Normally Open / Normally closed	Selectable from ControlUnit
Valve protection function	1 open/close cycle per 84 hours	Protects valves from getting stuck
System frost protection mode	System min temperature is 5 °C	Protects pipes and heating system from freezing
Connection ports for relays	3x 6A (3x 1400W @230V)	For various electrical devices
Communication ports	1x LAN	Internet connection
	2x M-BUS	Energy meter, heating meter, water meter, etc.
Connection ports for CU power	1x 230V	
Connection ports for Actuator valves power	1x 230V	24V with external transformator (not included)
Communication channels	Ethernet LAN	Internet connection
	WiFi 2,4GHZ, b/g/n	Internet connection
	Radio, 868MHz sub-GHz	RoomUnit connection
Communication tools	RoomUnit	AirPatrol SmartHeat RoomUnit Thermostat
	SmartPhone application	Android, iOS
	WEB	PC, MAC
Protection type, IP class	IP20	
Dimensions	340x210x48,5mm (LxWxH)	Antennas included, L 260mm without antennas
Weight	1730g	
Package dimensions	270x350x120mm (LxWxH)	
Package weight	2100g	
Storage temperature / humidity	-30..+70 °C / 10..95%, non-condensing	
Operating temperature / humidity	-10..+50 °C / 10..95%, non-condensing	
EAN code	4742859012129	

CONNECTION OPTIONS

Temperature sensors

IN / COM — TEMP 1
IN / COM — TEMP 2
IN / COM — TEMP 3
IN / COM — TEMP 4
IN / COM — TEMP 5
IN / COM — TEMP 6
IN / COM — TEMP OUT

Relay connection

NC / COM / NO — RELAY 1
NC / COM / NO — RELAY 2
NC / COM / NO — RELAY 3

M-BUS connection

BUS / COM — M-BUS PORT 1
BUS / COM — M-BUS PORT 2

WiFi

Radio Sub GHz

Communication channels

LAN

WiFi   Sub-GHz

LAN

N. OPEN
ACTUATORS
N. CLOSED

IN / COM — TEMP 1
IN / COM — TEMP 2
IN / COM — TEMP 3
IN / COM — TEMP 4
IN / COM — TEMP 5
IN / COM — TEMP 6
IN / COM — TEMP OUT

1 COM/NO/NC
2 COM/NO/NC
3 COM/NO/NC
4 COM/NO/NC
5 COM/NO/NC
6 COM/NO/NC
7 COM/NO/NC
8 COM/NO/NC
9 COM/NO/NC
10 COM/NO/NC

∧ SELECT ∨ PAIR

NC / COM / NO — RELAY 1
NC / COM / NO — RELAY 2
NC / COM / NO — RELAY 3

RESET

POWER
NETWORK

BUS / COM — M-BUS PORT 1
BUS / COM — M-BUS PORT 2

F2 ACTUATOR SUPPLY COM V AC
F1 POWER SUPPLY L/N

AirPatrol
SmartHeat

SYSTEM OVERVIEW
Keep on scrolling, this is just the beginning!

Wiring Centre for actuator valve connections

N. OPEN
ACTUATORS
N. CLOSED

1 COM / NO/NC
2 COM / NO/NC
3 COM / NO/NC
4 COM / NO/NC
5 COM / NO/NC
6 COM / NO/NC
7 COM / NO/NC
8 COM / NO/NC
9 COM / NO/NC
10 COM / NO/NC
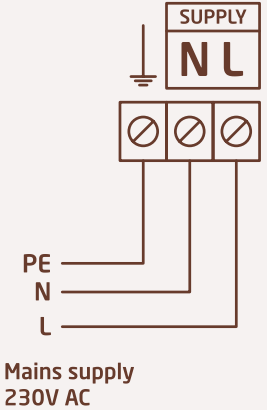
∧ SELECT ∨ PAIR

Power supply

ControlUnit requires a 230V AC mains supply connected to terminals marked L, N, & PE.

PLEASE ENSURE ALL WIRING IS CARRIED OUT IN ACCORDANCE WITH LOCAL ELECTRICAL REGULATIONS.

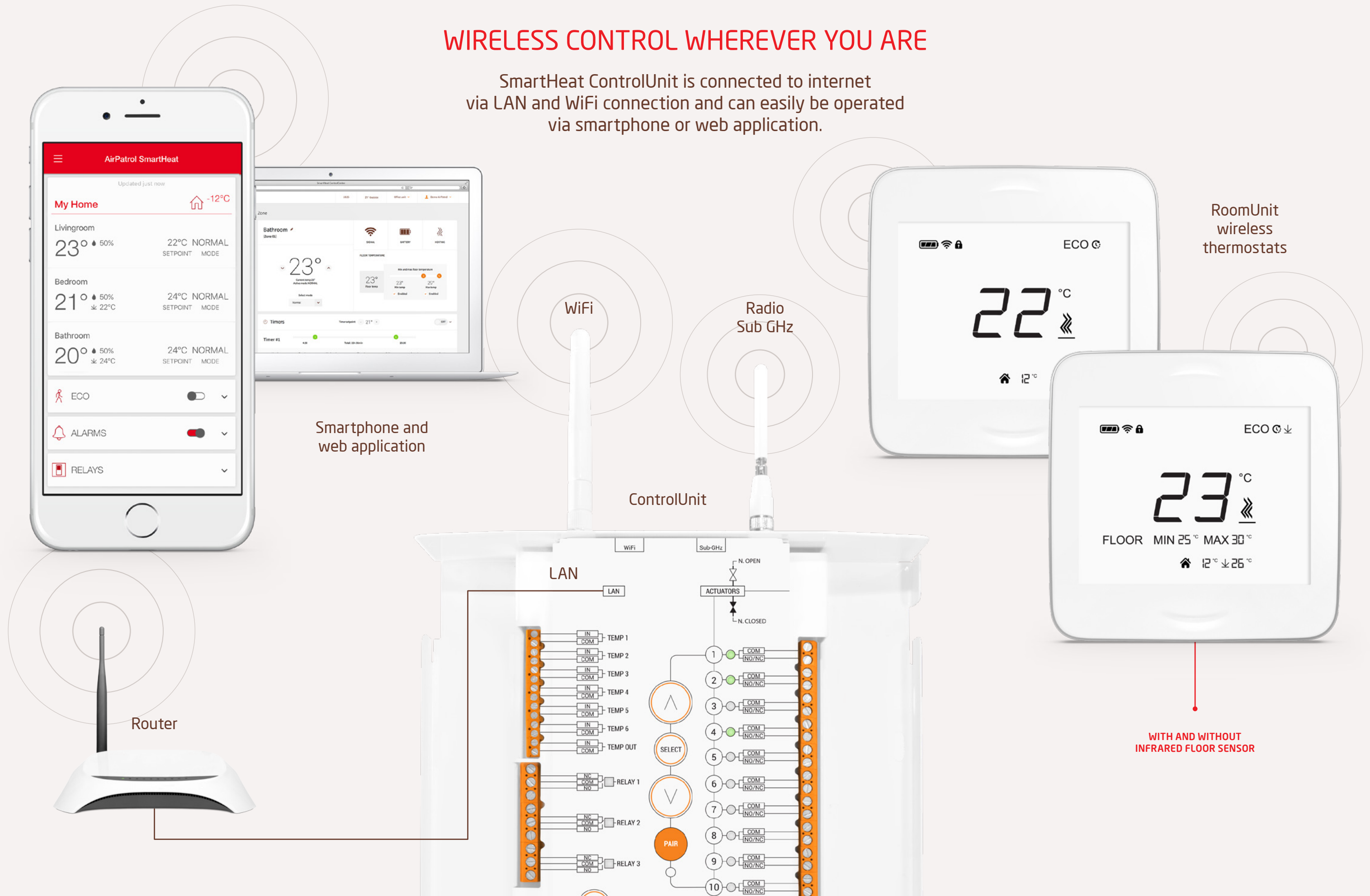After completing the wiring, fit the cover on the ControlUnit using the provded screw and lock washer.

SUPPLY
N L

PE
N
L

Mains supply
230V AC

COMMUNICATION CHANNELS

WIRELESS CONTROL WHEREVER YOU ARE

SmartHeat ControlUnit is connected to internet
via LAN and WiFi connection and can easily be operated
via smartphone or web application.

AirPatrol SmartHeat

Updated just now

My Home   -12°C

Livingroom
23°   50%   22°C NORMAL
    SETPOINT   MODE

Bedroom
21°   50%   24°C NORMAL
  22°C   SETPOINT   MODE

Bathroom
20°   50%   24°C NORMAL
  24°C   SETPOINT   MODE

ECO

ALARMS

RELAYS

Smartphone and
web application

WiFi

Radio
Sub GHz

RoomUnit
wireless
thermostats

ECO

22 °C

12°

ControlUnit

ECO

23 °C

FLOOR   MIN 25°C   MAX 30°C

12°C   26°C

WiFi   Sub-GHz

LAN

N. OPEN

ACTUATORS

N. CLOSED

IN/COM TEMP 1
IN/COM TEMP 2
IN/COM TEMP 3
IN/COM TEMP 4
IN/COM TEMP 5
IN/COM TEMP 6
IN/COM TEMP OUT

NC/COM/NO RELAY 1
NC/COM/NO RELAY 2
NC/COM/NO RELAY 3

SELECT

PAIR

1 COM NO/NC
2 COM NO/NC
3 COM NO/NC
4 COM NO/NC
5 COM NO/NC
6 COM NO/NC
7 COM NO/NC
8 COM NO/NC
9 COM NO/NC
10 COM NO/NC

Router

WITH AND WITHOUT
INFRARED FLOOR SENSOR

WIRING CENTRE FOR ACTUATOR VALVE CONNECTIONS

ACTUATORS SUPPLY

The ControlUnit has 10 voltage free relay outputs that can be used to control either 230V or 24V actuators.
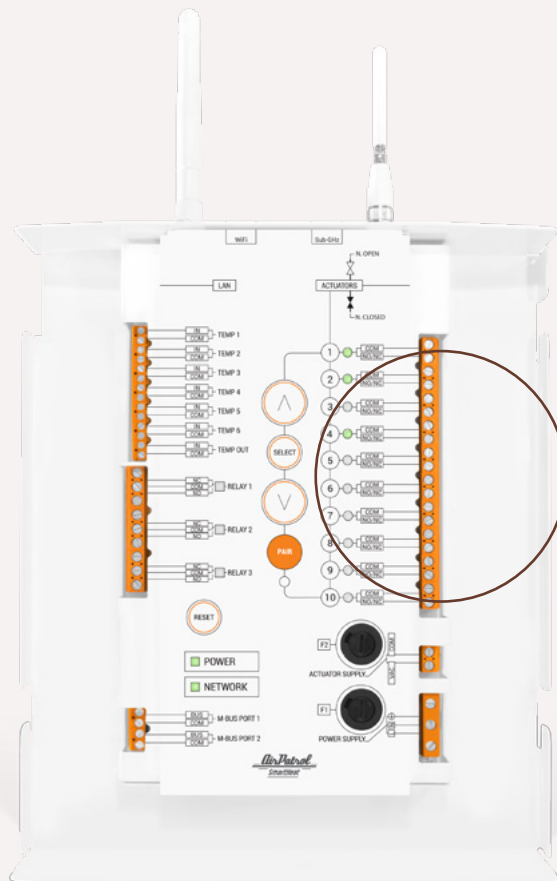
The actuator relay outputs can be used to switch a live supply. The 230V AC live supply can be passed to the actuators using jumper wires.

To use 230V AC actuators, bridge the power supply **L** terminal to the **VAC** terminal of the actuator supply. Bridge the power supply **N** terminal to the **COM** terminal of the actuator supply.

To use 24V actuators an external transformator has to be used to transfor power from 230V to 24V.

SWITCHING MAINS 230V AC ACTUATORS

To switch a live 230V AC supply with the actuator relays, connect VAC terminal of the desired actuator output of the ControlUnit to the line input (L) terminal of the actuator. Connect COM terminal of the actuator output of ControlUnit to the neutral (N) terminal of the actuator. Provide earthing for the actuators

CONTROLS UP TO 10 ROOMS

A single ControlUnit is capable of controlling 10 different rooms or 20 contours in total, which makes it perfectly suited even for a colossal home.
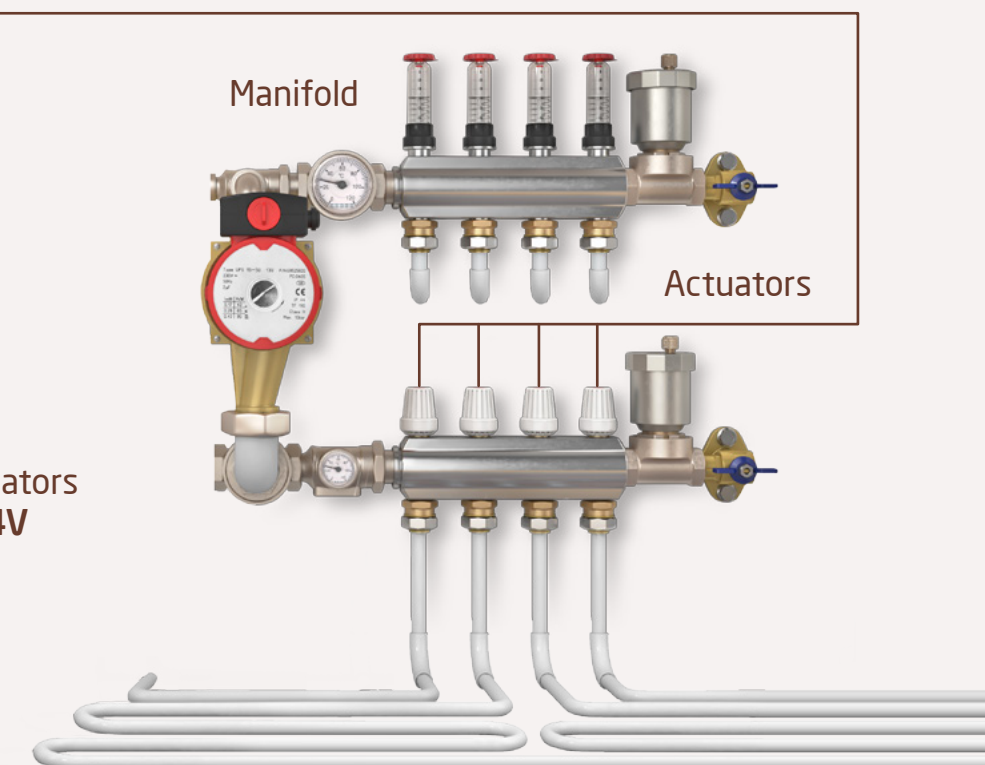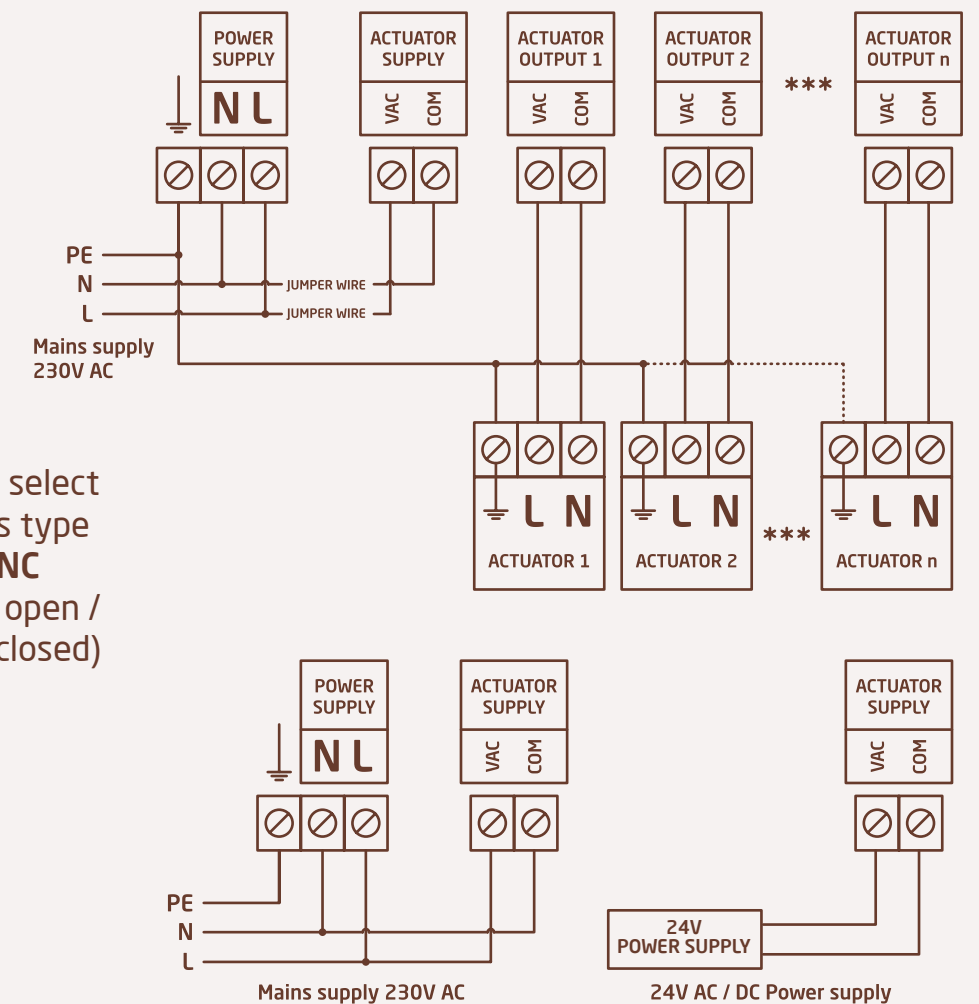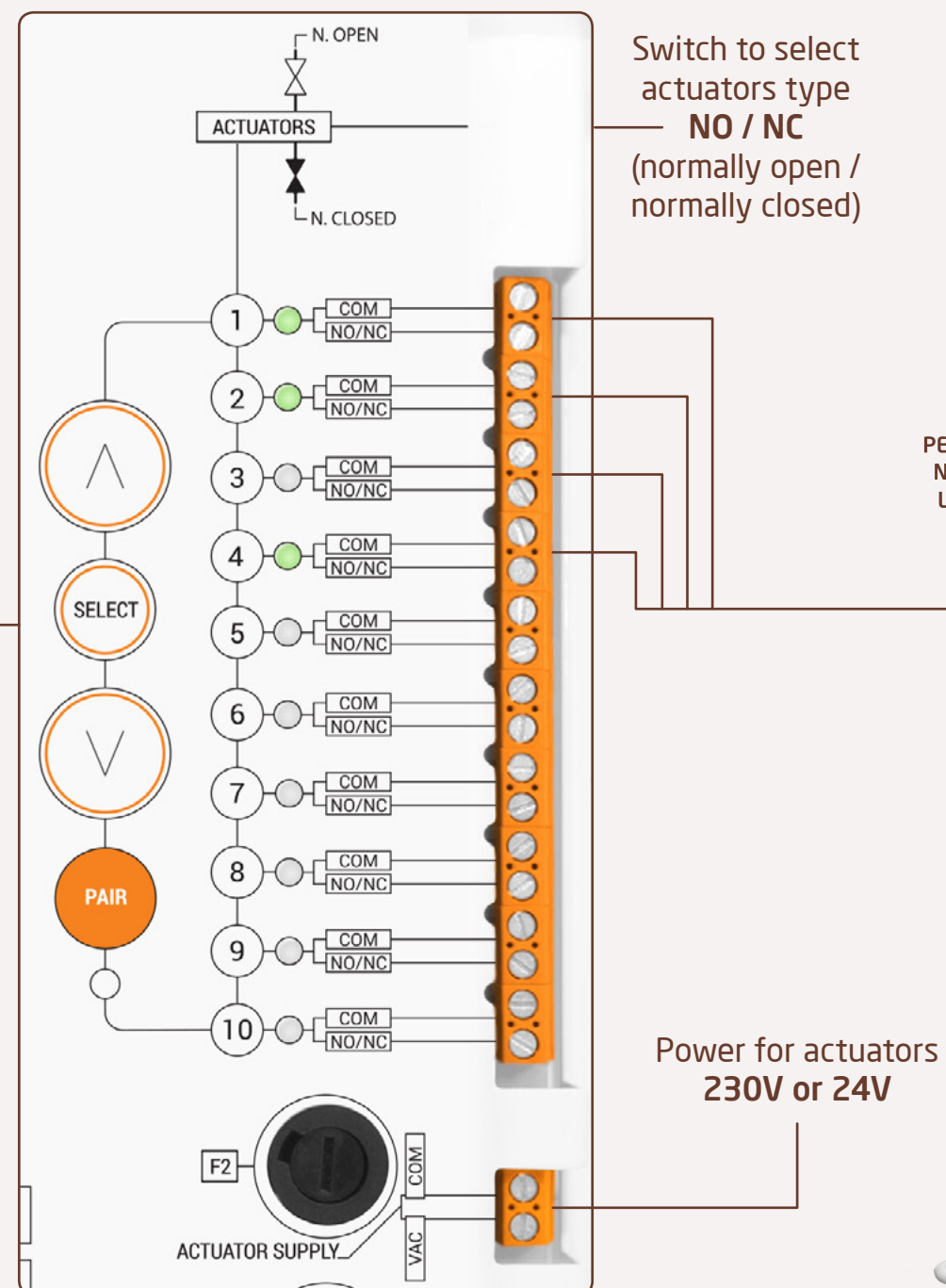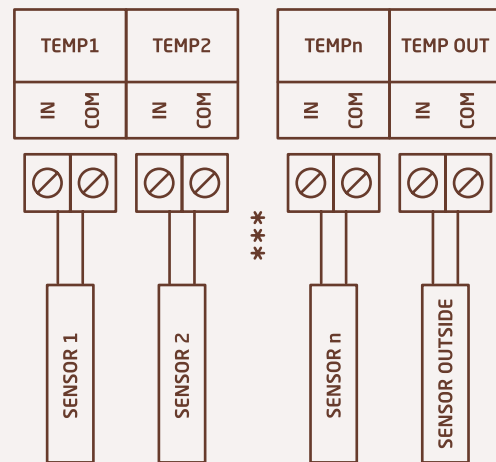
The maximum actuator load with all connected actuators must not exceed 4A, 230V during start-up.

Please note that the normal state of the actuator relays can be set to normally open or normally closed by using the slide switch on the right side of the ControlUnit.

Switch to select actuators type
NO / NC
(normally open / normally closed)

Power for actuators
230V or 24V

Manifold

Actuators

TEMPERATURE SENSORS

IDEAL TEMPERATURES EVERYWHERE

TEMP1	TEMP2		TEMPn	TEMP OUT
IN / COM	IN / COM	***	IN / COM	IN / COM
SENSOR 1	SENSOR 2		SENSOR n	SENSOR OUTSIDE

In addition to setting the ideal room temperature throughout your home, ControlUnit can monitor up to 6 temperature readings + the outside temperature to create the most comfortable indoor temperature.

SMART CONTROL WITH TEMPERATURE SENSORS

SmartHeat enables to monitor various temperatures. Just connect temperature sensor to the Control Unit and it will start reading for example heating water temperature, domestic water temperature, outdoor temperature, etc. It is so smart that it even calculates temperature differences for you if needed. Connect up to 6 temperature sensor to measure all the different temperatures plus outdoor temperature.

SAFEGUARD YOUR HOME

Set and receive notification in case some temperature limits exceed the limits.

WiFi

LAN

Returning water

Heating water

Domestic hot water

IN / COM — TEMP 1
IN / COM — TEMP 2
IN / COM — TEMP 3
IN / COM — TEMP 4
IN / COM — TEMP 5
IN / COM — TEMP 6
IN / COM — TEMP OUT

Outside temperature

SELECT

NC / COM / NO — RELAY 1
NC / COM / NO — RELAY 2
NC / COM / NO — RELAY 3

PAIR

CONNECTING TEMPERATURE SENSORS

The ControlUnit has seven (7) temperature sensor inputs for PT1000 type platinum resistance temperature detectors (RTD). There are six (6) inputs for indoor temperature sensing and one for outside temperature sensing.
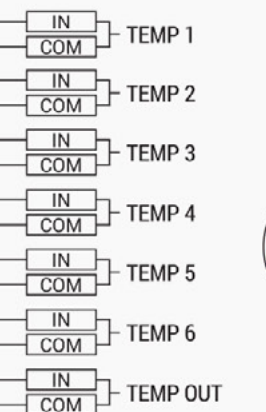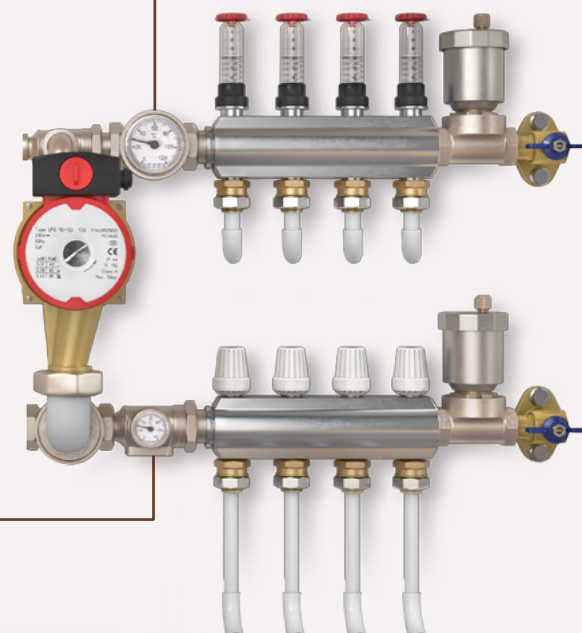
The 2-wire temperature sensors can be connected to the ControlUnit without considering the polarity of each individual sensor.
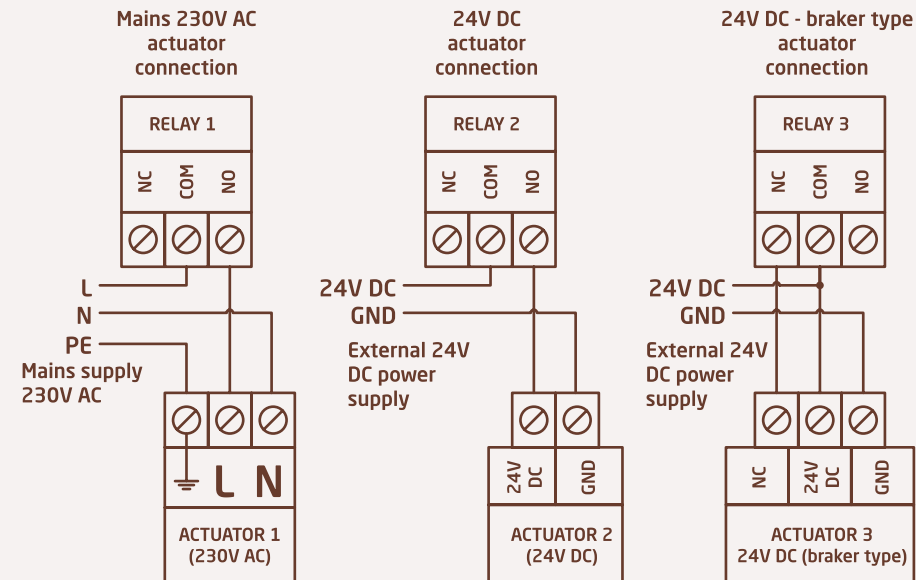
RESET

☐ POWER

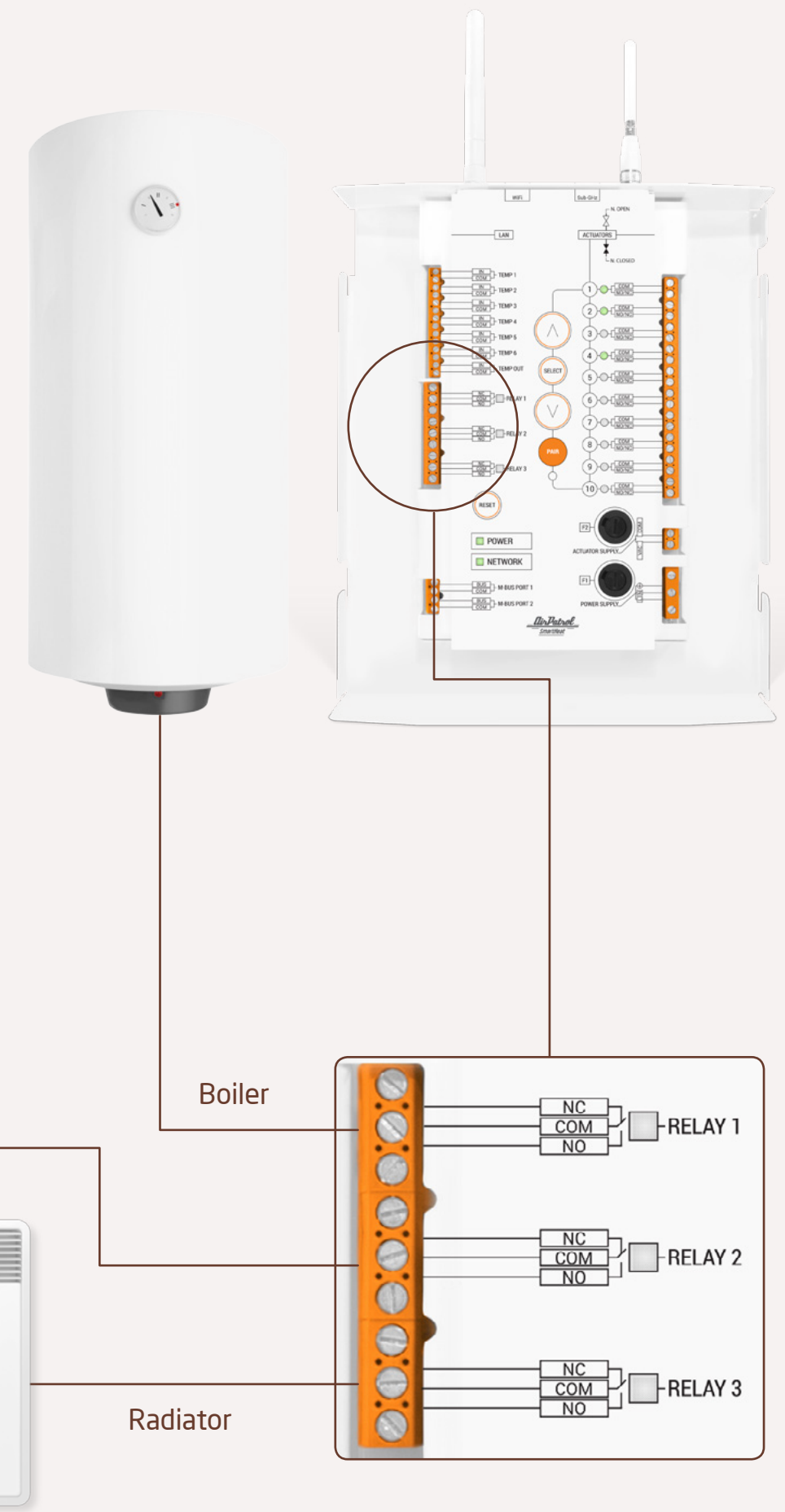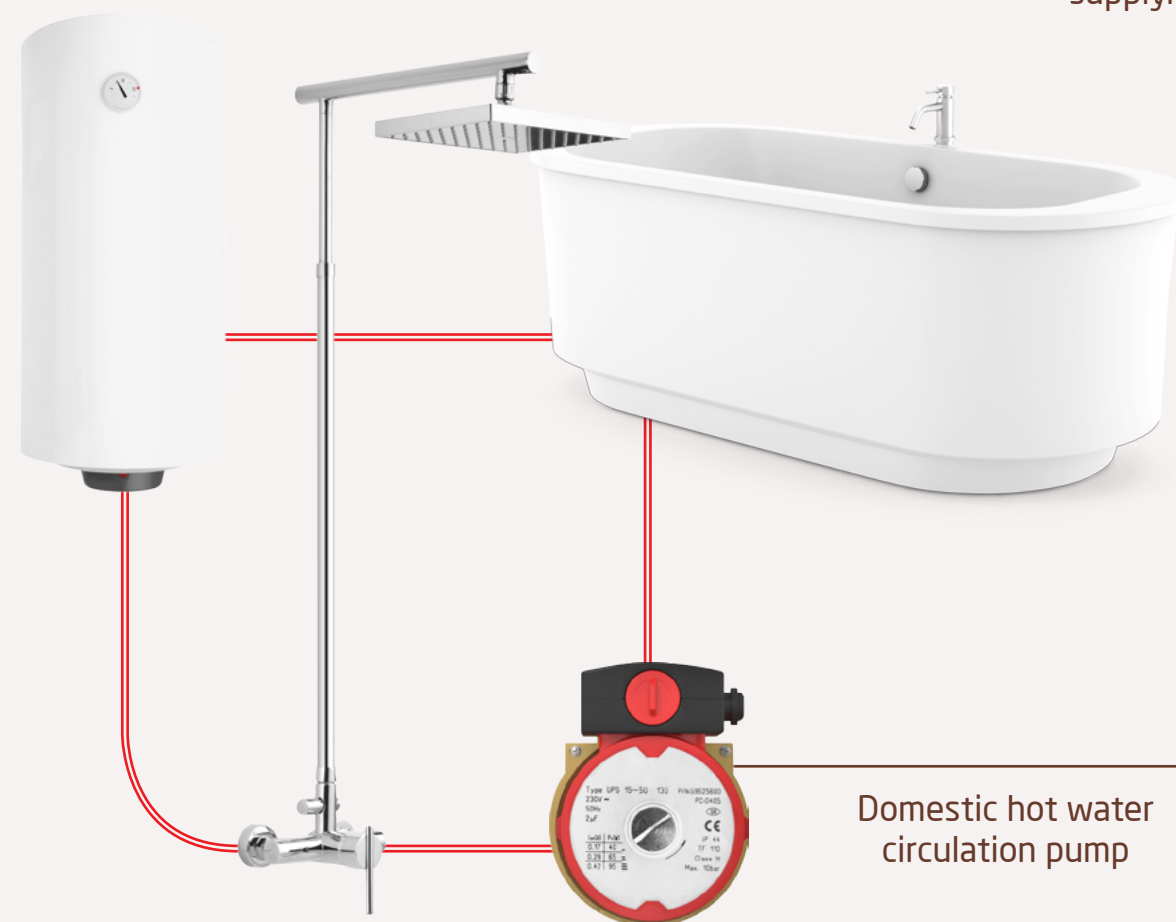☐ NETWORK

RELAY CONNECTIONS

MAXIMUM SAVINGS

ControlUnit can be connected to any relevant electrical device such as a boiler, circulation pump or an electrical heater. SmartHeat ControlUnit will make sure that no unnecessary electrical waste is made by turning the devices ON or OFF only when needed.

GENERAL PURPOSE RELAYS

The ControlUnit has three (3) voltage free general purpose relay outputs that can be used to control actuators or any generic electrical devices.

The actuator relay outputs can be used to switch a live supply. The 230V AC live supply can be passed to the general purpose relays.

Mains 230V AC actuator connection

RELAY 1

NC | COM | NO

L
N
PE
Mains supply 230V AC

ACTUATOR 1 (230V AC)

L N

24V DC actuator connection

RELAY 2

NC | COM | NO

24V DC
GND
External 24V DC power supply

24V DC | GND

ACTUATOR 2 (24V DC)

24V DC - braker type actuator connection

RELAY 3

NC | COM | NO

24V DC
GND
External 24V DC power supply

NC | 24V DC | GND

ACTUATOR 3 24V DC (braker type)

POWER
NETWORK

Boiler

Radiator

NC
COM
NO
RELAY 1

NC
COM
NO
RELAY 2

NC
COM
NO
RELAY 3
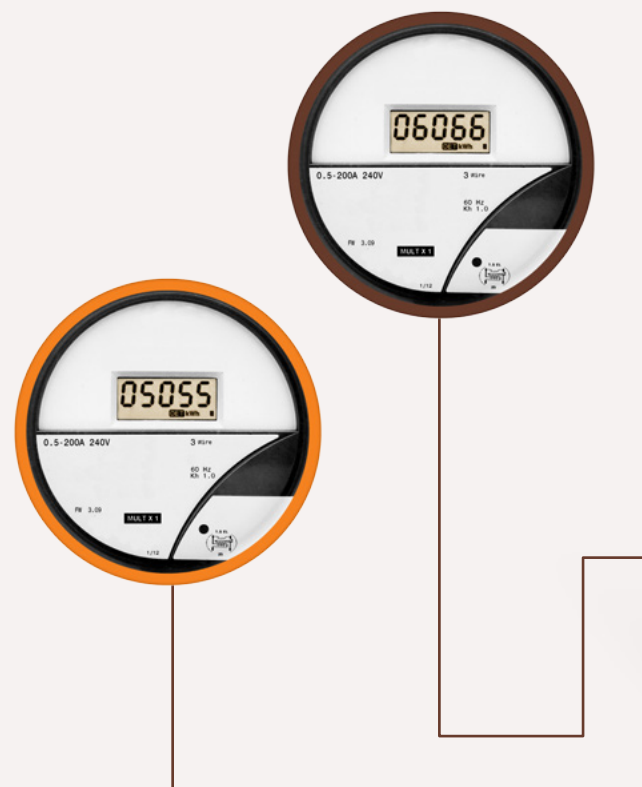
Domestic hot water circulation pump
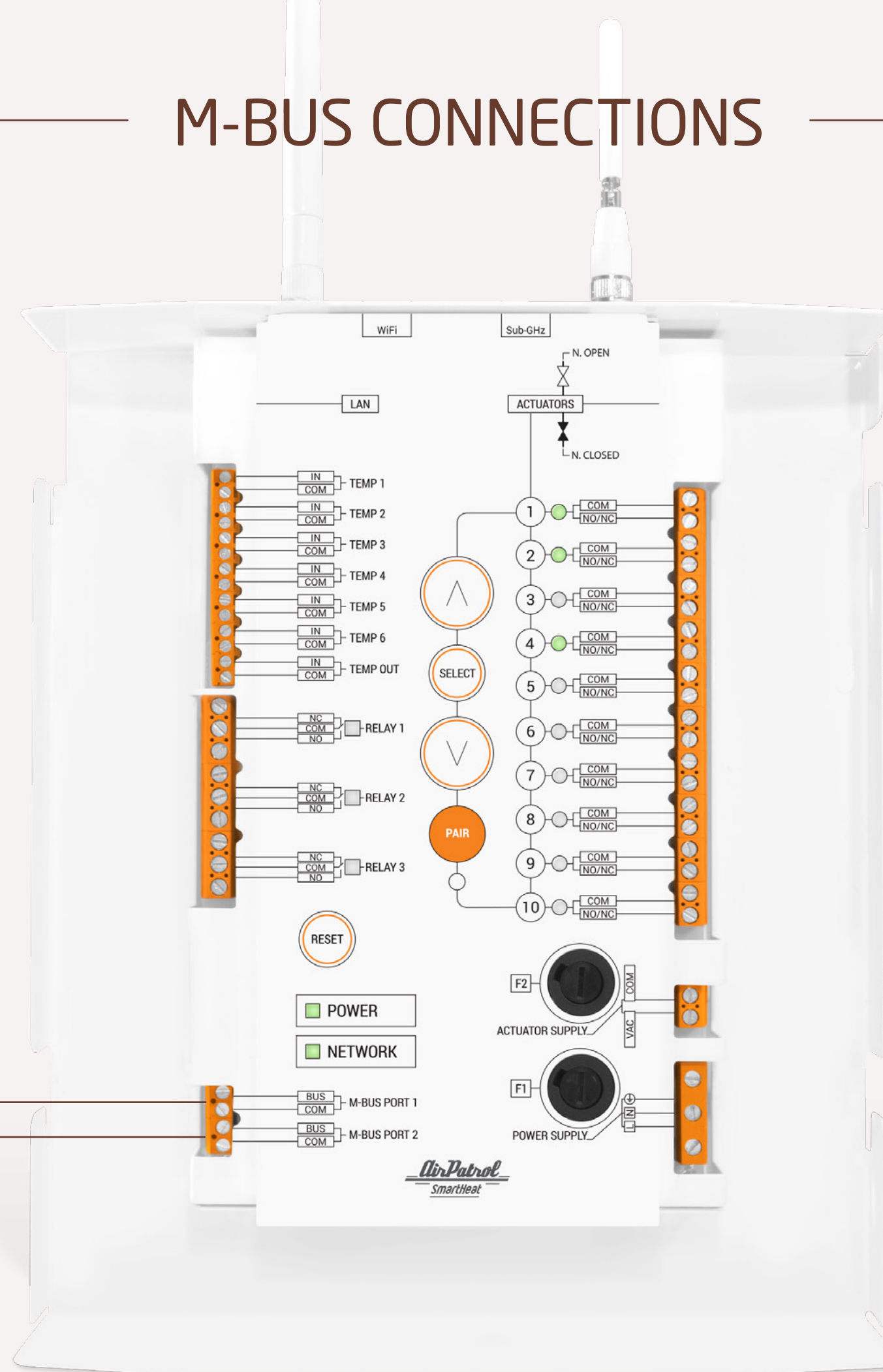
M-BUS CONNECTIONS

TOTAL OVERVIEW

SmartHeat ControlUnit can be connected to a heating energy meter and electric energy meter and it's web or smartphone application will give you a detailed overview of energy usage.

This will help you save even more!

Electricity or heating meters

M-BUS CONNECTION

The ControlUnit has two (2) 2-wire communication ports for connecting M-BUS metering devices. Several types of M-Bus meters can be used, such as heat or electricity.

ControlUnit supports connecting up-to three (3) independent metering devices via M-Bus. To connect more than two (2) metering devices the metes can be connected either using star topology or daisy-chained together.

The maximum cable length between any single M-Bus meter and the ControlUnit must not exceed 30m.
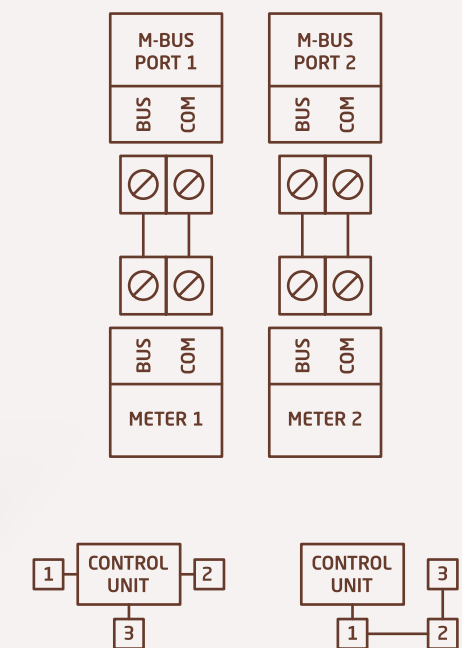
Connecting 3 M-Bus meters to Control Unit

ControlUnit

SMART ALL-IN-ONE CONTROL UNIT FOR WATER BASED UNDERFLOOR HEATING

Wiring Center | Gateway | Relays
Temperature Sensors
M-Bus Connections

Set the ideal temperature in every room and save on energy costs

+ Control via Smartphone, Web application and RoomUnit thermostat
+ Multi-zone control with up to 10 zones
+ Set and get notifications for each zone
+ Valve protections and Antifreeze function 5°C
+ Turn ON and OFF any electrical device via smart relay switches

SMART ENERGY CONTROL SOLUTION

All ready to go

SmartHeat product packages are compiled so that you have all that you need to set the system up and start heating smart.

RoomUnits are fully assembled to be taken from the box and mounted on the wall. Intuitive plug-and-play features mean that almost everyone can set the RoomUnit wireless thermostats up without the aid of the quick manual.

ControlUnit is kitted with 4 temperature sensors, easy fix cable ties and all that is needed to create a fully functional SmartHeat system. Only some additional tools for mounting may be needed.

PACKAGE INCLUDES

ControlUnit

User manual

3x 3m temperature sensors

1x 5m temperature sensor

Power cable

Actuator power bridge for 230V

Easy fix cable ties

RoomUnit IR

WIRELESS THERMOSTAT WITH INFRARED FLOOR SENSOR

Smart temperature control for bathrooms and fine floors

SIMPLE INSTALL / INTUITIVE CONTROL / COMPLETE OVERVIEW

PACKAGE INCLUDES

RoomUnit Wireless Thermostat with Infrared Floor Sensor

3x AAA batteries

Quick manual

Wall connector

Adhesive tape

RoomUnit

WIRELESS THERMOSTAT

Set the ideal temperature in every room and save on heating

SIMPLE INSTALL / INTUITIVE CONTROL / COMPLETE OVERVIEW

PACKAGE INCLUDES

RoomUnit Wireless Thermostat

3x AAA batteries

Quick manual

Wall connector

Adhesive tape