TP5000 + RF

5/2 day programmable electronic room thermostat

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Installation Instructions

GB

Please Note:

This product should only be installed by a qualified electrician or competent heating installer and should be in accordance with the current edition of the IEEE wiring regulations.

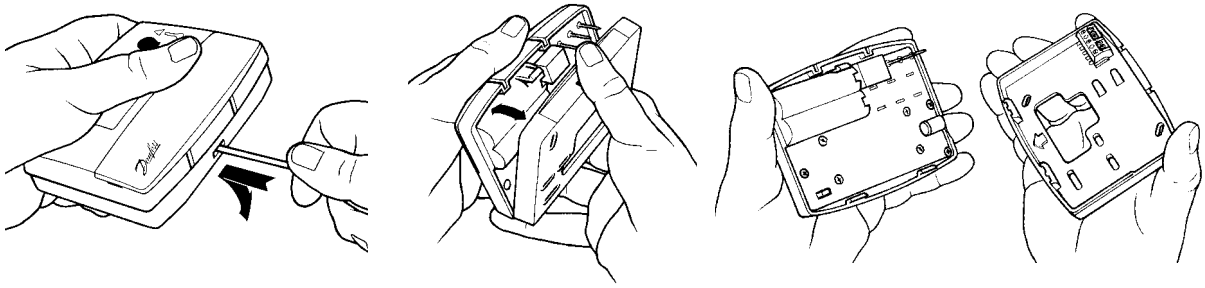
Product Specification

Thermostat features	TP5000	TP5000-RF
Power supply	2 x AA/MN1500/LR alkaline cells	
Memory back-up	1 min for battery change	
Switching action of output relay	1 x SPDT, Type 1B	N/A
Switch rating of relay contact	6(2)A, 10-230Vac	N/A
Transmission frequency (RF model)	N/A	433.92MHz
Transmitter range (RF model)	N/A	30m max
Temperature range	5-30°C	
Dimensions, mm	110 wide, 88 high, 28 deep	
Design standard	EN60730-2-9 (EN300220 for RF)	
Rated impulse voltage	2.5Kv	
Ball hardness test	75°C	
Control pollution situation	Degree 2	
Temperature accuracy	±1°C	
Time accuracy	±1 min.	

Important note RF products: *Ensure that there are no large metal objects, such as boiler cases or other large appliances, in line of sight between the transmitter and receiver as these will prevent communication between thermostat and receiver.*

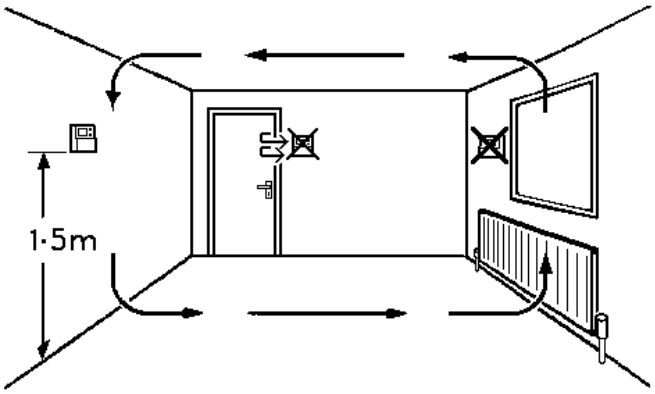
Installation

❑ First, remove the wallplate from the back of the unit.

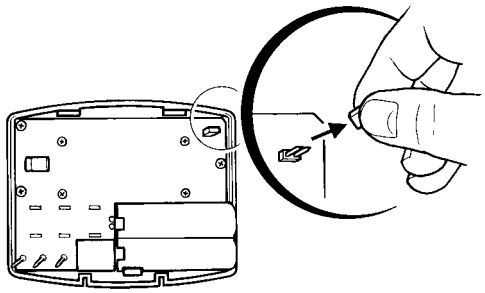


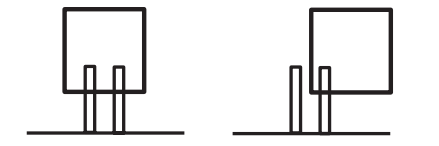
❑ From the top left hand corner of the wallplate, there must be clearances of at least 140mm to the right, 15mm to the left, 30mm above and 100mm below in order to mount the plug-in module.

❑ Fix at a height of approximately 1.5m from the floor, away from draughts or heat sources such as radiators. open fires or direct sunlight.



❑ Prior to mounting the unit should be set in either ON/ OFF or chrono-proportional control mode (see below).



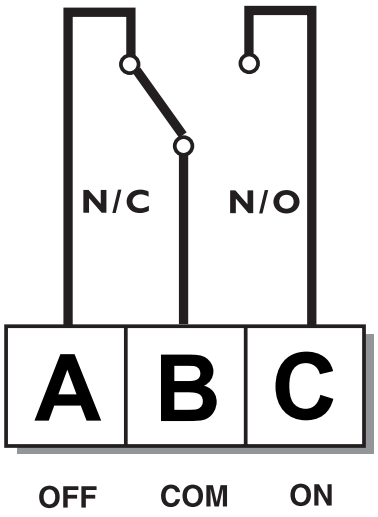


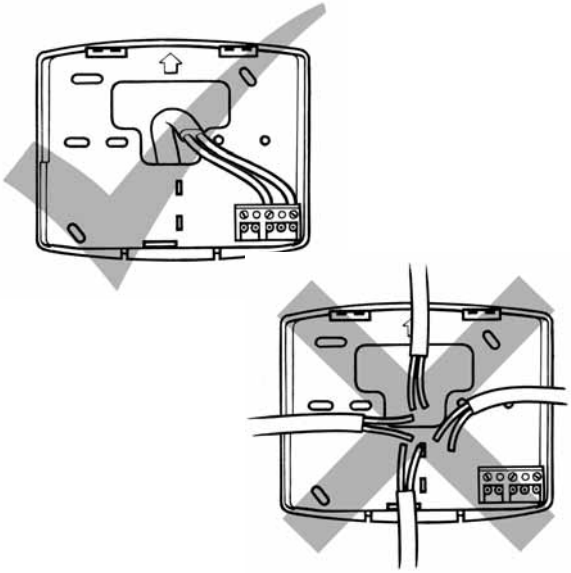
1) ON/OFF - boiler switches ON when below set temperature and OFF when above..

2) Chrono-Proportional - energy saving feature which fires the boiler at regular intervals to maintain a set temperature, achieving a constant ambient environment for the user.

For a full explanation of all advanced features please visit our website www.danfoss-randall.co.uk or call 01234 364621 to obtain a copy of our Advanced Features Guide.

Thermostat Wiring (not RF models)

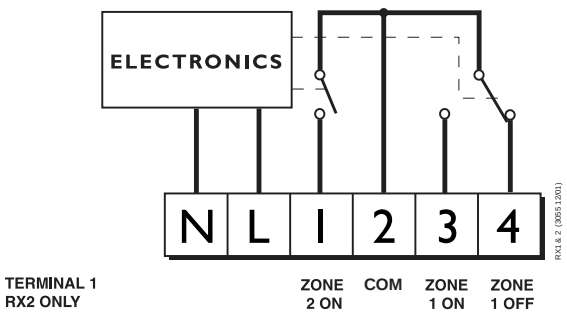




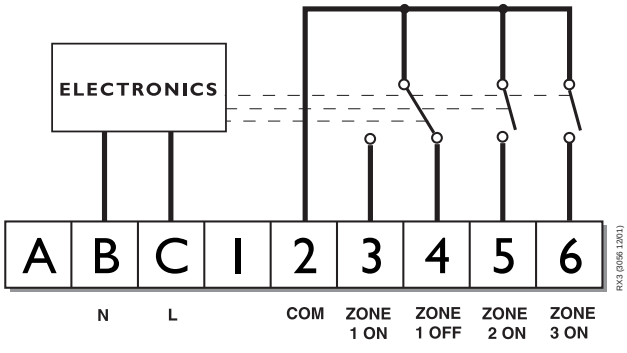
! *Some existing thermostats will have a Neutral and/or Earth wire connected. These are not required by the TP5000 and must NOT be connected to any TP5000 terminals. Instead they should be made electrically safe and coiled in the recess at the back of the TP5000.*

RX Receiver Wiring (RF models only)

RX1 & RX2



RX3



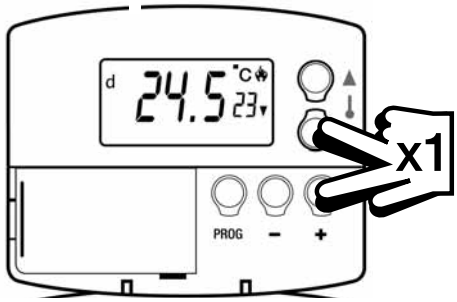
NB. For mains voltage operated systems link terminal 2 to mains live supply

Commissioning (RF models only)

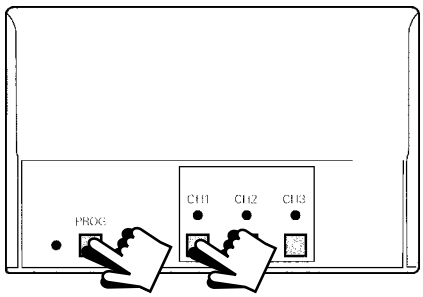
To tune the RX receiver to the frequency of the thermostat signal, follow steps 1-5 below.

Step 1 **TP5000-RF**
Reset the unit by pressing and holding **-, +, V and Λ together** until display goes blank.

Step 2 Press and hold **V and +** buttons for 3 seconds (TP5000 now transmits unique signal continuously for 5 minutes)



Step 3 **RX1**
Press and hold buttons **PROG and CH1** for 3 seconds until green light flashes once.



Step 4 **RX2 (if applicable)**
Stat 1 - perform steps 1-3
Stat 2 - wait 5 mins, perform steps 1-2 and then press **PROG and CH2 on RX2**

RX3 (if applicable)
Stat 1 - perform steps 1-3
Stat 2 - wait 5 mins, perform steps 1-2 and then press **PROG and CH2 on RX3**
Stat 3 - wait 5 mins, perform steps 1-2 and then press **PROG and CH3 on RX3**

Step 5 **TP5000-RF**
Press **V or Λ** to select temperature - the unit will revert back to operating mode.

GB User Instructions

Your programmable room thermostat

The TP5000 allows you to programme up to 6 times and temperatures at which your heating will come on and go off each day. You can programme one set of times and temperatures for weekdays and another set for weekends.

It features several user overrides including frost protection, thermostat mode and time or temperature display.

Preset Programmes

Your TP5000 comes ready programmed with a set of operating times and temperatures which often suit most people.

Weekdays (Mon-Fri)		
Event	**Time**	**Temp °C**
1	06:30	20
2	08:30	15
3	11:30	20
4	13:30	15
5	16:30	21
6	22:30	15

Weekend (Sat-Sun)		
Event	**Time**	**Temp °C**
1	07:00	20
2	16:00	21
3	23:00	15
4	00:00	15
5	01:00	15
6	01:59	15

If you want to change any of these settings you can do so by following the instructions on pages 9-10.

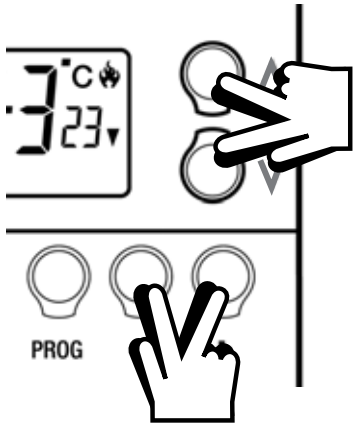
First, follow the steps on page 8 to set the correct time and date.

Before you start

Open the flap on the front of the programmer.

Press the **+ & – AND ▲ & ▼** buttons simultaneously to reset the unit.

This will reinstate the preset programmes and will set the time to 12:00 on Day 1 and the temperature to 20°C.



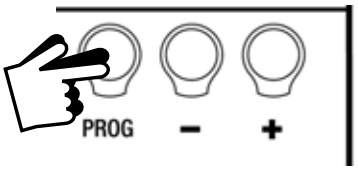
Setting the Clock & Day

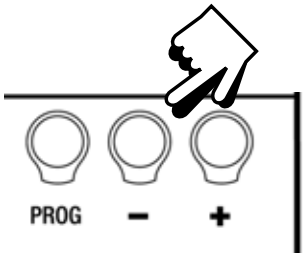
Note: clock is displayed in 24 hour mode

CLOCK

Press **PROG** to begin programming.

Use **+ or -** to adjust the TIME (press and hold to change in 10 min increments)



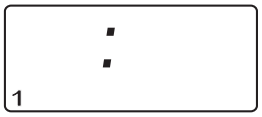


DAY

Press **PROG** again.

Use **+ or -** buttons until correct DAY is shown (1 = Monday, 2 = Tuesday, etc)

! ***Remember - you will have to reset the time when the clocks change in Spring and Autumn.***



Running your programme

If you are happy to use the preset programmes on page 7, you don't need to do anything else.

To accept the presets close the front cover and after 2 minutes the presettings will automatically be accepted (& colon will blink).

Your unit is now in RUN mode.

Before you change the preset programmes

Please Note

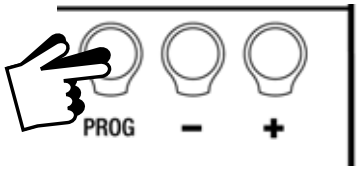
The unit must be programmed in sequence and ON/OFF times cannot be programmed out of sequence.

If you want to leave a preset time as it is, simply press **PROG** to move on to the next setting.

During programming, if no buttons are pressed for 2 to 3 minutes the unit will automatically return to RUN mode, and the programme set up to that minute will be active.

! *If at any time you get confused and need to reset the unit to the preset programmes press the* **+ & – AND ▲ & ▼** *buttons simultaneously.*

Changing the preset programmes

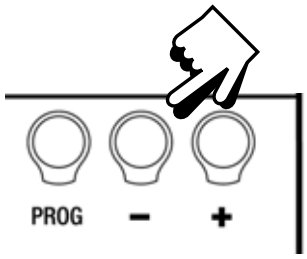


For Days 1-5 (weekdays)

a) Press **PROG** until 1st pre-set time and temperature (Event 1, Days 1,2,3,4,5) appears in display.

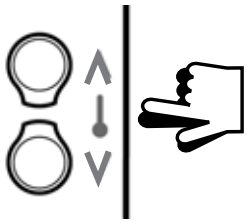
b) Use **+ or –** buttons to adjust the TIME (press and hold to change in 10 min increments)

c) Use ▲ **or** ▼ buttons to adjust the TEMPERATURE.



d) Press **PROG** to move to next preset time & temperature (Event 2)

e) Repeat steps b, c & d for programming Events 3, 4, 5 & 6.



For Days 6-7 (weekends)

❑ Press **PROG** until 1st pre-set time and temperature (Event 1 Days 6-7) appears in display.

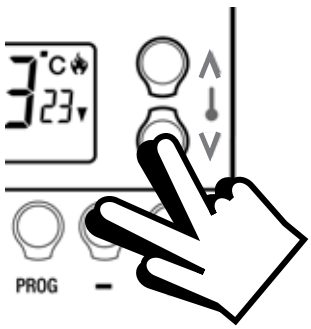
❑ Repeat steps b, c and d above to programme time and temperature events for the weekend.

If you require just 2 Events per day (1 ON / 1 OFF)

❑ Follow steps a, b & c above to programme Event 1 (ON)

❑ Press and hold ▼ **and - buttons** together for 3 seconds to skip events 2,3,4 & 5.

❑ Follow steps b & c to programme Event 6 (OFF)



To revert back to six events per day, reset the thermostat (see page 8).

Running your programme

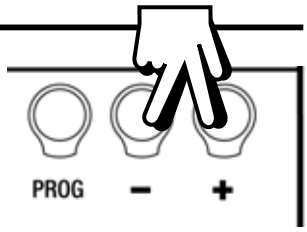
Press **PROG** – the colon in the LCD display will start to flash. The heating will now come on and go off at the programmed times.

User Overrides

Sometimes you may need to change the way you use your heating temporarily, i.e.due to unusually cold weather. The TP5000 has several user overrides, which can be selected without affecting the thermostat programming.

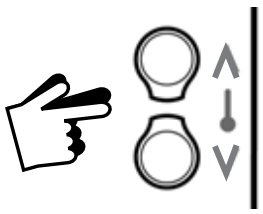
Altering display to show either time or actual room temperature

❑ Press **+ and – together** to change between settings.



To temporarily alter the current programmed temperature

❑ Press ▲ **or** ▼ until required temperature is displayed.

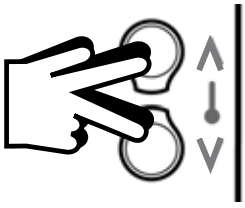


This override will automatically cancel at beginning of next programmed event)

To temporarily use your weekend programme during the week *(i.e. you have a days holiday or are off sick)*

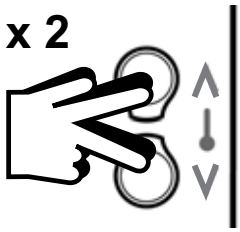
❑ Press ▲ **and** ▼ **together once.**

This override cancels at 2:00am.



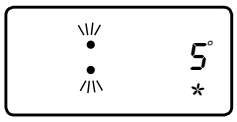
Frost Protection

A constant low temperature between 5°C-30°C can be selected whilst away from home.

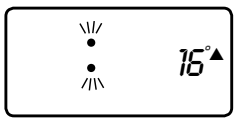


❑ Press ▲ **and** ▼ **together twice**.

❑ Use ▲ **or** ▼ buttons to set the desired low temperature.



- At 5°C a **snowflake** symbol appears indicating **frost protection** mode.



- At all other temperatures an ▲ arrow appears, indicating a **constant temperature** selection.

❑ To return to automatic programming press ▲ **and** ▼ together again.

Battery Replacement

When batteries are low a battery symbol will flash in the LCD display. You have 15 days to replace the battery before the unit switches off.

When changing batteries, remove old batteries and insert new ones within one minute and programming will not be lost.

IMPORTANT: always use high quality alkaline batteries

! *NB. If the display ever goes blank during normal operation, the batteries will need to be renewed, the unit reset and the time and programmes reset.*

www.danfoss.com/BusinessAreas/Heating

This product complies with the following EC Directives:
Electro-Magnetic Compatibility Directive.
(EMC) (89\336\EEC), (92\31\EEC)
Low Voltage Directive.
(LVD) (73\23\EEC), (93\68\EEC)

CE

Part No 61075 Issue 01 04/05