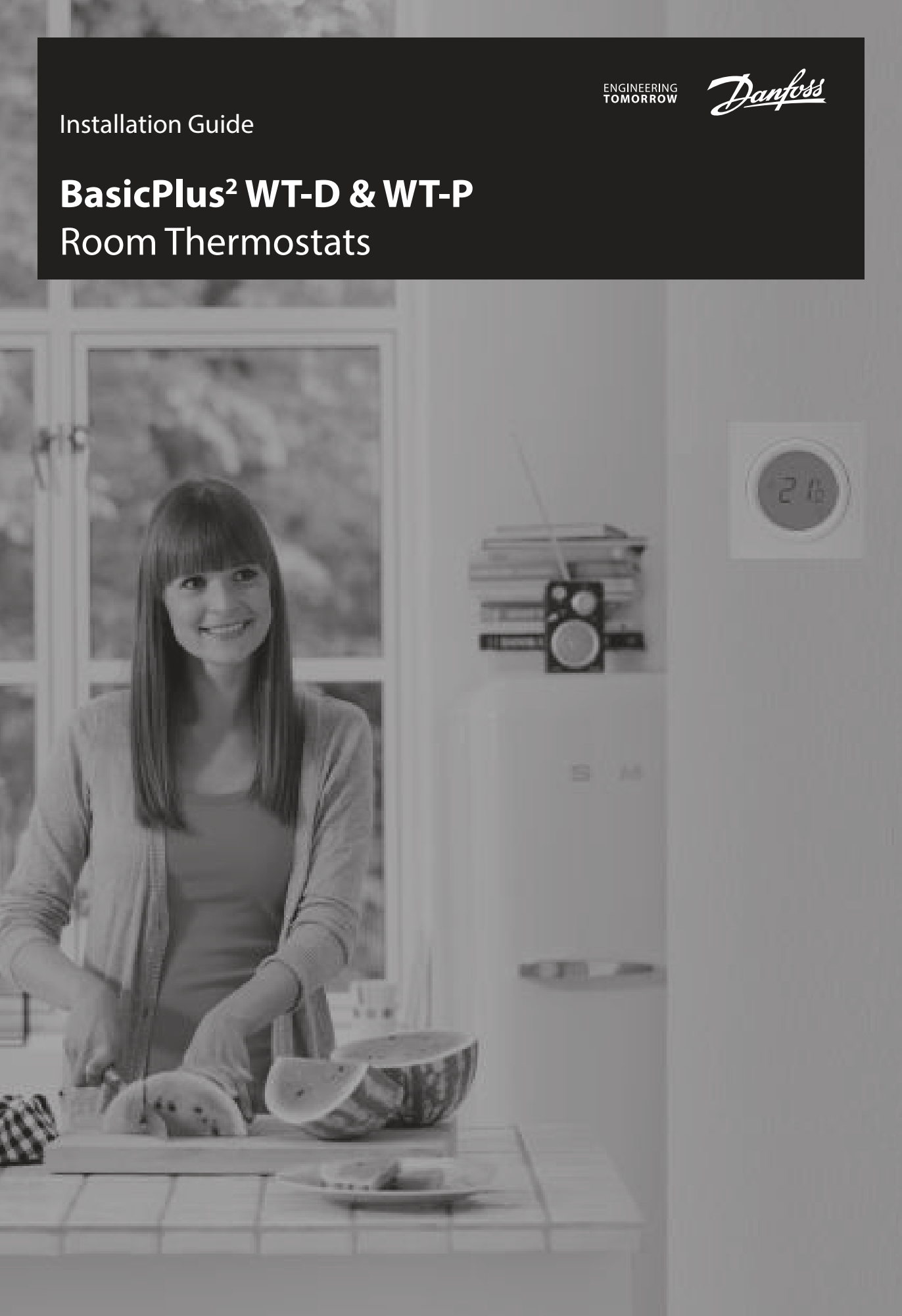
ENGINEERING
TOMORROW

Installation Guide

BasicPlus² WT-D & WT-P
Room Thermostats



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1. Installation Steps

User Guide can be downloaded from: heating.danfoss.com.

1. **Installation must be done by an authorised electrician.**
2. The room thermostat should be installed at approx. 1.5 m above floor and where the effects of sunlight, draught or other heat sources (eg. TV's) are avoided, see fig. 1.
3. First of all, carefully remove the cover, see fig. 2.
4. Connect the wire before mounting the back plate to the wall box using the enclosed screws. Then mount the cover to the back plate, see fig 3.

2. Wiring

Dimensions, see fig. 4. Wiring diagram, see fig. 5 (S1, S2: floor sensor terminals).
WT-D/P is often used with Danfoss TWA actuator.
Depending on the conditions of power location and actuator type (NC or NO), the wiring between room thermostat and actuator is different.
Follow the illustrations to complete the wiring:

1. When power supply location is close to room thermostat:
   - Connect to actuator TWA 230 V NC type,see fig. 6.
   - Connect to actuator TWA 230 V NO type, see fig. 7.

2. When power supply location is close to actuator:
   - Connect to actuator TWA 230 V NC type, see fig. 8.
   - Connect to actuator TWA 230 V NO type, see fig. 9.

3. Error codes

Display	Description
E1	Room sensor failure
E2	Floor sensor failure

4. Notes

1. Correct wiring is essential; using instrument to confirm L and N before wiring is recommended.
2. Don't remove too much of the insulation cover from the wire to avoid short circuit caused by the naked wire touching the metal 86 size mounting wall box.
3. Don't let the screw press or touch the wire when using screw to fix room thermostat in wall box. A short-circuit risk exists if the wire insulation cover is damaged by the screw, and if the naked wire connects with the screw.
4. If walls must be painted, mount the room thermostat after painting, to avoid dust or paint material penetrating the room thermostat and thus damaging the PCB.

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5. The max load of relay is 3 A (resistive) or 1 A (inductive, such as pump, motor). The relay will be damaged if the load exceeds the limit.
6. Don't cover the thermostat, for instance by hanging towels directly in front of it.
7. The room thermostat should be connected to the corresponding loop actuator in individual room temperature control.

5. Technical Specifications

Feature	Description
Approval	CE Marking, EN60730
Ambient temperature	-10 - 60° C
IP Class	30
Max. load, inductive	<1 A
Max. load, resistive	<3 A
Power consumption	2 W
Power supply	85-250 Vac, 50/60 Hz
Room temp. set range	5 - 35° C
Floor temp. set range	20 - 45° C
Shell material	ABS + PC

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Fig. 1

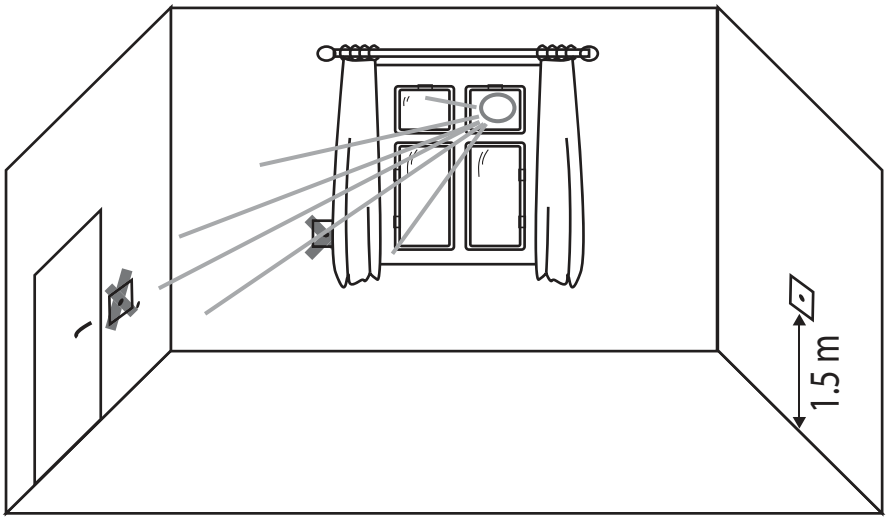

Fig. 2

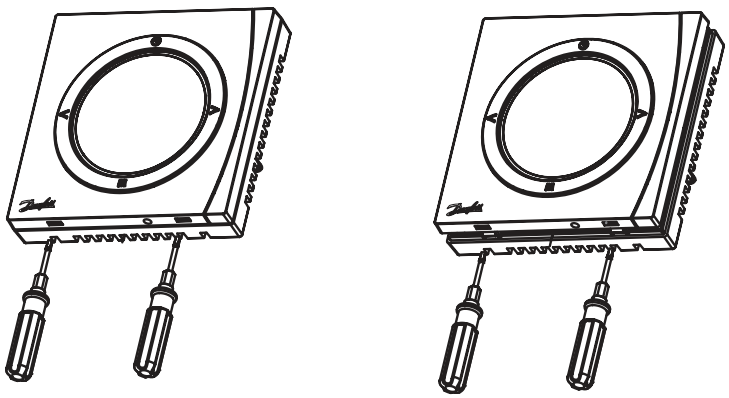

Fig. 3

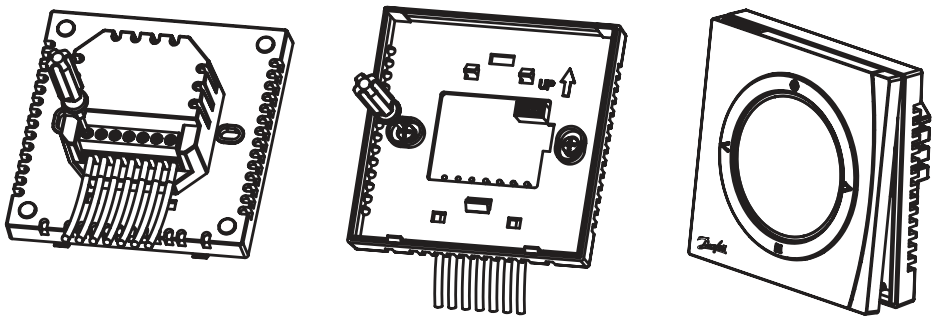

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Fig. 4

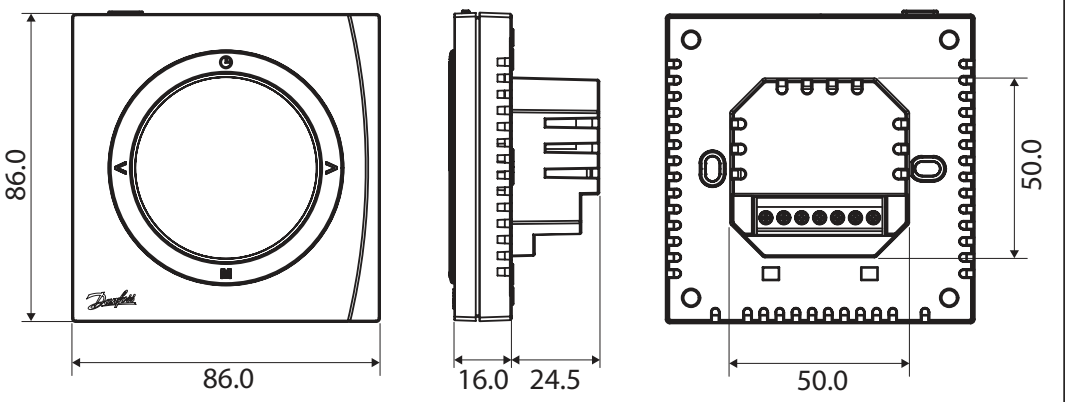

Fig. 5

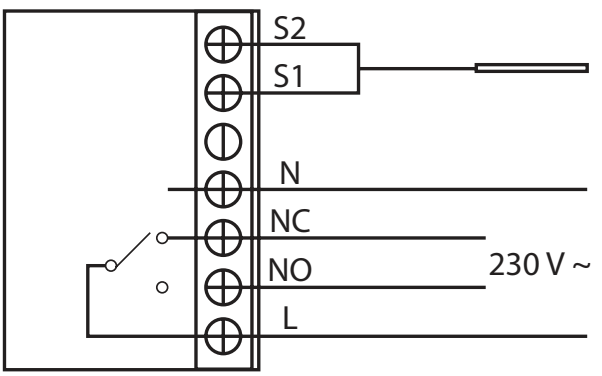

Fig. 6

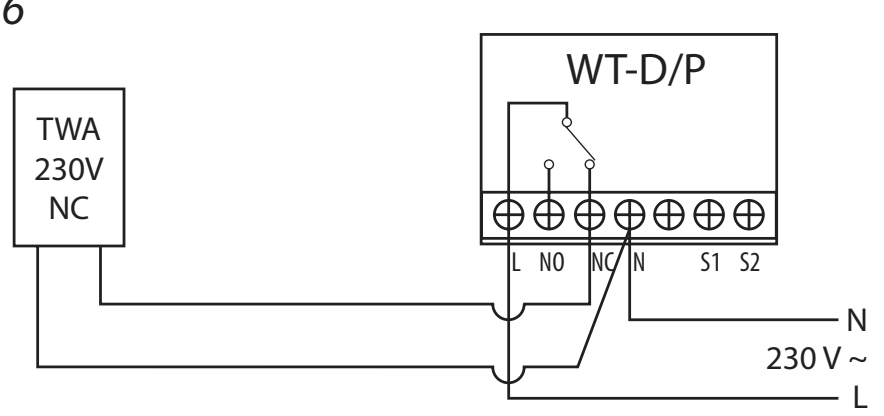

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Fig. 7

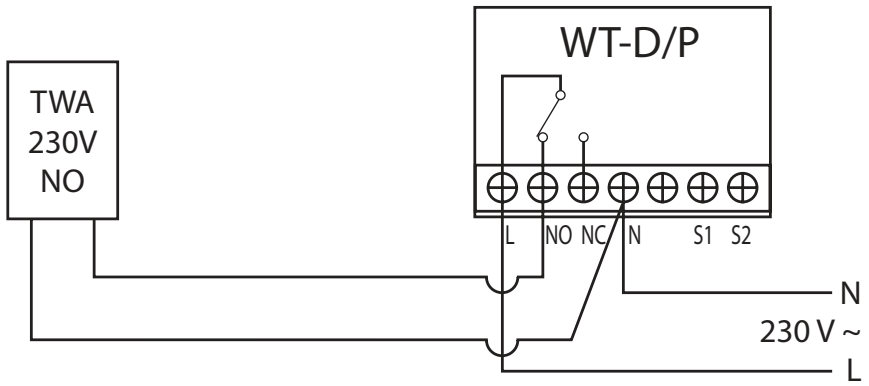


Fig. 8

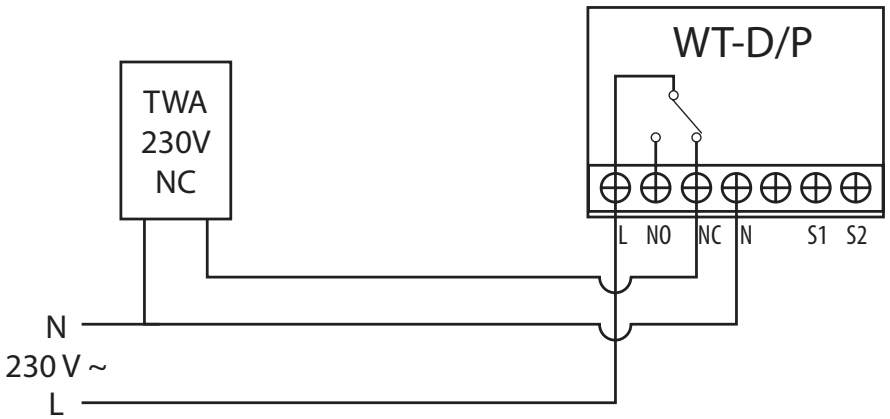
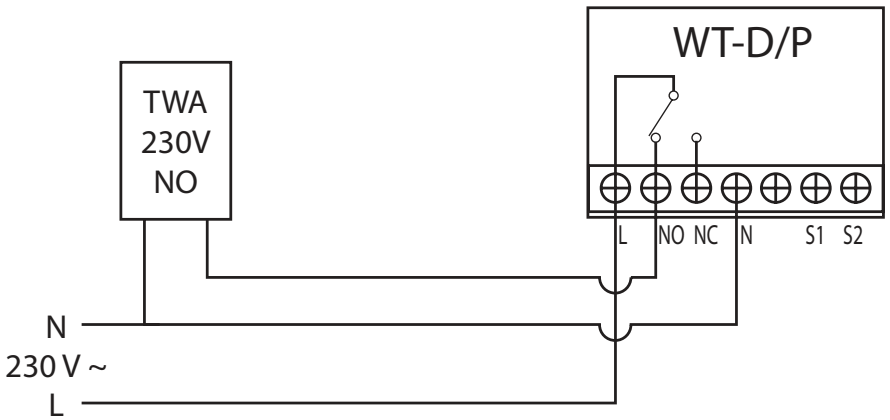


Fig. 9



Danfoss A/S
Floor Heating Hydronics
Ulvehavevej 61
DK-7100 Vejle
Denmark
Phone. . .+45 7488 8500
Fax. . . . . .+45 7488 8501
E-mail . . .heating.solutions@danfoss.com
www.heating.danfoss.com

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