STARTING UP

When turning ON, the Display ① shows the Firmware version (e.g. **5.1**)

ON/OFF. On /Off-button ⏻

Even in OFF position, while in **Thermostat Modus** Antifreeze Temperature Function, is still active**.**

Night Setback in Thermostat Modus only

Press button 3 sek for 3 sec until the Green LED flashes.

If Green Light, the Night Setback is activated. quick push on button 3 sek , cancels the Night Setback for this day, but returns automatically to Night Setback again next day. For permanent cancelling, enter into parameter P3.

Antifreeze

When **Thermostat Modus** is chosen, and the Thermostat being turned OFF, and the Display shows FS (*Freezing Security*), the Thermostat Antifreeze Function will however connect the "Heating Elements" controlled by the Thermostat. In case temperature measures below P2 parameter, **Thermostat** turn on the Heating Elements preventing frost damages.

NOTE!

In Regulator Modus, the Antifreeze Function will not be activated when the Thermostat being turned OFF.

Child Safety

Press the ON/OFF button ⏻ for 8 seconds to activate the Child Safety, and the display acknowledge by short flashing. For cancelling this function, repeat the same procedure.

Maximum Limit for wooden floor

Contact the supplier of the floor material for further information about the maximum temperature.

Set this recommended temperature in Menu P6.

Thermostat / Regulator Modus

Choose forth and back between Thermostat and Regulator: button ▲ and ▼ simultaneously for 3 sec.

NOTE: whatever switching on Regulator Modus adjust A parameter to value: 10%.

Interval for control of **Regulator**: P7 parameter

Button ▲ : increase the temperature (**Thermostat**)
increase A parameter(1÷99%) (**Regulator**)

Button ▼ : lower the temperature (**Thermostat**)
lower A parameter (1÷99%) (**Regulator**)

The desired temperature shows up for 5 sec. before returning to display the actual tempe-rapture [°C] (Thermostat) or value [%] (Regulator).

Regulator Modus in use is seen in pic.1.

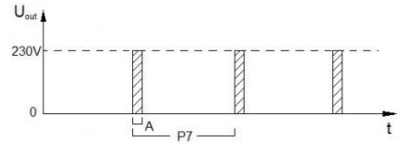
Explanation of Display Information

- Display ① shows continually the actual temperature at the moment
- By pressing the ▲ or ▼ button quickly, the set temperature shows up
- Dot ② in the display indicates floor or wall sensor is connected
- Dot ③ indicates that the Thermostat is in regulator Modus
- Red LED indicates that the load is connected/on
- Yellow LED ✹ indicates Day Modus
- Green LED ☽ indicates Night Setback Modus. Lowering the temperature with set value (i.e. 5°C), and 50% in Regulator Modus

Calibration (Menu P0)

Place a reliable thermometer close to the Thermostat and adjust the Thermostat by using ▲ and ▼ button to harmonize the temperature of the Thermostat with the thermometer. The result will automatically by saved after 10 seconds.

Pic. 1. Example U_{out} in **Regulator Modus**:



NOTE!

- If display shows: 'HI' the temperature of the floor is exceeded (P6 parameter), 'LO' temperature of the floor is below 0°C.
- If display shows 'OL' (overloaded) the temperature in wall-box exceeds 75°C, and the Thermostat will be turned OFF.
- The Thermostat switches ON again when the temperature drops to 65°C, and continues functioning as normal

TEMPERATURE REGULATOR

ISO 9001:2015 QMS

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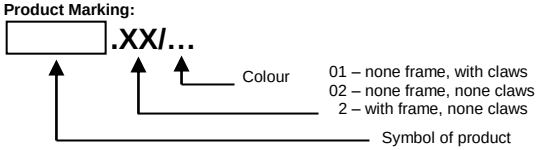
CE

Variants:

DTRNSZ. .../…
DTRNSWZ. …/…
DTRNW. …/…

Product Marking:



TECHNICAL DATA

Voltage	230V AC (+10% / -20%) / 50Hz
Load current	10A 2300W 2-pole with outer sensor (DTRNSWZ…)
	16A 3600W 1-pole with outer sensor (DTRNSZ…)
	16A 3600W 1-pole (DTRNW…)
Temperature regulation range	5 ÷ 40°C
Antifreeze Protection	programmable (default +5°C)
Type of operation	automatic
Method regulation	ON-OFF
Type of sensor	inner (air) – all types
	outer (floor) (sensor MGF47k), length: 3m
Night Setback	programmable (default reduced by 5°C in 7 hours)
Weight	94g (128g with sensor)
Height of installation	1.0 ÷ 1,5 m
Protection class	IP20
Reference standards	PN-EN 60730-1

APPLICATION

The **Temperature Regulator** with **Night Setback** and **Special Floor Protection Function** is designed to control underfloor heating systems, electric heaters, etc. in a manner assuring maintenance of constant temperature.

Total power of the connected load may not exceed 2300W (**DTRNSWZ…**) or 3600 (**DTRNSZ…, DTRNW…**). Load of higher power shall be connected through an additional contactor.

The **Temperature Regulator** 10A 2-pole (**DTRNSWZ…**) switch guarantees complete disconnection of the load circuit from the network.

The **Temperature Regulator** automatically detects if an external temperature sensor is connected. If an external floor-or air sensor is connected, the internal temperature sensor is automatically set out of service.

The **Temperature Regulator** can be mounted by use of screws in flush-mounted Ø60mm installing boxes and surface boxes and in multiple-box set **Simon54 Premium**.

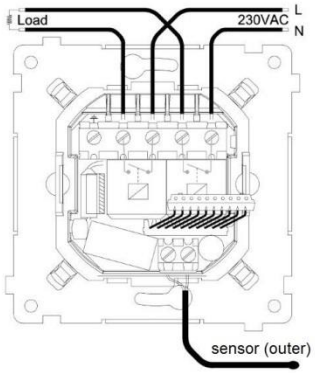
INSTALLATION RECOMMENDATIONS

The regulator should be installed on a wall 1,0 ÷ 1,5 m above the floor level, in a heated room in a place assuring free air circulation (see the figure 'Method of Installation').

It should not be exposed to direct influence of other sources of heat (e.g. the sun), to draughts (close to windows, doors etc.) or water.

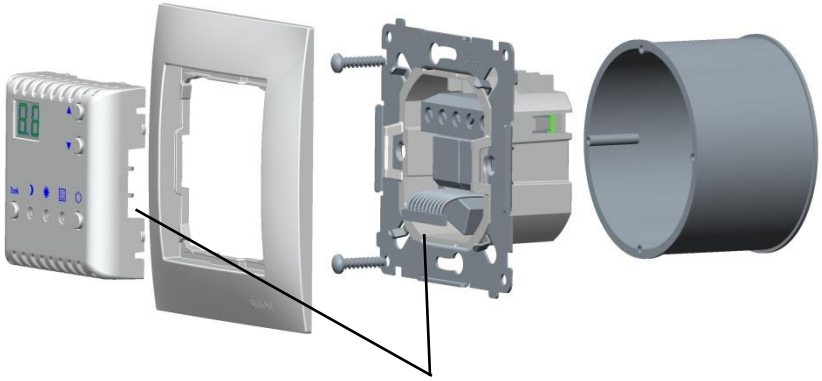
Attention should be paid to correct connection of power supply, i.e. a phase conductor to L terminal and a neutral conductor to N terminal. A terminal for connection of a protection conductor ⏚ ,enables maintenance of protection circuit continuity. Temperature **Regulator** is stablied about 30 min., after connect of power supply.

DIAGRAM OF TEMPERATURE REGULATOR CONNECTION TO THE ELECTRICAL SYSTEM



METHOD OF INSTALLATION

Caution: Disconnect power supply before installing temperature regulator. Installation should be carried out by a person with suitable qualification.



Caution: ***The wires should be connected to the terminals before plate closing.***

Caution: While power supply is not disconnected, there is dangerous voltage accessible after removing of the cover.

PARAMETER SETTINGS

How to enter the menu	Press Button ⏻ and Minus-button ▼ for 5 sec. until P0 shows up in the display
Manoeuvring between the parameters	Push the Button ⏻
Editing parameters	Push ▲ or - button ▼ for setting new values
Save new settings	Being automatically saved after 10 sec.
Return to Factory Settings	Push and hold ▲ and ▼ and ⏻ buttons simultaneously for minimum 3 sec.

Menu	Parameter	Settings	Fact. Setting
P0	Calibrating temperature	Adjustable +/-5°C in according to “master” thermometer	0 °C
P1	Antifreeze	1 = On / 0= Off	1
P2	Set Antifreeze Temp.	1÷20 °C (only valid in Thermostat Modus)	5 °C
P3	Night Setback	1 = On / 0= Cancel Night Setback	1
P4	Hours in Night Setback	1÷23	7 hours
P5	Lowering temp. in Setback	1÷20 °C (In Thermostat Modus and 50% in Reg. Modus)	5 °C
P6	Max. Floor Temp	5÷40 °C	28 °C
P7	Interval for control of temp/regulating	1÷20 min.	15 min.
P8	Maximum Limit	1 = On / 0 = Off / 2 = air *)	1
PA	Floor Variants	00=47k, 01=12k, 02=15k, 03=10k,	00=47k
Pb	Display Brightness	0÷50 (0 means bright and 50 means dark)	20

P8*) Maximum limit in floor, but being regulated by internal air sensor.