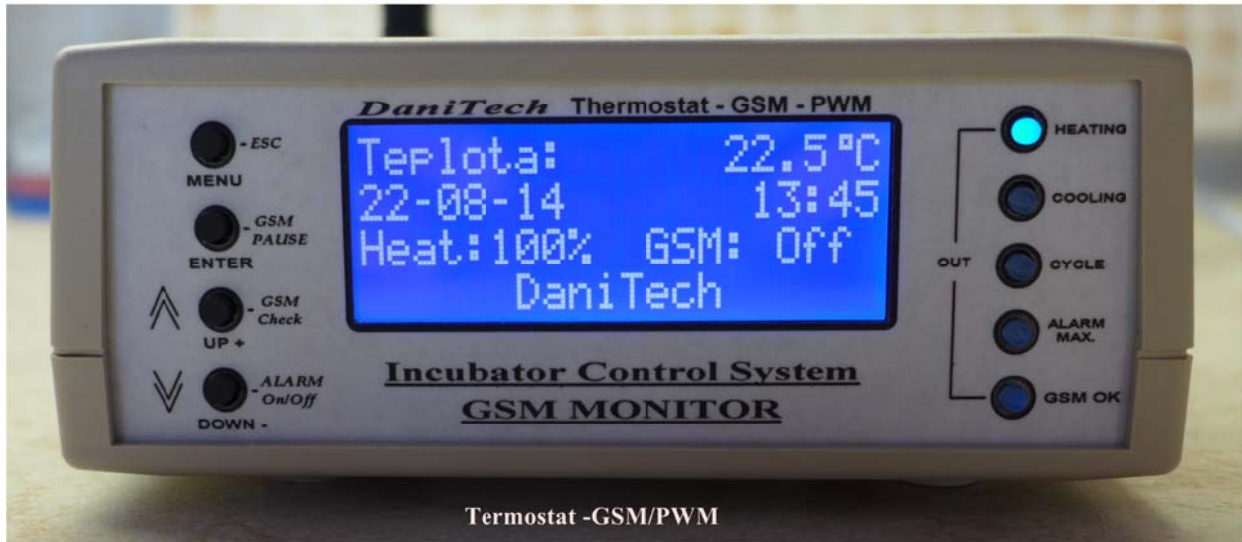


Thermostat - Protect

GSM / PWM



Device is designated for measurement and regulation of temp. and humidity
GSM - alarm on the cell phone
Usage: hatchery, incubator, terrarium, greenhouse and like that.

- sends SMS on the cell phone if:***
- temperature decreases below the value alarm minimum.***
- temperature increases above the value alarm maximum.***
- at the loss or failure of temperature's sensor.***
- at the drop-out of el. power***
- at the restoration of el. power***
- at the failure (damage) of the output fuse.***
- at the activation of the input alarm uni.1 and uni.2***
- SMS sending of the current status (checking) after ringing the device***

- In case of troubles, please contact service man.

+421 904339612

www.morel.snadno.eu

Thermostat - Protect

Version: *Thermostat GSM* *Thermostat PWM*
 Thermostat GSM-PWM *Thermostat 1T*

Device is designated for measurement and regulation of temperature.

GSM - alarm on the cell phone.

Usage: hatchery, incubator, terrarium, greenhouse and like that.

Functions: *1 x thermostat - heating (difference day/night)*
outputs: *1 x thermostat - cooling (difference day/night)*
 1 x cycler
 1 x protective relay, switches off during temperature exceeding alarm.max!!!!

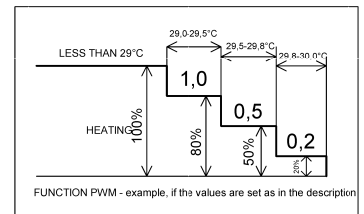
Function HEAT PWM -

* - Only model with PWM!

Power of heating is decreasing on a percentage basis with approaching final temp.

Maximum loading of the output 250Watt (version PWM)-electronic relay

- guarantees constant and accurate temp.



Settings: *Day's temperature 5,0 to 99,9°C, step 0,1°C*
 Night's temperature 5,0 to 99,9°C, step 0,1°C
 Hysteresis 0,1 to 10,0°C, step 0,1°C
 Acoustic alarm of minimum and maximum temperature
 Transit time day/night
 Actual time
 Time of impulse repeating, impulse length
 Time start/stop of cycling

GSM - alarm

* - Only model with GSM!

Sends SMS at decreasing/exceeding the values of alarm min,max.

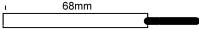
At the drop-out of el.power, disconnecting of the output fuse.

At the loss or failure of temperature's sensor.

Device sends SMS message of the current status for ringing.

Possibility to choose 3 different telephone numbers on which SMS information can be sent.

Contains:

1 x sensor DS 18B20 on the cable of length 2m. 7mm  ***4 x output 230VAC, connection by means of terminal box up to mm²***

Outputs:

Voltage 230VAC !!!

Fuse 6,3A, it is common for all outputs!!!

Maximum current 6A

Outputs are designated for connection of 2.class devices

Dimension: *45 x 100 x 130mm*

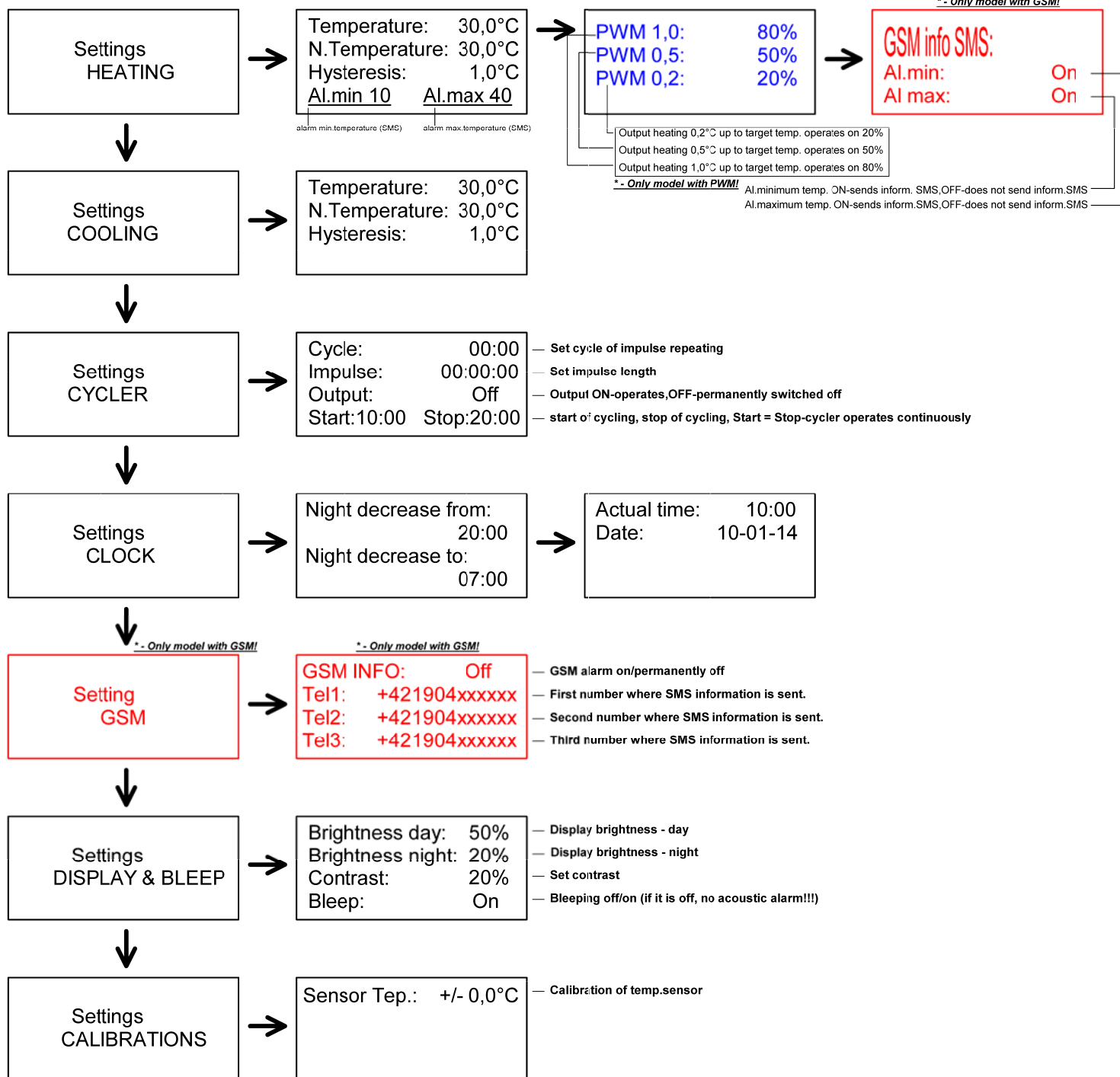
Device can be neither covered nor built in!

Device of 2.class! (even connected devices)

- Only authorized personnel is allowed to connect the device!!!

Possibilities of settings in MENU:

MENU: Menu of settings (return back)
ENTER: Acknowledgement (entry)
DOWN: Shift down
UP: Shift down

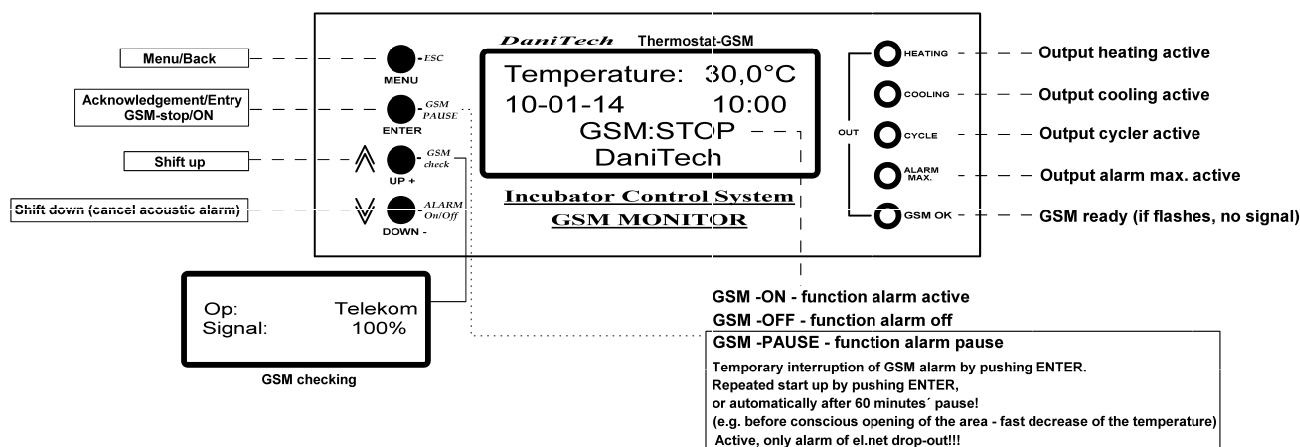


Note:

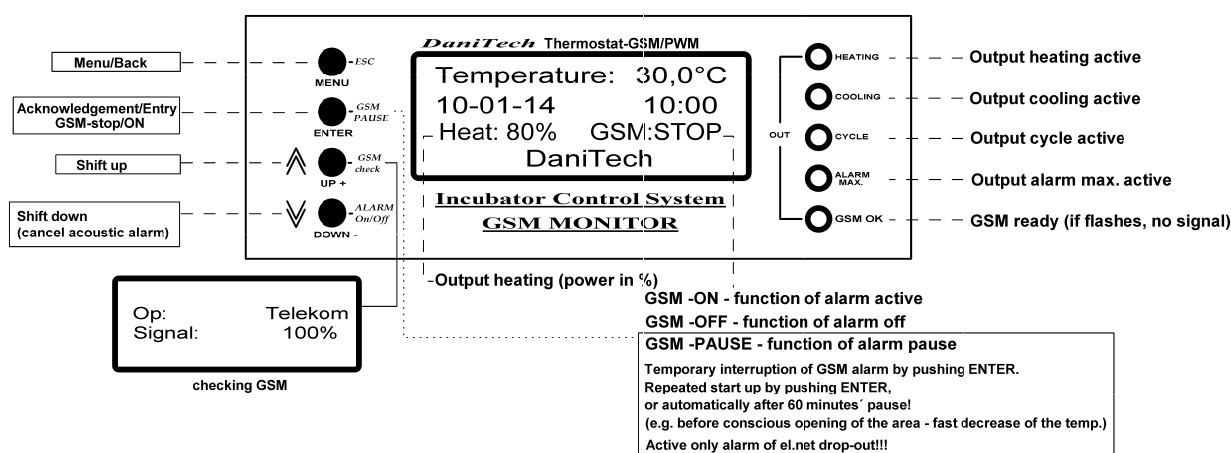
* - Only model with GSM! - Contains only model with GSM !!!

* - Only model with PWM! - Contains only model with PWM !!!

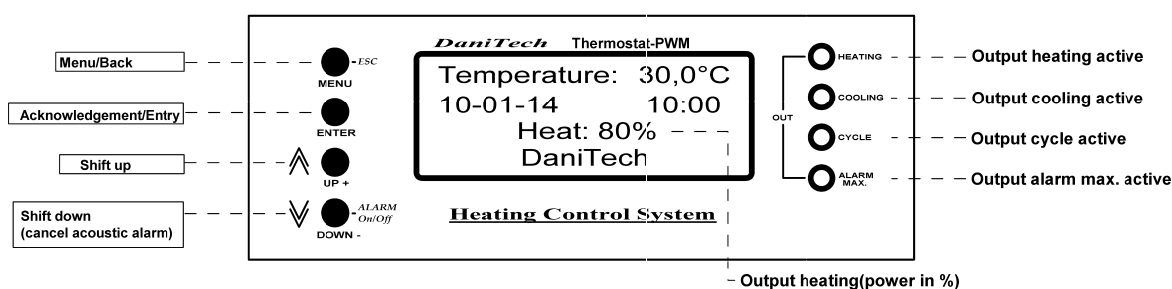
Model: Thermostat GSM



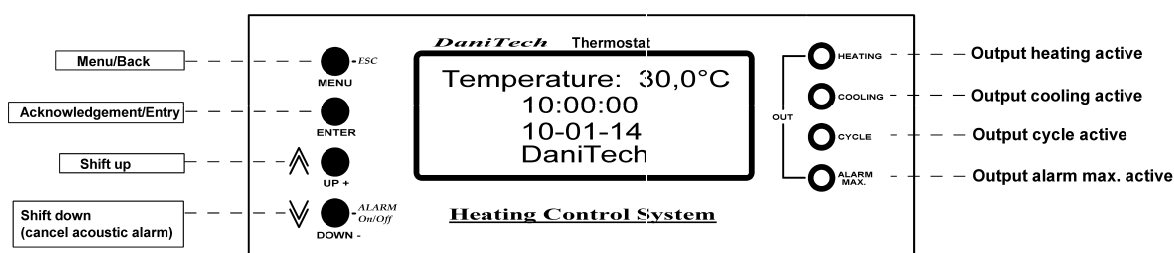
Model: Thermostat GSM with PWM



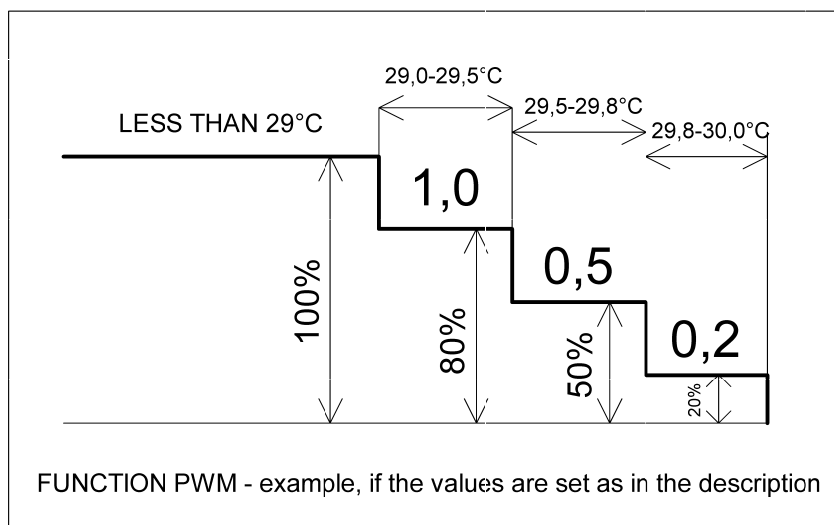
Model: Thermostat PWM



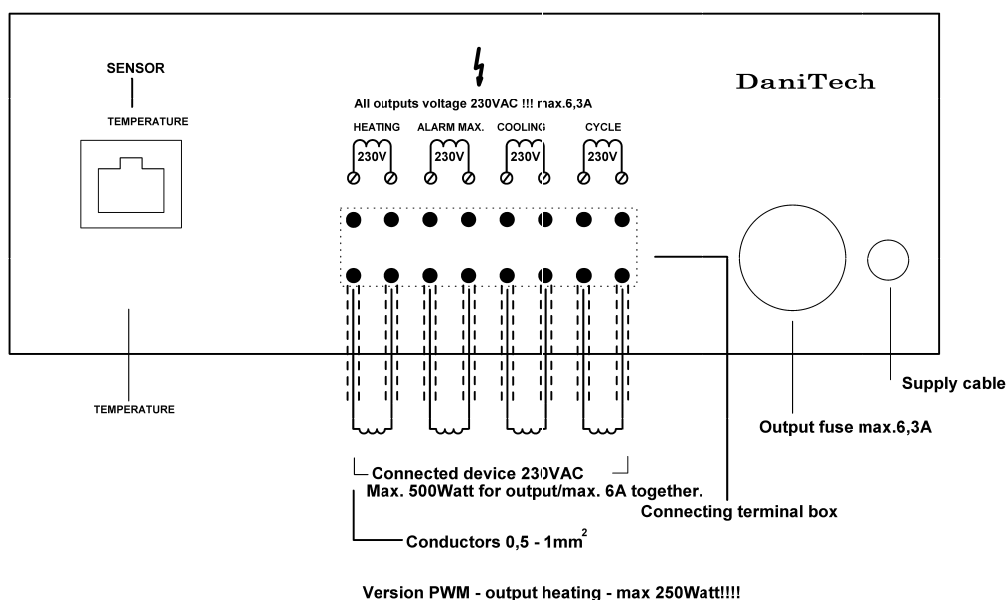
Model: Thermostat



Function PWM



Rear panel



Output voltage 230VAC !!!!! Attention!

- Only authorized personnel is allowed to connect the device!!!

Warning:

- Function GSM alarm is off by default!
- Switch on GSM alarm, only after setting of alarm values (min,max,etc.)
- You avoid undesired sending of useless SMS.
- Before sudden (desired) change of values (e.g. opening of controlled area), it is necessary to stop the function GSM alarm manually (button GSM-PAUSE)
- Before shut down (non using) of the device, it is necessary to switch off the function GSM alarm in the menu!!!
- Under the long term shut down, it is necessary to activate device in order to charge accumulator, once a month!! for approximately 24 hours
- Use only in the area with sufficient coverage of GSM signal of given operator!!!
- Insert SIM card with PIN CODE in OFF state!!!! (firstly, it must be switched off in the cell phone.)
- Service CLIP must be activated on the SIM card, otherwise the device shall not react on ringing.
- As far as the device indicates battery charging, GSM function is not active!!! (Charg.Batt)

Recommendation:

- In order to guarantee reliability of the operation, change accumulator every 24 months.

Example of printout on the cell phone:

Error message always in the beginning with capital letters.

Cell phone:

ThermoHygrostat-GSM reports:

RESTORATION OF EL.POWER!
Current values:

Tep.:30,0C

Hum.:70%

Time: 10:00:00

El.power:OK

Fuse:OK

Battery:80%

Cell phone:

ThermoHygrostat-GSM reports:

ACTIVE ALARM UNI1!
ACTIVE ALARM UNI2!

Time: 10:00:00

Printout of alarms UNI1 and UNI2 on the cell phone.

Alarm UNI 1 and 2.

Universal alarm defined by the user.

Activated input UNI1-

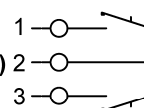
(by connection of clamp 1 and 2)

Activated input UNI2-

(by connection of clamp 2 and 3)

Connection of clamps 1,2 and 3 only isolated contact (relay)

Example:



Insertion/Change the SIM card:

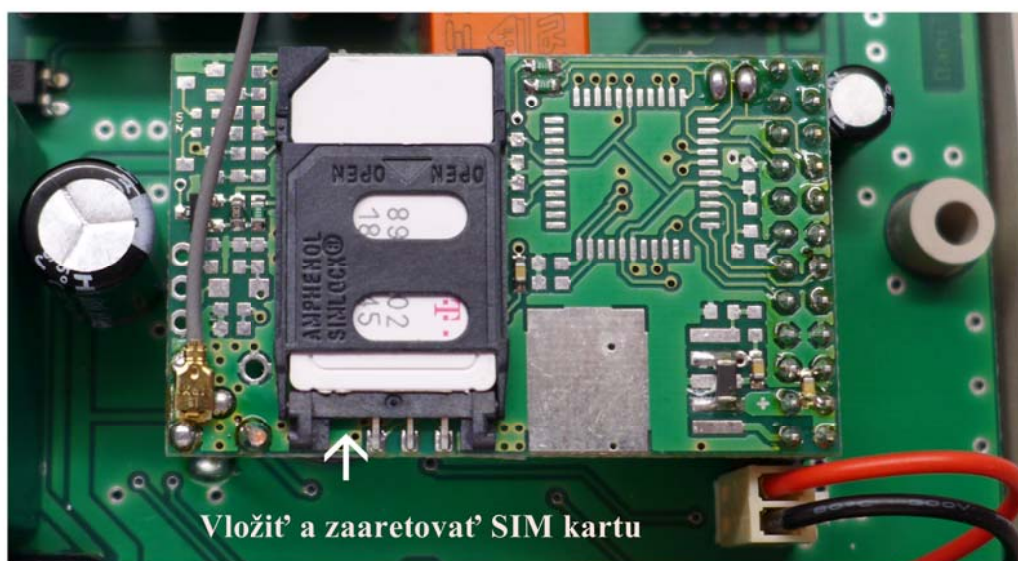
- Only SIM card with pin code in OFF state!!!

- Change SIM, only when the device is disconnected from el.power!!!

1 - Open the device.



2 - Insert SIM card.

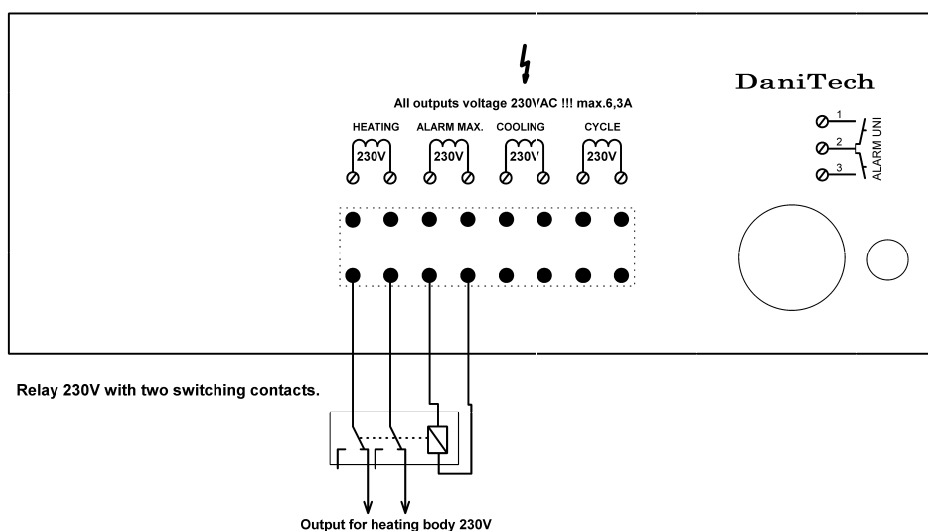


Insert and fix SIM card

3 - Close the device the same way, just the opposite order.

Recommendations - possibilities:

Connection with external relay for the function ALARM.MAX



Connection with external additional power relay for high powers.

