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# RECESS SERIES ELECTRONIC THERMOSTATS MODULE - H 45 mm

Models with differential ON/OFF intervention and luminous charge inserted signal

**1TITE302/MC - Electronic thermostat with On-Off-Antifreeze control and input for night reduction**

**1TITE304/MC - Electronic thermostat for night reduction control on board**

**1TITE305/MC - Electronic thermostat with remote thermostat for floor heating; night reduction control on board**



## Installation and user instructions

Read this manual carefully before using the product as it provides important guidelines regarding safety, installation and use. The manual must be preserved with care for future reference.

English



## TECHNICAL DATA

Supply voltage:	230 V~ 50 ÷ 60 Hz
Type of action, disconnect and device:	1 / B / Electronic
Type of output:	relay with changeover contact NO / COM / NC voltage free - 8(2)A / 250 V~
Output connection (load):	2 or 3 conductors
Wire section at terminals:	min. 0,75 mm <sup>2</sup> - max. 2,5 mm <sup>2</sup>
Insulation type:	Class II <input type="checkbox"/>
Protection degree:	IP 30
Pollution:	normal
Temperature adjustment range (excluding 1TITE305/MC):	from + 5 °C to + 30 °C (limitable)
Temperature adjustment range (only 1TITE305/MC):	from 0 °C to + 60 °C (limitable)
ERP Energy classification:	ErP: Class I; 1% Reg. EU 811/2013
Thermal gradient:	max 1K/15 min.
Differential operation:	ΔT = 0,7 °C
Precision of reading:	± 1 °C
Operating temperature limits:	0 °C ÷ + 50 °C
Reference standard for CE mark:	LVD EN60730-2-9 EMC EN60730-2-9

## PERFORMANCE DATA (according to model)

Night reduction control:	on board (1TITE304/MC and 1TITE305/MC) remote control (1TITE302/MC)
Night reduction temperature (referred to the set):	- 4°C (all models excluding 1TITE305/MC) - 9 °C (1TITE305/MC)
Antifreeze temperature (only 1TITE302/MC):	+5 °C fix
Temperature set lock (all models):	mechanical with "range disc" (supplied)
External probe (only 1TITE305/MC):	probe with 4 m of cable (supplied)
Luminous signals (all models):	LED showing charge inserted/disengaged

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### DISPOSAL OF OLD ELECTRICAL & ELECTRONIC EQUIPMENT

This symbol on the product or its packaging indicates that this product shall not be treated as household waste.



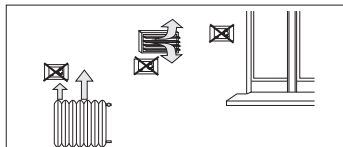
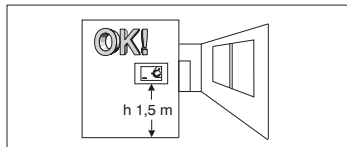
Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment, such as for example:

- sales points, in case you buy a new and similar product
- local collection points (waste collection centre, local recycling center, etc...)

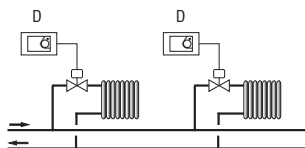
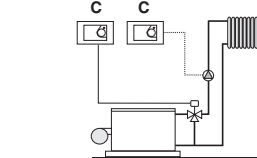
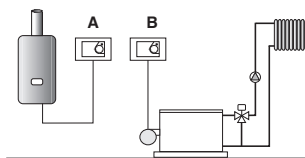
By ensuring this product is disposed of correctly, you will help prevent potential negative consequence for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## INSTALLATION EXAMPLES



Install the thermostat at a height of 1,5 m ÷ 1,7 m from the floor, far from heat sources, air vents, doors or windows and anything else that could affect its operation.

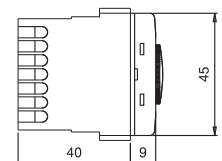
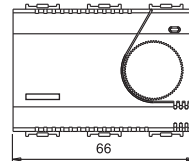


Examples of installation in heating systems with a thermostat that controls:

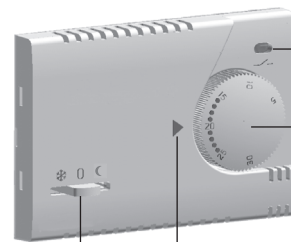
- A) Wall mounted boiler
- B) Burner
- C) Circulation pump or Motorized solenoid valve
- D) Area solenoid valve

N.B.: the examples contained in this documentation are in principle.

## DIMENSIONS



## SIGNALS AND CONTROLS (according to model)



Load status signal LED:  
alight = load inserted

Knob with temperature scale:	
5 °C ÷ 30 °C	1TITE302/MC
"	1TITE304/MC
0 °C ÷ 60 °C	1TITE305/MC

Reference index for temperature setting

Selector for controlling work mode, according to model:  
1TITE302/MC - I - 0 - \* (Alight - OFF - Antifreeze)  
1TITE304/MC - \* - 0 - C (Winter - OFF - Nighttime economy)  
1TITE305/MC - \* - 0 - C (Winter - OFF - Nighttime economy)

## SAFETY PRECAUTIONS



**Important:** the installation and electrical connection of the devices and appliances must be implemented by person with electrotechnical expertise only and in conformity with current laws and regulations. The manufacturer declines any liability for the use of products subject to special environmental and/or installation standards.



**Attention:** before starting any operations on the device, disconnect the 230V~ mains power supply

- This appliance must be intended only for the use for which it was built. Any other use must be considered improper and dangerous.
- The thermostat is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or by those with a lack of experience and knowledge of the instructions, unless they are supervised or have received the necessary instructions concerning use of the device by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the device.

## COMPATIBILITY TO THE MOST COMMON RESIDENTIAL SERIES PLATES

**IMPORTANT:** for the assembly procedure of the thermostat with the chosen residential plate, follow instructions contained in the specific compatibility sheet contained in the package.

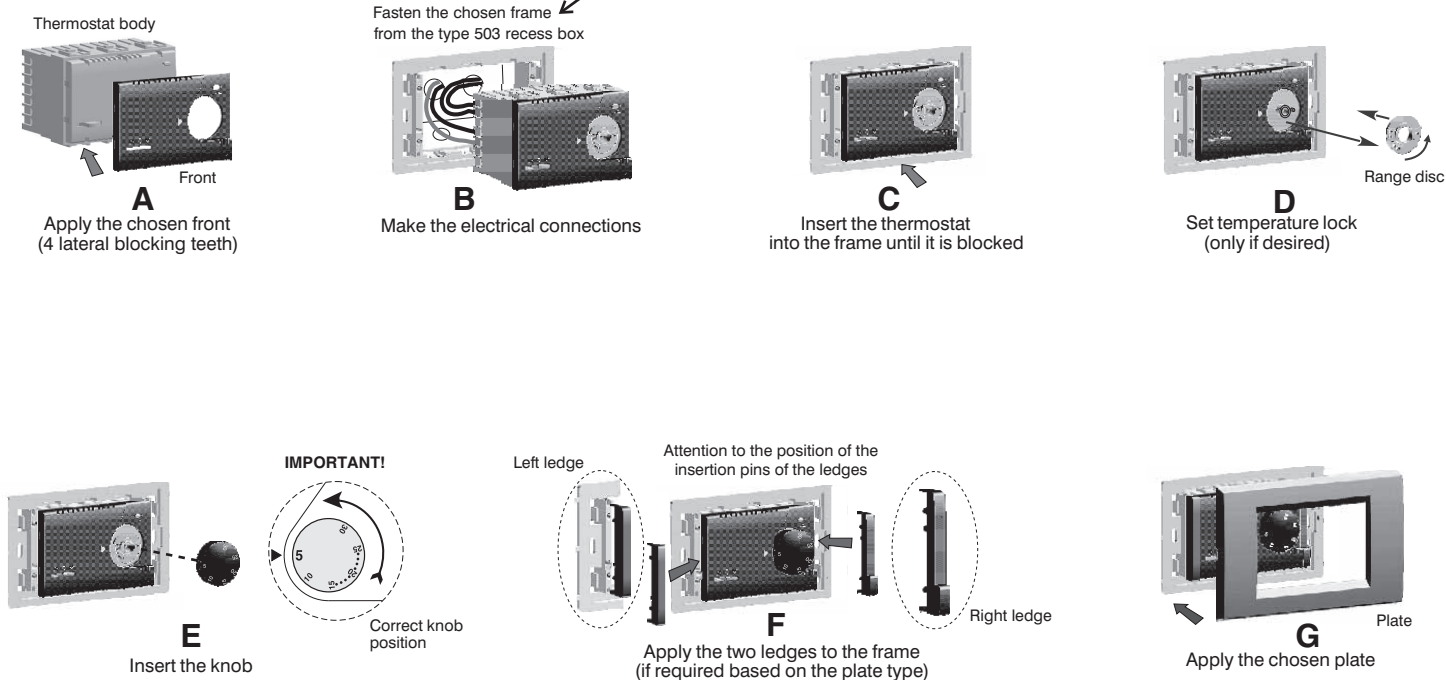
# INSTALLATION INSTRUCTIONS

## 1 - INSTALLATION EXAMPLE

 Make sure to remove the 230V mains supply before proceeding with the installation

### COMPATIBILITY TO THE MOST COMMON RESIDENTIAL SERIES PLATES

**IMPORTANT:** for the assembly procedure of the thermostat with the chosen residential plate, also follow instructions contained in the specific compatibility sheet contained in the package.



## 2 - WORKING FLUID MAXIMUM TEMPERATURE OF THE ENVIRONMENT LIMITATION

It is possible to preset from 16 °C to 24 °C, with 2 °C step, the maximum temperature value (excluding 1TITE305/MC).  
 It is possible to preset from 25 °C to 45 °C, with 5 °C step, the maximum temperature value (1TITE305/MC).  
 NB: the thermostat is supplied with the "range disc" preinstalled with pin in the neutral hole (no temperature limitation).

### Temperature limit setting or its subsequent modification

- Rotate the knob anti-clockwise and pull it out.
- Take out the "temperature range" disc and reinsert it by locating the maximum desired temperature hole over the pin placed on thermostat (fig. 1).
- Reinsert the knob and verify at the end of the anti-clockwise limit corresponding to 5°C (0°C for 1TITE305/MC) with index, if different, re-insert the knob rotated by 180°.

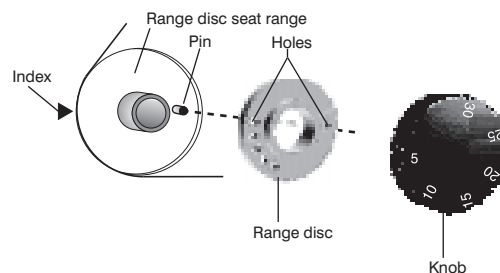
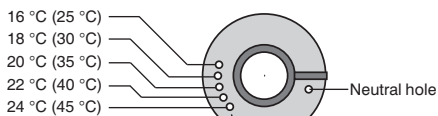


Fig. 1



**N.B.:** the values in parenthesis refer to 1TITE305/MC

Holes for temperature set point limitation

### 3 - ELECTRICAL CONNECTIONS (according to model)

#### ELECTRICAL CONNECTIONS for 1TITE302/MC

Thermostat with inputs for controlling night temperature reduction, external (example time switch)

##### Switch mains supply off

Connect the power supply wires to the terminals n° 4 (Line) and n° 5 (Neutral).

Connect the wires of the device to be controlled to the terminals: n° 1 = common  
n° 2 = normally open  
n° 3 = normally closed

For heavy inductive loads (pumps and solenoid valves) it is advisable to connect an RC filter in parallel with the load.

##### Remote selection of "Comfort" or "Reduction" temperature

If you want to use remote control of "Comfort" or "Reduction" temperature, connect the exterior contact to the terminals n° 6 and n° 7 of the thermostat (fig. 3 e fig. 4).

**ATTENTION:** the connections to the external reduction selection contacts are network potential.

Example

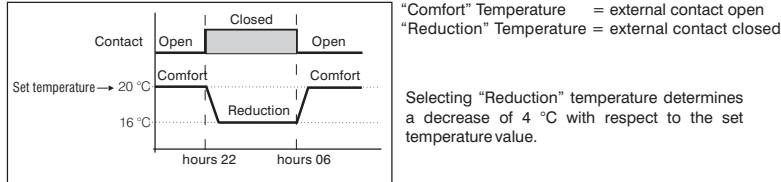


Fig. 2

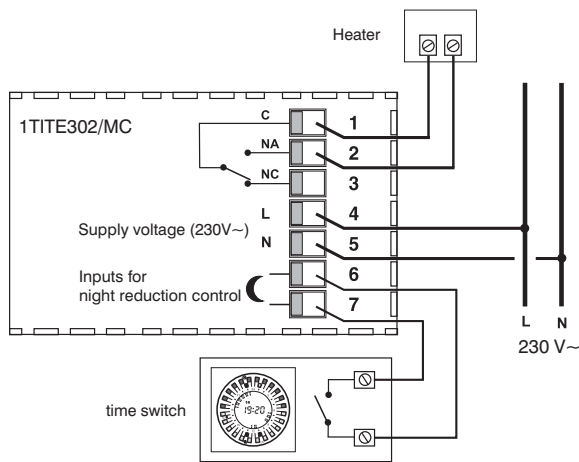


Fig. 3 - Example of connection to boiler and clock for night reduction control

##### Multiple installations

Besides all that has been mentioned above, in multiple installations (for example offices, schools, houses, etc.) operated only by one clock for the centralized night reduction, it is necessary to follow carefully the indications below (fig. 4).

##### For all thermostats

1) Supply voltage (230V~)

Terminal n° 4: connect the Line of network (230 V~)

Terminal n° 5: connect the Neutral of network (return)

**N.B.:** normally residential power supply used the unified colours "brown" for the phase, "blue" for neutral (line return).

##### 2) Connections for night reduction control

All terminals n° 6: connect in parallel with output 2 of the time switch.

All terminals n° 7: connect in parallel with output 1 of the time switch.

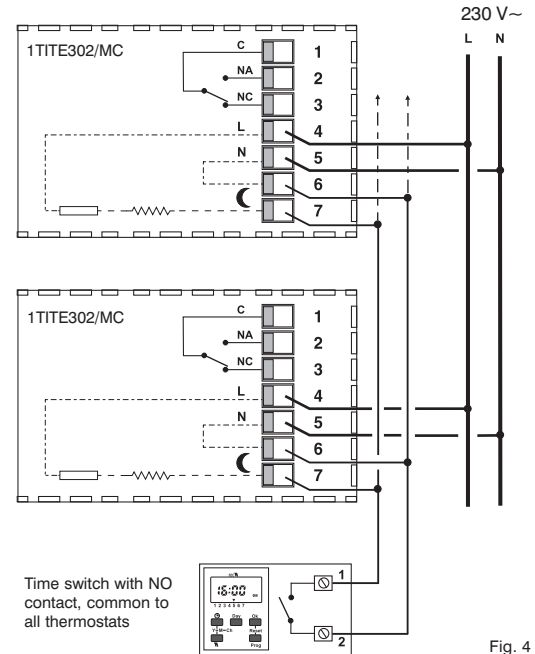


Fig. 4

#### ELECTRICAL CONNECTIONS for 1TITE304/MC

Thermostat with on board night reduction control (-4°C from the set temperature group)

##### Switch mains supply off

Connect the power supply wires to the terminals n° 4 (Line) and n° 5 (Neutral).

Connect the wires of the device to be controlled to the terminals: n° 1 = common  
n° 2 = normally open  
n° 3 = normally closed

For heavy inductive loads (pumps and solenoid valves) it is advisable to connect an RC filter in parallel with the load.

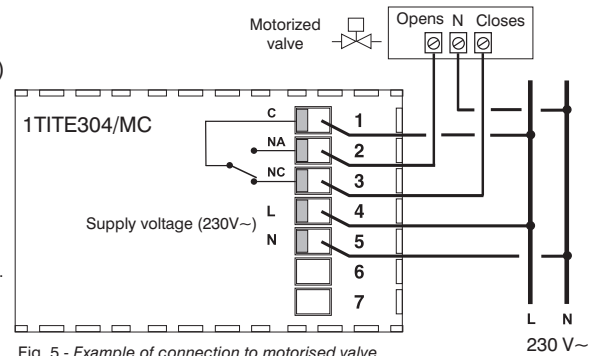


Fig. 5 - Example of connection to motorised valve

#### ELECTRICAL CONNECTIONS for 1TITE305/MC

Thermostat with external temperature probe for measuring the temperature of circulating liquid in floor heating systems.

On board night reduction control (- 9°C from the set temperature group of the circulating liquid)

##### Switch mains supply off

Connect the power supply wires to the terminals n° 4 (Line) and n° 5 (Neutral).

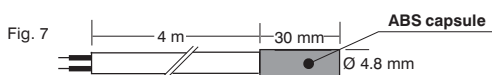
Connect the wires of the device to be controlled to the terminals: n° 1 = common  
n° 2 = normally open  
n° 3 = normally closed

Connect the wires coming from the probe to the terminals: n° 6 and n° 7 (the probe is not polarised)

For heavy inductive loads (pumps and solenoid valves) it is advisable to connect an RC filter in parallel with the load.

##### PROBE INSTALLATION

- Insert the electric wire of the probe into a gaiter (e.g. rigid or corrugated pliable conduit) according to the type of installation.
- Fasten the sensor capsule at the measuring point.



**Important:** the sensor and its cable must not be accessible to the user once installation has been completed.

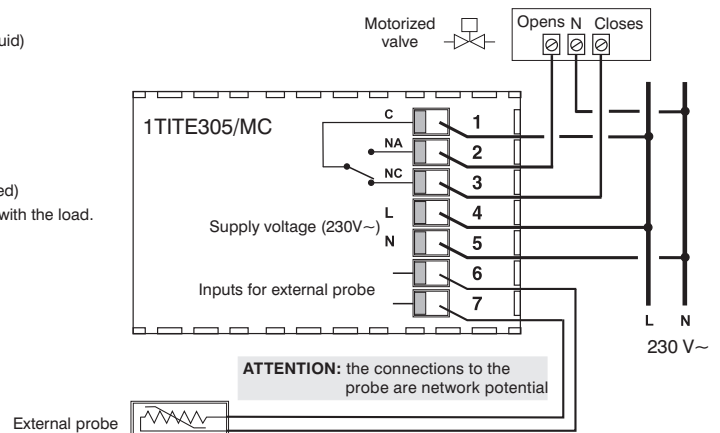


Fig. 6 - Example of connection to motorised valve and external probe



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