| *ATTENTION* | *Firmware V1* |

Read carefully these instructions before installing and using this device and keep them for future reference. Attention to installation and electrical wiring. Use this device only as described in this document and never use itself as a security device. <u>The device must be disposed of in accordance with local standards for the collection of electrical and electronic equipment.</u>

DESCRIPTION

WM_TC is a wall-mounted **Room Temperature Controller**.

The room temperature is controlled with a PTC / NTC type sensor. It has 3 temperature display digits with an accuracy of 0.5°C and 4 keys. The device has two 10A 250VAC

relays. Relay 1 is controlled by the room thermostat. Relay 2 is controlled by the button (SET) . By pressing it changes its state, from ON to OFF and vice versa (Boiler). The

device, with dimensions of 121x35mm, is mounted on the wall and held with two screws.

INDICATIONS
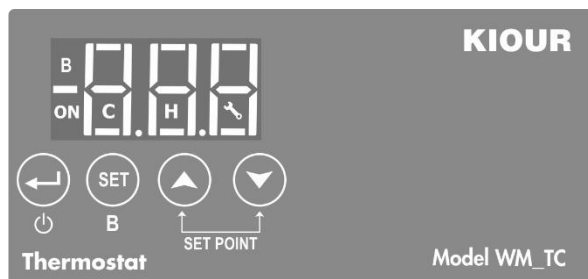
Indications	
ON	Room thermostat ON (relay1)
B	Boiler ON (relay2)
C	cooling mode ON
H	heating mode ON
🔧	malfuction ON

BUTTONS FUNCTION

Keybord	
(▲) **or** (▼)	By pressing the (▲) **or** (▼) button displays the value of the SPC (cooling set point), if the thermostat is set to cooling, **or** the SPH (heating set point), if the thermostat is set to heating. Use the arrows to change the SET POINT value. By pressing (↵) or (SET) returns to the room temperature display, and stores the new SET POINT value. When thermostat displays SET POINT then the **C** (cool) or **H** (heat) flashes.
(↵) **+** (SET)	**Enter** the parameters menu by pressing at the same time the (↵) **+** (SET) buttons. By pressing the (↵) button or (SET) button **exits** the parameter menu.
(SET)	By pressing the (SET) button for 3 seconds **activates** or **deactivates relay 2**, of the Boiler.
(↵)	By pressing the (↵)(⏻) button we can turn ON / OFF the device (pressed for 5 sec).

PROGRAMMING A PARAMETER

*ATTENTION: to gain full access to the parameter's menu, the 2nd parameter **Cod** must be adjusted to **22** (see parameter table page 2).*

1. Press (↵) **+** (SET) and the first **SPC** parameter is displayed.
2. We select the parameter we want with (▼) or (▲) arrow.
3. By pressing (SET) the value of the parameter is displayed and with the (▼) or (▲) arrow we change the value.
4. By pressing (↵) or (SET) enter the new value .
5. By pressing (↵) or (SET) we exit the parameters menu.

TOGGLING BETWEEN HEATING - COOLING

The **HCo** parameter defines the cooling or heating mode - HEAT or COOL -. When the parameter **HCo= 0 → Cool** and when **HCo= 1 → Heat**

⏻ DEVICE ON/OFF

To activate or deactivate the device, press for 5 seconds the (↵) (⏻) button. When the device is turned off, **OFF** is displayed on the screen.

TECHNICAL SPECIFICATIONS

Power supply: 230 VAC/DC / Maximum power consumption: 3W.

It is recommended using a power supply safety fuse: 0.5A (not included)

Room temperature sensor NTC 10K 1% 25ºC and temperature range -50÷+112°C (-58÷+230°F) IP68 (or PTC 1K 25°C temperature range -50÷+150°C (-58÷+302°F). / Accuracy: 0.5°C

Two relays 10A res. 250VAC normally open contact / Max current load 10A

Connections with terminal blocks 18A using cable with cable cross section up to 2.5 mm² / It is recommended using a torque wrench with maximum torque 0.4Nm

Operating temperature: -15÷+55°C / Storage temperature: -20÷+80°C

Dimensions 121x70x35mm / The device is wall mounted and is screwed to the wall with 2 screws. / IP protection IP20

Firmware: V1

ELECTRICAL DIAGRAM - DIMENSIONS

ATTENTION: according to safety standards, the device must be properly positioned and protected from any contact with electrical parts. The device must be fastened in such a way that it cannot be removed without the use of tools. Disconnect the main safety switch of the installation before proceeding to any maintenance. Disconnect the power supply of the device before proceeding to any maintenance. Do not place the device near heat sources, equipment containing strong magnets, in areas affected by direct sunlight or rain. Prevent electrostatic discharges and sharp objects from been inserted to the device. Separate signal cables from power supply cables to prevent electromagnetic disorders. Signal cables must never be in the same pipe with the power supply cables. ATTENTION: Read carefully the technical specifications and make sure that the working conditions are appropriate. According to safety standards, the device must be fastened in such a way that it cannot be removed without the use of tools.
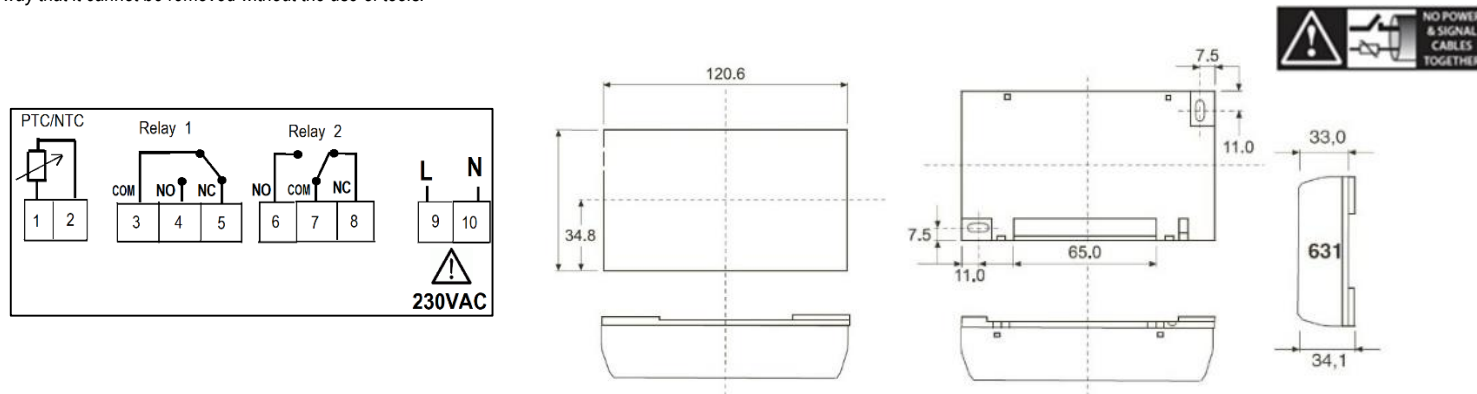
PARAMETERS TABLE

No		DESCRIPTION	min	max	Default	UOM
1	SPC	SET POINT in cooling	LCL	LCH	25.0	°C
2	SPH	SET POINT in heating	LHL	LHH	20.0	°C
3	Cod	Enter the Cod = 22 and press ⓗ/c to enter the other parameters	0	255	0	-
4	diC	Cooling differential	0.1	25.0	3.0	°C
5	diH	Cooling differential	0.1	25.0	3.0	°C
6	SE1	Sensor offset (zero adjustment)	-9.9	10.0	0	°C
7	SEN	Type of sensor, where: **0** = PTC , **1** = NTC	0	1	0 = PTC	-
8	HCo	Thermostat cooling or heating mode, where: **0** = Cooling, **1**= Heating	0	1	0 = Cooling	-
9	LCL	Lower setting limit of the cooling **SET POINT**	-50	150	-50	°C
10	LCH	Maximum setting limit of the cooling **SET POINT**	-50	150	150	°C
11	LHL	Lower setting limit of heating **SET POINT**	-50	150	-50	°C
12	LHH	Maximum setting limit of heating **SET POINT**	-50	150	150	°C

ALARMS TABLE

1	LF1	room thermostat temperature sensor malfunction
2	EEr	Error in memory RAM: re-enter the SPC (see Device temperature setting – SET POINT previous page)

The alarms are automatically deactivated once the cause of the alarm disappears.

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