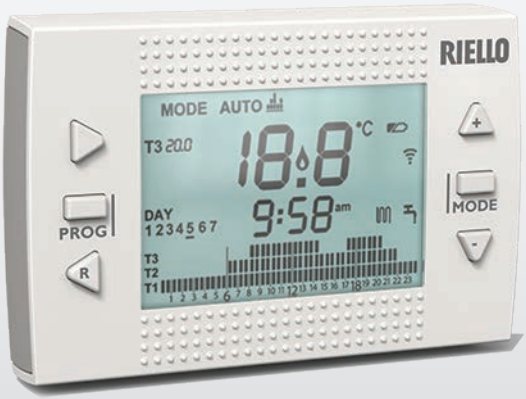
cod. RICLOUD rev. 0 05/16



RiCLOUD

EN INSTALLER AND USER MANUAL

RIELLO

Dear Customer,
Thank you for choosing **RiCLOUD** control. This control device for heating (and cooling) systems and boilers is easily installed and, if used correctly, offers better quality comfort as well as energy savings.
This thermostat has been designed to support a maximum of 2 A at 30 VDC or 0.25 A at 230 VAC (specifications for internal relay to switch the boiler "room thermostat" connection).

 If the device is installed by a third party, please ensure that this manual is given to the end user.

 These instructions must be kept by the user.

COMPLIANCE

The **RiCLOUD** remote control panel complies with:
- Electromagnetic Compatibility Directive 2004/108/EEC
- Low Voltage Directive 2006/95/EEC

CE

The following symbols are used in some parts of the manual:

 **CAUTION=** for tasks which require particular care and suitable preparation.

 **FORBIDDEN =** for tasks which MUST NOT be performed.

SUMMARY

1 GENERAL INFORMATION

1.1 General notices

Please read this manual before installing and using the device.


Risk of electric shock. This device should be installed by a qualified professional and in line with the standards in force for electrical installations. Always disconnect the power supply before installing.


Note to the installer:
- Most of the product parameters are factory set. If the device is activated without a WiFi connection, the date and time should be set on the thermostat as a minimum (this information is wiped every time the batteries are removed and if not updated via the web). All other settings – such as linking the receiver and the transmitter (for the WiFi Box), usage mode and temperatures – are pre-configured.


These instructions must be read together with the sections of the boiler manual regarding the room thermostat/boiler remote control. It is recommended that the device be installed by qualified technicians.


RiCLOUD should be installed in the most accessible room for you as regards controlling the room temperature (usually the living room).


As per the standards, **RiCLOUD** should be positioned 1.5 m from the floor to make sure that you can easily read the display.


RiCLOUD is powered by 2 x AA batteries.


RiCLOUD must be kept away from sources of heat or air currents as these may affect the accuracy of the readings from the incorporated room sensor.


Do not open **RiCLOUD** for any reason, unless to replace the batteries; it does not require any maintenance to operate.


Do not press on the liquid crystal display glass as this may damage the glass and cause problems with reading the display.


To clean the display, use a dry cloth only. Any seepage would damage the liquid crystal display.

When the WiFi Box is connected in ON/OFF mode to the boiler or another device via cable, should all the thermostats be faulty or the batteries flat, the Box will show as OFF (no heating/cooling requests). The Wi-Fi Box relay can be forced on and off manually using the APP.

With the WiFi Box connected in OTBus mode to the boiler via cable, should all the thermostats be faulty or the batteries flat, the Box will remain in the last operating mode. From the APP, you can manually force the boiler in heating mode on or off when connected to the internet.

With **RiCLOUD** connected (ON/OFF) to the boiler or another device via cable, should all the thermostats be faulty or the batteries flat, the thermostat relay will remain in the last operating mode.

With the WiFi Box connected in ON/OFF or OTBus mode to the boiler via cable, should there be a power outage, the WiFi box remains in the last operating mode.

1.2 What is the RiCLOUD for?

The **RiCLOUD** allows you to check the temperature in your house and the operation of your boiler without you needing to access it. For reasons of space optimisation, your boiler may be located outside (for example, on a terrace or balcony or in an outdoor space); **RiCLOUD,** on the other hand, is usually installed in the largest room in the house, where it can be easily checked and adjusted.
Where installed in systems with a boiler which is not equipped with the specific communication bus, **RiCLOUD** allows you to check the temperature of the room where it is installed and consequently send the heat requests to the house generator with no boiler remote control (domestic hot water temperature and boiler settings/alarms cannot be managed).
For both types of installation, the **RiCLOUD** system allows you to check the temperature in different zones in your house, where there are zone valves and each one of these is connected to a single additional **RiCLOUD** (multi-zone management).
If **RiCLOUD** is installed together with the WiFi Box and you have a WiFi internet connection in your home, **RiCLOUD** system allows you to carry out the same functions available via **RiCLOUD** itself remotely on a smartphone.

1.3 Modes of use

RiCLOUD means you can manage your domestic heating in a more sophisticated way; you can decide how and when the boiler will come on to heat your living spaces. In addition, it allows you to set the domestic hot water temperature, without having to access the boiler panel (where connected to the boiler via OTBus or a specific communication bus). The purpose of this manual is to explain each of these ways of using the device and the related functions.

1.4 Glossary of technical terms

Heating water: the water in the radiators that has been heated by the boiler.

Domestic hot water: the water heated by the boiler which is dispensed from the domestic taps.

Fault code: this code shows on the display to flag any boiler or **RiCLOUD** faults.

Original set-up: this is the control panel configuration after turning on the device for the first time or after a reset.

Display: this is the liquid crystal panel where each of the symbols corresponding to the various functions are shown.

Anti-freeze function: this function ensures that any drops in temperature do not cause the water inside the pipes to freeze and cause damage to the heating system. This function is activated when the room temperature drops below 5°C (**this value can be changed by the qualified technical service**).

NOTE
This function is active only if the boiler is in the correct operating condition (i.e. powered and not blocked) and no hydraulic system splitting into sections.

Restore factory settings: this restores the control panel to its original set-up, resetting any user programming excluding the system clock.

Summer: the heating system is not active in this mode (for example, during the summer).
The boiler can dispense domestic hot water. If correctly connected and configured (in cooling mode), **RiCLOUD** can be used to manage a cooling system in the summer, turning the relay on in ON/OFF mode, in the opposite way to the winter operating mode. The relay keeps the user request connected (e.g. a zone valve) until the room temperature falls below a certain level.
The cooling mode requires a specific system and generator for this purpose.

Winter: RiCLOUD dispenses domestic hot water and hot water for heating in this mode.

T1 anti-freeze temperature: this is the temperature used when the rooms are not lived in.

T2 economy temperature: this is the temperature used when the rooms are not lived in during the day, at night or when you are on holiday.

T3 comfort temperature: this is the temperature at which you obtain ideal room heating during the day.

Room temperature: this is the temperature in the room where **RiCLOUD** is installed (see "NOTE 1" page 8).

Room setpoint temperature: this is the desired room temperature.

External temperature: this is the temperature outside, read using an external probe connected to the boiler or read in another way (see "NOTE 2" page 8).

Heating curve: this is the relationship between the external temperature and the heating flow temperature. Where external temperature data are available (via an external probe or other method), the heating flow temperature is automatically adjusted as the external temperature varies in order to maintain a constant temperature in the room. The heating curve must be set by the installer on the basis of the geographical location and type of system.

Connection via OTBus communication bus: this is a communication mode between **RiCLOUD** and the boiler, where a series of information is exchanged between the two electronic systems. This **proprietary** connection can be used as opposed to the simple ON/OFF (open/closed contact) and is set by the boiler manufacturer specifically for **RiCLOUD**
Check the compatibility of your boiler with the OTBus connection first.

ON/OFF connection (boiler room thermostat): this is the simple communication method between the **RiCLOUD** and the boiler (or any other unit capable of receiving this command), where the relay in **RiCLOUD** (or on the WiFi Box/receiver) sends an on/off request via the room thermostat (TA) contact on the boiler. The ON/OFF connection is also used when a request is made to another system component such as a zone valve or similar.

RiCLOUD ON/OFF contact always maintains the same technical characteristics (**RiCLOUD** relay, WiFi Box relay, boiler RF receiver relay) wherever it is positioned and these must be respected when connecting the relay and the components it controls via cable. **NOTE:** Never exceed the maximum electrical loads (see "2.20 Technical Data" page 27).

NOTE 1
The display range for the room temperature is between -7°C and +50°C.

NOTE 2
The display range for the external temperature is between -40°C and +60°C. Temperatures outside of these ranges are shown as three dashes "- - -".

1.5 RiCLOUD control Class Declaration, according to the ErP Directive

With reference to Delegated Regulation (EU) No. 811/2013, the data in the table can be used to complete the product data sheets and energy labelling of space heaters, combination heaters, packages of space heater, temperature control devices and solar devices.

Manufacturer/Brand	Model
RIELLO SpA / **RiCLOUD**	**RiCLOUD**

Possible **RiCLOUD** configurations, the relative configuration classes and the energy contribution to the system.

Boiler characteristics	RiCLOUD configuration	Class and contribution
Boiler with fixed delivery temperature (ON/OFF control)	**RiCLOUD** ON/OFF connection	I = 1%
Boiler with variable delivery temperature (controlled by communication bus)	Connection via communication bus to **RiCLOUD**. Delivery temperature to the boiler calculated on the basis of one room temperature only	V = 3%
Boiler with variable delivery temperature (controlled by communication bus)	Connection via communication bus to **RiCLOUD.** Delivery temperature to the boiler calculated on the basis of the room temperature and the external temperature (given by the external probe or via the web).	VI = 4%

Boiler characteristics	RiCLOUD configuration	Class and contribution
Boiler with variable delivery temperature (controlled by communication bus)	Connection via communication bus to **RiCLOUD.** Delivery temperature to the boiler calculated on the basis of at least 3 distinct room temperatures. At least 3 **RiCLOUD**s (sensors) connected to at least 3 zone valves (actuators) are required.	VIII = 5%

Definition of classes

Class I – On/off room thermostat: a room thermostat that controls the on/off operation of a heater. Performance parameters, including switching differential and room temperature control accuracy are determined by the thermostat's mechanical construction.

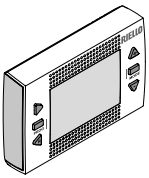
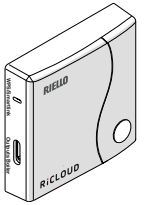
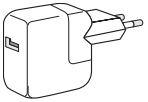
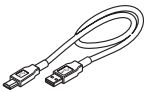
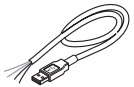
Class V – Modulating room thermostat, for use with modulating heaters: an electronic room thermostat that varies the flow temperature of the water leaving the heater dependent upon measured room temperature deviation from room thermostat set point. Control is achieved by modulating the output of the heater.

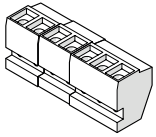
Class VI – Weather compensator and room sensor, for use with modulating heaters: a heater flow temperature control that varies the flow temperature of water leaving the heater dependent upon prevailing outside temperature and selected weather compensation curve. A room temperature sensor monitors room temperature and adjusts the compensation curve parallel displacement to improve room comfort. Control is achieved by modulating the output of the heater.

Class VIII – Multi-sensor room temperature control, for use with modulating heaters: an electronic control, equipped with 3 or more room sensors, that varies the flow temperature of the water leaving the heater dependent upon the aggregated measured room temperature deviation from room sensor set points. Control is achieved by modulating the output of the heater.

2.1 Contents of the package

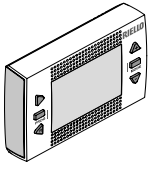
The WiFi **RiCLOUD** package contains the following components:

Qty	Component	Description
1		**RiCLOUD** = boiler remote control with room programmable thermostat function (*) or room programmable thermostat (**). (*) where there is an active OTBus connection in one of the following configurations: between the WiFi Box and the boiler, between the RF receiver (optional) and the boiler, between **RiCLOUD** and the boiler, (**) where the TA connection between the WiFi Box and the boiler is active
1		WiFi Box = device for communicating with **RiCLOUD** programmable thermostat. It can operate with the Boiler RF receiver (optional) via radio frequency, with the boiler itself via cable (provided as standard) and with your home router via a WiFi connection. Magnetic back so that it can be attached to the boiler's metal casing.
1		USB power adapter
1		USB cable A – USB Mini B = WiFi Box power cable
1		USB cable A = cable connecting the WiFi Box and the boiler
2		1.5V AA batteries
1		Installer/User Manual

Qty	Component	Description
2		Screws with plugs
1		OTBus connector (only for boilers without one) for an OTBus connection between the WiFi Box and the boiler or the Boiler RF receiver (optional) and the boiler or **RiCLOUD** and the boiler. It can also be used to connect the external probe (optional).

If installing additional **RiCLOUD**s or boiler RF receivers, you must follow the procedure to link them to the WiFi Box (see "3.13 Linking function" page 64).

RiCLOUD package contains the following components:

Qty	Component	Description
1		**RiCLOUD =** boiler remote control with room programmable thermostat function (*) or room programmable thermostat (**). (*) where there is an active OTBus connection in one of the following configurations: between the WiFi Box (optional) and the boiler, between the RF receiver (optional) and the boiler, and between **RiCLOUD** and the boiler, (**) where the TA connection between the WiFi Box (optional) and the boiler is active
2		1.5V AA batteries
1		Installer/User Manual
2		Screws with plugs

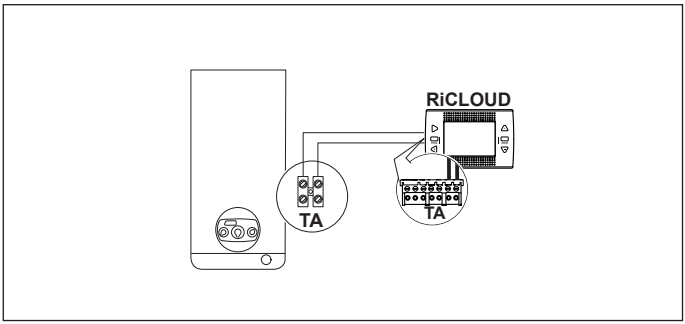
If installing additional **RiCLOUD**s or boiler RF receivers, you must follow the procedure to link them to the WiFi Box (see "3.13 Linking function" page 64).

2.2 Practical installation diagrams

Key	
RF	Radio frequency communication (868 MHz)
WiFi	WiFi communication (2.4 GHz)
	WiFi modem/router
	Internet connection
	Smartphone/Tablet (Android/IOS)
L	Line
N	Neutral
TA	Room thermostat connection, dry contact ON/OFF (max 0.25 A @ 230 V)
OT	OTBus protocol connection, contact for proprietary communication protocol
	Zone valve with microswitch contact control

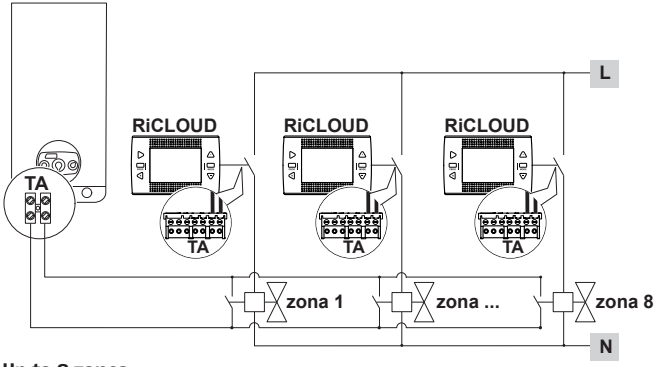
2.3 Diagram 1

ON/OFF programmable thermostat for heating (TA).
Single heating zone in ON/OFF mode.



2.4 Diagram 2

ON/OFF programmable thermostat for heating (TA).
Multi-zone heating in ON/OFF mode.

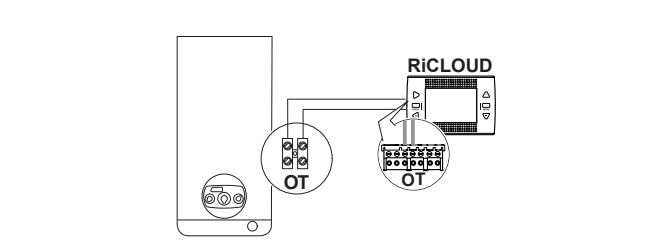


Up to 8 zones

For information on wireless management of the zone valves, please see "Diagram 16" – "Diagram 17"

2.5 Diagram 3

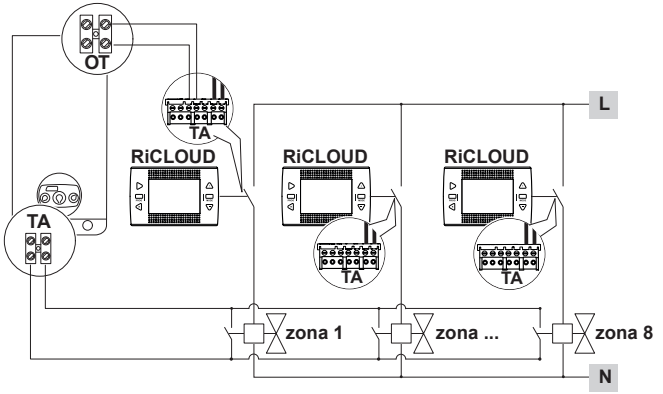
Modulating programmable thermostat/remote control.
Single heating zone in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.



2.6 Diagram 4

Modulating programmable thermostat/remote control and ON/OFF programmable thermostat for heating (TA).
Single zone in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.
Multi-zone heating in ON/OFF mode.

Set the boiler to "zone valve" mode.

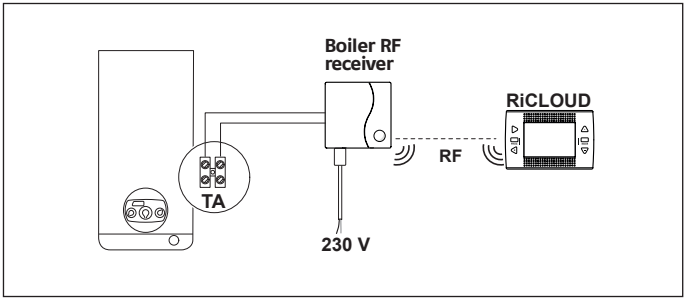


Up to 8 zones

For information on wireless management of the zone valves, please see "Diagram 16" – "Diagram 17"

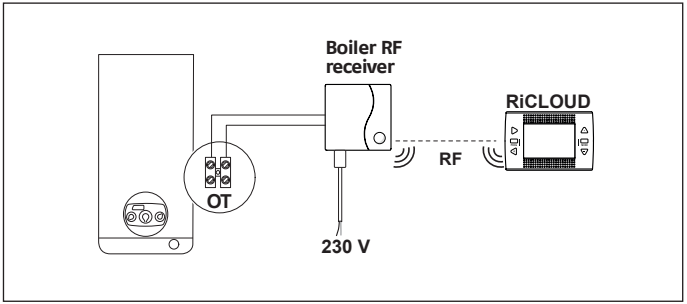
2.7 Diagram 5

ON/OFF programmable thermostat for heating (TA).
Single heating zone in ON/OFF mode.
Wireless installation.



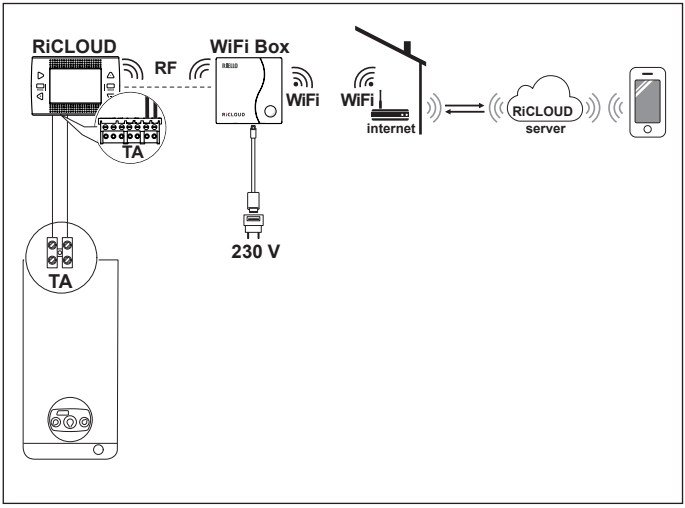
2.8 Diagram 6

Modulating programmable thermostat/remote control.
Single heating zone in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.
Wireless installation.



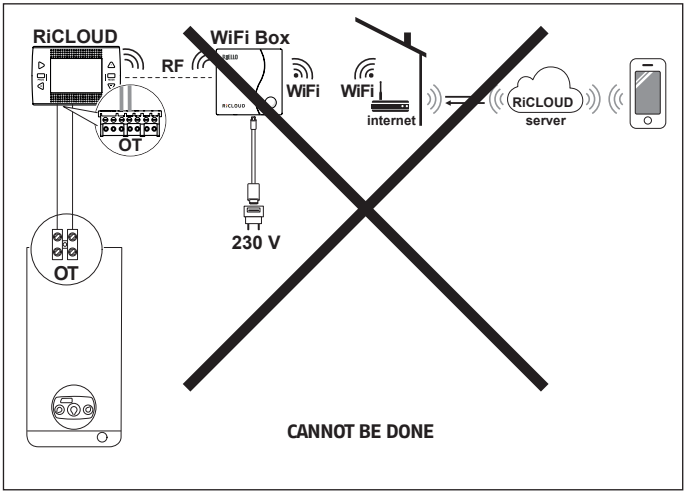
2.9 Diagram 7

ON/OFF programmable thermostat for heating (TA) with remote control via WiFi.
Single heating zone in ON/OFF mode.



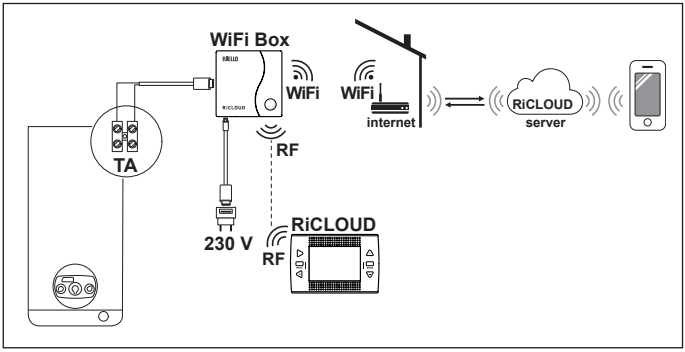
2.10 Diagram 8

Modulating programmable thermostat/remote control with remote control via WiFi.
Single heating zone in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.



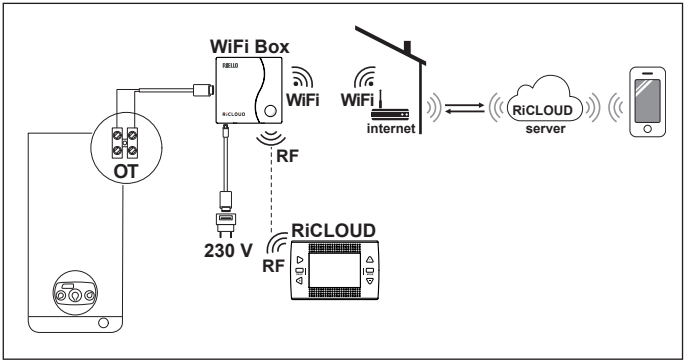
2.11 Diagram 9

ON/OFF programmable thermostat for heating (TA) with remote control via WiFi.
Wireless installation.



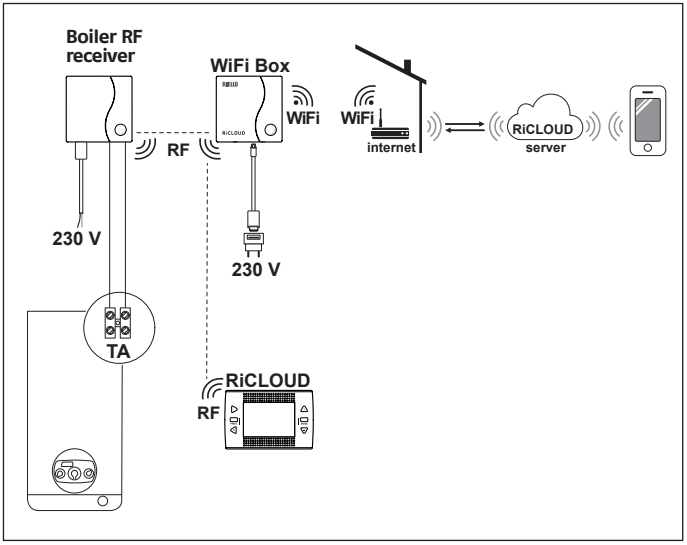
2.12 Diagram 10

Modulating programmable thermostat/remote control.
Single heating zone in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.
Wireless installation.



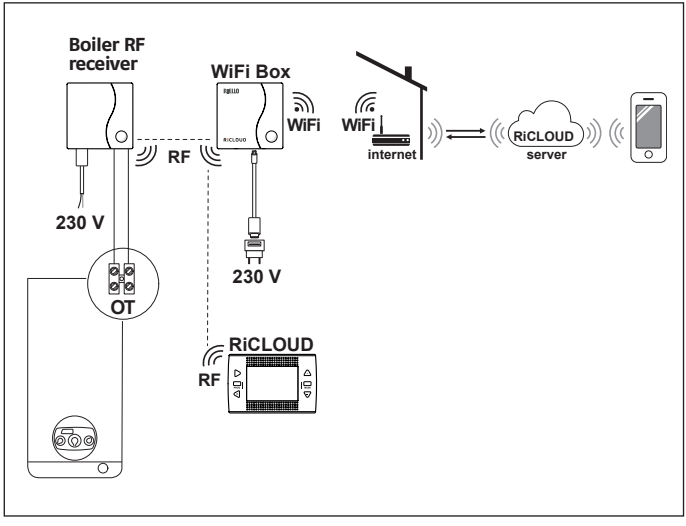
2.13 Diagram 11

ON/OFF programmable thermostat for heating (TA) with remote control via WiFi.
Single heating zone in ON/OFF mode.
With boiler RF receiver to be inserted if the WiFi signal at the boiler is weak or lacking.
Wireless installation.



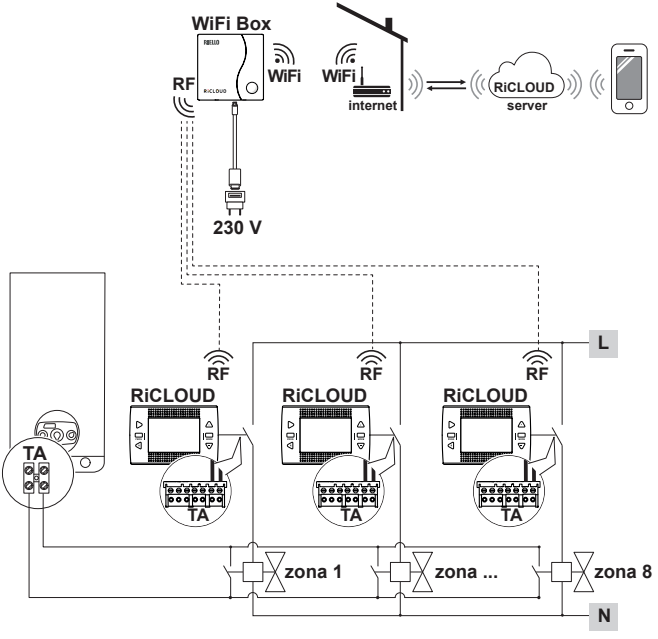
2.14 Diagram 12

Modulating programmable thermostat/remote control with remote control via WiFi.
Single heating zone in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.
With boiler RF receiver to be inserted if the WiFi signal at the boiler is weak or lacking.
Wireless installation.



2.15 Diagram 13

ON/OFF programmable thermostat for heating (TA) with remote control via WiFi.
Multi-zone heating in ON/OFF mode.



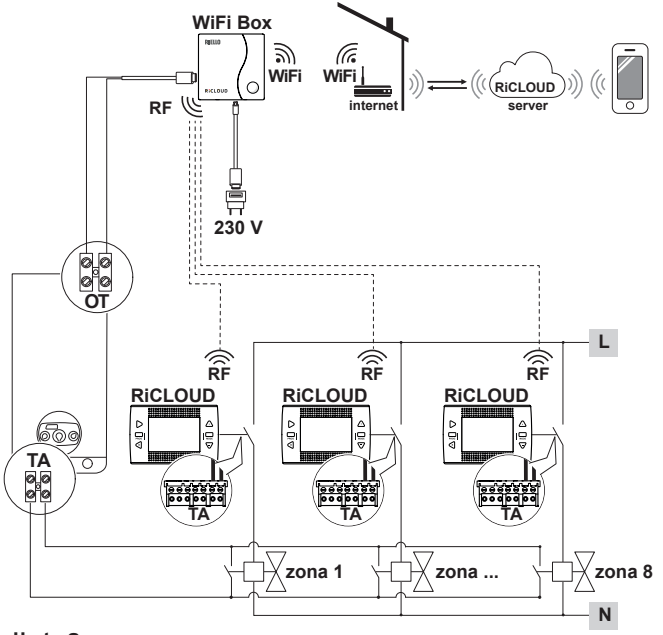
Up to 8 zones

For information on wireless management of the zone valves, please see "Diagram 16" – "Diagram 17"

2.16 Diagram 14

Modulating programmable thermostat/remote control with remote control via WiFi.
Multi-zone heating system in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.
Thermoregulation for every zone with automatic selection of the maximum request temperature between the different zones.

Set the boiler to "zone valve" mode.



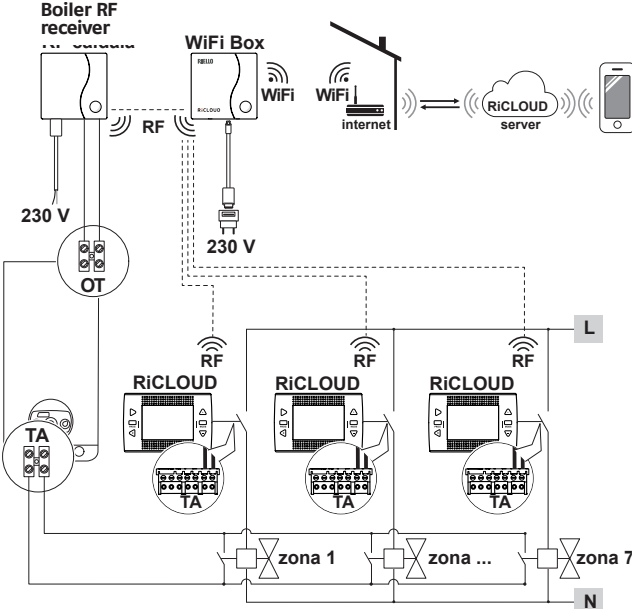
Up to 8 zones

For information on wireless management of the zone valves, please see "Diagram 16" – "Diagram 15"

2.17 Diagram 15

Modulating programmable thermostat/remote control with remote control via WiFi.
Multi-zone heating system in modulating thermoregulation mode.
OT: full control of boiler, heating, DHW, alarms and settings.
Thermoregulation for every zone with automatic selection of the maximum request temperature between the different zones.
With boiler RF receiver to be inserted if the WiFi signal at the boiler is weak or lacking.

Set the boiler to "zone valve" mode.

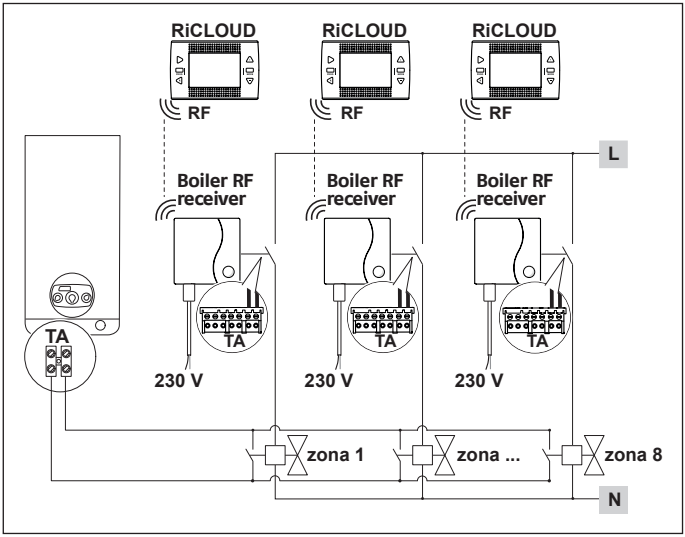


Up to 7 zones with "Boiler RF Receiver".

For information on wireless management of the zone valves, please see "Diagram 16"- "Diagram 17"

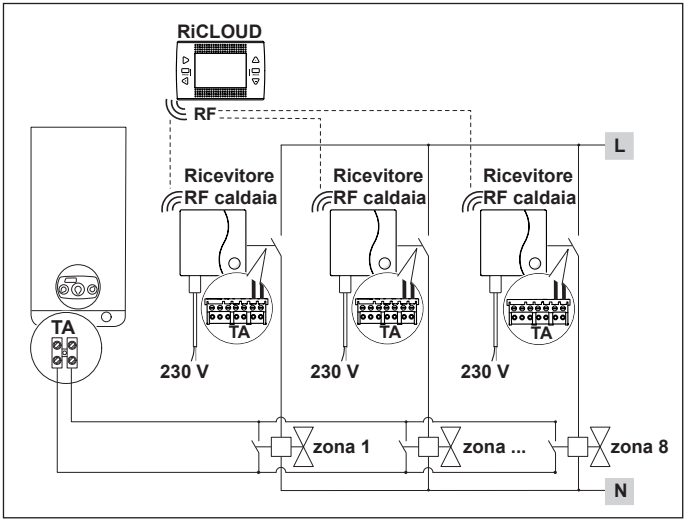
2.18 Diagram 16

Wireless management of the zone valves via boiler RF receiver.
Generic use both in system ON/OFF mode and in OT mode, with or without WiFi.



2.19 Diagram 17

Wireless management of various devices controlled by just one RiCLOUD and of zone valves via boiler RF receiver.



If installing additional RiCLOUDs, follow the procedure to link these RiCLOUDs to the WiFi Box (see "3.13 Linking function" page 64).

If installing boiler RF receivers, you must follow the procedure to link them to the WiFi Box (see "3.13 Linking function" page 64).

If installing one or more RiCLOUD RF receivers, you must follow the procedure to link them with the RiCLOUD thermostat (see "3.13 Linking function" page 64).

The boiler RF receiver can also be used to control fan coils or other devices for which electric load needs to be checked (only for "Diagram 14" and "Diagram 15").

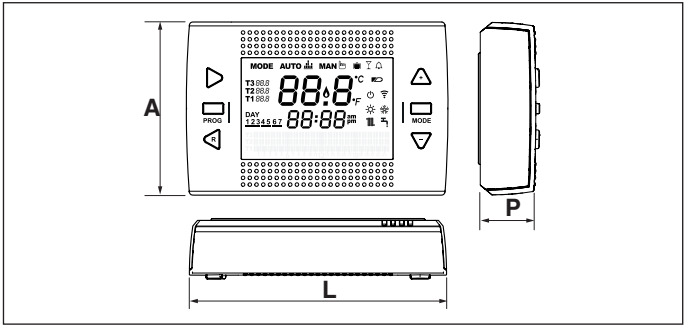
2.20 Technical Data

Description		Thermostat RiCLOUD		Units
Battery power supply		2 x 1.5 – AA		V
Battery life		18 months (normal use)		
Dry contact relay output electrical power (room thermostat)	at 30 VCC/VDC	min	1	mA
		max	2	A
	at 230 VAC/VDC	max	0.25	A
Radio frequency band (RF)		868		MhZ
Room temperature setting		1 – 35 Resolution 0.2		°C
Room temperature display		–9.9 – 50 Resolution 0.2		°C
Factory set temperatures T3 = Comfort		21		°C
T2 = Economy		16		°C
T1 = Anti-freeze		5		°C
Maximum cable length between the WiFi Box and the boiler OTBus terminal or **RiCLOUD** and the boiler OTBus terminal		30		m
Maximum open-field distance between the WiFi Box and **RiCLOUD** or between the WiFi Box and the boiler RF receiver (RF connection)		40		m
Size (W x H x D)		135 x 89 x 28		mm
Distance between holes for wall connection	electrical box 503	83.5		mm
	electrical box DIN	60.3		mm

Description		WiFi Box		Units
Transformer power supply	Input	100–240 / 0.1		VAC/A
	0utput	5 – 1		VCC–VDC/A
Dry contact relay output electrical power (room thermostat)	at 30 VCC/VDC	min.	1	mA
		max	2	A
	at 230 VAC/VDC	max	0.25	A
Radio frequency band (RF)		868		MhZ
WiFi band		IEEE 802.11 b/g/n		
		2.4		GHz
Monthly data traffic (30 days)		16.95		MB
Maximum consumption		0.5		W
Maximum length of WiFi Box cables – boiler connection via cables		30		m
Minimum operating room temperature		–15		°C
WiFi signal percentage to guarantee correct **RiCLOUD** system operation		40		%

2.21 Dimensioni

		Units
W – Width	XXX	mm
H – Height	XXX	mm
D – Depth	XXX	mm



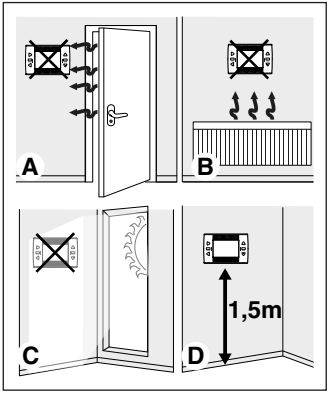
2.22 Three-phase installation

Preparation

Before installing the device

Check that the thermostat is compatible with the boiler (see boiler installer manual).
The wireless **RiCLOUD** thermostat can be installed anywhere, however the most suitable place should be chosen taking into account the following:

- Avoid draughts (A).
- Do not install above sources of heat (B).
- Avoid direct sunlight (C).
- Position at the appropriate height (D).



Wireless installation does not require any wiring, making the process very simple.
RiCLOUD thermostat can also be installed with wiring, to replace any existing thermostat, provided compatibility is checked in advance.

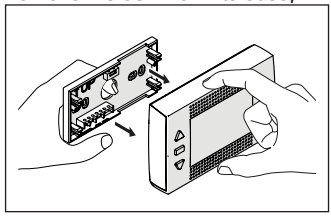
Before installing the boiler control unit (WiFi Box), disconnect the boiler from the power supply.
Installation

The following tools are required:

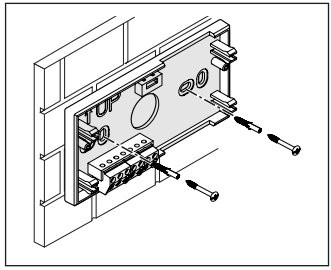
- Phillips screwdriver
- Small slotted screwdriver
- Pliers and wire strippers

Installing RiCLOUD

Remove **RiCLOUD** from its base;



Fix **RiCLOUD** base to the wall or electrical box using the screws provided, use the optics level in the plastic wrapping to install RiCLOUD horizontally.
Using screws other than those PROVIDED may compromise the correct closure of the plastic. Make sure that the screw head is correctly inserted in the hole.



RiCLOUD can be installed in one of the following ways:

Wireless

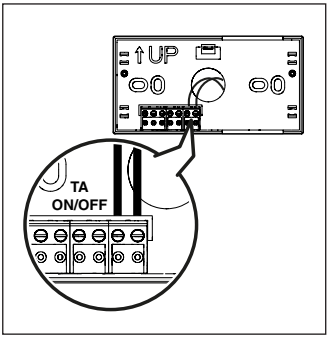
No wiring is required.
Please check the maximum open-field distances shown in **RiCLOUD** thermostat technical data.

Loss of radio frequency communication is flagged with alarm E82. Distances which exceed the maximum may occasionally generate an E82 alarm, causing incorrect system operation.

Wired in ON/OFF mode (room thermostat contact on **RiCLOUD** base)

When replacing old thermostats or as a new wired ON/OFF installation. **RiCLOUD** can be connected to a boiler, zone valve or other device. The electrical load on **RiCLOUD** room thermostat contact must not exceed the specifications for the relay itself (see "2.20 Technical Data" page 27). Should the electrical load not be compatible with the technical characteristics indicated in **RiCLOUD** thermostat technical data, it is recommended that you use an additional separation relay.

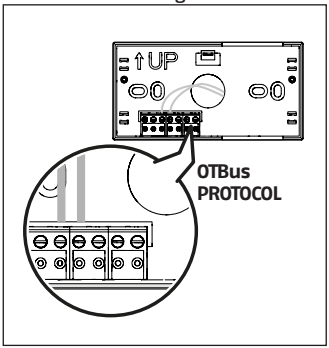
Connect the cables from the boiler room thermostat terminal or the power supply for any zone valves to **RiCLOUD** room thermostat terminal.



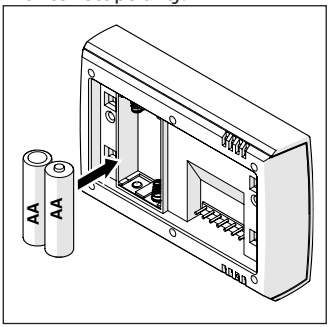
Wired in OTBus mode (OTBus contact on **RiCLOUD** base).

Direct connection via two wires to the boiler equipped with the same communication protocol.
We recommend checking the maximum cable length between the WiFi Box and the boiler OTBus terminal or **RiCLOUD** and the boiler OTBus terminal (see 2.3 "Technical data" on page 13). For the electrical connection to the boiler, please see the boiler manual.

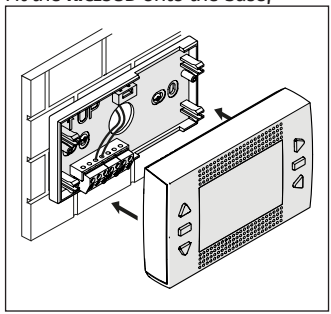
A wired connection via OTBus between the RiCLOUD and the boiler is recommended in the absence of a WiFi Box. With the above connection and a WiFi Box, only one zone can be controlled and operation via the APP is not guaranteed.



Insert the 2 x AA batteries provided, with correct polarity.



Fit the **RiCLOUD** onto the base;



Installing the WiFi Box

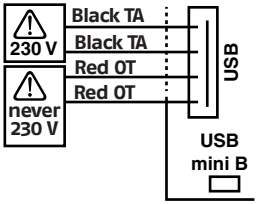
Description of the WiFi Box

The WiFi Box communicates with **RiCLOUD** thermostat or with the boiler RF receiver only via radio frequency (wireless).

OUTPUTS

The WiFi Box contains a relay (see "2.20 Technical Data" page 27) which replicates **RiCLOUD** thermostat relays linked to it. It is ON if at least 1 of **RiCLOUD** relays is ON, and OFF if all of **RiCLOUD** relays are OFF.
The WiFi Box can be wired to the boiler OTBus connection. This transforms the WiFi Box into a wireless receiver of an OTBus command. All of the information available in **RiCLOUD** via the OTBus connection is repeated to the receiver which wires it to the boiler; it is therefore an example of complex radio frequency communication.
The relay and OTBus outputs are identified on the WiFi Box by the term OUTPUTS and are available via a USB plug.

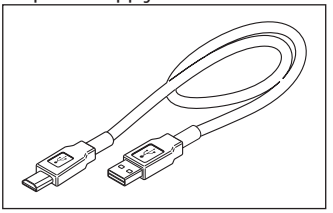
The position and distinction between the 2 outputs on the USB plug are given below.



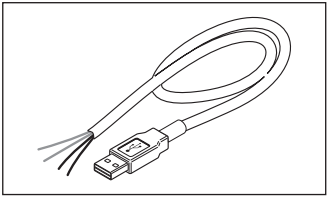
USB Outputs/Boiler:
Dry contact TA
ON/OFF relay
max 2 A at 30 VDC
max 0.25 A at 230 VAC
OTBus protocol contact
Never 230 V

Power supply:
USB mini B 5V – 1A
WiFi: IEEE 802.11 b/g/n – 2.4 GHz
Radio frequency: 868 MHz
Power consumption: 0.5 W

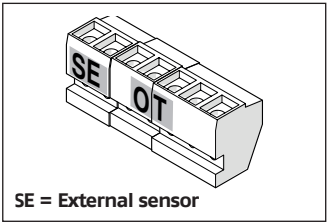
Two USB cables are also supplied, one to provide power via the USB power adapter and the other to connect the WiFi Box to the boiler.
The cable to connect it to the electrical power supply is a USB mini.



The USB cable to connect the device to the boiler has an end with 4 terminals.



The black terminals are for the ON/OFF connection and are to be connected to the "boiler room thermostat" output.
The red terminals are for the connection via OTBus and are to be connected to the "OTBus" output on the boiler.



SE = External sensor

If there is a RF boiler receiver installed in the system, these do nothing other than repeat everything that happens in the WiFi Box on a RF receiver with the same outputs (ON/OFF and OTBus) which use the same wiring colours: Red = OTBus, Black = ON/OFF

WiFi Box connection via OTBus (only for boilers equipped with a compatible OTBus protocol)

Connect the red wires of the USB cable to the boiler OTBus terminal (please consult the boiler installer manual). Should the boiler not be equipped with an OTBus terminal, you can use an OTBus connector provided in the WiFi **RiCLOUD** package (only for boilers without one).

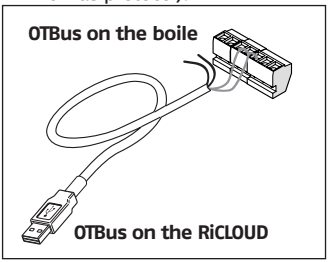
⚠ Only one of **RiCLOUD** system components (**RiCLOUD**, WiFi Box or boiler RF receiver) must be connected to the boiler via cable via OTBus.

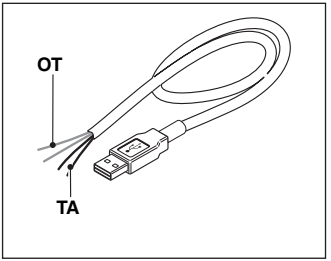
⚠ For Family models for interiors (exterior and recessed versions are not compatible with this operating mode), the NEUTRAL ITRF11 INTERFACE BOARD KIT PART NO.20047522 must be bought and the communication board installed, following the instructions included in the kit.

ON/OFF WiFi Box connection

Connect the black wires of the USB cable to the boiler room thermostat terminal (it is recommended that you consult the boiler installer manual).

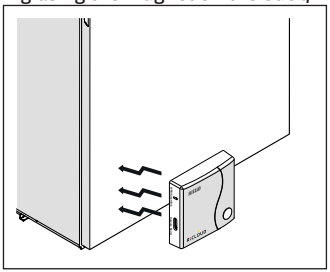
⚠ In the case of **RiCLOUD** thermostats wired in ON/OFF mode, or zone valve microswitches, it is recommended that you connect these to the boiler room thermostat terminal and wire the WiFi Box to the boiler via OTBus only (only for boilers equipped with a compatible OTBus protocol).



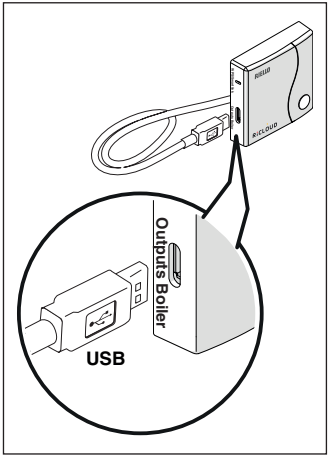


Black cables = TA (ON/OFF)
Red cables = OTBus communication protocol

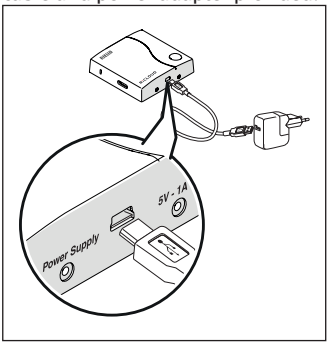
Attach the WiFi Box to the boiler casing using the magnet on the back;



Connect the USB connector on the previously connected cable to the WiFi Box OUTPUTS/BOILER output;



Power the WiFi Box via the relevant cable and power adapter provided.



Resetting the OTBus connection auto-configuration function

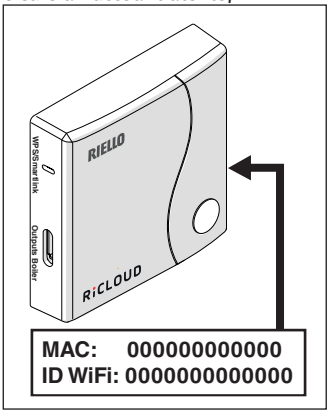
RiCLOUD is configured to function in ON/OFF mode.
Should it be connected to an OTBus communication bus (wired or wireless/radio frequency), **RiCLOUD** auto-configures to the "Boiler remote control" operating mode.
To restore the thermostat to its original operating mode (ON/OFF), remove and then reinsert the batteries.

The alarm E82 may be triggered by a change of operating mode from OTBus to ON/OFF or vice versa.

Installing and configuring the smartphone APP

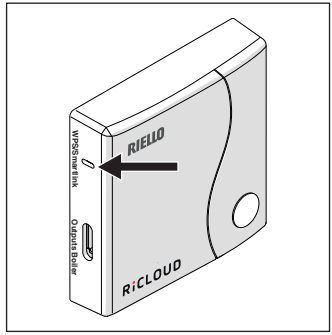
Download the APP on your smartphone or tablet;

Creare un account utente;



Match the WiFi ID of the WiFi Box to the user account.

If you need to link other thermostats and/or boiler RF receivers to the WiFi Box via radio frequency, press the clear button on the WiFi Box for 5 seconds until the LEDs flash at the same time and set the device to be linked to the same operating mode (see "3.13 Linking function" page 64). After making these links, the system automatically resumes normal operation.



Link you home modem password to the WiFi Box via one of the following methods.

⚠ Smartphones or tablets must be connected to the WiFI network that will be matched to the WiFi Box.

Smart Link

- Press the Smart Link button on the WiFi Box once with an appropriate implement.
- The green and red LEDs start flashing frequently.
- Select the "Configure WiFi" field from the drop-down menu in the APP, insert your home modem password and press the "Connect" button.

The process is complete if the APP displays the message "Connection complete".

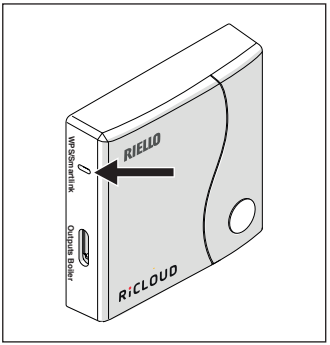
⚠ Once online, the system requires up to 4 minutes to auto-configure.

WPS (only for modems with this function)

- Set your home modem to WPS mode.
- Press the WPS button on the WiFi Box using an appropriate implement and hold for 5 seconds until the red and green LEDs flash frequently.

The link has been made if the red LED on the WiFi Box flashes frequently after a few seconds.

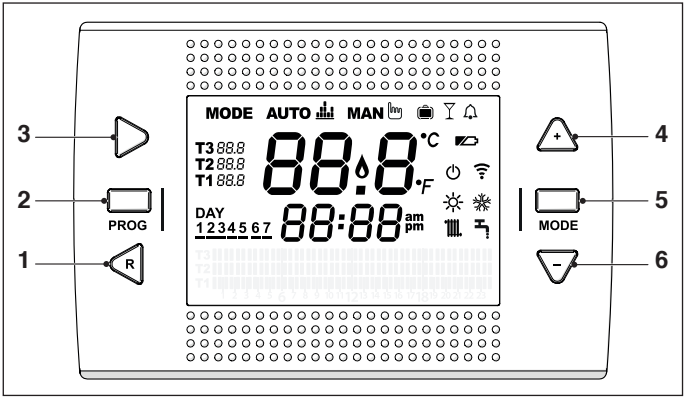
⚠ Once online, the system requires up to 4 minutes to auto-configure.



Restart the WiFi router after the operation is completed.

NOTE
For further information, please see **RiCLOUD** APP manual.

3.1 User interface



1 **BACK button =** allows you to select the desired field, reset an alarm or activate the ONE HOUR BOOSTER function

2 **SET/PROG button =** allows you to access the menus or selected field and save

3 **FORWARD button =** allows you to select the desired field or activate the special ADVANCE function

4 **UP button =** increases the field selected or displays the room temperature for the current time period

5 **ESC/MODE button =** allows you to select the operating mode, exit programming, activate the link function or activate the special SEMI-AUTOMATIC FILLING function

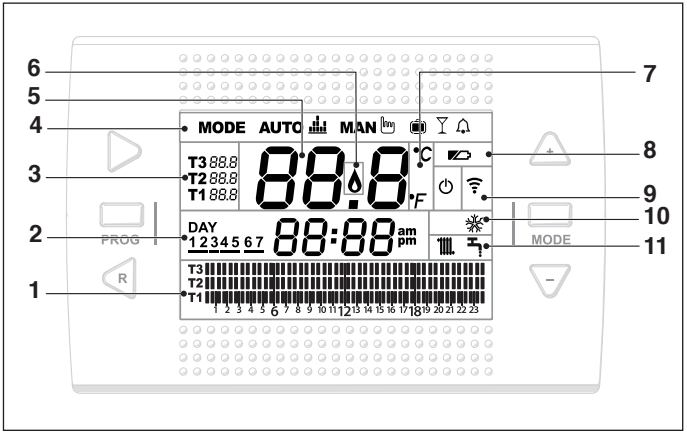
ESC = escape

MODE = select the operating mode:

AUTO	AUTO
MAN	MANUAL
	HOLIDAY
	PARTY
	SUMMER (if OTBus available)
	OFF

6 **DOWN button =** decreases the field selected or displays the room temperature for the current time period

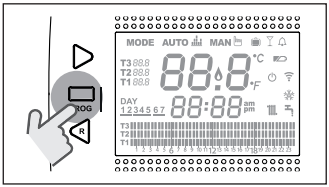
3.2 Display



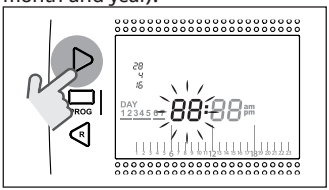
1 **Date and time**
2 **Operating mode**
3 **Time program** for heating/DHW
4 **Room setpoint temperature** desired, in relation to the heating program. If the summer/domestic hot water mode is set, it displays the domestic hot water setpoint temperature (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or the **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
5 **Batteries running low**
6 **Room temperature** read by the **RiCLOUD** thermostat
7 **Flame detection** (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol) or heating request if **RiCLOUD** system is in ON/OFF mode
8 **Unit of measure** (°C/°F)
9 **Heating or DHW mode active**
10 **Radio frequency communication** active with the WiFi Box or with the boiler RF receiver
11 **Cooling mode active**

3.3 Setting the date and time

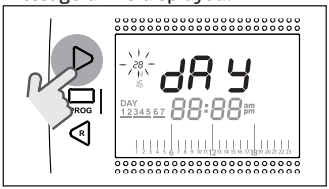
From the HOME screen, press the SET/ PROGRAM button twice.



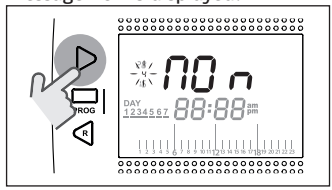
Select the desired field (hours, minutes or day) using the FORWARD ❯ or BACK ❮ button (time, minutes , day, month and year).



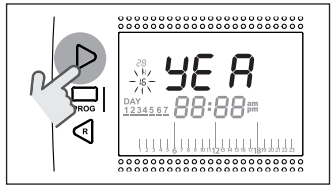
When day is selected, the corresponding number flashes and the message dAY is displayed.



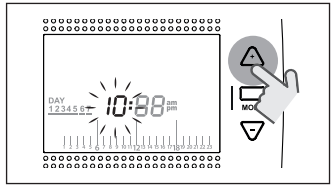
When month is selected, the corresponding number flashes and the message Non is displayed.



When year is selected, the corresponding number flashes and the message YEA is displayed.



Change the value using the UP ⌃ or DOWN ⌄ buttons.

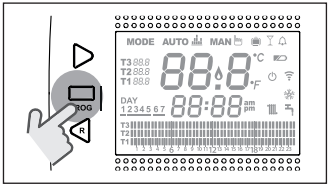


Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 30 seconds to automatically save the value and return to the home screen.

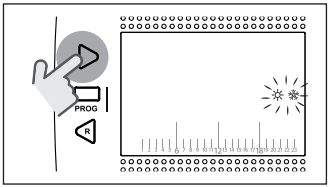
3.4 Setting the heating/ cooling mode

RiCLOUD is default set to heating mode.
In heating mode, **RiCLOUD** activates a request for heat when the room temperature is **below** the set temperature.
In cooling mode, **RiCLOUD** activates an ON request (where there is a cooling system) when the room temperature is **above** the set temperature.

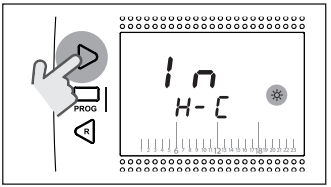
From the HOME screen, press the SET/ PROGRAM button to open the user menu.



Press the FORWARD ❯ or BACK ❮ button to select the field HEATING/COOLING.

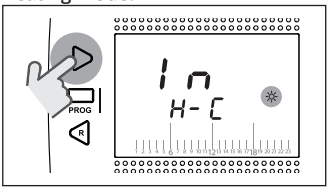


Press the SET/PROG button to set.

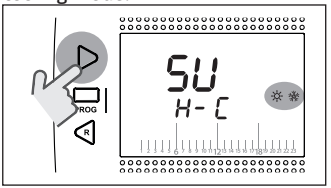


Press the UP ❮ or DOWN ❯ button to select the desired mode.

IN=WINTER
Heating mode.



SU=SUMMER
Cooling mode.

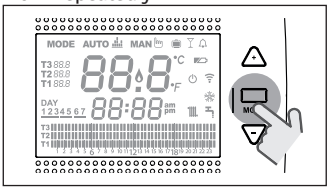


Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 30 seconds to automatically save the value and return to the HOME screen

If at least one **RiCLOUD** thermostat is in cooling mode, the heating request via OTBus is not considered.

3.5 Setting the operating mode

From the HOME screen, press ESC/MODE repeatedly



to select one of the following modes:

3.5.1 OFF mode

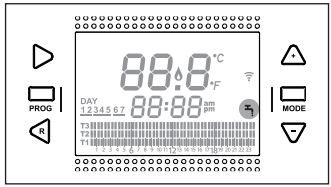
In OFF mode, **RiCLOUD** guarantees the minimum room temperature set at parameter 01 from the PL technical menu only.

NOTE
Only if the boiler is in the correct operating condition (i.e. powered and not blocked).

In case of an OTBus connection between the WiFi Box and the boiler (including other types of connection via OTBus), the boiler remains OFF if all **RiCLOUD** thermostats in the system are OFF. When the boiler is OFF it does not provide any heating or **domestic hot water.**

3.5.2 SUMMER/DHW mode

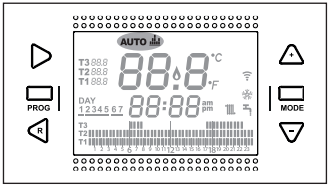
RiCLOUD in SUMMER/DOMESTIC HOT WATER mode. In this mode, the boiler provides domestic hot water where requested (instant boiler).
If the parameter 24 CLOC is set to ON; **RiCLOUD** follows the time periods set in the user-programming menu for DHW, pre-heating the water in the storage tank (only for boilers with integrated tank).
The minimum room temperature set at parameter 01 from the PL technical menu is, however, guaranteed.
In case of an OTBus connection between the WiFi Box and the boiler (including other types of connection via OTBus), the boiler remains in SUMMER mode if at least one of the thermostats is in summer mode and the others are OFF.



3.5.3 WINTER/AUTOMATIC mode AUTO

In Winter/AUTOMATIC mode, **RiCLOUD** follows the time program set in the user-programming menu for heating.
In case of an OTBus connection between the WiFi Box and the boiler (including other types of connection via OTBus), the boiler remains in Winter/AUTOMATIC mode if at least one of the thermostats is in heating mode.

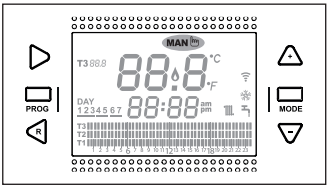
For installations with multiple **RiCLOUD** thermostats connected via OTBus, if one of these devices is in **cooling** mode, the heating request to the boiler is not considered.



3.5.4 WINTER/MANUAL mode MAN

RiCLOUD in Winter/MANUAL mode, **RiCLOUD** programmable thermostat takes the T3 room setpoint temperature (comfort), ignoring the heating time program.
In case of an OTBus connection between the WiFi Box and the boiler (including other types of connection via OTBus), the boiler remains in Winter/MANUAL mode if at least one of the thermostats is in heating mode.

For installations with multiple **RiCLOUD** thermostats connected via OTBus, if one of these devices is in **cooling** mode, the heating request to the boiler is not considered.

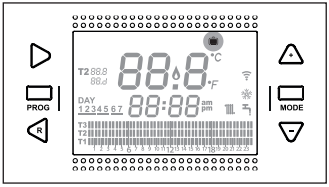


3.5.5 WINTER/HOLIDAY mode

In HOLIDAY mode, **RiCLOUD** takes the T2 room setpoint temperature (economy), ignoring the heating time program, for the days set with the FORWARD ❯ or BACK ❮ buttons.
RiCLOUD returns to AUTO mode AUTO once the days set in HOLIDAY mode have lapsed.
In case of an OTBus connection between the WiFi Box and the boiler (including other types of connection via OTBus), the boiler remains in Winter/HOLIDAY mode if at least one of the thermostats is in heating mode.

Every day, including programming day, ends at 24h00.

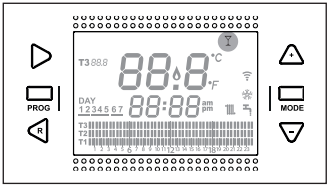
For installations with multiple **RiCLOUD** thermostats connected via OTBus, if one of these devices is in **cooling** mode, the heating request to the boiler is not considered.



3.5.6 WINTER/PARTY mode

In PARTY mode, **RiCLOUD** takes the T3 room setpoint temperature (comfort), ignoring the heating time program, until midnight of the current day, and then automatically switches back to AUTO mode AUTO.
In case of an OTBus connection between the WiFi Box and the boiler (including other types of connection via OTBus), the boiler remains in Winter/PARTY mode if at least one of the thermostats is in heating mode.

For installations with multiple **RiCLOUD** thermostats connected via OTBus, if one of these devices is in **cooling** mode, the heating request to the boiler is not considered.

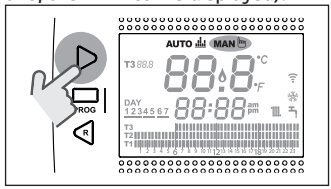


3.6 Setting the extra functions

3.6.1 ADVANCE function for AUTOMATIC operating mode

The ADVANCE function allows you to bring forward the next heating/cooling time period and the relative room setpoint temperature desired, or to disable the heating time period if it is already running.

To activate/deactivate the ADVANCE function, from the HOME screen press the FORWARD button (if active, the MAN icon is displayed).

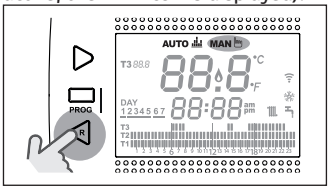


3.6.2 ONE HOUR BOOSTER function for AUTOMATIC operating mode

The ONE HOUR BOOSTER function allows you to activate the heating/cooling time period and the relative T3 room temperature (comfort) for 60 minutes, if it is not already in operation.

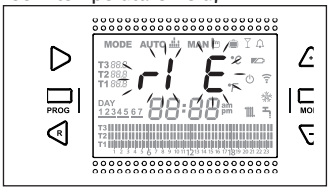
If the heating time period relative to the T3 room setpoint temperature (comfort) is already running, by activating the function the time period is extended by one hour, but not beyond midnight of the current day.

To activate/deactivate the ONE HOUR BOOSTER function, from the HOME screen press the BACK button ❮ (if active, the MAN icon is displayed).

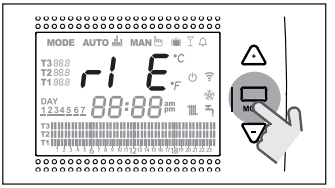


3.6.3 SEMI-AUTOMATIC FILLING function

The SEMI-AUTOMATIC FILLING function allows the correct system pressure to be restored and is only available for boilers equipped with the relevant function (if OTBus connection available between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
If the rIE alarm is quickly flashing (0,5 sec) on the HOME screen in the room temperature field,



press the ESC/MODE button and hold for 5 seconds to start semi-automatic filling (the message rIE will stop flashing and remain on).
When releasing the button ESC/MODE the rIE message starts flashing slowly (2 secs) until the end of the function.



Once the system pressure has been restored, **RiCLOUD** automatically returns to the normal HOME screen display.

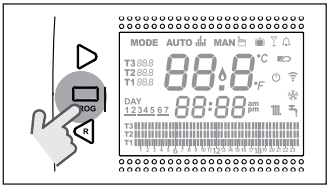
⚠ If the SEMI-AUTOMATIC FILLING function is not carried out within 90 seconds, the rIE alarm flashes quickly (1sec.) and is displayed on the HOME page again.

3.6.4 KEY-LOCK function

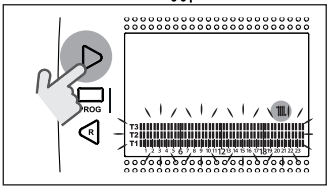
To enable/disable the KEY-LOCK function, press the FORWARD > and UP ^ buttons together for 5 seconds from the HOME page (if enabled, LOC will be displayed for 5 seconds, if disabled, UnL will be displayed for 5 seconds).

3.7 Setting the heating/cooling time program in automatic operating mode

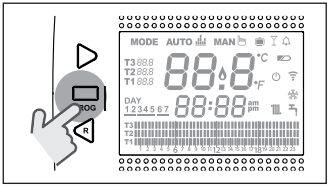
From the HOME screen, press the SET/PROGRAM button to open the user menu.



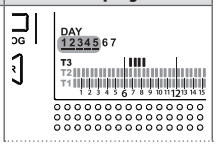
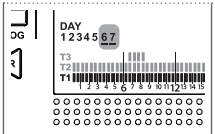
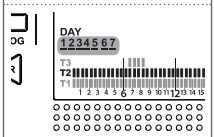
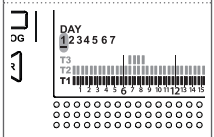
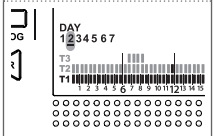
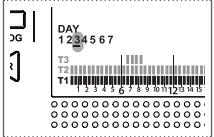
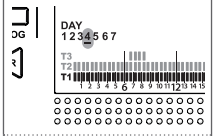
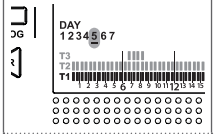
Press the FORWARD ❯ or BACK ❮ button to select the field HEATING/COOLING TIME PROGRAM.

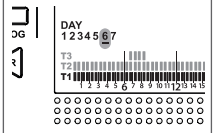
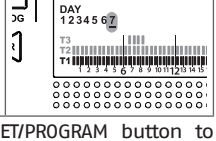


Press the SET/PROG button to set.



Press the FORWARD ❯ or BACK ❮ button to select the day or period of the week to be changed.

Days	Display
Monday Friday	
Saturday Sunday	
Monday Sunday	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Days	Display
Saturday	
Sunday	

Press the SET/PROGRAM button to confirm the day or period of the week to be changed.

Press the FORWARD ❯ or BACK ❮ button to select the time segment to be changed.

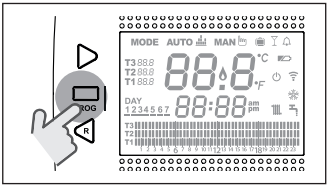
Press the ESC/MODE button to select the desired room setpoint temperature (T1, T2, T3).

Press the UP button ∧ to copy the previous setting to the following time segment (the DOWN ∨ button can be used to go back or copy the setting to the previous time segment).

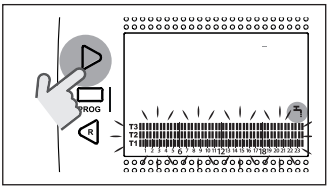
Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 30 seconds to automatically save the value and return to the HOME screen.

3.8 Setting the DHW time program

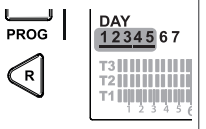
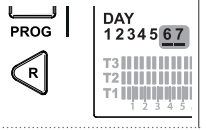
This function is available only if the parameter 24 CLOC is set to ON.
The time periods are default set to ON (domestic hot water function active).
From the HOME screen, press the SET/PROGRAM button to open the user menu.

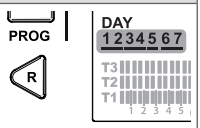
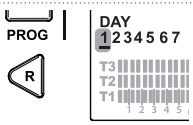
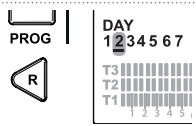
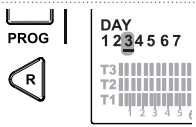
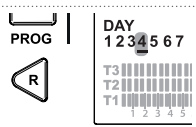
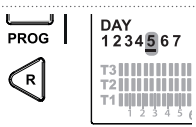
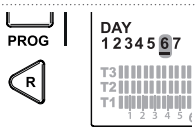


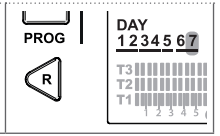
Press the FORWARD ❯ or BACK ❮ button to select the field DHW TIME PROGRAM.



Press the SET/PROG button to set.
Press the FORWARD ❯ or BACK ❮ button to select the day or period of the week to be changed.

Days	Display
Monday Friday	
Saturday Sunday	

Days	Display
Monday Sunday	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Sunday	

Press the SET/PROGRAM button to confirm the day or period of the week to be changed.

Press the FORWARD ❯ or BACK ❮ button to select the time segment to be changed.

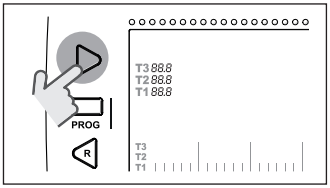
Press the ESC/MODE button to activate or deactivate the domestic hot water function.

Press the UP button ∧ to copy the previous setting to the following time segment (the DOWN ∨ button can be used to go back or copy the setting to the previous time segment).
Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 30 seconds to automatically save the value and return to the HOME screen.

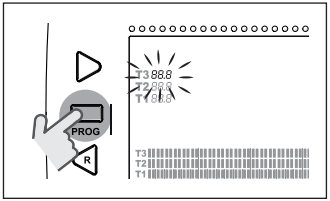
3.9 Setting the heating/ cooling room setpoint temperature

To change the T1/T2/T3 room setpoint temperature, press the SET/PROGRAM button from the HOME screen to enter the user menu.

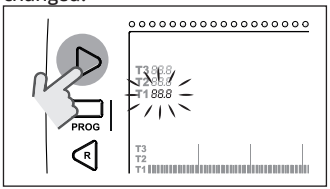
Press the FORWARD ❯ or BACK ❮ button to select the field HEATING/COOLING TEMPERATURE.

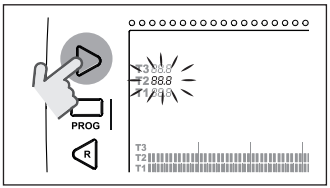


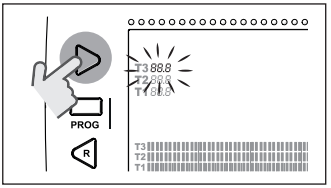
Press the SET/PROG button to set.



Press the FORWARD ❯ or BACK ❮ button to select the temperature to be changed.







Press the UP ⌃ or DOWN ⌄ button to modify the selected room setpoint temperature.

⚠ The T3 temperature (comfort) cannot be higher than 35°C or less than or equal to T2 (economy).

⚠ The T2 temperature (economy) cannot be higher than or equal to T3 (comfort) or less than or equal to T1 (anti-freeze).

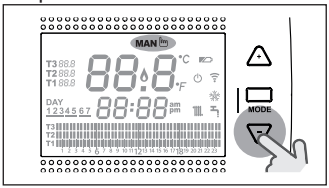
⚠ The T1 temperature (anti-freeze) cannot be higher than or equal to T2 (economy) or less than 1°C.

Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 30 seconds to automatically save the value and return to the HOME screen.

The room setpoint temperatures can also be modified instantly if **RiCLOUD** is in the operating mode corresponding to the room setpoint temperature to be modified.

3.9.1 Setting the temperature in MANUAL mode

From the HOME screen, press the UP ∧ or DOWN ∨ button to set the desired T3 (comfort) room setpoint temperature.

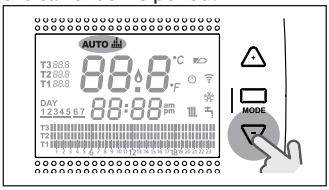


The room setpoint temperature set cannot be less than or equal to the T2 temperature (economy).

Press the SET/PROG button to save and return to the HOME screen, press ESC/MODE to save and return to the HOME screen, or wait 5 seconds to automatically save the value and return to the HOME screen.

3.9.2 Setting the temperature in AUTOMATIC mode

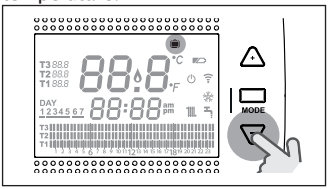
From the HOME screen, press the UP ∧ or DOWN ∨ button to set the desired room setpoint temperature for the current time period.



Press the SET/PROG button to save and return to the HOME screen, press ESC/MODE to save and return to the HOME screen, or wait 5 seconds to automatically save the value and return to the HOME screen.

3.9.3 Setting the temperature in HOLIDAY mode

From the HOME screen, press the UP ∧ or DOWN ∨ button to set the desired T2 (economy) room setpoint temperature.

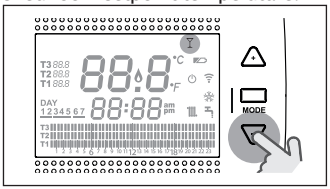


The room setpoint temperature set cannot be higher than or equal to T3 (comfort) or less than or equal to T1 (anti-freeze).

Press the SET/PROG button to save and return to the HOME screen, press ESC/MODE to save and return to the HOME screen, or wait 5 seconds to automatically save the value and return to the HOME screen.

3.9.4 Setting the temperature in PARTY mode

Press the UP ∧ or DOWN ∨ button on the HOME screen to set the desired room setpoint temperature.



The room temperature set cannot be less than or equal to the desired T3 (comfort) room setpoint temperature.

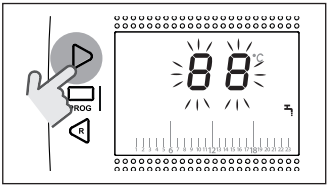
⚠ The room setpoint temperature set cannot be less than or equal to the T2 temperature (economy).

Press the SET/PROG button to save and return to the HOME screen, press ESC/MODE to save and return to the HOME screen, or wait 5 seconds to automatically save the value and return to the HOME screen.

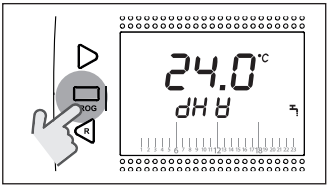
3.10 Setting the DHW setpoint temperature

From the HOME screen, press the SET/PROGRAM button to open the user menu.

Press the FORWARD ❯ or BACK ❮ button to select the field DOMESTIC HOT WATER TEMPERATURE.



Press the SET/PROG button to set.

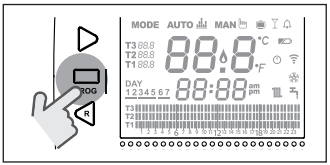


Press the UP ∧ or DOWN ∨ button to modify the domestic hot water setpoint temperature.
Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 30 seconds to automatically save the value and return to the HOME screen.

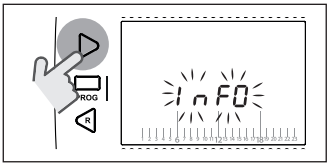
3.11 Displaying operating information

This function (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol) allows you to display the boiler probe values and some boiler operating statuses.

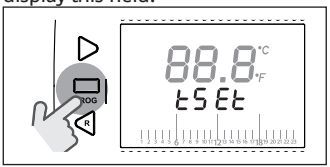
From the HOME screen, press the SET/PROGRAM button to open the user menu.



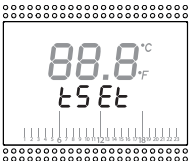
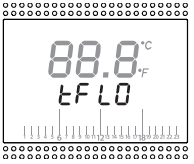
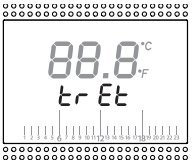
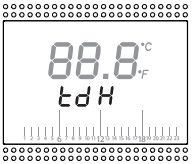
Press the FORWARD ❯ or BACK ❮ button to select the field InFO.

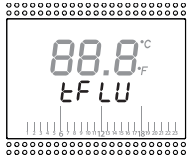
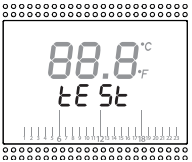
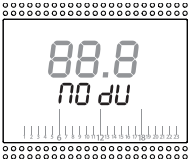
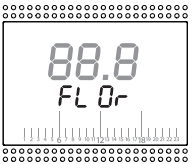


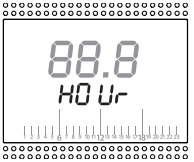
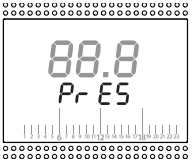
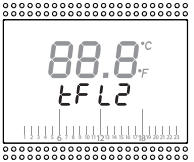
Press the SET/PROGRAM button to display this field.



Press the UP ∧ or DOWN ∨ button to select the desired parameter and wait until it is displayed.

Parameter	Description
tSEt 	Heating delivery setpoint calculated by **RiCLOUD** (shown only if **RiCLOUD** has received a heating request). The value calculated by **RiCLOUD** may differ from the real heating delivery setpoint delivered by the boiler, if the minimum boiler heating setpoint parameter is higher than this value. **EXAMPLE:** The heating delivery setpoint calculated by **RiCLOUD** is 30°C, the minimum boiler heating setpoint parameter is 40°C, the real heating delivery setpoint delivered by the boiler is 40°C.
tFLO 	Temperature read by the boiler heating delivery probe (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
trEt 	Temperature read by the boiler heating return probe (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
tdH 	Temperature read by the boiler DHW probe (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).

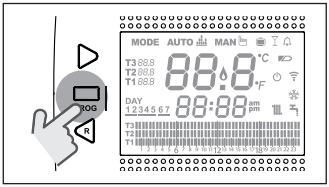
Parameter	Description
tFLU 	Temperature read by the boiler flue gas probe (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
tESt 	Temperature read by the external probe connected to the boiler or the external temperature communicated via the APP (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
MOdU 	Boiler fan speed percentage (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). The value 0.0 corresponds to the MINIMUM DOMESTIC HOT WATER POWER; the value 100 corresponds to the MAXIMUM DOMESTIC HOT WATER POWER.
FLOr 	Flow meter rate in litres/minute, where a flow meter is available (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).

Parameter	Description
HOUr 	Number of operating hours in high condensation mode (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
PrES 	System pressure (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).
tFl2 	Temperature read by the delivery probe in the second heating circuit (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol).

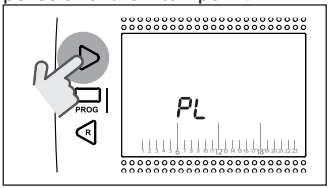
Press the SET/PROG button to save and return to the programming menu, press ESC/MODE to save and exit the programming menu, or wait 180 seconds to automatically save the value and return to the HOME screen.

3.12 Menu tecnico – programmazione avanzata

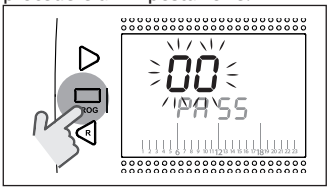
Dalla schermata HOME premere il tasto SET/PROGRAM per entrare nel menu utente.



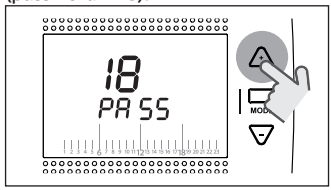
Premere il tasto FORWARD ❯ o BACK ❮ per selezionare il campo PL.



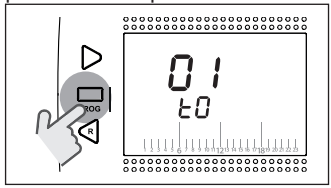
Premere il tasto SET/PROGRAM per procedere all'impostazione.



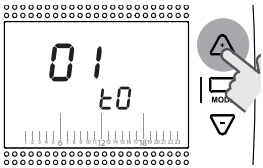
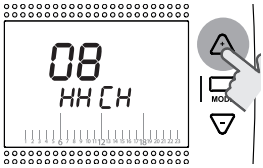
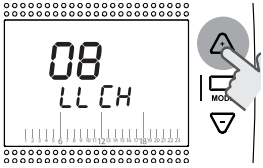
Premere il tasto UP ∧ o DOWN ∨ per inserire la password installatore (password = 18).

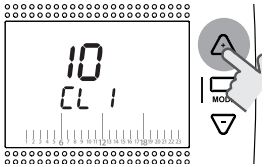


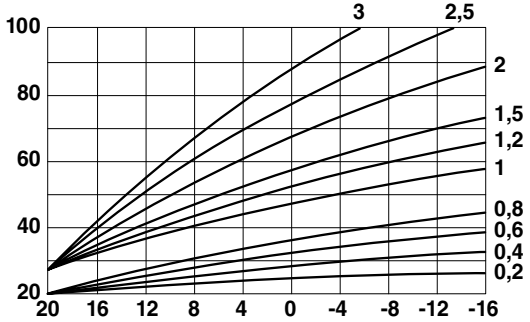
Premere il tasto SET/PROGRAM per procedere all'impostazione.



Premere il tasto FORWARD ❯ o BACK ❮ per selezionare il parametro desiderato.
Premere il tasto SET/PROGRAM per procedere all'impostazione del parametro selezionato. Per i parametri 08 e 19 è necessario utilizzare il tasto FORWARD ❯ o BACK ❮ per selezionare i 2 sotto-parametri.
Premere il tasto UP ∧ o DOWN ∨ per modificare il parametro selezionato.
Premere il tasto SET/PROG per memorizzare e tornare al menu tecnico, premere ESC/MODE per memorizzare ed uscire dal menu tecnico, oppure attendere 120 secondi per memorizzare automaticamente il valore e tornare alla schermata HOME.

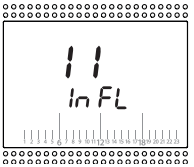
Parameter	Description
01 t0 	Minimum safety temperature. The value can be set from 1°C to 5°C. Default set to 3°C. Should **RiCLOUD** room probe detect a temperature below the parameter set, a heating request is generated – only when HEATING in operating modes SUMMER/DOMESTIC HOT WATER and OFF – taking into account the hysteresis set under the HOn and HOFF parameters.
08 HHCH 	Maximum heating setpoint temperature (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). The value can be set between 80°C and 40°C (for high temperature heating) or from 45°C to 20°C (for low temperature heating).
08 LLCH 	Minimum heating setpoint temperature (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). The value can be set from 10°C to HHCH –1°C.

Parameter	Description
10 CLI 	Thermoregulation curve with external probe connected to the boiler or external web probe via the APP (available with OT-Bus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). Default set to 1.2°C. The value can be set from 0.2°C to 3°C. The parameter in question affects the calculation of the heating delivery setpoint temperature.



T Mand risc = T Mand Curva + (CLI * InFL * ΔT Amb)

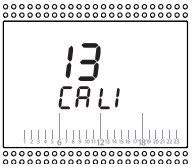
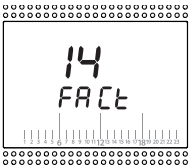
T Mand Curva = Delivery temperature calculated using the thermoregulation curve set under parameter CLI
CLI = thermoregulation curve
InFL = room influence
ΔT Amb = (room temperature set) – (current room temperature)

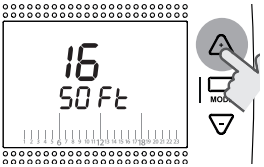
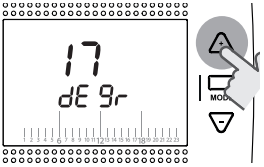
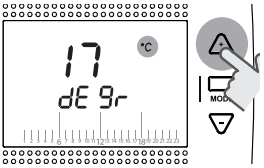
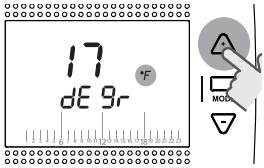
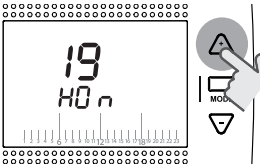
Parameter	Description
11 InFL 	Influence of room probe on calculation of heating delivery setpoint temperature (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). Default set to 10. The value can be set from 0°C to 20°C.

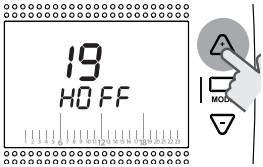
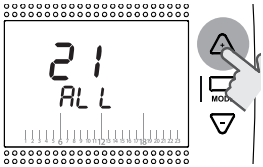
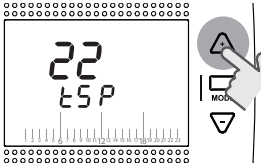
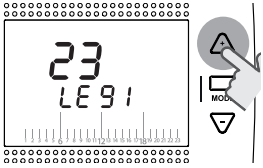
T Mand risc= T Mand Curva + (CLI * InFL * ΔT Amb)

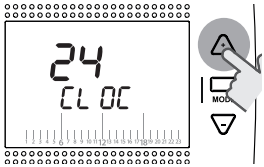
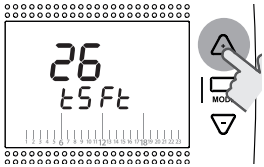
T Mand Curva = Delivery temperature calculated using the thermoregulation curve set under parameter CLI
CLI = thermoregulation curve
InFL = room influence
T Amb = (room temperature set) – (current room temperature)

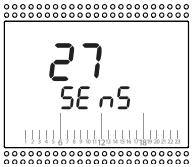
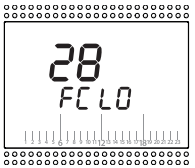
⚠ Setting the parameter InFL=0, with the external probe disconnected from the boiler and the web external probe not enabled on the app, the heating delivery temperature (per la zona comandata dal **RiCLOUD**) is the same as the temperature set under parameter LLCH.

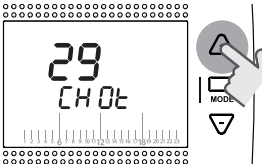
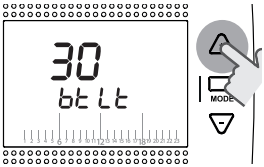
13 CALI 	Correction of the temperature detected by **RiCLOUD** room probe. The value can be set with a hysteresis of +–7°C.
14 FACt 	Restore factory settings. The value can be set from 0 to 1. By setting this parameter to 1, **RiCLOUD** values are restored to the default setting, excluding the date and time and the domestic hot water temperature.

Parameter	Description
16 SOFt 	**RiCLOUD** software version. Read-only parameter.
17 dEgr   	Setting the unit of measure. The value can be set to °C or °F. The default setting is °C (degrees Centigrade). This parameter allows you to set and view temperatures on the degrees Centigrade or degrees Fahrenheit scale.
19 HOn 	Setting the ON hysteresis for heating or cooling requests. The value can be set from 0°C to 2°C; the default setting is 0.4°C. **RiCLOUD** processes an ON request below the target room temperature set (desired room setpoint – H On) if the heating mode is active, or above the target room temperature set (desired room setpoint + H On) if the cooling mode is active.

Parameter	Description
19 HOFF 	Setting the OFF hysteresis for heating or cooling requests. The value can be set from 0°C to 2°C; the default setting is 0.1°C. **RiCLOUD** processes an OFF request above the target room temperature set (desired room setpoint + H OFF) if the heating mode is active, or below the target room temperature set (desired room setpoint – H OFF) if the cooling mode is active.
21 ALL 	Alarm history display (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). The last 9 alarms generated by the boiler and saved by **RiCLOUD** are shown.
22 tSP 	Setting boiler parameters (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). This parameter is set by the Authorised Service Centre.
23 LEgI 	Enabling the anti-legionella function for boilers with domestic hot water tank (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). Default set to OFF. This value can be set to ON or OFF. By setting this parameter to ON; every 20 domestic hot water request cycles a request to replenish the tank is sent with a domestic hot water delivery setpoint of 65°C. If the 20 cycles have not be performed within one week, a request to replenish the tank is sent with a domestic hot water delivery setpoint of 65°C on Saturday at 1.00 a.m.

Parameter	Description
24 CLOC 	Enabling domestic hot water timer for boilers with domestic hot water tank (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). Default set to OFF. This value can be set to ON or OFF. Setting this parameter to ON, the domestic hot water time periods can be programmed, as explained in "3.8 Setting the DHW time program" page 50.
26 tSFt 	The parameter will only be shown if the SEnS parameter is OFF (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol). Default set to 10°C. The value can be set from 1°C to 20°C. The value set for this parameter will be subtracted from the heating delivery setpoint calculated by **RiCLOUD** (tSEt), only in AUTO AUTO operating mode, during the T2 (economy) or T1 (anti-freeze) time period.

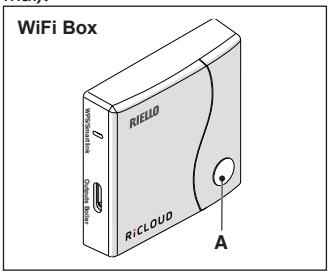
Parameter	Description
27 SEnS 	Enabling/disabling room sensor to activate pure climate control (thermoregulation from a single external probe). Default set to ON. This value can be set to ON or OFF. In AUTO AUTO, MAN MAN and PARTY operating modes only, by setting this parameter to OFF the heating/cooling request is processed as follows: – In ON/OFF mode, the heating/cooling request is always active (relay closed) if the T3 (comfort) time period is active. – In OTBus mode, the heating request is always active (only with the external probe connected to the boiler or the external web probe via the APP) and the heating setpoint temperature is calculated using the external probe value only. The value set for parameter 26 (tSFt) is subtracted from the heating delivery setpoint calculated by **RiCLOUD** (tSEt), only in AUTO AUTO operating mode, during the T2 (economy) or T1 (anti-freeze) time period. ⚠ This function uses one **RiCLOUD** only.
28 FCLO 	Time display setting. Default set to 24-hour clock. The format can be set to the 12- or 24-hour clock. Setting the parameter to 12H, the field is display in the 12-hour a.m./p.m. format.

Parameter	Description
29 CH0t 	Enabling/disabling heat request via 0TBus (available with 0TBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the 0TBus protocol). Default set to 0N. This value can be set to 0N or 0FF. Setting this parameter to 0FF, **RiCLOUD** thermostat does not consider the heating request via 0TBus to the boiler.
00 EHIt	Press the SET/PR0G button or ESC/M0DE to return to the H0ME screen.
30 btLt 	Enable/disable backlighting. 0N/0FF Configurable value: set to 0FF so that the backlighting will not switch on at every operation thus making the batteries last longer. Press the button SET/PR0G or ESC/M0DE to go back to the H0ME page.

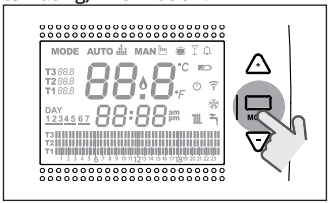
3.13 Linking function

RiCLOUD linking with the WiFi Box

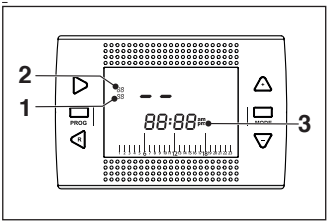
RiCLOUD and the WiFi Box in the WiFi **RiCLOUD** package are already linked. If installing an additional **RiCLOUD**, follow the procedure below.
Ensure that **RiCLOUD** and the WiFi Box are connected to a power source and there are no alarms.
Press the prismatic dome clear LED button (A) and hold for 5 seconds until the green and red LEDs flash slow (1 sec) at the same time (once linked the flash will return to normal).



From **RiCLOUD** HOME screen, press the ESC/MODE button and hold for 5 seconds to display the following (alternating) information.

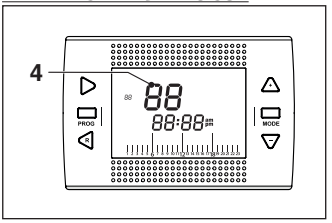


EXAMPLE OF LINKED RICLOUD



1 Radio frequency channel
2 Receiver (WiFi Box) number
3 Radio frequency address

EXAMPLE OF LINKED RICLOUD



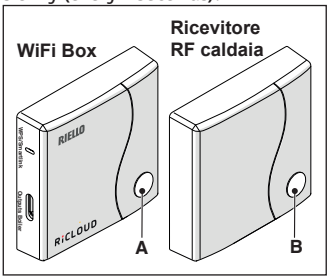
4 Transmitter number (**RiCLOUD**)
To complete the link, press the SET/PROGRAM button or wait for **RiCLOUD** to return to the HOME screen.

This may take up to 2 minutes, after which **RiCLOUD** automatically returns to the HOME screen.

Should the link not be successful, please contact the Authorised Service Centre.

Linking the boiler RF receiver to the WiFi Box

If installing a boiler RF receiver, please follow the procedure below.
Press the prismatic dome clear LED button (A) on the **WiFi Box** and hold for 5 seconds until the green and red LEDs flash slow at the same time (1 second).
Press and hold again for 5 seconds until the green and red LEDs momentarily switch off and then flash slowly (every 2 seconds).



Press the prismatic dome clear LED button (B) on the boiler RF receiver and hold for 5 seconds until the green and red LEDs flash frequently (every 0.5 seconds) at the same time.
The WiFi Box flashes frequently (every 0.5 seconds) to show the link has been made.
Press the button on the WiFi Box again to confirm.
The boiler RF receiver auto-configures to normal operating mode.

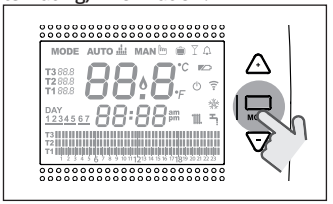
This may take up to 2 minutes, after which the **RiCLOUD** automatically returns to the HOME screen.

Should the link not be successful, please contact the Authorised Service Centre.

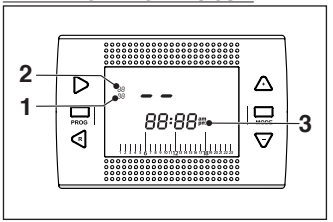
Linking the boiler RF receiver to the RiCLOUD

RiCLOUD programmable thermostat can be linked to a wireless receiver if you want to replicate the relay functionality on the thermostat in a remote zone (e.g. zone valve), which is not accessible with a cable (wireless access).
Follow the procedure below to link them:
Press the prismatic dome clear LED button on the boiler RF receiver and hold for 5 seconds until the green and red LEDs flash slow (1 seconds) at the same time (once linked the flash returns to normal).

From **RiCLOUD** HOME screen, press the ESC/MODE button and hold for 5 seconds to display the following (alternating) information:

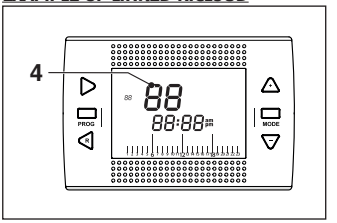


EXAMPLE OF LINKED RICLOUD



1 Radio frequency channel
2 Receiver (WiFi Box) number
3 Radio frequency address

EXAMPLE OF LINKED RICLOUD



4 Transmitter number (**RiCLOUD**)

To complete the link, press the SET/PROGRAM button or wait for **RiCLOUD** to return to the HOME screen.

This may take up to 2 minutes, after which **RiCLOUD** automatically returns to the HOME screen.

Should the link not be successful, please contact the Authorised Service Centre.

4.1 LED notification lights for the WiFi Box and boiler RF receiver **

LED Green	LED Red	Status
F05		Relay = closed (only for ON/OFF connections)
F1		Relay = open (only for ON/OFF connections)
ON		OTBus connection = OK (for OTBus connection)
ON	F01	Boiler alarm (only for OTBus connection)
F05 F1 ON	ON	Network or RF error
F05	F05	WPS mode active – Wait for WPS signal from the router*
	F05	WPS signal accepted*
F05	F05	Smartlink mode active*
F1	F1	Encoded RF mode active*

* Only for WiFi Box

** The notification lights on boiler RF receivers may differ with respect to the table.

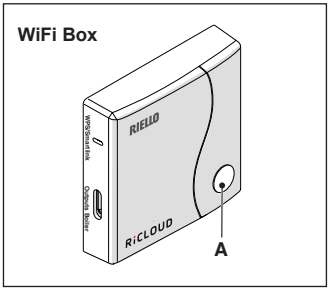
LED

ON = remains on

F05 = quick flash (every 0.5 seconds)

F1 = slow flash (every 1 second)

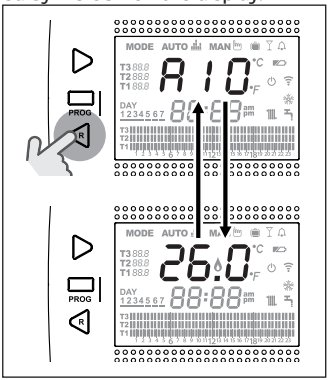
Operation of the prismatic dome clear LED button on the WiFi Box and boiler RF receiver



In case of a boiler alarm (available with OTBus connection between the WiFi Box and the boiler or the RF receiver and the boiler or **RiCLOUD** and the boiler, if provided for by the OTBus protocol), the alarm can be reset by pressing the prismatic dome clear LED button (A) (for alarm A99, reset from the boiler).
With an ON/OFF connection, the relay can be activated or deactivated by pressing the prismatic dome clear LED button (A).

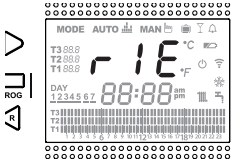
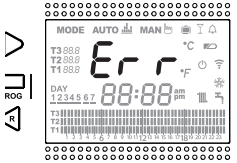
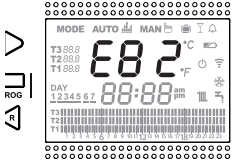
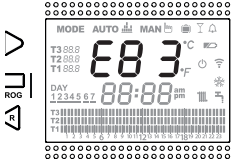
4.2 Boiler and RiCLOUD alarms

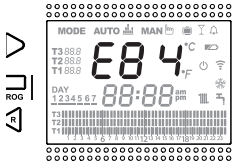
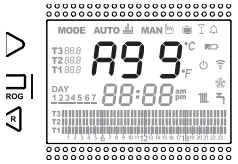
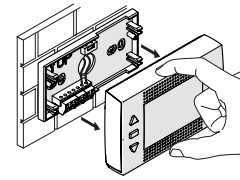
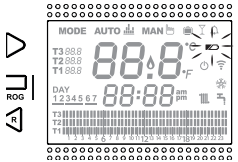
The alarm is shown in alternation with the room temperature detected by **RiCLOUD** on the display.



In case of a boiler alarm (available with OTBus connection between the WiFi Box and the boiler, if provided for by the OTBus protocol), the alarm can be reset by pressing the BACK/RESET button ⟨ (for alarm A99, reset from the boiler).

RiCLOUD alarms (rIE, E82, E83) and the temporary boiler alarms may be automatically reset once the fault has been resolved.

Alarm	Description	Solution
rIE	 Semi-automatic fill function.	- See "3.6.3 SEMI-AUTOMATIC FILLING function" page 48 - Check the system pressure. - Should you not be able to remove the alarm, please contact the Authorised Service Centre.
Err	 **RiCLOUD** room temperature sensor damaged. Cannot be repaired.	- Replace **RiCLOUD** - Contact the Authorised Service Centre.
E82	 Communication failure between the **RiCLOUD** and the WiFi Box.	- Check the distance between **RiCLOUD** and the WiFi Box (see "2.20 Technical Data" page 27). - Remove and then reinsert the batteries. - Check that the WiFi Box is connected to a power source. - Check the coupling between **RiCLOUD** and the WiFi Box (see "3.13 Linking function" page 64). - Contact the Authorised Service Centre.
E83	 OTBus communication failure between the WiFi Box and the boiler or the **RiCLOUD** and the boiler.	- Check the OTBus electrical connection and the maximum distance between the WiFi Box and the boiler OTBus terminal or between **RiCLOUD** and the boiler OTBus terminal (see "2.20 Technical Data" page 27). - Contact the Authorised Service Centre.

E84	 Hardware error **RiCLOUD**. Cannot be repaired.	– Replace **RiCLOUD.** – Contact the Authorised Service Centre.
A01....99	Boiler alarm.	– See boiler manual.
A99	 Too many boiler resets performed via remote control.	– Reset from the boiler.
	  Batteries running low	To replace the batteries, remove **RiCLOUD** from its base. – Replace the batteries. – Check that the contacts are not rusty. – Replace **RiCLOUD.** – Contact the Authorised Service Centre. ⚠ Replace the batteries as soon as possible. When the low battery warning is on, correct operation of **RiCLOUD** and any RF communication is no longer guaranteed.

Alarm	Description
A01-A10	Burner ignition/detection failure after numerous attempts
A02-A20	Limit thermostat tripped
A03-A30	Flue gas thermostat and/or safety thermostat and/or air pressure switch and/or fan fault
A04-A40	Primary circuit pressure insufficient
A06-A60	DHW NTC probe anomaly
A07-A70	Alarm relating to heating NTC probe and/or delivery NTC probe and/or excessive differential between the delivery and return NTC probes
A08	Alarm relating to return NTC probe and/or excessive differential between probes
A09-A91	Flue gas NTC probe or dirty exchanger alarm
A77	Low external temperature limit thermostat tripped
A99	Too many resets performed via remote control

The alarm history can be viewed under the parameter ALL from the advanced programming menu.

For details of boiler alarms, please see the boiler installer manual.

RiCLOUD 0 (05/16)

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