

CORE MCT 010 CORE MCT 010 C

Technical Room Module



USER MANUAL



SAFETY WARNINGS

Carefully read this manual prior to installing and/or using the device and store it in an accessible place.

This device is a component that is part of complex installations: the electrician is responsible for drawing up the general diagram of the system and of the electrical connections outside the device itself.

The Manufacturer's Technical Department can be contacted at the numbers indicated on the back for advice or for special technical requests.

WARNING

Installation and maintenance must be carried out solely by qualified personnel.

The hydraulic and electrical systems and the rooms where the appliance is installed must comply with the safety, accident-prevention and fire safety regulations in force in the country where the device is used.

- An effective earthing device must be connected to the device and included within a bonding system that complies with the applicable regulations relating to its efficacy.
- Prior to making the electrical connection, make sure that the voltage and frequency shown on the rating plate match the values of the power supply system.



GENERAL WARNINGS

- If, after unpacking the device, any anomalies are found, do not use the device but contact a Service Centre authorised by the Manufacturer.
- After completing the installation, dispose of the packaging in accordance with the regulations in force in the country of use.
- Only use original spare parts: failure to observe this rule shall void the warranty.
- The Manufacturer declines all liability in the following cases:
 - The above warnings and safety regulations are not complied with, including those in force in the country of installation.
 - Failure to observe the indications given in this manual.
 - Harm to people and animals and damage to objects deriving from incorrect installation and/or improper use of products and equipment.
 - Printing or transcription inaccuracies or errors contained in this manual.
- Moreover, the Manufacturer reserves the right to cease production at any time and to make all the changes deemed useful or necessary without prior notice.



DISPOSAL



On the basis of that envisaged in European Directives 2011/65/EU, 2012/19/EU and 2003/108/EC, relative to the reduction in the use of hazardous substances in electrical and electronic equipment, and the disposal of the relative waste.

The crossed-out wheellie bin symbol appearing on the device indicates that the products, once it reaches the end of its life, must be collected separately from other waste.

The user must therefore deliver the device at the end of its life to suitable separate waste collection facilities for waste electrical and electronic equipment, or return it to the dealer who, in exchange for an equivalent product, must collect the product to be disposed of free of charge.

Proper separate waste collection for the subsequent delivery of the decommissioned device to facilities for its recycling, treatment and environmentally compatible disposal helps to prevent potential negative effects on the environment and on human health and favours the recycling of the device's constituent materials.

The unlawful disposal of the product by the user implies the application of fines as envisaged in the applicable regulations.



CONTENTS

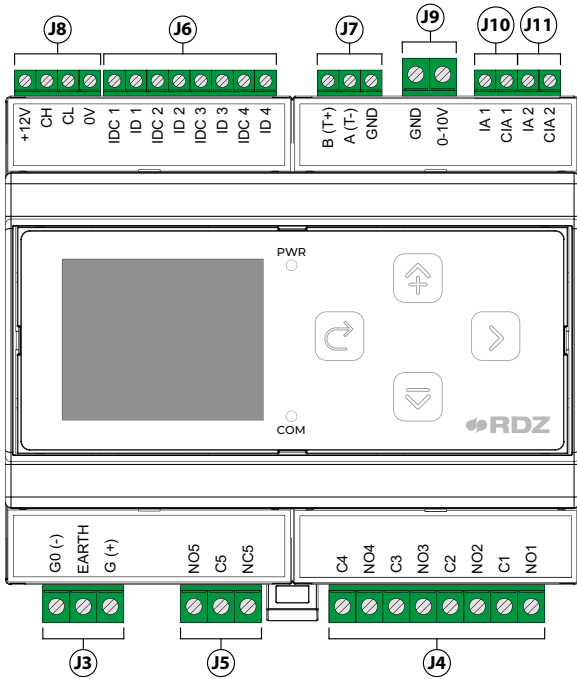
	Description	Page
	Safety warnings	3
	General warnings	3
	Disposal	4
	Preliminary operations	6
1	DESCRIPTION	5
1.1	Connections	5
1.2	Types of use	5
2	USING THE DEVICE	6
2.1	Display and keyboard	6
2.2	Description and operation of the keys	6
2.3	Wizard start-up	7
2.4	Summary map	7
3	USING THE DEVICE	8
3.1	Description of the Home Page	8
3.2	Main Menu	10
3.3	Alarm Menu	10
3.4	Settings Menu	11
3.4.1	Season	11
3.4.2	System status	11
3.4.3	Supply temperature correction	12
3.4.4	Date/time	12
3.4.5	Language	12
3.4.6	Buzzer	12
3.5	Installer Menu	13
3.6	Information Menu	13



1 DESCRIPTION

CORE MCT 010 is a device that controls the temperature of the radiant heating circuit's delivery water, the switching on/off of the boiler, the heat pump, the pump dedicated to the radiant heating circuit and the air treatment machines. The device is equipped with a 3.5" graphic display with 160x128 pixel resolution which the user and installer can use to view and edit parameters.

1.1 CONNECTIONS



Ref.	Connectors
J3	24 VAC or 20/60 VDC power supply
J4	Digital outputs (max 2 A)
J5	Digital outputs (max 2 A)
J6	Digital inputs
J7	RS-485 port
J8	R-BUS port
J9	0-10 V analogue output
J10	NTC analogue input
J11	NTC analogue input

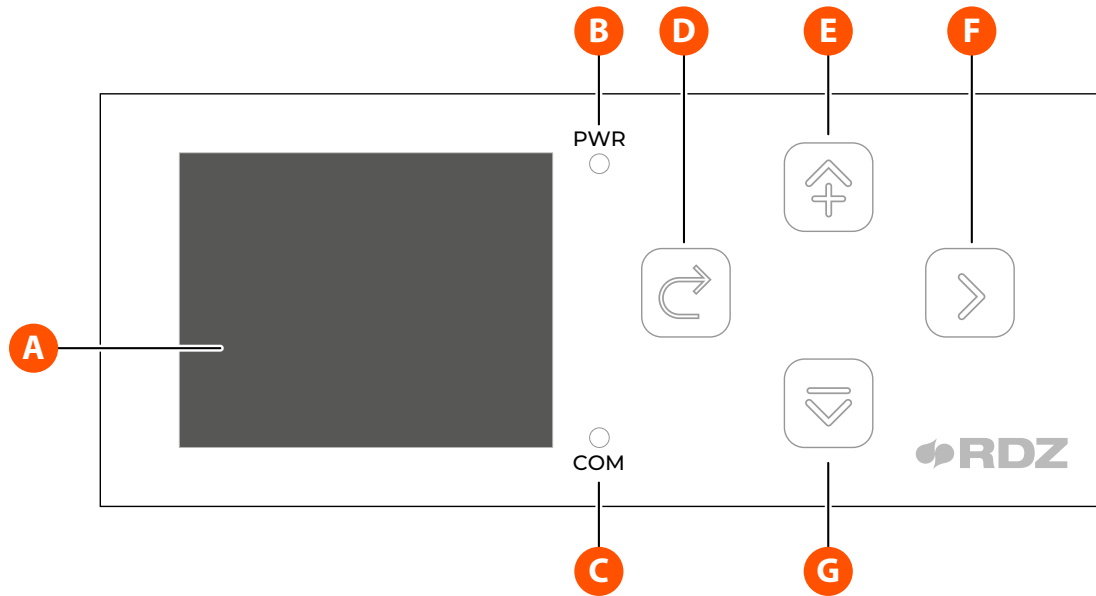
1.2 TYPES OF USE

- **Stand-alone:** CoRe MCT 010 does not have any R-Bus connection active. The module works exclusively with the consents managed through the configured digital inputs and/or the display.
- **R-Bus:** CoRe MCT 010 connected with R-Bus active but without the CoRe CONNECT web server. The module works on the basis of requests received from the devices connected to the network and/or through the digital inputs.
- **R-Bus + Supervisor:** CoRe MCT 010 connected with R-Bus active and with the presence of the CoRe CONNECT web server. The module receives certain settings from the CoRe CONNECT and works with the consents received from the devices connected to the network and/or through the digital inputs.



2 USING THE DEVICE

2.1 DISPLAY AND KEYBOARD



A	3.5" colour display with 160x128 pixel resolution		
B	PWR 	Power LED (Green)	If the LED is lit steady, it means that the device is powered and set to On or Away from Home
			If the LED flashes, it means that the device is powered and set to OFF
			The LED turned off indicates that the device is not powered
C	COM 	Communication LED (Blue)	If the LED is lit steady, it means that the device was in communication on the R-Bus, but the communication broke off
			If the LED is flashing (two short flashes with a pause in between), it means that the communication is in progress
			The turned off LED indicates the device is not connected on the R-Bus
D		ESC key	
E		UP key	
F		SET key	
G		DOWN key	

2.2 DESCRIPTION AND OPERATION OF THE KEYS

Key	Action	Function
SET	Brief press	<ul style="list-style-type: none"> To confirm the values being edited (Enter) To access the sub-menus
ESC	Brief press	<ul style="list-style-type: none"> To exit the editing operations (Reset) To return to the upper menu
UP	Brief press	<ul style="list-style-type: none"> Upward scrolling of the fields present in the menu being displayed Increase of the value of the field being edited
DOWN	Brief press	<ul style="list-style-type: none"> Downward scrolling of the fields present in the menu being displayed Decrease of the value of the field being edited



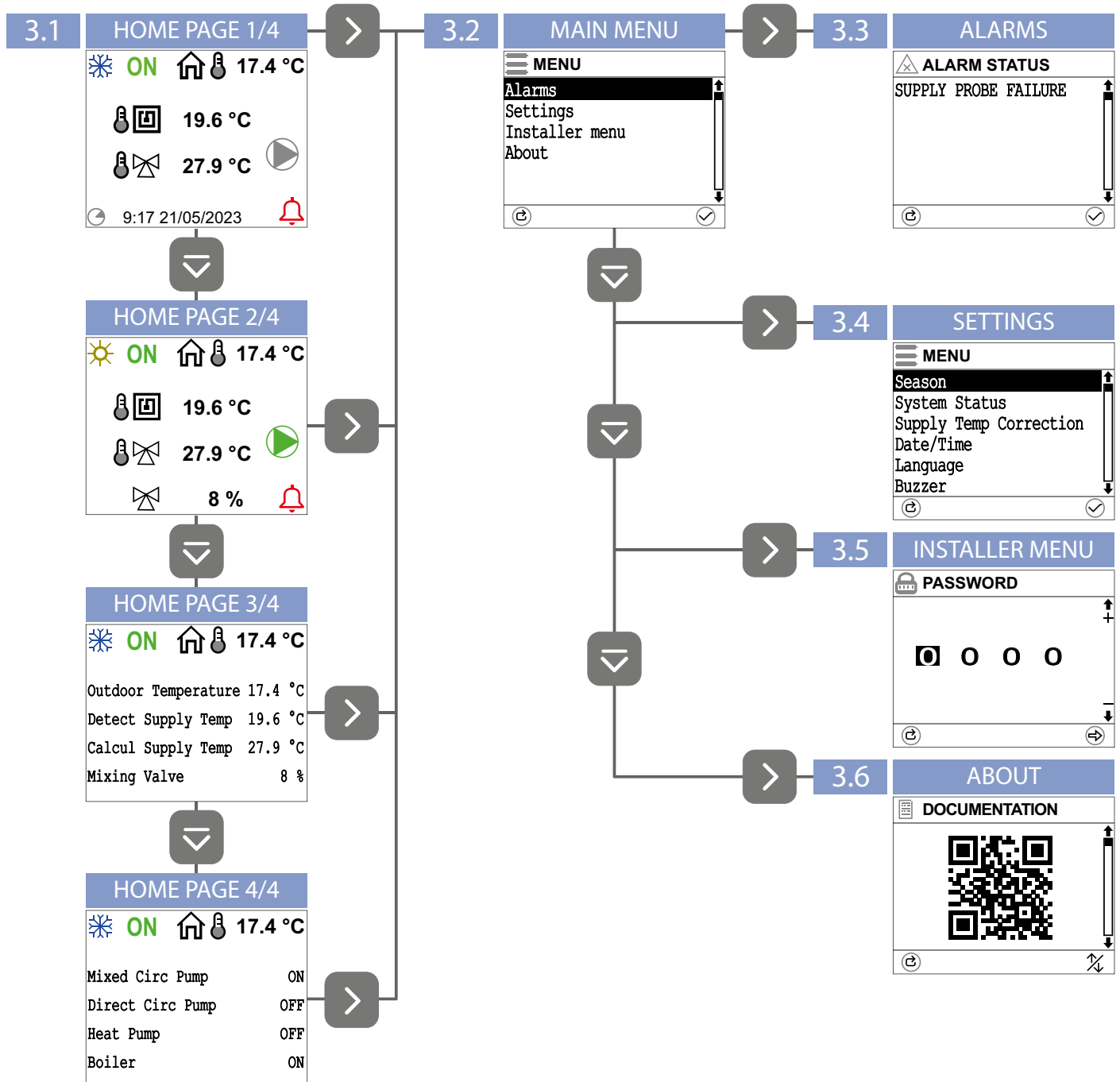
2.3 WIZARD START-UP

Only for the initial start-up of the device (thus without any active configuration) will the “Wizard start-up” window from the Installer Menu appear, preceded for a few seconds by a window showing the firmware version installed on the device.
 With this guided procedure a few parameters are set in sequence to give the device an initial configuration on the basis of the type of system installed.

WARNING: The initial configuration must be carried out during the start-up phase by expert and qualified personnel.
 For further details, consult the Technical Manual.

2.4 SUMMARY MAP

Below is a summary map showing the windows and main menus that can be displayed on the device together with the corresponding paragraphs for quick consultation in this manual.



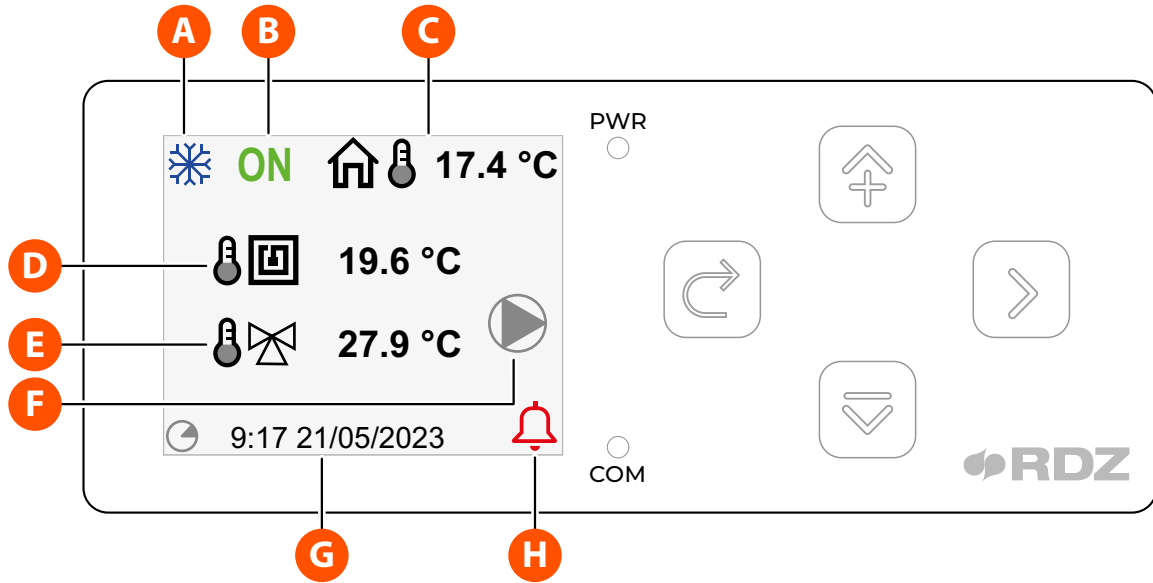
The and keys can be used to navigate the items on the menu in a cyclical way, so when the last menu item at the bottom of the list is reached, pressing the key brings up the first item and vice versa.

Pressing the key opens the page relative to the selected item and pressing takes the user to the previous page. All menus of the device work in this way.

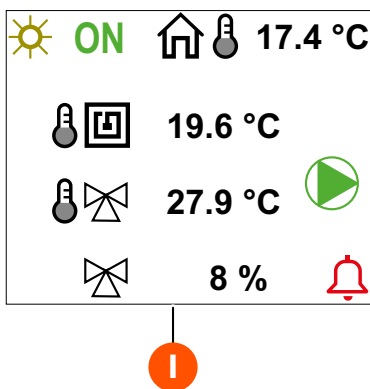


3 USING THE DEVICE

3.1 DESCRIPTION OF THE HOME PAGE

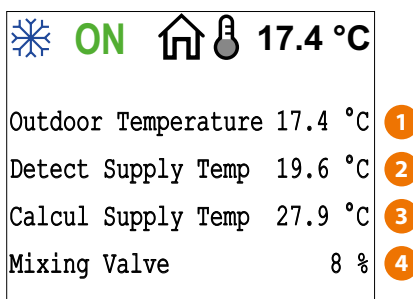


Description			
A			Indicates the summer season and thus the "Cooling" mode
			Indicates the winter season and thus the "Heating" mode
The icons are always lit steady. The icons flash when the season is being changed			
B	ON	Green	Indicates the "ON" status of the central heating unit module
	OFF	Grey	Indicates the "OFF" status of the central heating unit module
C		17.4°C	Indicates the outdoor temperature value measured by the analogue input (IA2)
		*** °C	The presence of the "***" symbols indicates the lack of connection with the outdoor temperature sensor
D		19.6°C	Indicates the supply temperature measured by the supply probe of the radiant heating system
		*** °C	The presence of the "***" symbols indicates the lack of connection with the supply sensor
E		27.9°C	Supply set-point: indicates the temperature of the supply water to the radiant heating circuit calculated by the system
		*** °C	The "***" symbols appear when the central heating unit module is not processing any value If the system is off, the field is left empty
F		Green	Indicates the "ON" status of the radiant heating circuit pump
		Grey	Indicates the "OFF" status of the radiant heating circuit pump
The flashing light indicates that the exit is being forced through the installer menu			
G		9:17 21/05/2023	Date and time set on the central heating unit module
H			The flashing red icon indicates the presence of alarms



Description			
		8 %	Indicates the percentage value of the mixing valve's opening.
		8 % *	The "*" symbol indicates that the valve opening value is set manually from the technical menu
			If no mixing valve is mounted in the system, the field remains empty

This page includes the information shown graphically above



No.	Value	Description
	17.4°C	Indicates the outdoor temperature value measured by the analogue input (IA2)
	*** °C	The presence of the "***" symbols indicates malfunctions/problems with the reading of the value or a lack of connection with the outdoor temperature sensor
	19.6°C	Indicates the supply temperature measured by the supply probe of the radiant heating system
	*** °C	The presence of the "***" symbols indicates malfunctions/problems with the reading of the value or a lack of connection with the supply sensor
	27.9°C	Indicates the temperature calculated by the system for the supply water temperature
	*** °C	The "***" symbols appear when the central heating unit module is not processing any value If the system is off, the field is left empty
	8 %	Indicates the mixing valve opening in percentage terms
	8 % *	The "*" symbol indicates that the valve opening value is set manually from the technical menu If no mixing valve is mounted in the system, the field remains empty



ON
17.4 °C

Mixed Circ Pump	ON	1
Direct Circ Pump	OFF	2
Heat Pump	OFF	3
Boiler	ON	4

No.	Value	Description
1	ON	Indicates the status of the mixed circuit pump. The possible values are ON, OFF or the time remaining to the pump's activation during the start-up phase or the time remaining to its switching off after the mixed system has activated. The presence of the "*" symbol indicates that the exit was forced through the installer menu
2	OFF	Indicates the status of the direct circuit pump. The possible values are ON, OFF or the time remaining to the pump's activation during the start-up phase or the time remaining to its switching off after the direct system has activated. The presence of the "*" symbol indicates that the exit was forced through the installer menu
3	OFF	Indicates the status of the heat pump. The possible values are ON, OFF or the time remaining to the heat pump's activation or switching off. The presence of the "*" symbol indicates that the exit was forced through the installer menu
4	ON	Indicates the status of the boiler. The possible values are ON, OFF or the time remaining to the boiler's activation or switching off. The presence of the "*" symbol indicates that the exit was forced through the installer menu

3.2 MAIN MENU

MENU
 3.3 Alarms
 3.4 Settings
 3.5 Installer menu
 3.6 About

The Main Menu is designed to rapidly access the main categories required for informing the user/installer and setting the device:

- Alarms: for accessing the Alarms page
- Settings: for accessing the User Menu, used for defining the main settings
- Installer: for accessing the Installer Menu, after entering the password
- About: consisting of three pages, it contains all the information relative to the device

Use the and keys to select the desired menu then press to access it. Press to return to the Home Page.

3.3 ALARMS MENU

ALARM STATUS
SUPPLY PROBE FAILURE

The Alarms Menu includes any anomalies and signals detected by the device:

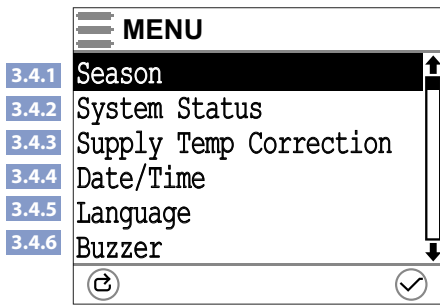
Alarm	Description
SUPPLY PROBE FAILURE	Probe of out reading range if the mixer valve is configured for operating in cooling or heating mode
OUTDOOR PROBE FAILURE	Probe out of the reading range
HP ALARM	Alarm detected by the digital input, check the heat pump and the relative manual to determine the cause of the problem
BOILER ALARM	Alarm detected by the digital input, consult the more detailed information on the boiler
SAFETY THERMOSTAT	Alarm detected by the digital input, check the safety thermostat
ANTIFREEZE FUNCT ON	A supply temperature below 4 °C has been detected
HIGH TEMP SUPPLY	The temperature of the supply water to the radiant heating circuit is too high

All the alarms reset automatically

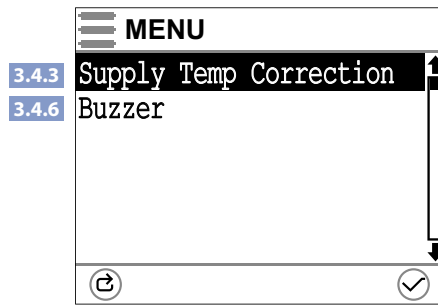


3.4 SETTINGS MENU

The Settings Menu enables the user to access a series of functions displayed according to the system configuration:



CoRe MCT 010
(Fig. 1)



CoRe MCT 010 + CoRe CONNECT
(Fig. 2)

With CoRe MCT installed without CoRe CONNECT (Fig. 1), all the menu items will be included.

N.B.: "H/C mode" and "System State" may not be present in the menu if they are managed using digital inputs.

If the CoRe MCT is connected to the CoRe CONNECT (Fig. 2), some of the menu items will not be present because they will be managed directly by the web server.

Use the and keys to select the desired menu then press to access it.

To return to the Main Menu, press .

3.4.1 SEASON



Used to select the operating mode depending on the season of the year:

- **Summer** (system works in cooling mode)
- **Winter** (system works in heating mode)

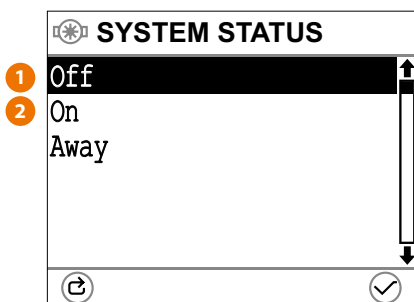
When the menu is opened, the operating mode is highlighted and is always visible also on the Home Page by means of the corresponding icons.

To change the current operating mode, use the and keys then press to confirm and return to the previous menu. If the operating mode icon flashes in the Home Page it means that the mode is being changed; the procedure lasts for a few minutes.

To return to the previous menu without making any changes, press .

N.B.: if this window is absent, it means that the mode changeover is effected through digital inputs, remotely via the APP or through home automation systems.

3.4.2 SYSTEM STATUS

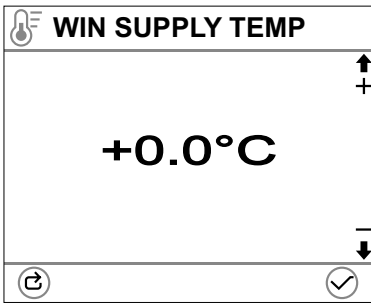


Used to switch the central heating unit module on or off. If the central heating unit module is the system's master (absence of the CONNECT module), the setting is transmitted also to all the other elements of the system when the probes and air treatment unit are switched off or on.

The central heating unit module, when the Connect module is present, can be switched on or off regardless of the system's general setting.



3.4.3 SUPPLY TEMPERATURE CORRECTION

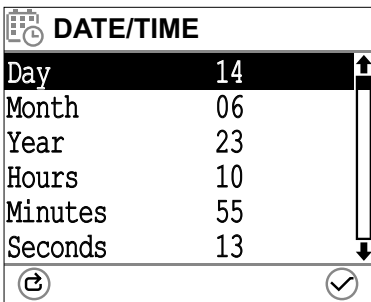


Allows the user to modify the supply temperature calculated in winter by adding an offset that increases or decreases the value within a range between -20°C and +20°C.

Modify the value using the and keys then press to confirm and return to the previous menu.

To return to the previous menu without making any changes, press .

3.4.4 DATE/TIME



Used to set the date and time on the central heating unit module.

Highlight the item to be modified using the and keys then press to start making the change.

While the value is being modified (flashing number), use the and keys to reach the desired value and confirm by pressing .

Repeat the procedure for all the desired items then press to return to the previous menu.

3.4.5 LANGUAGE

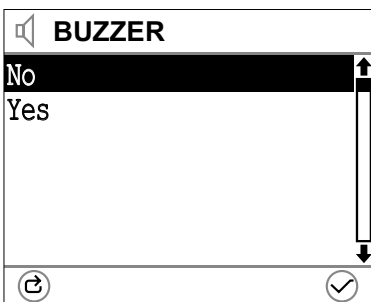


Used to select the language for the device's interface.

When the menu opens up, the current language is highlighted: use the and keys to select the desired language then press to confirm and return to the previous menu.

To return to the previous menu without making any changes, press .

3.4.6 BUZZER



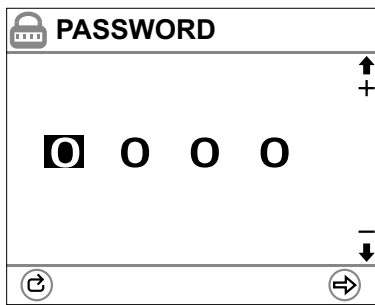
Used to enable or disable the buzzer when the keys are pressed.

Use the and keys to change the current setting then press to confirm and return to the previous menu.

To return to the previous menu without making any changes, press .



3.5 INSTALLER MENU



Menu reserved for technical personnel.
Enter the password to access the Installer Menu then consult the dedicated manual.

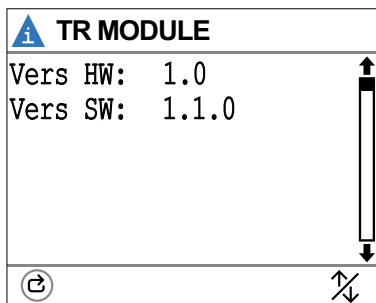
3.6 INFORMATION MENU

The Information Menu is used to view information on the central heating unit module.

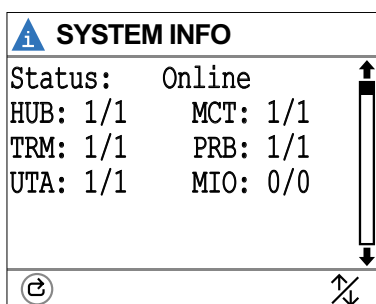
Use the and keys to reach the desired pages then press to return to the previous menu.



From the DOCUMENTATION page, by scanning the QR code it is possible to access the Web page dedicated to the product and view/download the related documentation.



The TR MODULE page shows the hardware (HW) and software (SW) versions installed on the device.



The SYSTEM INFO page shows information relating to the communication between the MCT 010 device and the other CoRe devices through the R-Bus network.

The first line indicates the status of the central heating unit module's connection to the R-Bus network. This status can be:

- Offline: no connection.
- Online: connected to the R-Bus network, without the CoRe CONNECT module (web server).
- Supervisor: connected to the R-Bus network and with the presence of a CoRe CONNECT module.

If there is an active connection, the next lines will show a list of connected devices divided by type:

- HUB = CoRe CONNECT
- TRM = (Terminal) CoRe Chrono TH, CoRe Air Control
- UTA = Air Treatment Unit, CoRe Air MU
- MCT (Central Heating Unit Module) = CoRe MCT 010
- PRB (Probe) = CoRe T, CoRe TH, CoRe Air Speed
- MIO (Input Output Module) = CoRe MZ, CoRe Air FC

For each type, the number of connected devices at the time of display compared to the total number connected to the R-Bus network will be shown.



CLICK I SCAN



qr.rdz.it/?qr=P648

FAE0EC00BZ.00
03/2024



RDZ S.p.A.

🏠 V.le Trento, 101 - 33077 SACILE (PN) - Italy

☎ Tel. +39 0434.787511 📠 Fax +39 0434.787522

✉ info@rdz.it 🌐 www.rdz.it

**COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =**