Fan

TEMPERATURE AND HUMIDITY REGULATION

MULTI-ZONE AND MULTI-SYSTEM

WiFi™ LoRa®

THE PERFECT
CLIMATE
IN EVERY
ENVIRONMENT

AND FOR EVERY TYPE OF INSTALLATION

FantiniCosmi

HEATING OR SAVING?
NO LONGER A PROBLEM

With the Fantini Cosmi multi-zone temperature control system, adjusting the temperature of each individual radiator or room is now easier and faster! !

✓ **Multi-system** and **multi-zone** solutions

✓ Smart **wireless** installation

✓ Even more **powerful** radio communication

✓ Easier management **via App**

A comfortable environment enhances quality of life, but energy costs and environmental sustainability must also be considered. How can you ensure the ideal temperature without increasing energy costs? The solution is an **intelligent temperature regulation system that heats or cools spaces only when and where needed**! This is possible thanks to the new Fantini Cosmi multi-zone radio temperature control system.

The Fantini Cosmi multi-zone system allows you to manage heating and cooling by **regulating temperature and humidity in different environments** (zones). The desired parameters for each zone are set on the CH180WIFIRL multi-zone programmable thermostat and can be viewed and modified locally using one or more devices installed in the respective zones.

Depending on the type of system (radiators, radiant panels, fan coils) and specific needs, users can **freely choose the devices to integrate into the network** and configure them accordingly.

UNIVERSAL FOR ALL SYSTEMS

The Fantini Cosmi multi-zone system components are modular, flexible, and adaptable to any installation requirement (radiators, fan coils, underfloor radiant systems), whether in centralized or autonomous heating systems. Based on specific needs, users can select the devices to integrate into the system configuration.

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The **Fantini Cosmi App** is available for free on:

Available on the App Store

ANDROID APP ON Google play

EVERY ENVIRONMENT IS ALWAYS CONNECTED

With the Fantini Cosmi App, you can control and adjust the temperature and programmed settings, as well as monitor humidity levels in each zone, even via WiFi.

COMFORT AND ENERGY SAVINGS

Schedule operating times and adjust the desired temperature in each room, ensuring warmth (or coolness) only when and where needed, without waste.

MONITOR YOUR ENERGY USAGE

With the Fantini Cosmi multi-zone system, you can track real-time usage history generating daily, monthly, and annual reports.

EASY AND FAST INSTALLATION

Installing the Fantini Cosmi multi-zone system is simple, fast, and cost-effective. Thanks to radio communication between all components, the system **adapts to any installation without requiring** structural modifications. The modularity and quick configuration make the Fantini Cosmi multi-zone system suitable for various applications, meeting all installation requirements.

FantiniCosmi   3

PERFECT TEMPERATURE AND HUMIDITY IN EVERY ROOM

With the Fantini Cosmi multi-zone temperature control system, you can **adjust the temperature and humidity in each room**, avoiding unnecessary energy waste while ensuring comfort and significant energy savings.

Different rooms in a home serve different functions, requiring varying temperatures. For example, living rooms and bathrooms should be warmer, while kitchens and bedrooms can have a lower temperature.

Temperature alone does not define ideal environmental conditions. Humidity levels are also crucial for well-being, with the recommended range being 40-60%. If humidity is too low, the environment becomes overly dry, which can cause discomfort.

Source: WHO (World Health Organization)

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Living room
20°C
50%RH

When at home, especially on weekends, this is the room where most time is spent, often relaxing and watching movies on the couch. A constant temperature of 20°C is recommended in the living room.

Kitchen
18°C
55%RH

This space is usually warmer than others, as the oven and stove contribute to raising the temperature. Therefore, it is important to keep the set temperature below 18°C.

Bathroom
22°C
45%RH

In the morning and evening, this should be the warmest room, as no one likes to feel cold right after waking up or after a hot shower.

Bedroom
19°C
50%RH

It should be the coolest room because a lower temperature, around 19°C, helps with breathing and relaxation while sleeping.

CUSTOMIZED COMFORT WITH THE MULTI-ZONE SYSTEM

The Fantini Cosmi multi-zone system is fully **flexible and customizable**, adapting to any installation need. The interconnected devices create limitless combinations to implement **any type of wireless multi-zone temperature and humidity control system**.

The new Fantini Cosmi multi-zone system is also multi-system, meaning it can be adapted to different applications, meeting diverse installation requirements.

The system allows for the management of:
· Centralized systems with vertical columns and radiators
· Autonomous systems with boilers and radiators
· Underfloor heating systems (both autonomous and centralized)
· Systems for both heating and cooling
· Centralized vertical column systems with user modules

The Fantini Cosmi multi-zone and multi-system solution is ideal for new homes, existing buildings, and renovation projects. It is a reliable ally for optimizing energy consumption in single-family homes, multi-story residences, and other scenarios.

System components:

CH180WIFIRL _ WIFI WIRELESS MULTI-ZONE PROGRAMMABLE THERMOSTAT

It acts as the supervisor of the temperature and humidity control system, communicating with zone devices and the EV200RL climate control module. The integrated WiFi connection allows remote system control via an app in a practical and intuitive way.

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C830RL _ WIRELESS ZONE THERMOSTAT-HUMIDISTAT

LoRa

It allows the visualization and adjustment of the temperature and humidity in the zone where it is installed, communicating the corresponding commands to the CH180WIFIRL programmable thermostat.

O70RL _ WIRELESS RADIATOR THERMOSTAT

LoRa

Modulates water flow in radiators to maintain the set temperature.

CH177RL _ 1 RELAY WIRELESS RECEIVER

LoRa

Controls auxiliary system components such as boilers, heat pumps, zone valves, cooling systems, dehumidifiers, ventilation, and irrigation systems.

EV200RL _ WIRELESS MULTI-SYSTEM CLIMATE REGULATOR

LoRa

Controls the thermal heads of the collector and manages mixing and secondary circuit activation (hot/cold) based on external temperature sensor readings.
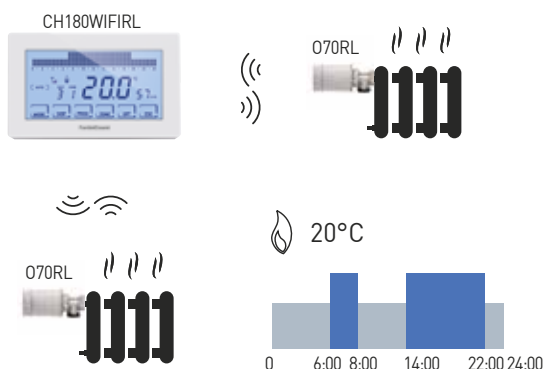
EVERY ENVIRONMENT HAS ITS IDEAL COMFORT

Thanks to the modularity of the devices, you can easily control the temperature and humidity in every space, ensuring optimal comfort while optimizing energy consumption and improving quality of life.
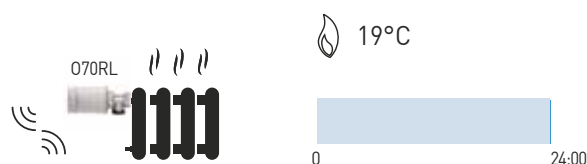

EXAMPLE OF A CENTRALIZED SYSTEM WITH VERTICAL COLUMNS AND RADIATORS

- The CH180WIFIRL multi-zone programmable thermostat directly controls the O70RL thermostatic heads. These heads receive the desired temperature value from the programmable thermostat and regulate accordingly based on the temperature detected by their internal sensor.

- The desired temperature setpoint in the zone can also be adjusted directly from the O70RL.
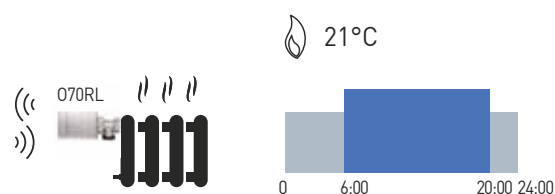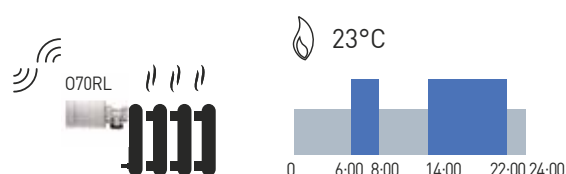
ZONE 2

O70RL   🔥 19°C

0   24:00

ZONE 1

CH180WIFIRL   O70RL

O70RL   🔥 20°C

0   6:00 8:00   14:00   22:00 24:00

ZONE 3

O70RL   🔥 21°C

0   6:00   20:00 24:00

ZONE 4

O70RL   🔥 23°C

0   6:00 8:00   14:00   22:00 24:00

FantiniCosmi
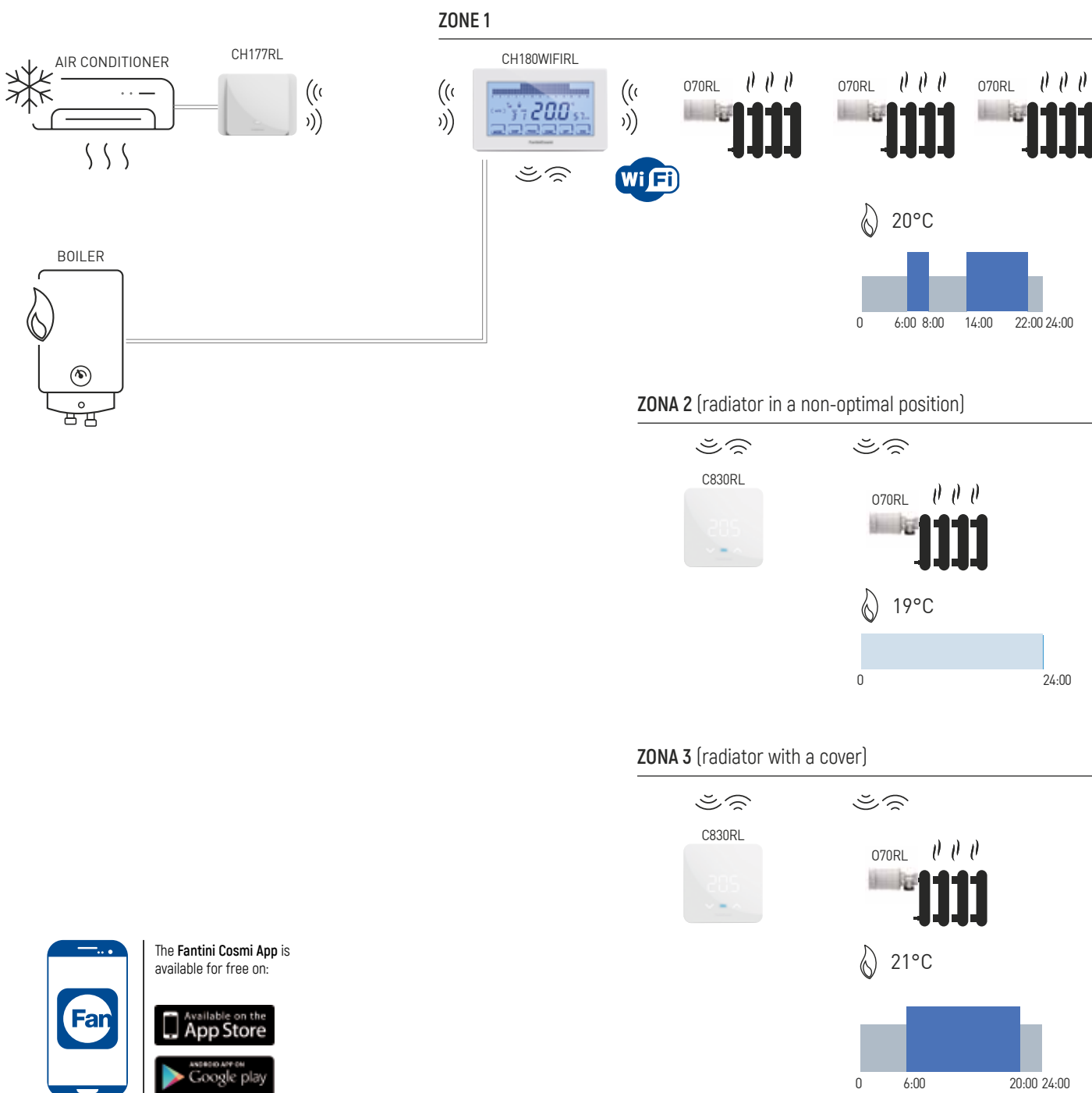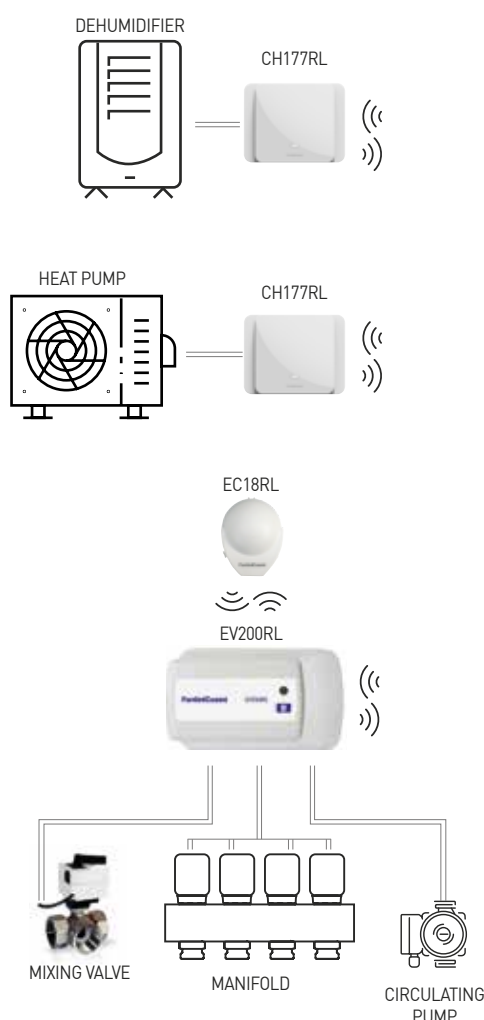
EXAMPLE OF AN INDEPENDENT RADIATOR SYSTEM WITH BOILER AND AIR CONDITIONER MANAGED VIA APP

- The boiler is directly connected to the output relay of the CH180WIFIRL programmable thermostat, which controls the O70RL thermostatic heads to maintain the desired temperature.

- If the thermostatic head is not optimally positioned (e.g., inside a niche or covered by a radiator cover), the CH180WIFIRL multi-zone programmable thermostat communicates with the C830RL zone thermostats (where present). These thermostats monitor the room temperature and activate the O70RL thermostatic heads when necessary. The desired temperature setpoint in the zone can also be adjusted directly from the O70RL or C830RL.

- The CH177RL actuator controls the switching on and off of air conditioners based on the ambient temperature values communicated by the CH180WIFIRL programmable thermostat.

- The entire system can be managed both locally and remotely through the app, compatible with iOS and Android systems.

ZONE 1

AIR CONDITIONER   CH177RL   CH180WIFIRL   O70RL   O70RL   O70RL

Wi Fi

🔥 20°C

0   6:00 8:00   14:00   22:00 24:00

BOILER

ZONA 2 (radiator in a non-optimal position)

C830RL

O70RL

🔥 19°C

0   24:00

ZONA 3 (radiator with a cover)

C830RL

O70RL

🔥 21°C

0   6:00   20:00 24:00

The **Fantini Cosmi App** is available for free on:

Available on the App Store

ANDROID APP ON Google play

EXAMPLE OF A HEATING AND COOLING SYSTEM WITH HUMIDITY CONTROL, AUTONOMOUS OR CENTRALIZED UNDERFLOOR, MULTI-ZONE WITH APP CONTROL
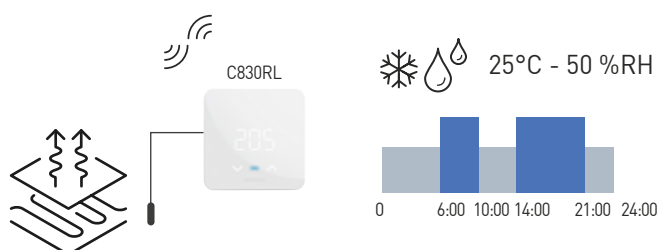
- The CH180WIFIRL multi-zone programmable thermostat, through the C830RL zone thermostat-hygrostats, regulates heating, cooling, and dehumidification in a hot-cold underfloor radiant system.

- The generator is wirelessly managed via the CH177RL actuator, while the EV200RL climate module handles climate compensation through the EC18RL external radio sensor, adjusting operation based on the environmental priority communicated by the CH180WIFIRL thermostat. Additionally, the EV200RL module regulates the ON-OFF activation of the various zones requiring heat, ensuring optimal control and efficient thermal energy distribution.

- A general or zone-specific dehumidifier prevents possible condensation formation during the summer by continuously monitoring the humidity level, which is wirelessly communicated by the C830RL zone thermostats. To ensure optimal comfort regulation, the C830RL zone thermostats are equipped with an EC19 floor sensor that communicates real-time temperature changes, ensuring precise and responsive Dew Point control.

- The system can be managed both locally and remotely through the APP, compatible with iOS and Android systems.
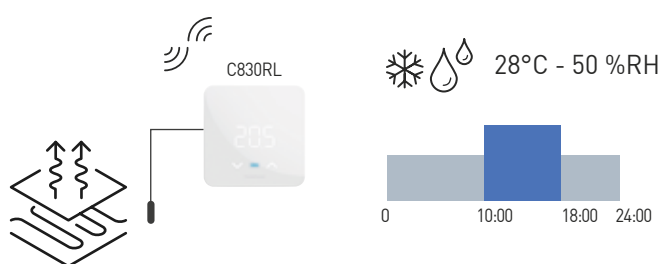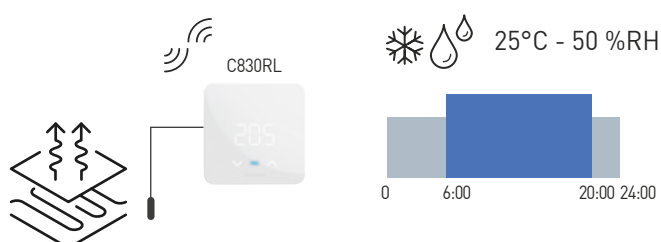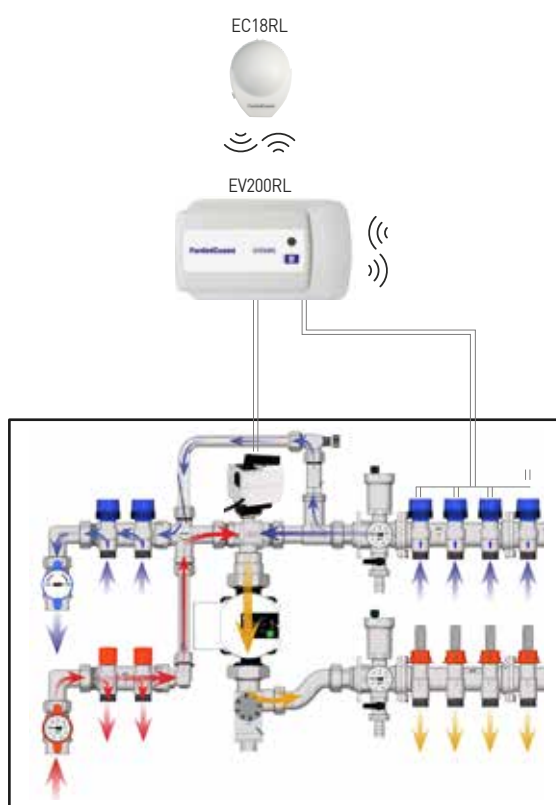

DEHUMIDIFIER CH177RL

HEAT PUMP CH177RL

EC18RL

EV200RL

MIXING VALVE   MANIFOLD   CIRCULATING PUMP

The **Fantini Cosmi App** is available for free on:

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ANDROID APP ON Google play

ZONE 1

CH180WIFIRL

WiFi

26°C - 50 %RH

0   6:00 10:00 14:00   22:00 24:00

ZONE 2

C830RL

25°C - 50 %RH

0   6:00 10:00 14:00   21:00 24:00

ZONE 3

C830RL

28°C - 50 %RH

0   10:00   18:00   24:00

ZONE 4

C830RL

25°C - 50 %RH
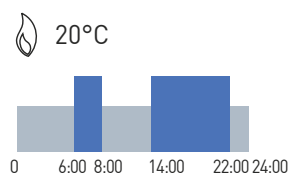
0   6:00   20:00 24:00

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EXAMPLE OF A CENTRALIZED HEATING SYSTEM WITH VERTICAL COLUMNS AND USER MODULE
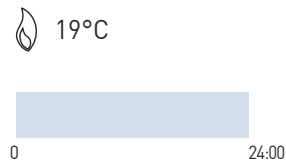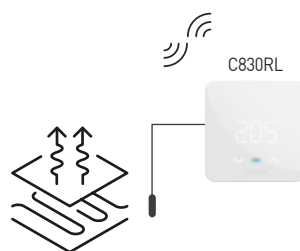
- The CH180WIFIRL multi-zone programmable thermostat, through the C830RL zone thermostat-hygrostats, regulates heating and cooling in an underfloor system served by a user module with a mixing valve and distribution manifold.

- The EV200RL climate module handles climate compensation through the EC18RL external radio sensor, adjusting operation based on the environmental priority communicated by the CH180WIFIRL thermostat. Additionally, it regulates the ON-OFF activation of the various zones requiring heat, ensuring optimal control and efficient thermal energy distribution.

- To ensure optimal room temperature regulation, the C830RL zone thermostats are equipped with an EC19 floor sensor. This sensor communicates real-time temperature changes directly from the radiant panel to the temperature control system, ensuring precise and responsive temperature regulation.
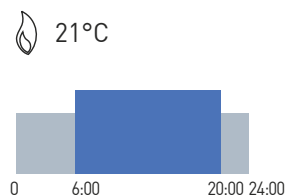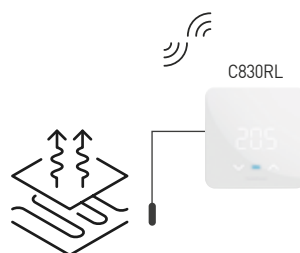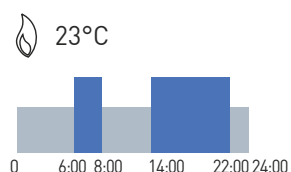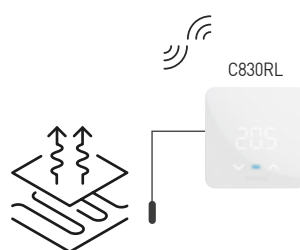
EC18RL

EV200RL

ZONE 1

CH180WIFIRL

07:41 23-10-18
26.0°

20°C

0   6:00 8:00   14:00   22:00 24:00

ZONE 2

C830RL

19°C

0   24:00

ZONE 3

C830RL

21°C

0   6:00   20:00 24:00

ZONE 4

C830RL

23°C

0   6:00 8:00   14:00   22:00 24:00

SMART **CONNECTIVITY** WITH THE FANTINI COSMI **APP**

With the integrated WiFi and Fantini Cosmi App, your heating or cooling system is always connected, providing optimal comfort, energy savings, and intuitive control from anywhere.

With the App, you can:

- Turn the heating or cooling system on or off;
- Monitor and adjust temperature and humidity in each zone;
- View real-time system status,
- Set and adjust your ideal temperature at any time;
- Create custom daily or weekly schedules;
- Optimize energy savings;
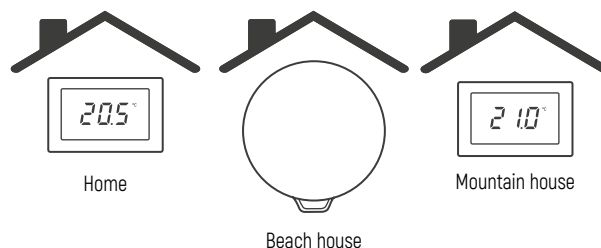- Receive push notifications for system alerts and anomalies.

The **Fantini Cosmi App** is available for free on:
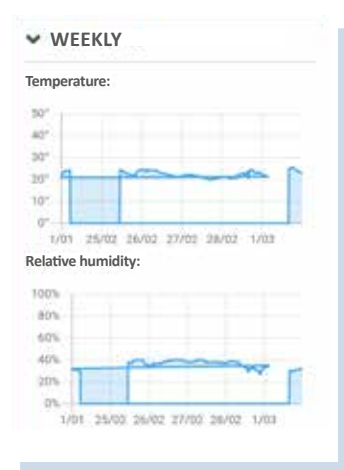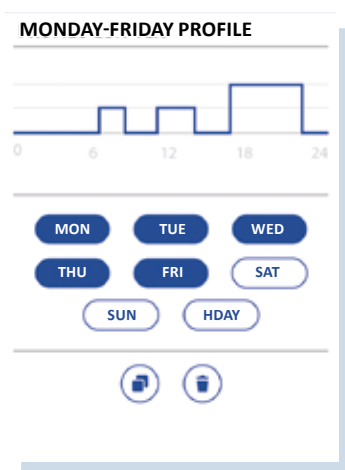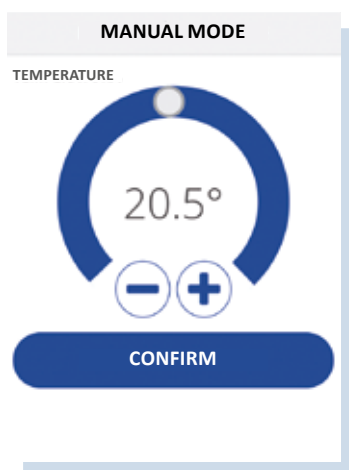
App Store

Google play

Choose Your Comfort

Use the Fantini Cosmi App for all your programmable thermostats at home or in the office, by the sea or in the mountains. You can manage multiple residences and multiple thermostats within a single home.

Home

Beach house

Mountain house

Simple and Intuitive Interface

The modern and highly intuitive graphical interface, along with pre-set programs, helps users easily manage their thermostat with remote control capabilities.

MANUAL MODE

TEMPERATURE

20.5°

CONFIRM

MONDAY-FRIDAY PROFILE

0   6   12   18   24

MON	TUE	WED
THU	FRI	SAT
SUN	HDAY

WEEKLY

Temperature:

50° 40° 30° 20° 10° 0°
1/01 25/02 26/02 27/02 28/02 1/03

Relative humidity:

100% 80% 60% 40% 20% 0%
1/01 25/02 26/02 27/02 28/02 1/03

Control and Share

With the Fantini Cosmi App, you can share thermostat management with other users of your choice.

Guided Installation

Through a guided installation procedure, you will configure the app and your chronothermostat in just a few simple steps.

LoRa® TECHNOLOGY
FOR LONG-RANGE COMMUNICATION

The long-range LoRa® telecommunications technology ensures stronger signal coverage and high reliability

The new Fantini Cosmi multi-zone system is solid and reliable, utilizing LoRa® long-range communication technology to connect various devices.

The LoRa® protocol ensures greater signal coverage and high reliability, reaching distances of up to 800 meters in open areas while maintaining low energy consumption, similar to that of a remote control.

It allows a large number of devices to connect to a single wireless network, even over long distances (up to 800 meters in open areas), overcoming obstacles such as thick walls, floors, and reinforced concrete, reaching underground spaces such as basements, storage areas, and even multiple levels of a home.

Installation, configuration, and usage of the system devices are simplified, eliminating the need for cables or remote controls.

LoRa® technology key benefits:

- Strong signal penetration even in underground environments and urban areas
- Wide coverage for connecting multiple devices
- Flexibility: It allows you to connect various devices and technologies.
- Secure, end-to-end encrypted communication

FantiniCosmi

DESIGNED
FOR INSTALLERS

Wireless and modular solutions for simple installation without structural work

The installation of the Fantini Cosmi multi-zone radio system adapts to any system without requiring structural work. The O70RL radiator actuators and C830RL zone thermostat-hygrostats are battery-powered, and all components communicate wirelessly.

Thanks to its modularity and quick configuration, the Fantini Cosmi multi-zone system is suitable for a wide range of applications, covering all installation needs.

Configuration and communication between devices take place via the LoRa® radio protocol, ensuring extended signal range and high reliability, covering distances of up to 800 meters in open areas.

PERFECT
FOR USERS

A system that combines easy installation with maximum user comfort. Fantini Cosmi prioritizes efficiency, modularity, and ease of use to meet all needs, making perfect climate control a daily experience.

SYSTEM COMPONENTS

WiFi wireless multi-zone programmable thermostat

Intellicomfort CH180WIFIRL

The CH180WIFIRL allows direct or remote control of the Fantini Cosmi multi-zone radio temperature regulation system via an app. It serves as the supervisor for different areas of the home, communicating with the C830RL environmental thermostats-humidistats, O70RL radio thermostatic heads for radiators, and CH177RL actuators for boilers or zone solenoid valves.

It allows the creation of custom programs for managing temperature and humidity in each zone, which can be easily modified based on needs. Both on the LCD display and via the app, it's possible to view the overall energy consumption of the system through an intuitive graph.

The CH180WIFIRL can communicate with up to 32 radio devices (such as thermostats and actuators) and manage up to 8 zones, ensuring precise and flexible control of the entire system.

ErP Classification (Reg. EU 811/2013 - 813/2013):
- Class IV; 2%
- Class VIII; 5% when used with other devices in the Fantini Cosmi wireless multi-zone system

CODE	POWER SUPPLY	TEMPERATURE CONTROL RANGE	PROTECTION DEGREE
CH180WIFIRL	230V - 50HZ	2 ÷30 °C	IP40

The **Fantini Cosmi App** is available for free on:

- Manages: heating, cooling, and humidity control for the system and individual zones
- Operating Modes: MAN (manual), AUTO (weekly schedule), HOLIDAY (8th-day mode), JOLLY (programmable up to 90 days), OFF (system off or antifreeze program)
- Adjustable differential from 0.3 to 5°C
- Customizable zone offset
- System-wide and screen-cleaning password locks
- External relay changeover support
- External sensor management
- 1 configurable output relay
- Condensation prevention control
- Alarm management for exceeding min/max temperature limits
- System shutdown protection for temperature threshold violations
- Fault diagnostics display
- Automatic daylight saving time function
- LCD display with white backlighting
- Supports up to 32 wireless devices and 8 controllable zones
- Customizable zone names
- Complies with Directive 2014/53/EU (RED)

Wireless radiator thermostat

O70RL

LoRa

The O70RL thermostatic head replaces the manual adjustment knob on the thermostatic valve of the radiator. The actuator controls the valve's piston to modulate the water flow, maintaining the room temperature set on the chronothermostat or on the thermostatic head itself.

The O70RL is compatible with all thermostatic valves featuring an M30x1.5 connection. For valves with different connections, the appropriate adapter (not included in the package) can be used.

CODE	POWER SUPPLY	VALVE CONNECTION	TEMPERATURE CONTROL RANGE
O70RL	2 alkaline batteries 1.5V – LR6 – AA	M30x1.5mm	2 ÷ 30°C; increment of 0.1°C

ADAPTER CODE	COMPATIBLE THERMOSTATIC VALVES	
309703A	Adapter for IRSAP/CALEFFI valves	
309704	Adapter for Giacomini valves	
309706A	Adapter for valvole FAR valves	

- Display orientation: 3 positions (vertical or horizontal installation)
- Protection rating: IP30
- Transmission frequency: ISM band EU868
- Complies with Directive 2014/53/EU (RED)

Wireless zone thermostat-humidistat

C830RL

LoRa

The C830RL environmental thermostat-humidistat functions as the zone ambient probe, displaying the current temperature and humidity settings of the zone in which it is installed, and allowing temporary adjustments to these settings, such as the regulation of temperature and humidity set-points.

In the management of radiant panel systems operating in the summer mode, with the contribution of the optional EC19 floor probe, it helps with precise regulation of the ambient temperature, enabling the cooling system to turn off when the DewPoint limit is reached, and simultaneously activating the Dehumidifier (if provided).

CODE	POWER SUPPLY	TEMPERATURE CONTROL RANGE	MOUNTING	PROTECTION DEGREE
C830RL	2 batteries AA 1,5V	2 ÷ 30 °C	wall	IP32

- Allows temporary adjustments to temperature and humidity set-points
- Includes square and rectangular base kit
- Screen-cleaning password lock
- Positive display with white backlighting
- Powered by 2 AA 1.5V batteries
- ISM band EU868 transmission frequency
- Wall-mounted installation
- Complies with Directive 2014/53/EU (RED)

Floor temperature sensor

EC19

LoRa

The floor temperature probe can be connected to the C830RL zone thermostats in the management of radiant panel systems to ensure precise control of the DewPoint (condensation) during summer operation. When the limit value detected by the probe is reached, the cooling system shuts off, and simultaneously, if provided, the dehumidification function is activated.

CODE	LENGTH	TYPE	PROTECTION DEGREE
EC19	3 m	NTC 10K Ω a 25°C	IP32

- Capsule: Nylon 7x25mm
- Cable: PVC double-insulated, white exterior
- Tinned terminals

Wireless multi-system climate regulator

EV200RL

LoRa

It controls the electrothermal heads of the manifold and manages the mixing and activation of the secondary circuit (hot/cold). Additionally, when paired with the EC18RL radio external temperature probe, it regulates and optimizes the system's operation based on the data gathered from the system and the external weather conditions.

The EV200RL climate control unit can be connected to the supply and return probe for pits (model EC17 - optional).

CODE	POWER SUPPLY	MOUNTING	PROTECTION DEGREE
EV200RL	230Vca - 50HZ	wall	IP52

- Auxiliary pump relay: 5(3)A
- Power consumption: 4VA max (excluding load)
- Contact rating: 5 (3) A – 250V AC

230V

Configuration via App
FAN BUILDER

Wireless outdoor temperature sensor

EC18RL

LoRa

The supplementary EC18RL probe detects the external temperature and transmits the data via radio to the EV200RL climate controller, allowing the heating and cooling system's operation to be optimized. This way, the system adapts in real time to external weather conditions, ensuring optimal energy efficiency and comfort.

CODE	PROTECTION DEGREE	OPERATING TEMPERATURE
EC18RL	IP55	-30 ÷ 60°C

- Thermoplastic casing
- NTC thermistor sensing element
- 3V CR123/A battery powered
- ISM band EU868 transmission frequency
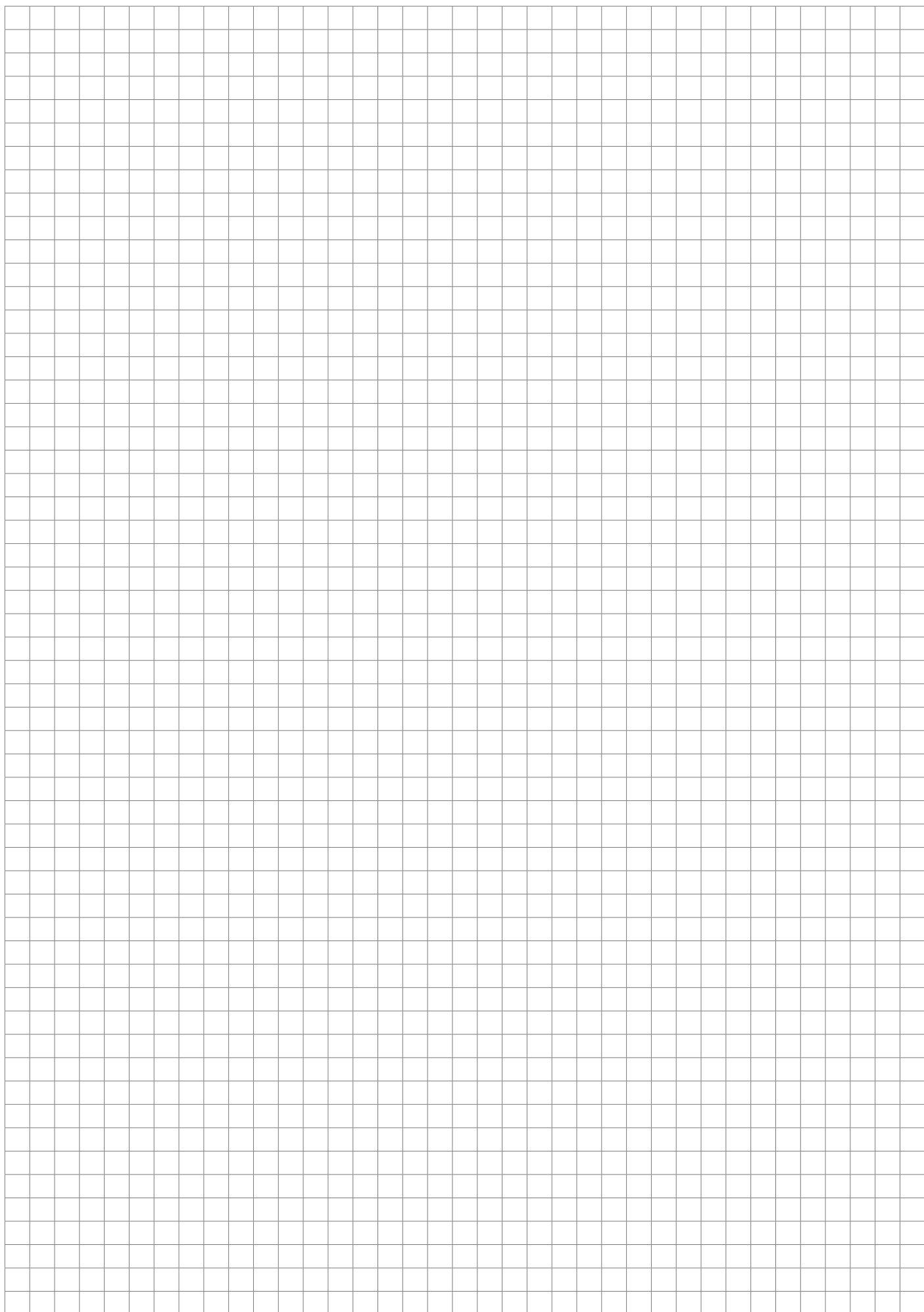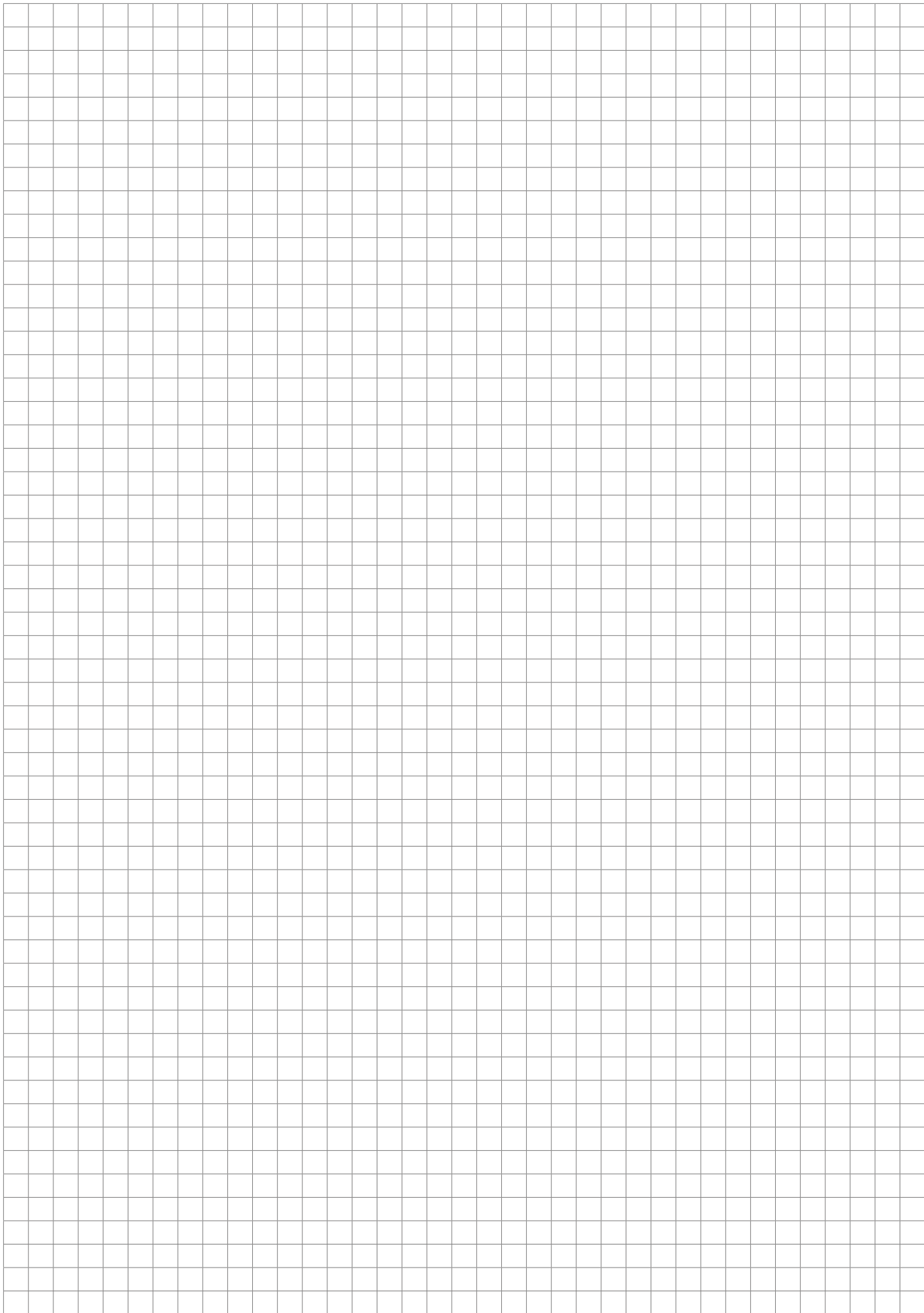
1 relay wireless receiver

CH177RL

LoRa

The CH177RL device is a 1-relay actuator module that, connected to the wireless network of the Fantini Cosmi multi-zone system, allows the activation and management of various units in the system, such as boilers, heat pumps, zone solenoid valves, cooling systems, dehumidifiers, VMC (controlled mechanical ventilation), irrigation systems, and other devices.

CODE	POWER SUPPLY	MOUNTING	PROTECTION DEGREE
CH177RL	230Vca - 50HZ	wall	IP32

- 1-Relay Configurable for: heating or cooling, dehumidification, integration
- Complies with: EN 60730-1, Directive 2014/53/EU (RED)
- ISM band EU868 transmission frequency
- Wall-mounted installation
- Contact rating: 5(43A – 250V AC

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