

Chapter 6 Regarding environmental thermoregulation, the requirements of designers, installers and the actual customers have become increasingly higher over the years. More appropriate climate comfort, considerable savings in energy consumption, optimised maintenance and greater safety are now required in every type of building, from residential to tertiary. To allow all this, we offer innovative thermoregulation systems, developed based on the most current technologies and focused expressly on the climate regulation of radiant systems for heating and cooling.



Thermoregulation

Products

146	Thermoregulation - KLIMAdomotic TRV
148	Thermoregulation - KLIMAdomotic RAD
149	Thermoregulation - KLIMAbus
151	Thermoregulation - Stand-Alone
152	Thermoregulation - Wireless

Thermoregulation - KLIMAdomotic TRV

A COMPLETE PLATFORM TO CONTROL INDOOR COMFORT

KLIMAdomotic is a smart and easy control system optimized for radiant panel and thermoregulation systems with radio controlled thermostatic valves (Wireless). It thus enables to control, with one single user interface, all aspects of indoor comfort, from heating to summer air conditioning, through air exchange and humidity control. The KD410 Connect control unit is configured based on the installed system. The product will feature a software version specific for the different type of systems: Connect-Rad for radiant systems, Connect-TRV for systems with thermostatic valve thermoregulation. With KD410, the user is constantly connected to his system: easy to configure with user-friendly graphic interface and remotely controllable through webpage for desktops or with most Smartphones through "Giacomini Connect" dedicated APP.

KLIMADOMOTIC SIMPLE TO INSTALL, EASY TO ADJUST. OFFER YOUR CUSTOMERS THE WI-FI CLIMATE.



APPLICATION
WITH RADIATORS
KD410Y002

APPLICATION
WITH RADIANT SYSTEMS
KD410Y001



DISCOVER THE NEW KLIMADOMOTIC BY GIACOMINI.
The Wi-fi HVAC system for radiators and radiant systems.

Control domestic comfort with the innovation of Klimadomotic. Offer your clients the perfect tool to adjust climate in every room, with wireless technology, touch display and remote control with Giacomini's Connect App. Available for both radiator and radiant systems applications. All the comfort smartness right in your hands.

Control all the environments from a single TOUCH DISPLAY

Make also a centralized system INDEPENDENT

Check it too from smartphone through the APP



KD410

PRODUCT CODE	POWER SUPPLY		
KD410Y002	Connect-TRV (230 V)	1	-

Control unit with touch screen display for climatic control. It can be properly configured based on the installed system. The control unit features a specific software version according to the different type of system:

- KD410Y002: Connect-TRV for thermoregulation systems with thermostatic valves

It supports the following communication protocols:

- ZigBee (wireless communication with K470W chronothermostat for radiators)
- WiFi (wireless communication with WiFi Router)
- LoRa (wireless communication with KA410 control actuator and K410W temperature/humidity sensors)

INFO

KD410Y002 Connect-TRV

Power supply:

- Table mount connection: 5 Vdc (through external power supply 230 Vac / 5 Vdc mini-USB)
- Wall mount connection: 12 Vdc (through rear quick connector 230 Vdc / 12 Vdc)



K410W

PRODUCT CODE	POWER SUPPLY		
K410WY001	Temperature sensor	1	-

Temperature/humidity or temperature only wireless sensors.

INFO

KLIMAdomotic-TRV

K410WY001: wireless temperature sensor to be placed in rooms controlled by the K470W chronothermostat for radiators. Communication with KD410Y002 Connect-TRV through LoRa protocol.

Power supply: 2 batteries AA 1,5 V.



KE410

PRODUCT CODE	POWER SUPPLY		
KE410Y001	230 V (ITA 16 A)	1	-
KE410Y002	230 V (SHUKO 16 A)	1	-

ZigBee wireless signal repeater (Extender) to extend the radio coverage between the KD410 Connect-TRV control unit and the farthest K470W chronothermostats for radiators. Power supply: 230 V.



ZigBee

KA410

PRODUCT CODE	POWER SUPPLY		
KA410Y001	230 V	1	-

Wireless control actuator to turn ON/OFF the heat generator (boiler, heat pump, electric actuator). Communication with KD410 Connect-TRV control unit through LoRa protocol. Power supply: 230 V.



K470W

PRODUCT CODE	POWER SUPPLY		
K470WX001	-	1	-

Wireless chronothermostat for radiators (ZigBee standard).

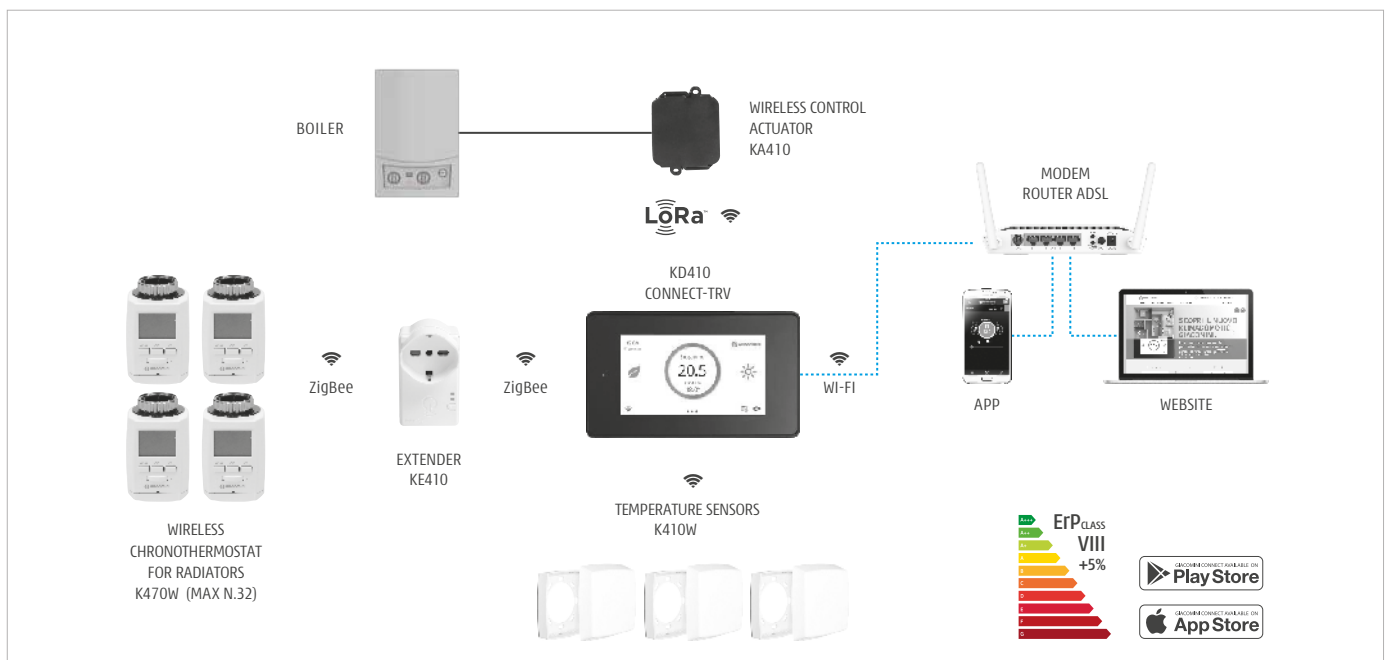
Operation combined with the KD410 Connect-TRV for remote management of heating systems.

Equipped with adaptors for installation on Giacomini "TG" or "H" series valves.

Power supply: 2 batteries AA 1,5 V.



ZigBee



Thermoregulation - KLIMAdomotic RAD

KD410

PRODUCT CODE	POWER SUPPLY		
KD410Y001	Connect-RAD (12 V)	1	-

Control unit with touch screen display for climatic control. It can be properly configured based on the installed system. The control unit features a specific software version according to the different type of system: KD410Y001: Connect-RAD for radiant systems. It supports the following communication protocols:

- WiFi (wireless communication with WiFi Router)
- Modbus (wired communication with KPM40 actuator modules)



INFO

Power supply: 12 Vdc through KPM40 actuator module

KPM45

PRODUCT CODE	POWER SUPPLY		
KPM45Y002	Modbus	1	-

"Air" actuator module to control various types of air treatment units: dehumidifiers, dehumidifiers with integration and possible heat recovery, fan-coil. Power supply: 230 V.



K465

PRODUCT CODE	POWER SUPPLY		
K465Y001	12 V	1	-

External temperature probe. To be connected to KPM40 actuator module through wired bus. Temperature measurement range -40÷85 °C. Power supply: 12 V through KPM40 actuator module.



KPM40

PRODUCT CODE	POWER SUPPLY		
KPM40Y002	Modbus	1	-

"Hydro" actuator module of the radiant system hydraulic components.

It carries out the following actions:

- opens/closes the thermo-electric actuators (up to 20)
- opens/closes the mixing valve
- turns ON/OFF the system circulator and the air treatment units
- summer/winter commutation

It can control up to 8 rooms, bathrooms excluded (controlled by a dedicated relay outlet). Power supply: 230 V.



K410W

PRODUCT CODE	POWER SUPPLY		
K410WY002	Temperature/Humidity	1	-
K410WY003	Temperature sensor	1	-
K410WY012	Temp./Humidity (Access point)	1	-

Temperature/humidity or temperature only wireless sensors.

INFO

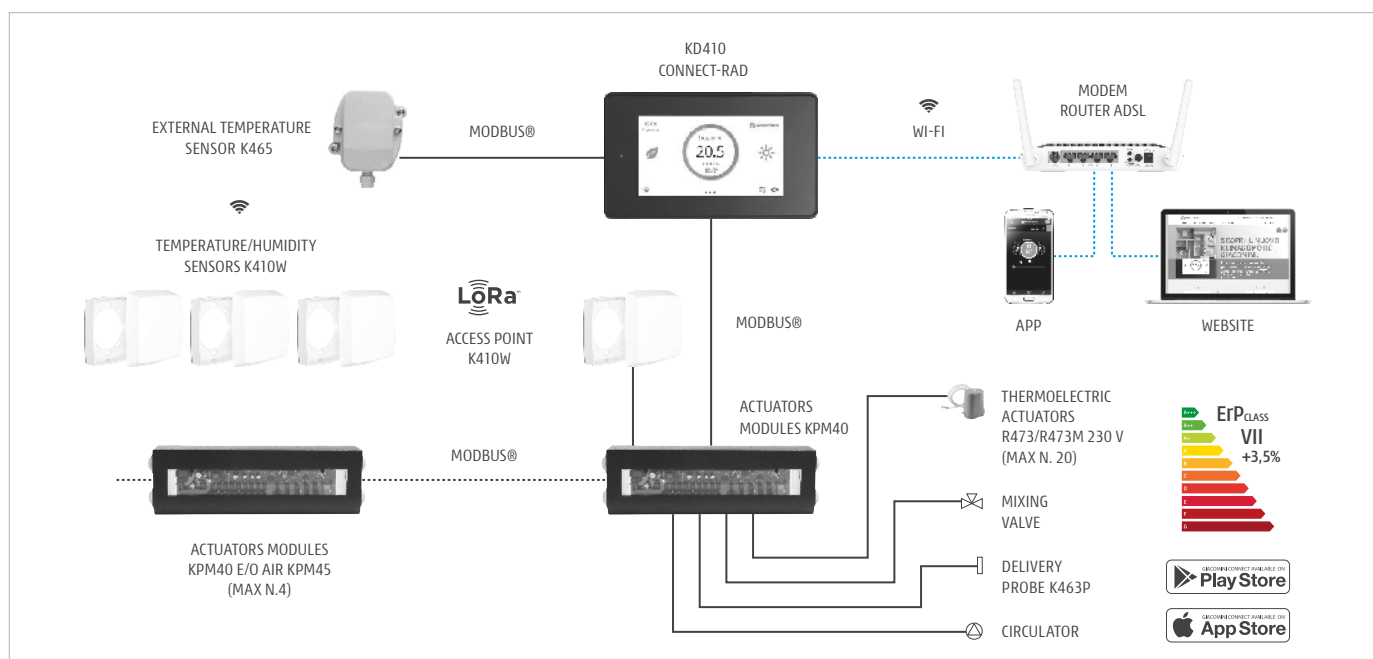
KLIMAdomotic-RAD

K410WY002: wireless temperature/humidity sensor to be placed in any rooms treated by the radiant system and put in communication with the KPM40 Hydro actuator module through the K410WY012 Access-Point via Lora protocol. Power supply: 2 batteries AA 1,5 V.

K410WY003: wireless temperature sensor to be placed in any rooms treated by the radiant system and put in communication with the KPM40 Hydro actuator module through the K410WY012 Access-Point via Lora protocol. Power supply: 2 batteries AA 1,5 V.

K410WY012: Access-Point wireless temperature/humidity sensor to be placed in a room treated by the radiant system. It takes wireless data from the others K410W sensors and send them to the KPM40 Hydro actuator module through Modbus wire.

Power supply: 12 V via KPM40 actuator module.



Thermoregulation - KLIMAbus

KLIMABUS - BUS THERMOREGULATION SYSTEM

New bus system for control of radiant heating and cooling systems. Modular system to control both simple heating and cooling mixing groups and more complex residential and commercial systems, with air treatment systems for dehumidification, cold integration, air recirculation and controlled mechanical ventilation. Possible connection with main control protocols available on the market. KLIMAbus can be used with domotic communication standards, such as Modbus and KNX Applications easy to configure through guided menus for easy installation and commissioning. For more details on how to use the system, please contact our Technical Assistance service.



KPM30

PRODUCT CODE	POWER SUPPLY	□	⊞
KPM30Y001	24 V	1	-
KPM30Y002	24 V	1	-
KPM30Y003	24 V	1	-
KPM30Y004	24 V	1	-
KPM30Y005	24 V	1	-



Regulation unit for heating/cooling systems. With display panel for system monitoring, configuration and management. Dimension 6 DIN modules. Possibility of controlling the mixing valve, circulator and voltage-free contact outputs.

Optional connection with KD201 remote display.

Possibility of connection (via Bus) with KPM35 expansion board and K492B/K495B/L or K493T/I ambient probes.

EC certification.

KPM31

PRODUCT CODE	POWER SUPPLY	□	⊞
KPM31Y001	24 V	1	-
KPM31Y002	24 V	1	-
KPM31Y003	24 V	1	-
KPM31Y004	24 V	1	-
KPM31Y005	24 V	1	-



Regulation unit for heating/cooling systems. To be combined with KD201 remote display for system monitoring, configuration and management. Dimension 6 DIN modules.

Possibility of controlling the mixing valve, circulator and voltage-free contact outputs. Possibility of connection (via Bus) with KPM35 expansion board and K492B/K495B/L ambient probes.

EC certification.

KPM35

PRODUCT CODE	POWER SUPPLY	□	⊞
KPM35Y001	24 V	1	-

Input/output expansion board for KPM30 or KPM31 regulation unit.

Voltage-free contact outputs with possibility of commanding the electrical actuators or air treatment systems for dehumidification or integration. Dimension 4 DIN modules.

EC certification.



KPM36

PRODUCT CODE	POWER SUPPLY	□	⊞
KPM36Y001	ModBus board	1	-
KPM36Y002	Konnex board	1	-
KPM36Y003	Ethernet board	1	-



Boards for KPM30/KPM31 regulation units.

K497

PRODUCT CODE	POWER SUPPLY	□	⊞
K497Y001	For KPM30 or KPM31	1	-
K497Y002	For KPM35	1	-



Kit of removable terminals

for KPM30/KPM31/KPM35 regulation unit.

KD201

PRODUCT CODE	POWER SUPPLY	□	⊞
KD201Y001	-	1	-



LCD display with keyboard for system monitoring, configuration and management. To be used in combination with the KPM30/KPM31 regulation unit. Direct power supply from the regulation unit. Surface mounting. EC certification.

K492B

PRODUCT CODE	POWER SUPPLY	□	⊞
K492BY002	230 V	1	-

Thermostat with backlight display and local interface for controlling ambient temperature and humidity. To be used in combination with the KPM30/KPM31 regulation unit, connected via Bus. Modbus RTU slave communication on RS485. Flush-mounting installation in round domestic box. EC certification.



K495B

PRODUCT CODE	POWER SUPPLY	□	⊞
K495BY002	24 V	1	-

Temperature/humidity probe without visualization and local interface (blank). To be used in combination with the KPM30/KPM31 regulation unit, connected via Bus. Modbus RTU slave communication on RS485. Surface mounting. EC certification.



K495L

PRODUCT CODE	POWER SUPPLY		
K495LY002	24 V	1	-

Thermostat with backlight display and local interface for controlling ambient temperature and humidity.

To be used in combination with the KPM30/KPM31 regulation unit, connected via Bus. Modbus RTU slave communication on RS485. Surface mounting. EC certification.



K493I

PRODUCT CODE	POWER SUPPLY		
K493IY012	12 V	1	-

Temperature/humidity probe.

To be used in combination with the KPM30/KPM31 regulation unit, connected via Bus. Modbus RTU slave communication on RS485. Flush-mounting. EC certification.



K493T

PRODUCT CODE	POWER SUPPLY		
K493TY002	12 V	1	-

Temperature/humidity thermostat with backlight touch-screen display.

Possibility to command N.1 fan-coil with 0-10 V signal or N.3 3-speed fan-coils in combination with KF201 module.

To be used in combination with the KPM30/KPM31 regulation unit, connected via Bus. Modbus RTU slave communication on RS485. EC certification.



K463P

PRODUCT CODE	POWER SUPPLY		
K463PY001	-	1	-

Delivery temperature probe (passive type). Measuring range -50/105 °C. Cable length 6 m. Bulb diameter 6 mm. To be used in combination with the KPM30/KPM31 regulation unit.



K465P

PRODUCT CODE	POWER SUPPLY		
K465PY001	-	1	-

External temperature probe (passive type). Measuring range -50/105 °C, in box with IP68 protection degree. To be used in combination with the KPM30/KPM31 regulation unit.



K498M

PRODUCT CODE	POWER SUPPLY		
K498MY002	-	1	-

Signal converter from PWM to 0-10 V, for commanding a second mixing valve from a KPM30/KPM31 regulation unit.

Installation on DIN rail. EC certification.



KF201

PRODUCT CODE	POWER SUPPLY		
KF201Y001	12 V Bus	1	1

Fan-coil control module to be used with K483T thermometers of the KLIMABus thermoregulation.



K373

PRODUCT CODE	POWER SUPPLY		
K373Y011	230 V	1	10
K373Y012	230 V - with R227-1	1	10

Safety thermostat with immersion probe and housing.



K489

PRODUCT CODE	POWER SUPPLY		
K489Y001*	-	15	-

Box for flush-mounting installation.

* Last in production



PM100R

PRODUCT CODE	POWER SUPPLY		
PM100Y001	230 V	1	10

Control unit with 8 input (thermostats) and 8 output (zone valve, actuators) with 4 minutes delayed intervention of the circulator.



PM100P

PRODUCT CODE	POWER SUPPLY		
PM100Y003	230 V	1	-

Control unit for actuators with safety thermostat and 4 minutes delayed intervention.



Thermoregulation - Stand-Alone

STAND-ALONE THERMOREGULATION SYSTEM

Chronothermostat and thermostat family for exposed and concealed installation and control of thermo-electric actuators or zone valves in heating and cooling radiant systems. Combined to radiant panels, they can also control integration terminals such as dehumidifiers. 230 Vac power and battery-powered with AA and AAA alkaline batteries. Main characteristics:

- Modern and technologic aesthetics.
- Blue led back-lit graphic display (for K490I and K492).
- Touchscreen (K492 only).
- For concealed chronothermostats, compatible with plates of most civil electric lines (among which Bticino Axolute).
- Possible centralized local (with a specific control module) or remote (with GSM module) control, using mobile phone text messages or downloading the dedicated APP for smartphones and tablets (versions for Android and iOS).

K490I

PRODUCT CODE	POWER SUPPLY		
K490IY001	230 V	1	-
K490IY002	2 batteries AAA 1,5 V	1	-

Weekly chronothermostat, flush-mounting installation.

Compatible with the plates of the most common domestic ranges, containing a wide selection of covers, frames and adaptors.

Operating mode in heating and cooling, with weekly/daily/timed program and the possibility of manual operation.

Temperature adjustment range: 2+40 °C. EC certification.

INFO

K490IY001: 230 Vac, 50 Hz.
K490IY002: N.2 AAA 1,5 V batteries.



K492

PRODUCT CODE	POWER SUPPLY		
K492DY012	230 V	1	-

Weekly chronothermostat with touchscreen display, surface mounting installation.

Operating mode in heating and cooling, with weekly/daily/timed program and the possibility of manual operation.

Built-in sensor for relative ambient humidity. Temperature adjustment range: 2+40 °C. EC certification.

INFO

Powered from the mains (230 Vac, 50 Hz). Equipped with 2 output relays (voltage-free exchange contact, 5(3)A, 250 Vac) for commanding heating/cooling systems (thermo-electric actuators) and integrated management of dehumidification (air treatment units).

Possibility to connect auxiliary supply temperature probe (K463PY001) for the management of alarms and system block (Dew Point control, max. temperature in heating mode, minimum temperature in cooling mode).



K494

PRODUCT CODE	POWER SUPPLY		
K494AY001	2 batteries AAA 1,5 V	1	-

Thermostat, surface mounting installation. Display without backlighting.

Operating mode in heating and cooling, with two attenuation levels.

Powered by N.2 AAA 1,5 V batteries.

Wall installation or in round box (diameter 60 mm).

Temperature adjustment range: 2+40 °C. EC certification.



K494I

PRODUCT CODE	POWER SUPPLY		
K494IY001	230 V	1	-
K494IY002	230 V	1	-
K494IY011	3 batteries AAA 1,5 V	1	-
K494IY012	3 batteries AAA 1,5 V	1	-

Thermostat, flush-mounting installation.

Display with graphic icons combined with front buttons. Operating modes: comfort, economy, off/antifreeze.

Temperature adjustment range: 2+40 °C. EC certification.

INFO

K494IY001, K494IY011: black color.
K494IY002, K494IY012: white color.



Thermoregulation - Wireless

WIRELESS THERMOREGULATION SYSTEM FOR MANIFOLD DISTRIBUTION IN HEATING SYSTEMS

New wireless system for control of heating systems with manifold distribution and thermo-electric actuators. Especially suitable for renovation works where building works are not recommended for installation of connection cables between the thermostats and the distribution group. The system includes: control module for electro-thermal actuators, touchscreen for programming and display, one or multiple wall-mount wireless chronothermostats, temperature probe with safety thermostat function for delivery water. Do not install the system in areas subject to electromagnetic interferences or magnetic fields that may prevent proper communication between the thermostats and control unit. For more details on how to use the system, please contact our Technical Assistance service.

PM100W

PRODUCT CODE	POWER SUPPLY		
PM100WY02	230 V	1	-



Wireless control unit, for heating systems.

Possibilities to control:

- N.16 zones of ambient temperature through K400Y002 chronothermostats;
- system circulator with safety thermostat function (if combined with the K563PY002 temperature probe);
- domestic hot water production managing (if combined with the K563PY002 temperature probe);

To be combined with KD400Y002 touch-screen display. EC certification.

K400

PRODUCT CODE	POWER SUPPLY		
K400Y002	2 batteries AA 1,5 V	1	-



Wireless chronothermostat with display. To be combined with PM100WY02 control unit. Surface mounting. EC certification.

KD400

PRODUCT CODE	POWER SUPPLY		
KD400Y002	Power supply from PM100WY02	1	-



Touch-screen display for programming, management and control of the PM100WY02 control unit.

Installation on wall or on the control unit. EC certification.

K563P

PRODUCT CODE	POWER SUPPLY		
K563PY002	-	1	-



Temperature probe, passive type, with double possibilities of operation: safety thermostat or managing of domestic hot water. To be combined with PM100WY02 control unit.

ERP DIRECTIVE

TEMPERATURE CONTROL DEVICE CLASSIFICATION ACCORDING TO REG. (EU) N.811/2013 - 813/2013

ENERGY EFFICIENCY CLASS	ENERGY EFFICIENCY BENEFIT	TYPE OF DEVICE
Class I	+ 1%	Room thermostat ON/OFF
Class II	+ 2%	Thermoregulation control unit with modulating heating devices
Class III	+ 1,5%	Thermoregulation control unit for use with heating devices with ON/OFF outlet
Class IV	+ 2%	Room thermostat with TPI function, for use with heating devices with ON/OFF outlet
Class V	+ 3%	Modulating room thermostat for use with modulating heating devices
Class VI	+ 4%	Thermoregulation control unit and room sensor for use with modulating heating devices
Class VII	+ 3,5%	Thermoregulation control unit and room sensor for use with heating devices with ON/OFF outlet
Class VIII	+ 5%	Multiple-sensor room temperature control for use with modulating heating devices



EXAMPLE OF ENERGY EFFICIENCY BENEFIT GUARANTEED BY TEMPERATURE CONTROL DEVICE



Heat generator with 95% energy efficiency

Ambient thermostat with TPI function



$$95\% + 2\% = 97\%$$

A+++	≤ 150%
A++	< 150%
A+	< 125%
A	< 98%
B	< 90%

SYSTEM ENERGETIC CLASS

A

Thermoregulation module with room temperature probe



$$95\% + 3,5\% = 98,5\%$$

A+++	≤ 150%
A++	< 150%
A+	< 125%
A	< 98%
B	< 90%

SYSTEM ENERGETIC CLASS

A+

