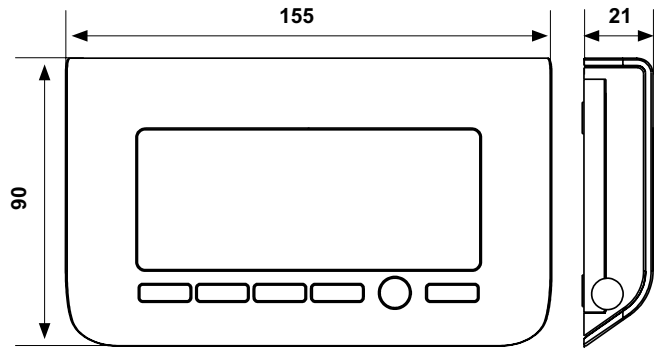


IntelliComfort CH150RF

Radio frequency weekly chronothermostat, with batteries

Electronic chronothermostat with microprocessor, with weekly programming, to control heating and air-conditioning installations. The "radio system" provides a chronothermostat CH150RF, one or few actuators (receivers) for temperature control and an actuator for humidity control (optional).



CHRONOTHERMOSTAT - TRANSMITTER

	Temperature regulation range °C	Prescribed differential * K	Temperature displayed range °C	Adjustable antifreeze temperature range °C	Humidity displayed range RH%	Humidity regulation range RH%
CH150RF	□ 2 ÷ 40	0,25	-30 ÷ 60	2 ÷ 7	20 ÷ 90	30 ÷ 70

* Differential values are referred to a thermal gradient of 4K/h.

- CH150RF WHITE
- CH151RF SILVER
- CH152RF ANTHRACITE



RECEIVER - ACTUATOR WITH 1 OUTPUT RELAY

	Installation	Receiver power supply	Contacts rating	Room admissible temperature °C	Protection degree
CH170D	on DIN-rail	230Vca 50Hz	5(3)A 250Vca	- 10 ÷ 45	IP20

TEMPERATURE CONTROL OF A HEATING AND COOLING SYSTEM

IntelliComfort CH150RF

actuator for temperature control



+



TEMPERATURE CONTROL + HUMIDIFICATION

IntelliComfort CH150RF

actuator for temperature control

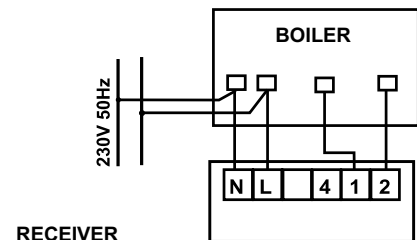
actuator for humidity control



+



+



RECEIVER

Maximum 30 meters



TRANSMITTER



FEATURES AND JOINT OPERATION OF ALL MODELS

HOMOLOGATION AND STANDARDS

In conformity with EN 60730-2-9; EN 60730-2-11 standards.

INSTALLATION

Wall mounting by means of fastening base in round boxes 502-503.

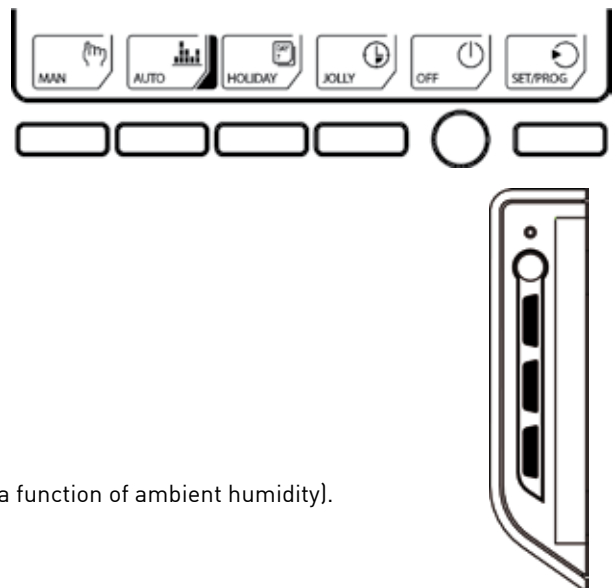
Two-wire connection with the user.

Install the chronothermostat at 1,5 m height from the floor, away from kitchens, heat sources, windows and doors.

OPERATION

The chronothermostat has:

- 3 side wheels for immediate setting of the temperatures.
- 1 SUMMER-WINTER switch button.
- 5 front keys to access directly the operating modes that can be changed by pressing the corresponding key.
- 1 key to access the programming menu.



VISUALIZATION

- Ambient temperature.
- Outside temperature (if external sensor is installed).
- Measured temperature (measured temperature of the body as a function of ambient humidity).
- Humidity percentage in the environment.

OPERATION MODES



MANUAL

The chronothermostat regulates the room temperature using the set temperature within 24 hours.

T1: The temperature can be set from 2 to 40°C



AUTOMATIC

The chronothermostat regulates the set temperatures according to the schedules on weekly profile.

It has 2 winter programs and 1 summer program (prescribed).

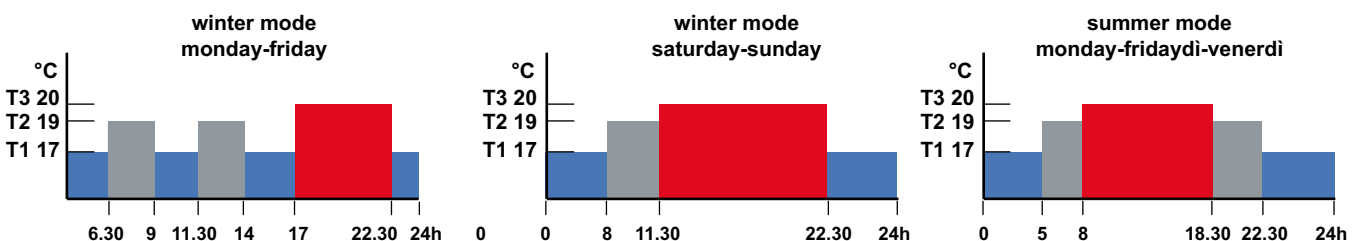
In automatic mode can be set three temperature levels T1-T2-T3.

T1 can be set from 2 to 40 °C

T2 can be set from 2 to 40 °C

T3 can be set from 2 to 40 °C

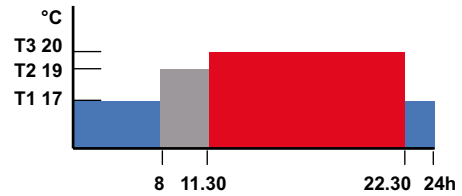
Note: T3 cannot be less than T2 and T2 cannot be less than T1.





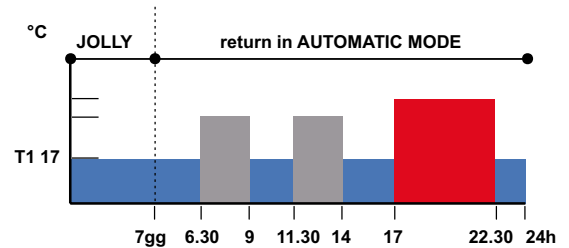
HOLIDAY

The chronothermostat follows time and temperature settings of the day "8". This mode stops when it is selected another operating mode. The chronothermostat has a predefined mode - Holiday, equal to Saturday and Sunday. In Holiday mode can be set three temperature levels T1-T2-T3.



JOLLY

The chronothermostat controls the installation using a set temperature over a period of time ranging from 1 hour to 99 days and 23 hours. At the end of the set time, the chronothermostat returns to the previously used operation mode. This function can be excluded at any time by setting a different operation mode.



Example: Automatic Mode - Jolly for 1 week - the chronothermostat completes the period of Jolly and resumes the automatic mode.
T1: The temperature set manually from 2 to 40°C.



OFF (turned OFF)

This mode is used to manage system operation for maintaining the antifreeze temperature, set from 2 to 7°C. Complete turn OFF of the system T1=OFF.

SPECIAL FUNCTIONS

These functions are selected accessing the technical menu of the chronothermostat.

TEMPERATURE

CELS

Temperature display in Celsius degrees (centigrade), e.g. 20,5°C.

FAHR

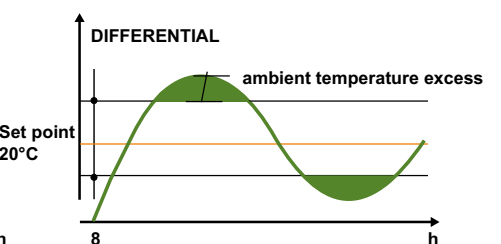
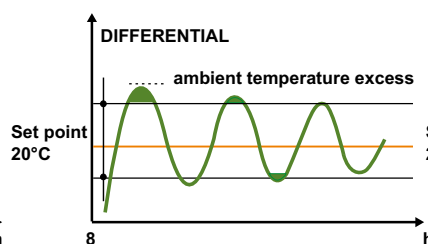
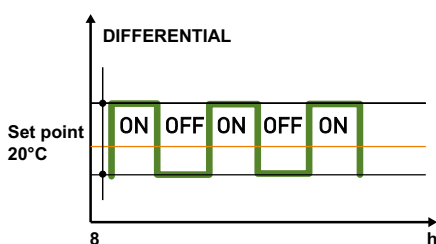
Temperature display in Fahrenheit degrees, e.g. 76,4°F.

REGULATION TYPE

Std

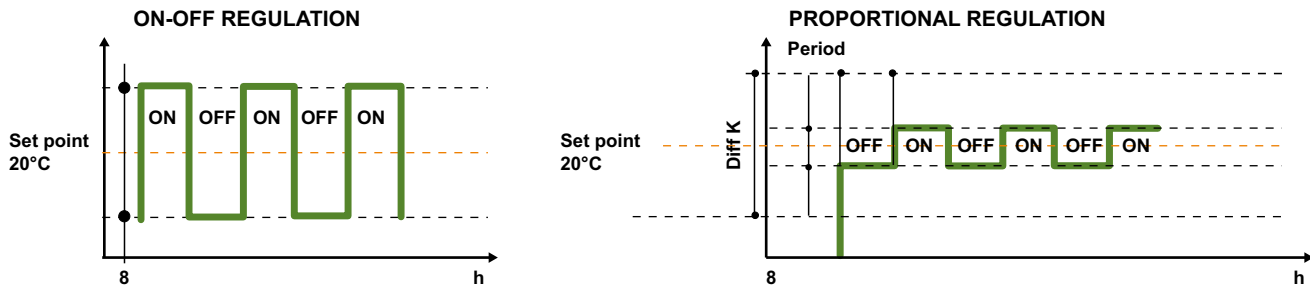
Standard regulation (ON-OFF).

When it is required heating "ON" the boiler or the cooling system stops the functioning only when is reached the set temperature value (set point) within the differential. It is reached quickly the set-point in installations with low inertia; on the contrary, in systems with high inertia are possible high temperature oscillations.



Prop PROPORTIONAL REGULATION

This regulation type allows you to limit the thermal differential to the minimum, significantly increasing the comfort. In proportional regulation the "heat request" periods are managed within the proportional band.

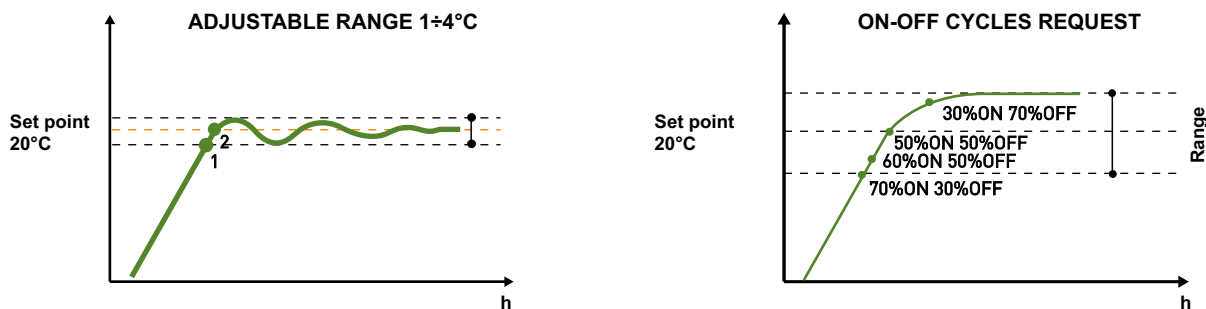


bAnd ADJUSTABLE PROPORTIONAL RANGE

A range means the value at which the chronothermostat starts regulation with ON and OFF cycles (installation) as a function of the prescribed period. Range regulation from 1 to 4°C by 0.1°C increments.

ON-OFF CYCLES

Are defined according to the chronothermostat's reached temperature, if the ambient temperature is equal to the set-point and the cycles are 50% ON and 50% OFF (proportional contribution +/- one percentage of the integral part contribution).



- 1) The temperature is within adjustable range, the chronothermostat starts to set ON-OFF cycles.
- 2) The temperature approaches to the set-point, decreasing ON cycles and increasing OFF cycles.

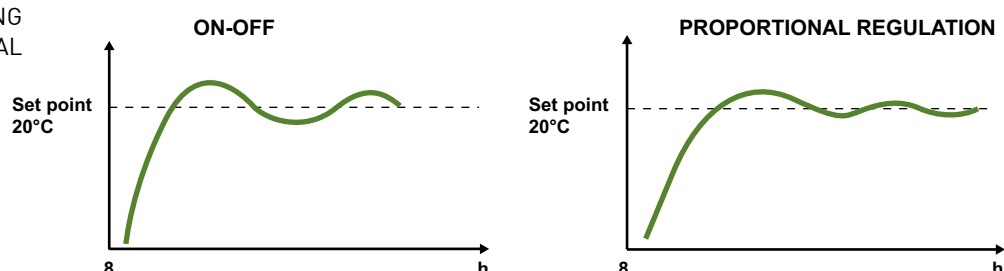
PEr REGULATION PERIOD

Regulation period is set in 5/10/20 minutes, value managed for ON-OFF cycles.

- EXAMPLE: period of 10 minutes 70% ON = 7 minutes, 30% OFF = 3 minutes. The period and the range should be defined according to the inertia and to the heat transfer type, such as:
 - FAN-COIL= transfer for convection
 - HEATERS= transfer for convection and radiation (prevailing convection)
 - PANNELLI RADIANTI= transfer for radiation and convection (prevailing radiation)

It has the advantage of decreasing the temperature excess regarding ON-OFF regulation, only to achieve the set-point will need more time.

SYSTEMS BEHAVIOR DURING ON-OFF AND PROPORTIONAL REGULATION



DIFF

PRESCRIBED THERMAL DIFFERENTIAL

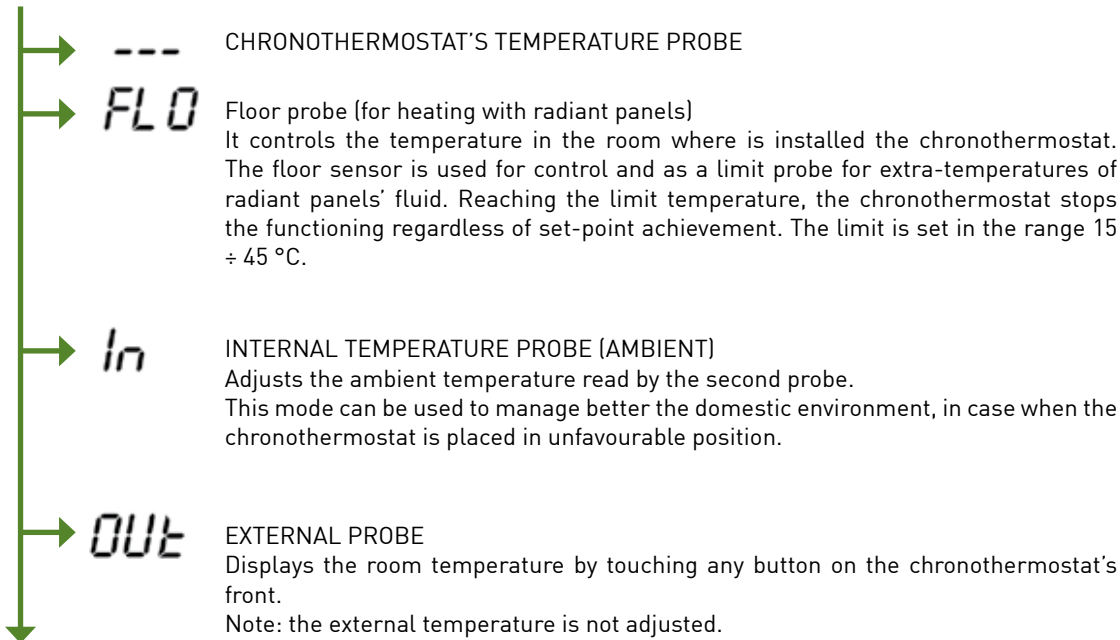
HI high

LO low

SECT

SEPARATE TEMPERATURE PROBES

Possibility to configure temperature probes of four types.

**Corr**

ROOM TEMPERATURE CORRECTION

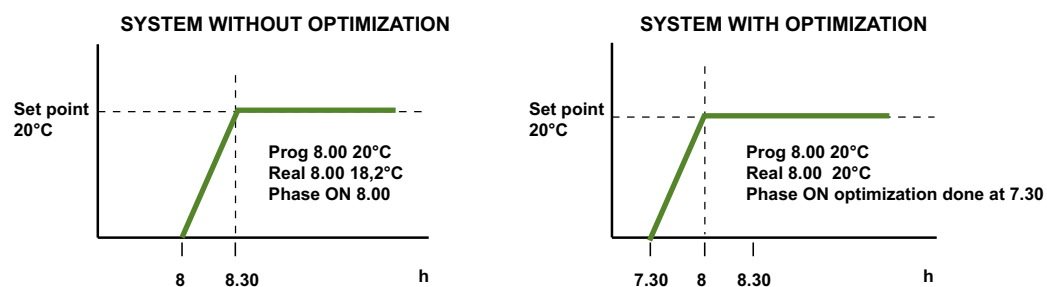
In cases, when the chronothermostat position is not favourable for an optimum regulation of the environment, and you do not want to appeal to the ambient secondary probes, is possible to correct the temperature, read by the chronothermostat.

Correction range from -4°C to $+4^{\circ}\text{C}$ with increments of $0,1^{\circ}\text{C}$.

OPT

OPTIMIZATION

The device calculates system's advance switching-on time needed to achieve the desired temperature at the set time of the day, taking into consideration its thermal inertia. The optimization takes place only at the first system's switching-on of the day.

**Pu**

PUMP ANTI-SEIZURE FUNCTION

The unit turns the system on for 1 minute per day (h 23.58), thereby operating the water circulation pump and preventing it from blocking. This takes place only if the system has never been turned on during the day.

BAtt Determines relay "status" at batteries discharge.

----- No setting

On The chronothermostat is in situation of batteries discharge (OFF displayed), closes the contact 1-2 (opens 1-4).

OFF The chronothermostat is in situation of batteries discharge (OFF displayed), opens the contact 1-2 (closes 1-4).

FANTINI COSMI SYSTEM

SEPARATE PROBE - ACTUATOR
2-wire connection



EC18 External probe



EC19 Floor probe



EC20 Ambient probe

CT3M/CT3MA - GSM PHONE ACTIVATOR, EXCEPT CH150R - VERSION WITH REMOTE RELAY

Intellitherm CH150 is designed to be connected to the mobile line GSM phone activator Telecomfort CT3/CT3MA.

Telecomfort CT3M/CT3MA allows chronothermostat's remote control via SMS messages.

It also allows the remote verification of the ambient temperature and the correct functioning of the chronothermostat.

CHRONOTHERMOSTAT

TELECOMFORT CT3M (see page 92)



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EXAMPLE OF INFORMATION FROM THE HEATING SYSTEM

SMS for
sending
#STATUS

SMS answer
Ambient: 25.5
Economy: 17.0
Comfort: 21.0
Input1: OFF
Output: OFF
Program: OFF
Remote: Auto



Ambient temperature
Set economy temperature
Set comfort temperature
Alarm input status
Output relay status (connected to the user)
In use program, set
In use program, set via SMS (remotely)