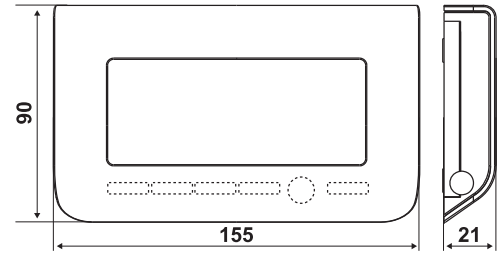


Intellicomfort CH150REV

Weekly climate controller with output proportional 3-point or two stage output, heating mode



Dimensions (mm)



	Temperature regulation range	Preset differential*	Adjustable antifreeze temperature range	Humidity displayed range	Contacts rating
CH150REV	2 ÷ 40 °C	0,25 K	2 ÷ 7 °C	20 ÷ 90 RH %	5(3)A 250Vac

ELECTRICAL FEATURES

Power supply from actuator CH174
 Back-up dati con 2 pile alcaline AA 1,5 V (opzionale).
 Inputs: phone activator
 separated probe
 actuator
 Electric connections screw clamps 3.5 mm twopole jack plug

CH174 ACTUATOR
 Power supply 230V 50Hz.
 Absorbed power 2VA.
 Input: regulator controls.
 Contacts rating 5(3)A 250 V~.
 Voltage-free switching contacts with 4 outputs: 2 for the valve and 2 for the burners.
 Pulse voltage: 4000V

HOMOLOGATION AND STANDARDS

Complies with EN 60730-1 standards and following parts, R&TTE EN 300 220-3.
 ACTUATOR CH174: complies with 2006/95/CE, 2004/108/CE, 1993/68/CE e EN60730-1.

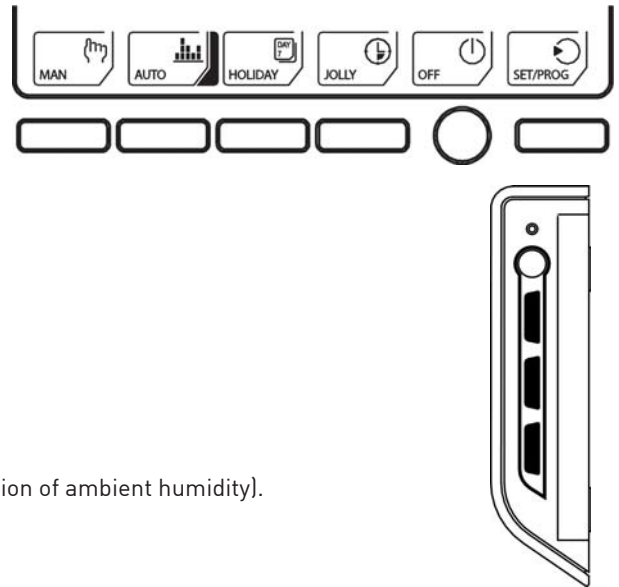
INSTALLATION

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.
 Actuator CH174: mounted on DIN bar 6 modules.

OPERATION

The programmable thermostat 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 programmable thermostat regulates the room temperature using the set temperature within 24 hours.

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



AUTOMATIC

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

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

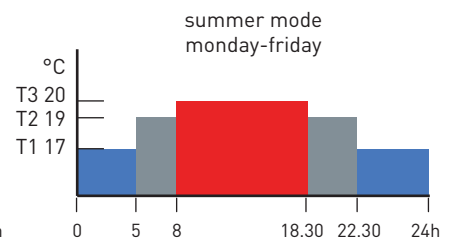
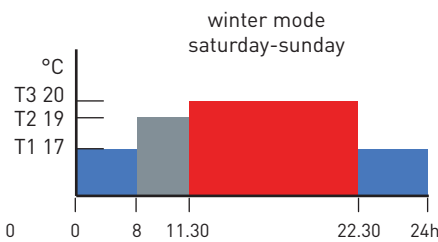
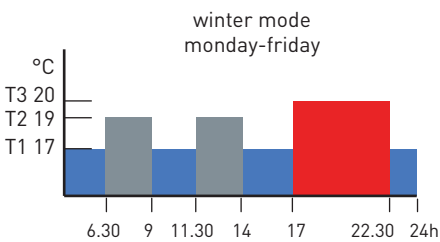
In automatic mode can be set three temperature levels T1-T2-T3.

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.



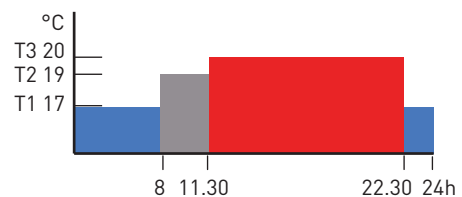
HOLIDAY

The programmable thermostat follows time and temperature settings of the day "8".

This mode stops when it is selected another operating mode.

The programmable thermostat has a predefined mode - Holiday, equal to Saturday and Sunday.

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

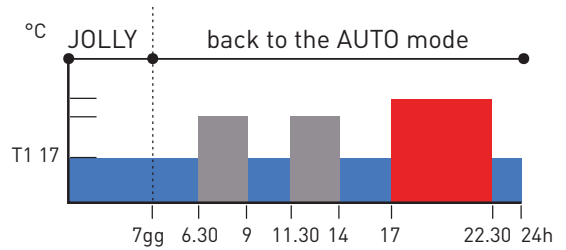




JOLLY

The programmable thermostat 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 programmable thermostat 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 programmable thermostat 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 programmable thermostat.

TEMPERATURE

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

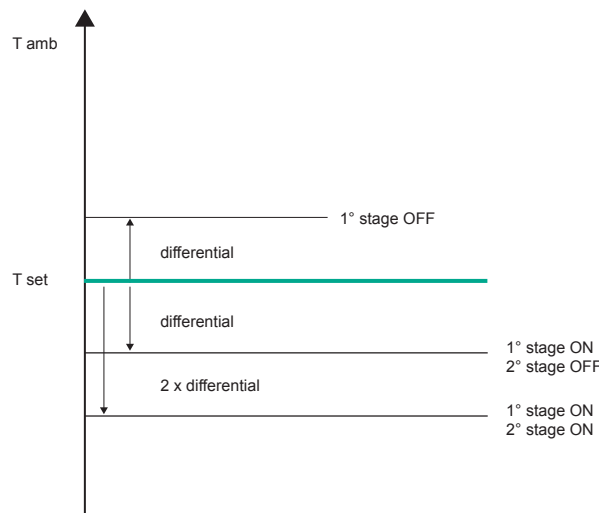
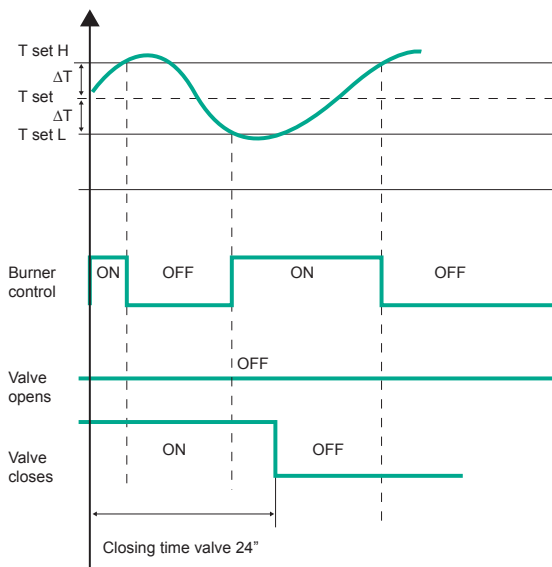
FAHr Temperature display in Fahrenheit degrees, e.g. 76,4°F.

REGULATION TYPE

OnOFF ON-OFF regulation with two stage output

If the ambient temperature is below the set-point minus the differential value. Is switched on the first stage; if the ambient temperature is below the set-point of the differential x 2, it is also turned on the second stage. The first stage control is switched off when the value of the set-point plus the differential is exceeded.

ON/OFF



THERMAL DIFFERENTIAL (ON-OFF CONTROL ONLY)

When choosing how to adjust the ON-OFF temperature, sets the temperature differential value. By suitably selecting the differential, according to the inertia of the system thermal heating, continuous starts and stops are avoided. It is possible to set values from 0,1° to 5,0°C, in steps of 0,1°C.

TIME OF VALVE COMPLETE CLOSURE / OPENING IN THREE POINTS (ONLY ON-OFF)

This is the valve control time for its complete closing or opening. The default is 24 seconds, but can be modify from 1 to 99 seconds, in steps of one second.

This type of control allows the valve control at 3-points and command ON burner/pump (mono or be-stage)

FUNCTION MODULATING REGULATION

With this adjustment is actively managed the modulating valve at three-points, according to the following logic:

If the ambient temperature is close to the set point, within the control band, only the first stage is on.

Instead, when the temperature drops below the set point of the regulation band, the valve open relay turned on for 1 second. Conversely, if the temperature rises above the set point on half of the band, the closing relay valve lit for the same time. This adjustment is performed every 3 seconds (adjustment period).

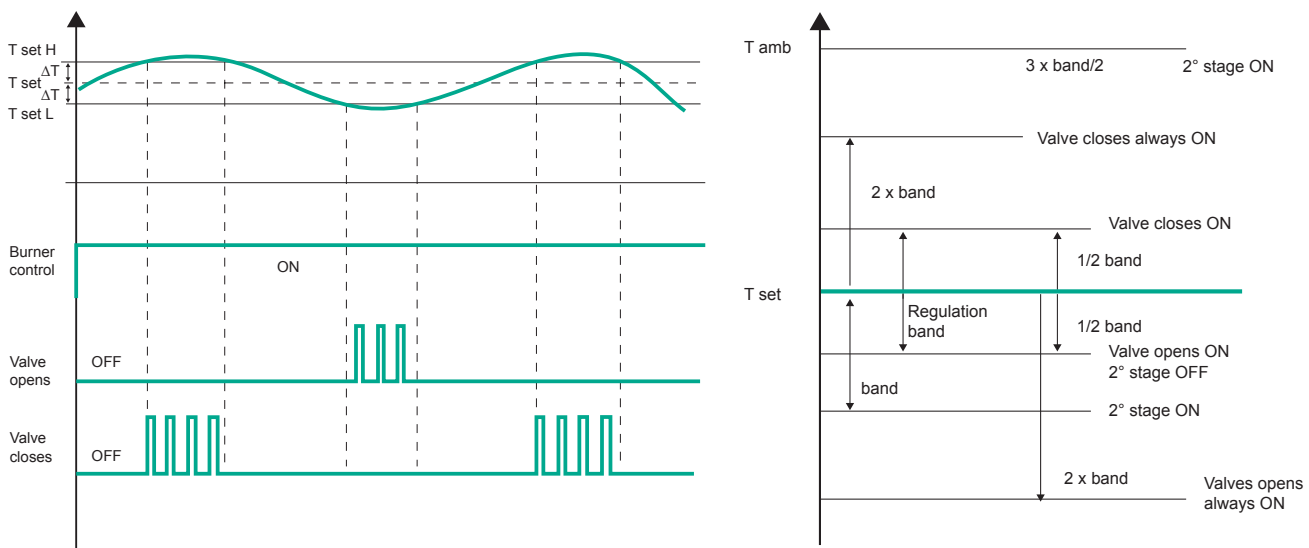
If the temperature is lower than the set point of the value in the control band, also the second stage is turned on. This second stage will turn off when the temperature comes back at the middle control band.

However, if the ambient temperature is very different from the set point (higher or lower than 2 times the regulation band), the command of Open Valve or Close Valve is given for the entire control period (that is, until the next adjustment), to get as quickly as possible close to the set point.

Finally, if the temperature is so high as to exceed the set point of 3 times the regulation band, the first stage is turned off, up to this will not fall below the set point minus half of the temperature band.

All numeric parameters (adjustment period, differential, control band, opening/closing valve, total opening period) can be customized in the configuration menu.

MODULATING CONTROL WITH THREE POINTS



CLIMATIC REGULATION

If External Probe is used (see Controller Configuration), mounted on the terminal of a separate probe, the controller employs a compensated control: the valve is opened for a period of time proportional to the difference between the ambient temperature and the temperature of the set point and is higher than the external temperature is lower. The adjustment with an external probe is applied only when the ambient temperature is below the set point (that is, during the heating phase); instead, during cooling and within the adjustment band, the controller applies the normal modulating control.

SETTING RANGE (ONLY MODULATING)

Band temperatures, centered on temperature set point, within which is turned on only the burner; when the ambient temperature is above this band, the valve closing control is turned on; when it is below the band also the open command is turned on. Normally this value is set at 2°C, but can be set to 0.2° to 10.0C in steps of 0.2°C

ADJUSTMENT PERIOD (ONLY MODULATING)

Sets the duration of the adjustment (ie. How many seconds each cycle is carried out the adjustment) when the mode Modulating temperature is chosen. Default is 3 seconds, but can be set from 1 to 60 seconds. regulation mode

CLOSING/OPENINGTIME (ONLY MODULATING)

Duration, in seconds, the ignition command of Opening/Closing the modulating valve, withing each actuation cycle. It can be set from a minimum of 1 second up to a maximum equal to the adjustment period. Normally is 1 second.

BURNER OFF (ONLY MODULATING)

If the temperature is higher than a certain number of times the control band, the burner is switched off. As a formula: $T_{off} BURNER = K \times Band$ where K is precisely the burner's off parameter and can be set from 1 to 10; default is 3

SECT

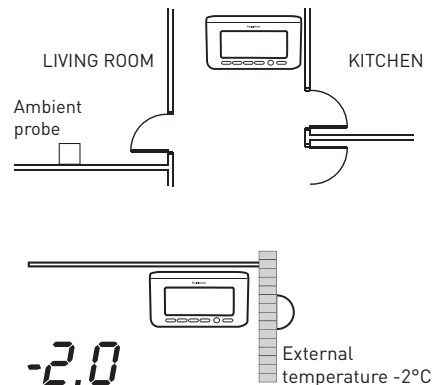
SEPARATE TEMPERATURE PROBES
Four types of temperature probe can be configured

--- REGULATOR TEMPERATURE PROBE

bLO BURNER/PUMP BLOCK SENSOR
switch the burner off and completely close the valve if an open circuit is read on the terminals of the separate temperature probe. It is normally used as a block sensor for the burner.
PLEASE NOTE: in order to use the separate probe terminal as a burner block sensor, a 10kΩ resistor has to be wired to the terminal (in series to the sensor).

In INTERNAL TEMPERATURE PROBE (AMBIENT) cod. EC20
Adjusts the ambient temperature read by the second probe.
This mode can be used to manage better the domestic environment, in case when the programmable thermostat is placed in unfavourable position.

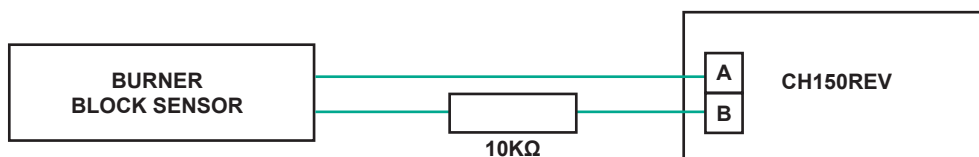
Est EXTERNAL PROBE FOR CLIMATIC ADJUSTMENT COD. EC18
CLIMATE CONTROL (MODULATING CONTROL ONLY): connect the separate probe outside, away from heat sources and in a position where the sun will never shine directly. By selecting this mode, the valve opening time depends on the outside temperature and the difference between set point and ambient temperature, from a minimum of 1 second to a maximum equal to the adjustment period.



Separate probe can be configured in various ways through the appropriate menu (see the section on the controller configuration).

Particularly, if the input is set as a room sensor, it is possible to employ an EC20 Fantini Cosmi probe to replace the internal sensor to the regulator: adjusting and viewing will refer to it and then it is possible to adjust the temperature of an environment other than in which it is placed the CH150REV.

If the input is configured as external probe, it must be connected to terminals A and B a probe EC18 Fantini Cosmi, secure it outdoors, preferably on the north or north-west façade of at least 2.5 m above the ground in a horizontal position and away from sources of heat and direct sun rays. This will make possible to exploit the climatic control. Finally, if it is intended to use the separate probe input as the burner block sensor, it will be necessary to select this setting in the configuration menu and connect the sensor as shown in the figure.



Note that it is necessary to connect a resistor of 10kW in series to the sensor, this one must be a short circuit in normal conditions (i.e. when the burner operates regularly) and an open circuit when the burner is in block: in these conditions the regulator fully close the valve, switch off the burner control and display the message "bLO"

Corr

ROOM TEMPERATURE CORRECTION

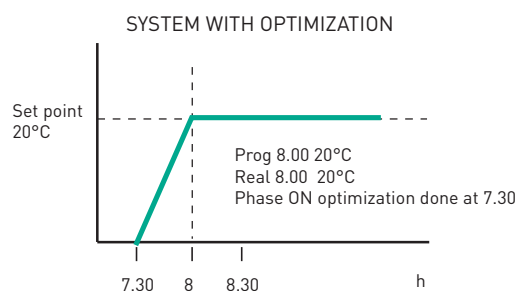
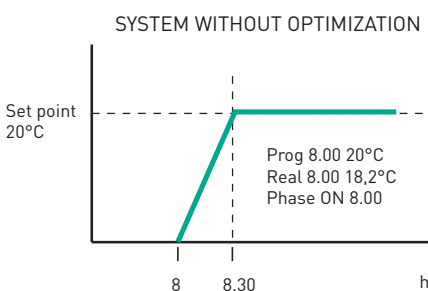
In cases, when the programmable thermostat position is not favourable for an optimum regulation of the environment, and you do not want to appeal to the ambient secondary probes, is possible to correct the temperature, read by the programmable thermostat.

Correction range from -4°C to +4°C with increments of 0,1°C.

Opt

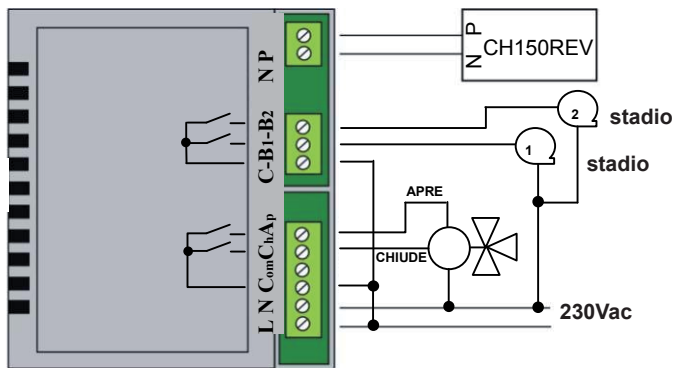
OPTIMIZATION

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.



WIRING CONNECTIONS

The actuator makes available clean contact (no voltage) for valve and burner.
In the case of mixing valve and 230VAC burner, connect the loads as showed below.



REGULATOR FEATURES

Power supply from actuator

Backup data with 2 AA alkaline batteries, 1.5 V (optional).

Inputs: phone activator
separated probe
actuator

Electric connections screw clamps 3.5 mm twopole jack plug

double insulation

Protection degree IP20 (normal pollution).

Setting storage : non-volatile memory

Type of action: 1BU (micro disconnection)

Software class A

Temperature regulation range 2 °C ÷ 40 °C.

Anti-freeze temperature regulation range 2 °C ÷ 7 °C.

Humidity displayed range 20% ÷ 90%.

Max. temperature T45

Dimensions: 155 X 91 X 20.

Maximum distance from temperature probe 10 m max.

Reference thermal gradient 4 K/h.

ACTUATOR FEATURES

Power supply 230V 50 Hz.

Absorbed power 2VA.

Input: regulator controls.

Contacts rating 5(3)A 250 V~.

Voltage-free switching contacts with 4 outputs: 2 for the valve and 2 for the burners.

Software classes: A

Max. temperature T45

Complies with 2006/95/CE, 2004/108/CE, 1993/68/CE.

Complies with EN60730-1 standards .

Type of action: 1B (micro disconnection).

Pulse voltage: 4000V

DIN rail mounting 6 modules

Dimensions 106x93x42mm.

FANTINI COSMI SYSTEM

Separate probe
2-wire connection



EC18 External probe



EC19 Floor probe



EC20 Ambient probe

Telecomfort CT3MA - GSM phone activator

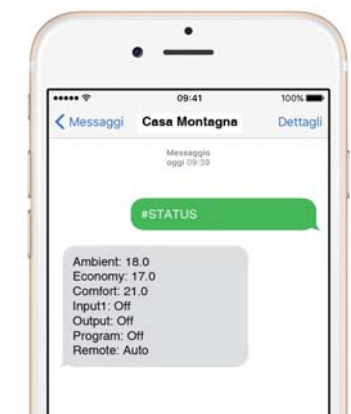
CH150REV is designed to be connected to the mobile line GSM phone activator Telecomfort CT3MA.

Telecomfort CT3MA allows programmable thermostat's remote control via SMS messages or APP Intellilima+.

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



+



+



The Intellilima+ APP is available for free on:

