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CH170D RADIO ACTUATOR FOR DIN RAIL MOUNTING

APPLICATION AND USE

CH170D is a radio receiver (actuator) that coupled to a transmitter of the Fantini Cosmi product line enables to remotely control a preset user (usually a boiler).

Sent radio signal is free from interference with other device even if the same frequency is used.

INSTALLATION AND CONNECTIONS

Installation shall be performed according to current CEI Standards.


The distance between actuator and transmitter must not exceed 30 m in closed spaces and 70 m in open spaces (N.B. Range data could vary according to environmental conditions). Do not shield the device with metallic parts.

Connect cables to the base terminal board according to the wiring diagrams shown. Receiver power supply (230 V a.c.) shall be connected to terminals N and L whereas the user (pump, burner, zone valve, humidistat, etc.) shall be connected to terminals 1 and 2.


N.B. Several receivers can be connected to one transmitter.

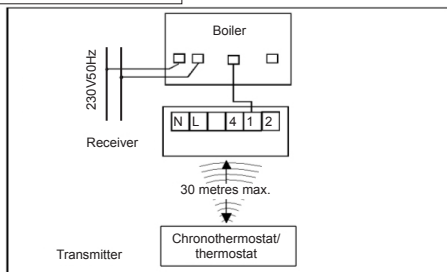
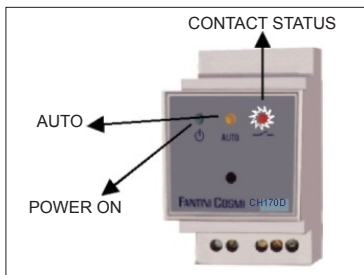
OPERATION

The receiving device features three leds giving the following indications:

 **POWER ON:** when this led is on it indicates that the receiver is properly powered. The meaning of the different colours of this led is specified below.

AUTO: when this led is on it indicates that the receiver is configured in AUTOMATIC MODE. When the led is off the MANUAL MODE is active.

 **CONTACT STATUS:** when this led is on it indicates that the relay contact is closed, otherwise (led off) it will be open.



Each time the button is pressed the three operating modes are started in turns:

AUTOMATIC

("AUTO" led: ON)

In this operating mode, the receiver receives a radio signal coded by the chronothermostat via the transmitter interface and triggers the integral relay. The "POWER ON" led takes on a different colour according to the quality of the signal received:

- RED: signal absent or very disturbed
- ORANGE: satisfactory reception
- GREEN: good reception

Fast and brief led flashing indicates the reception of radio data sent by the transmitter.

MANUAL ON

(“AUTO” led OFF and “CONTACT STATUS” led ON)

In this operating mode, the receiver relay contact is always closed and the radio transmission implemented by the transmitter module is ignored (consequently chronothermostat / thermostat commands are not accepted).

MANUALE OFF

(“AUTO” led OFF and “CONTACT STATUS” led OFF)

In this operating mode, the receiver relay contact is always open and the radio transmission implemented by the transmitter module is ignored (consequently chronothermostat / thermostat commands are not accepted).

SYSTEM CODE SELF-LEARNING PROCEDURE

Before using the CH170D actuator in AUTOMATIC mode its code shall be memorised into the Fantini Cosmi transmitter you purchased. To prevent storing of a different code, during the configuration procedure the reception sensitivity is reduced and therefore the distance between transmitter and receiver shall be 2 m max. Proceed as follows:

1. Turn the receiver on and then keep the button pressed until selecting the AUTOMATIC MODE (see paragraph “OPERATION”).
2. Keep the button pressed for over 10 seconds to start the “SELF-LEARNING” procedure, the “AUTO” led will start flashing.
3. Force radio thermostat / chronothermostat transmission (refer to the relevant user’s guide).
4. Carry out the OPERATION CHECK procedure to check for correct configuration of the programmed receiver.

N.B.: Max. 45 seconds shall pass between step 2 and step 3 of the above procedure.

Receiver “POWER ON” led will turn red if over two minutes pass without receiving data.

OPERATION CHECK

To use the chronothermostat/ thermostat refer to the relevant instruction manuals.

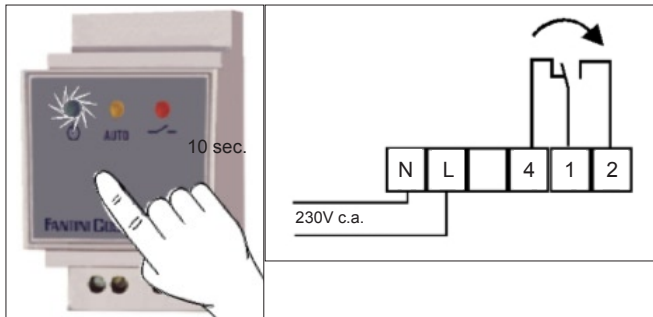
-Make sure the receiver is in AUTOMATIC mode (see paragraph OPERATION).

-Wait for chronothermostat/ thermostat data transmission and then check whether CH170D relay status matches with chronothermostat/ thermostat.

- Switch over chronothermostat/ thermostat and check whether the CH170D relay status changes.

Should the “POWER ON” led be red then transmitter and receiver are too distant: communication between the two devices is null or unreliable.

During normal operation certain radio signals could be lost due to external disturbances, these interferences however do not impair device operation if they last for a short time.



TECHNICAL DATA

Operating temperature: -10°C $+45^{\circ}\text{C}$

Storage and transport ambient temperature: -25°C $+60^{\circ}\text{C}$

Compliance with regulations: BT, EMC, R&TTE.

Standards: EN60730-1, EN 301 489-3, EN 300 220-3.

Power supply: 230V 50 Hz

Container: IP20

Absorbed power: 2VA

Relay output: 5(3) A 250 V~

Switching contacts: voltage-free

Receiver: :OOK868,350 MHz

Sensitivity: -104 dBm

Container dimensions: 3 modules, 17.5 mm per rail
EN50022

Degree of pollution: 2

Software class: A

Double insulation

Disconnection: 1B type

Installation type: back panel mounting

Impulse voltage : 4000V

Fantini Cosmi reserves the right to introduce whatever make and technical change at any time without prior notice.