

# **Comando Remoto Digitale**

*Instruction booklet*



 **iMMERGAS**

*Dear Customer,*

*Congratulations on choosing a high quality Immergas product designed to ensure lasting comfort and safety.*

*As an Immergas Customer you can always count on an expert and qualified Authorised Assistance Service able to guarantee the constant efficiency of your “Digital Remote Control”.*

*Compliance with the following instructions will ensure your satisfaction with the Immergas product:*

- *Carefully read the following pages as they contain useful information on correct use of the appliance.*

- *For any intervention or routine maintenance requirements, always contact “Immergas Authorised Centres”: which have original spare parts and specifically trained personnel.*

**IMPORTANT:** *Before connecting, make sure the Immergas boiler model installed is arranged for the Digital Remote Control; consult the boiler instruction handbook.*

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## INTRODUCTION

The “Immergas” programmable “**Digital Remote Control**” (hereinafter CRD) is designed to guarantee ideal temperature conditions at any time of the day and night for every single day of the week.

Installation takes just a few minutes: in fact it is connected to the boiler with only 2 wires through which it is powered and receives and sends adjustment and control commands. After installation it is ready to use, thanks to the preset program inside. The customer can modify the basic program according to needs.

The CRD is extremely easy to program and a large display allows all the settings to be constantly checked.

## GENERAL INSTRUCTIONS

This manual has been prepared for: **the Installer and the User.**

- Read this document carefully as it provides the technical characteristics and instructions on installation, assembly, programming, adjustment and correct use of the CRD.
- Execution of the system must comply with current CEI regulations.
- The instruction manual must be considered a part of the CRD and “**kept for future reference**”.
- After unpacking, check the good condition of the CRD. In case of doubt do not use it, and contact the **Dealer or Manufacturer.**

- The CRD must only be used for its expressly designed purpose. Any other use is deemed improper and therefore dangerous.
- Our products are manufactured in conformity with current safety regulations, therefore always use the devices properly and with care so as not to cause damage or injury.
- Do not dismantle parts of the CRD when it is operating.
- Do not use the CRD exposed to heat sources or in the hot sun.
- The manufacturer declines any liability in following cases:
  - a) Incorrect installation.
  - b) Malfunctioning of the boiler to which the CRD is applied.
  - c) Unauthorised modifications or interventions.
  - d) Total or partial non-compliance with the instructions.
  - e) Exceptional events, etc.

## **IMPORTANT**

Immergas reserves the right to make improvements and changes to parts and accessories, holding good the essential characteristics of the model described and illustrated in this handbook.

## **1. INSTALLATION**

### **1.1 Installation instructions**

Installation of the CRD, including cables and connection to the boiler, must be carried out by specialised personnel. With the initial free boiler check, when the CRD is included in the system, the Immergas Authorised Assistance Centre checks the

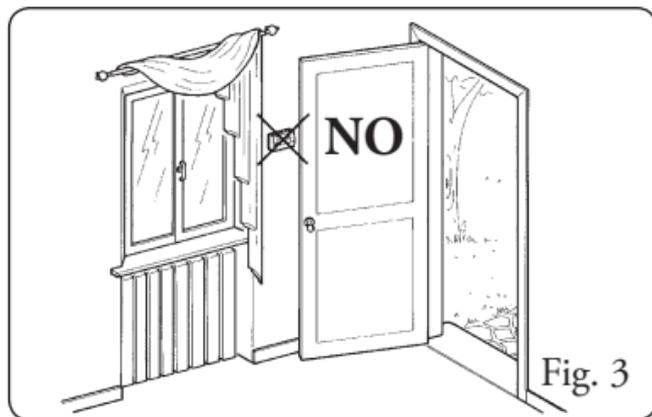
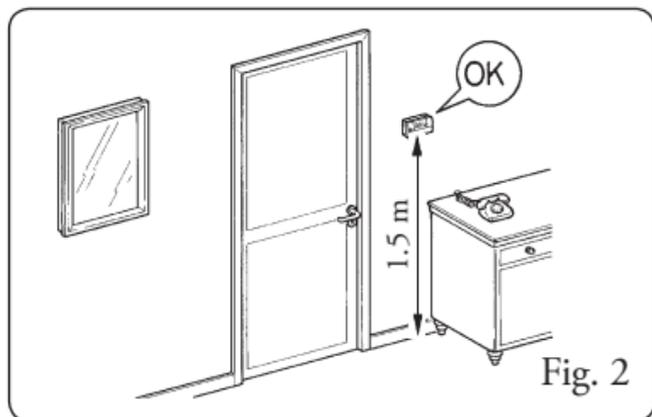
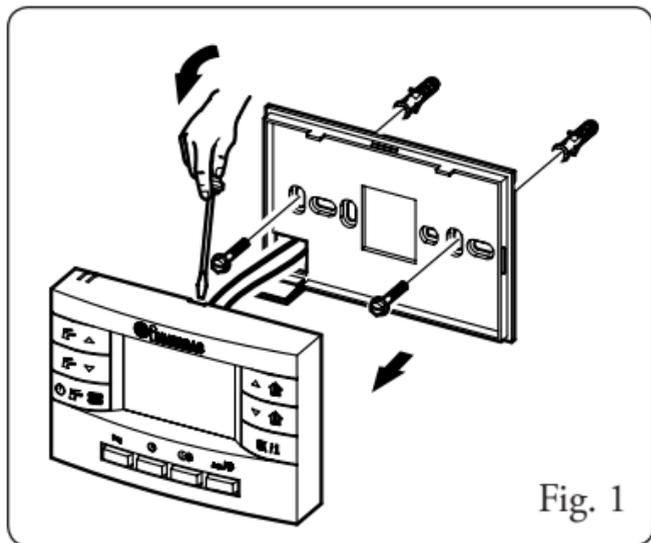
connection to the generator terminal block and correct operation. The free check of just the CRD by the Immergas Authorised Assistance Centre is not provided for if requested after the start of the boiler warranty phase.

**Important:** the free boiler check does not include the laying of the CRD wires, which is the installer's responsibility.

### **1.2 Installation operations**

- 1) Separate the fixing template from the Digital Remote Control body by prising with a screwdriver in the special recess (Fig. 1).

Install the Digital Remote Control away from heat sources and in a suitable position for correctly measuring the room temperature (Fig. 2 and 3).



- 2) Install the Digital Remote Control directly on the wall (Fig. 1) by means of the special holes in the back and using the screws supplied.
- 3) Carry out the electrical connections to the boiler (terminals 40 and 41), making sure the boiler is not powered; refer to the electrical connections given in the boiler instruction handbook. Connection polarity does not have to be respected for the Digital Remote Control. Connection to the boiler is made using two wires (Fig. 1) of min. section 0.50 mm<sup>2</sup> - max. section 1.5 mm<sup>2</sup> and max. length 50 m.

**NB:** For correct installation arrange a dedicated line for connecting the CRD in conformity with the current regulations on electrical systems.

If this is not possible, any interference due to other electrical cables could cause malfunctioning of the CRD.

- 4) Fix the body of the Digital Remote Control to the support template by pressing it on (Fig. 1).



## 2. DESCRIPTION OF CONTROLS

 ▲ Increase domestic hot water temperature.

 ▼ Decrease domestic hot water temperature.

   Boiler operation mode selection; off/antifreeze, domestic hot water, domestic hot water and heating.

▲  Increase room temperature.

▼  Decrease room temperature.

OK /  Confirm changes and display information / Reset

Prog Weekly timer programming.



Set time and date.



Set Comfort and Economy room temperature.



Select automatic or manual remote control operation.

### 3. DESCRIPTION OF DISPLAY

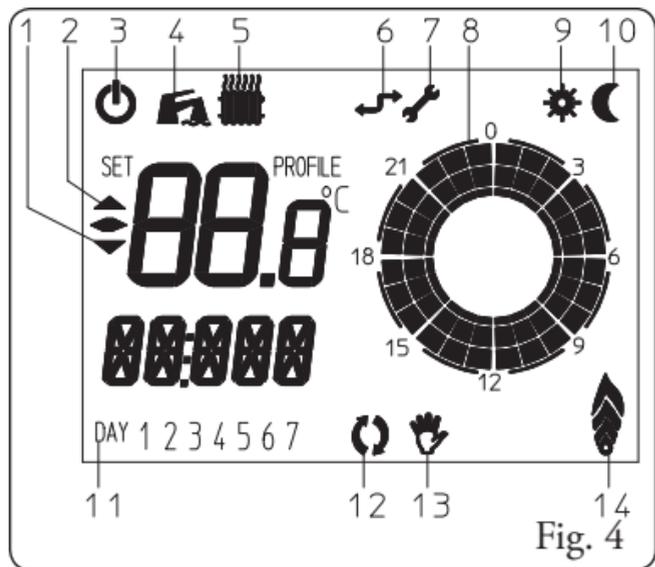


Fig. 4

- 1 Decrease room temperature.
- 2 Increase room temperature.
- 3 System on stand-by.

- 4 Domestic hot water function enabled (with demand the symbol shows domestic hot water delivery).
- 5 Heating function enabled (with demand the symbol shows emission of heat from radiator).
- 6 Communication with boiler on.
- 7 Anomaly.
- 8 Clock.
- 9 Operation at Comfort temperature.
- 10 Operation at Economy temperature.
- 11 Days of the week.
- 12 Automatic operation.
- 13 Manual operation.
- 14 Boiler power level.

## 4. BOILER TEMPERATURE AND OPERATION MODE ADJUSTMENT

### 4.1 Operation in stand-by mode (antifreeze)

- When the CRD is set to stand-by mode () it commands boiler switch-on only when the room temperature measured falls below +5°C, protecting the system against the possibility of freezing.

Press the button    to go from stand-by status to domestic hot water and domestic hot water/heating.

### 4.2 Operation in domestic hot water mode

- With the CRD set to “Domestic hot water” () only the domestic hot water heating function is enabled (detail A fig. 5).

### 4.3 Domestic hot water temperature adjustment

- The domestic hot water temperature is selectable by means of buttons   and  ; the display shows the value during adjustment (detail B fig. 5). Changes are stored at the end of flashing or immediately by pressing the button **OK/1** and thus returning to the normal display (detail C fig. 5).

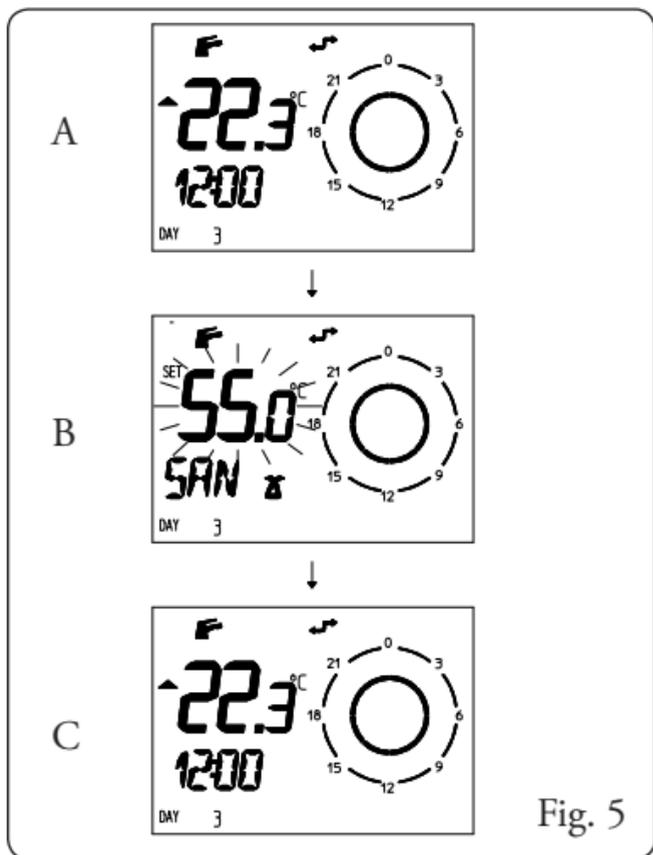


Fig. 5

#### 4.4 Operation in heating mode (F )

- With the CRD set to “Domestic hot water and heating” (F ) the domestic hot water and room heating functions are enabled.

#### 4.5 Heating water temperature adjustment

- In room heating mode, the CRD adjusts the heating water temperature according to the required room temperature. Two operating modes can be selected: automatic or manual.

## 5. MANUAL ROOM TEMPERATURE ADJUSTMENT

The CRD enables manual operation when it is the user who establishes the required room temperature from time to time.

### 5.1 Manual operation

To manually set room temperature:

- Press the button **Auto** /  until the symbol  appears on the display (detail A fig. 6).
- Press   or   until the required temperature is displayed (detail B fig. 6). Changes are stored at the end of flashing or immediately by pressing the button **OK** / **1** and thus returning to the normal display (detail C fig. 6).

- In manual mode it is possible to select any room temperature from +5°C to +30°C which will be kept constant until new adjustments or selection of a different operation mode.



Fig. 6

## 6. AUTOMATIC ROOM TEMPERATURE ADJUSTMENT

The CRD enables automatic operation in which a program manages room temperature during the hours of the day.

Room temperature can be set to two independent levels: Comfort (☼) and Economy (☾) whose distribution during the day or week is managed by the time programming.

### NOTE

Room temperature adjustment and programming are possible in any CRD operation mode.

### 6.1 Current day and time adjustment

Press the button  to enter day and time programming mode (detail A fig. 7).

Set the time with buttons   and   and confirm with button **OK/1**.

Proceed in sequence with hours (detail A), minutes (detail B fig. 7) and day of the week (detail C fig. 7). After setting, press  to quit adjustment.

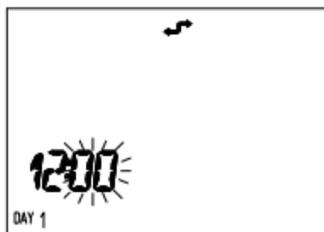
### NOTE

Day 1 corresponds to Monday, day 2 to Tuesday, and so forth.

A



B



C



Fig. 7

## 6.2 Automatic operation with preset program

The CRD contains a standard program for room temperature management during the hours and days of the week, making its use easier.

To use this program, whose description is given in the table (fig. 8), press the button **Auto**  until the symbol  appears on the display.

At this point the CRD is active and operating with the standard program described in the following table.

Days	 16°C	 20°C
Mon - Fri (Day 1 - 5)	from 23:00 to 6:00 from 8:00 to 11:00 from 13:00 to 17:00	from 6:00 to 8:00 from 11:00 to 13:00 from 17:00 to 23:00
Sat - Sun (Day 6 -7)	from 23:00 to 7:00	from 7:00 to 23:00

Fig. 8

### NOTE

To change the preset working temperatures, follow the indications given in the next paragraph.

## 6.3 Automatic operation with personalised program

If the standard program does not meet your needs, you can personalise it, regarding room temperature and also operation time bands.

### 6.3.1 Room temperature change

Press the button  to display the Comfort temperature (detail A fig. 9).

Press the buttons   and   to set the required temperature.

Press the button **OK / 1** to confirm the Comfort (COMFR) temperature and go to Economy (ECONM) temperature (detail B fig. 9). Press the buttons   and   to set the required temperature.

Press the button  to exit the menu and return to normal operation.

## NOTE

After this modification the CRD will operate with the standard time program and with the new Comfort and Economy temperatures settings.

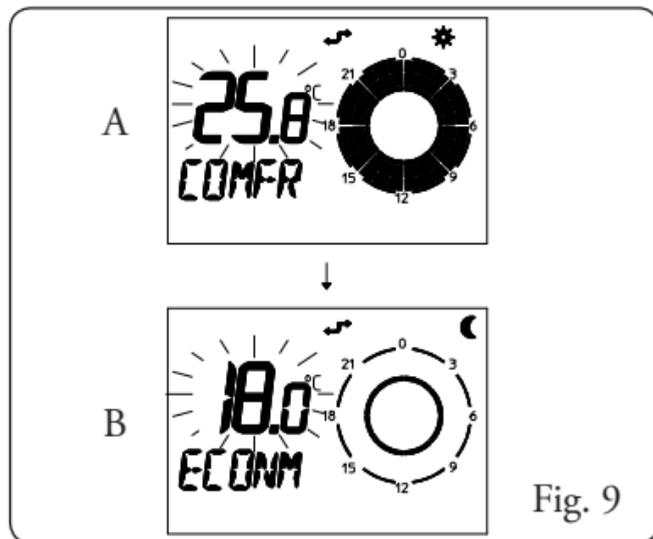


Fig. 9

### 6.3.2 Operation time band change

If the standard program does not meet your needs in terms of operation time bands, it can be modified.

Press the button **Prog** to enter the programming phase.

The day or group of days to be changed will appear on the display (detail A fig. 10), press buttons ▲  and ▼  to go from one day to the next in the following sequence: Monday, Tuesday, Wednesday ...Sunday; Mo - Tu; Sa - Su; Mo - Sa; Su; Mo - Su.

After selecting the day/s to be changed press the button **OK/1** and the display will show the time flashing and the message ON 1 relevant to the first Comfort tem-

perature band (detail B fig. 10). Press the buttons ▲  and ▼  to change the switch-on time: the time increases/decreases 30 minutes each time the button is pressed and also the corresponding clock on the display is updated.

Press the button **OK/1** to confirm the change and the display will show the switch-off time and the message OF 1 relevant to the first Comfort temperature operation band (detail C fig. 10). Press the buttons ▲  and ▼  to change the switch-off time: the time increases/decreases 30 minutes each time the button is pressed and also the corresponding clock on the display is updated.

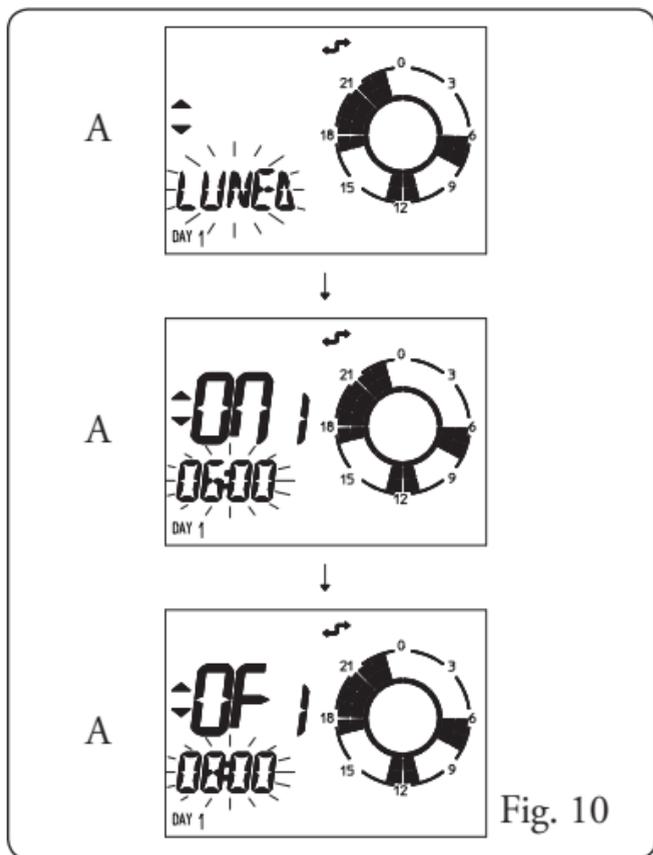


Fig. 10

Press the button **OK/1** to confirm the change and to go to the second time band. Up to 4 time bands can be set for each day; the switch-ons/switch-offs controlled over 24 hours do not affect the programming carried out. After personalising the selected daily program press **OK/1** and the next day/s to be changed will be displayed. Repeat the above operations if necessary. After programming the last day of the week (Sunday) the system exits programming and returns to normal operation, having acquired the changes made, otherwise programming can be quitted at any time by pressing the button **Prog.**

In case of difficulty, the factory settings can be restored by pressing the buttons **Prog** and  in sequence and keeping them pressed until the message “CLEAR” flashes on the display.

#### **NOTE**

All adjustment personalisations made to the programs and temperatures by the user are stored, even in case of a power failure.

### **6.4 Room temperature temporary change**

The set room temperature can be temporarily varied during automatic operation mode (detail A fig. 11).

Press the buttons   and   to set the room temperature value; the display shows the symbol  and  with the temperature value flashing. (detail B fig. 11)

After selecting the value press **OK/1** to store. If the value is not confirmed after a certain period the CRD will automatically acquire the selected value and the normal display will return with the symbol  flashing (detail C fig. 11).

**NB:**

The change remains effective until the next switchover from Comfort to Economy temperature, or vice versa, programmed on the timer.

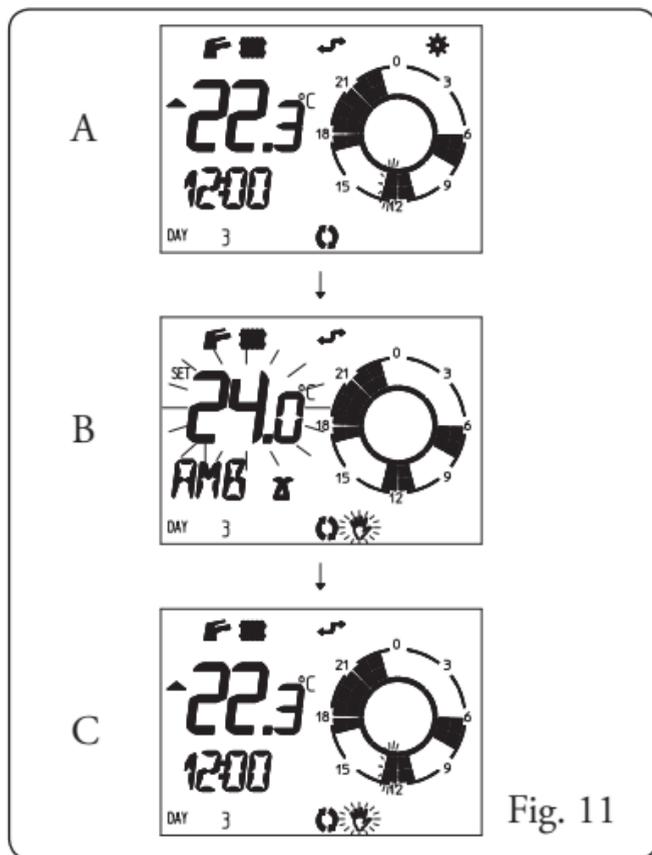


Fig. 11

## 7. INFORMATION

Press the button **OK/1** to display additional information on several quantities managed by the CRD. The functions displayed change according to the operation mode active at the time of the information request.

- Domestic hot water operation:
  - domestic hot water temperature.
- Room heating operation:
  - Comfort or Economy room temperature set according to the active phase;
  - boiler delivery temperature;
  - domestic hot water temperature;

- time program set for the current day; from this display use buttons ▲  and ▼  to show the set time program for the entire week.



## 8. DIAGNOSTICS AND ERRORS

The Digital Remote Control constantly controls boiler operation status, signalling any anomalies by displaying the message “ERROR” (detail A fig. 12) and the corresponding error code. In case of anomaly with manual reset the display will show the message “ERROR” alternating with the message “OK” (detail B fig. 12); press the button **OK/i** to reset the boiler.

### NOTE

Possible error codes displayed may depend on the boiler model the Digital Remote Control is connected to.

For information on these codes consult the boiler instruction handbook.

In case of non-resettable errors call a qualified technician (e.g. Immergas Technical Assistance Service).

### NOTE

In case of block with manual reset, up to 5 consecutive release attempts can be made, after which, resetting from the CRD is inhibited. Therefore operate the release button on the boiler to restore normal appliance operation.

## NOTE

If the malfunction persists contact the Immergas Assistance Centre.

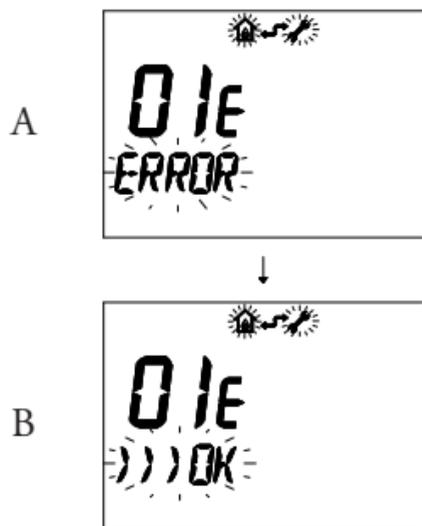


Fig. 12

## 9. SPECIAL FUNCTIONS

The CRD has a special menu reserved for the technician, in which various parameters can be set. This menu is reserved for specialised personnel and is accessed as follows:

Press the button **Prog** and then, keeping it pressed, press **OK/1**.

After entering the menu use the buttons **▲**  and **▼**  to change the values and button **OK/1** to confirm.

List of modifiable parameters:

- **RISL** this function is used to set the max. boiler delivery temperature value;
- **ANTIG** represents the room temperature value at which the antifreeze function is activated; this value can be set from 0 to 10°C;

- **AMBCR** corrects the room sensor reading. This value can be set from -1 to +1°C;
- **AMBON** enable room temperature sensor. When disabled the CRD works with the set time program and no longer controls the room temperature. When set to 1 the function is enabled, when set to 0 it is disabled. NB: The room antifreeze function is guaranteed even if the sensor is disabled. If the room sensor is disabled the boiler delivery temperature can be changed directly by using the buttons [**▲**  and **▼** ];
- **MODUL** sets operation to modulating or On/Off mode. When set to 1 the CRD operates in modulating mode, and 0 in On/Off mode;

- **ITALN** enables selection of the CRD operation language, ITALN for Italian and ENGLS for English;
- **K REG** CRD adjustment constant, this variable can be set from 0.5 to 6.5 (default value = 3); the higher the K value the higher the delivery temperature from which adjustment starts.
- **DIMEN** is a variable that takes into account the size and inertia of the heating system. It can be adjusted from 1 to 10; the higher the value, the quicker the system reaches the required temperature. The default value is ideal for a system with radiators of average size (default value = 5);
- **AUTO A** this function enables system self-learning, which automatically controls the variable **K REG** according to the room temperature values recorded. When set to 1 self-learning is enabled; when set to 0 it is disabled (default value = 1).

After setting the values press **Prog** to exit the menu.

## 10. TECHNICAL CHARACTERISTICS

- Power supply: ..... By means of communication Bus
- Power absorbed:..... 200 mW
- Room temperature: ..... 0 - 40°C
- Storage temperature:..... -10 - +65°C
- Protection rating according to EN 60730: ..... II
- Protection rating according to EN 60529: ..... IP 20
- Container dimensions (LxHxD):..... 110 x 73 x 25
- Connection method: ..... 2 non-polarised wires
- Charge reserve time: ..... 24 hours (with at least 2 hours' charge)
- Connection cable max. length: ..... 50 m (with cable 2x0.75mm<sup>2</sup>)
- Room temp. indication accuracy: ..... +/- 1°C at 25°C
- NTC room temp. sensor: ..... 50 k at 25°C
- Clock time deviation ..... +/- 15 minutes / year

## 11. FACTORY SETTINGS

- At switch-on: .....Stand-by
- Domestic hot water setting: ..... 50°C
- Winter status: .....Manual
- Comfort room temperature ..... 20°C
- Economy room temperature ..... 16°C
- RISL..... 85.0°C
- ANTIG ..... 5.0°C
- AMBCR..... 0.0°C
- AMBON ..... 1
- MODUL..... 1
- ITALN ..... 1
- K REG ..... 3.0
- DI MEN ..... 5.0
- AUTOA ..... 1

## EC DECLARATION OF CONFORMITY

In compliance with Gas Directive 90/396EC, EMC Directive 89/336EC, Efficiency Directive 92/42EC and Low Voltage Directive 73/23EC.

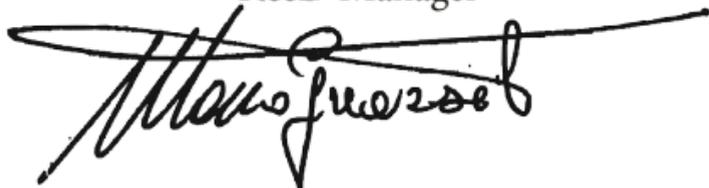
The manufacturer: Immergas S.p.A. v. Cisa Ligure no. 95 42041 Brescello (RE)

DECLARES THAT: the **CRD** Digital Remote Controls  
conform to the above-mentioned EC Directives

Mauro Guareschi

R&D Manager

Signature:

A handwritten signature in black ink, appearing to read 'Mauro Guareschi', written over a horizontal line.

**IMMERGAS S.p.A.**

*42041 Brescello (RE) Italy*

**[www.immergas.com](http://www.immergas.com)**