Manuel d'utilisation
User manual
Benutzerhandbuch
Manuale operativo
Manual de utilización

Airwell

RCW-2

| Français | English | Deutsch | Italiano | Español |

Centrale de supervision pour régulation électronique communicante

Communicating electronic regulation control unit

Überwachungszentrale für elektronische Kommunikations-Regelung

Centrale di supervisione per regolazione elettronica comunicante

Central de supervisión para regulación electrónica comunicante

CE AFAQ

Déclaration CE de conformité

Nous déclarons sous notre responsabilité que les produits désignés dans la présente notice sont conformes aux dispositions des directives CEE énoncées ci-après et aux législations nationales les transposant :

Directive Basse Tension (DBT) 73 / 23 / CEE
Directive Compatibilité Electromagnétique 89 / 336 / CEE

CE Declaration of Conformity

Under our own responsability, we declare that the products designated in this manual comply with the provisions of the EEC directives listed hereafter and with the national legislation into which these directives have been transposed :

Low Voltage Directive (LVD) 73 / 23 / EEC
Electro-magnetic Compatibility Directive 89 / 336 EEC

EG-Konformitätserklärung

Wir erklären in eigener Verantwortung, das die in der vorliegenden Beschreibung angegebenen Produkte den Bestimungen der nachstehend erwähnten EG-Richtlinien und den nationalen Gesetzesvorschriffen entsprechen, in denen diese Richtinien umgesetz sind :

Niederspannungsrichtlinie (DBT) 73 / 23 / EG
EMV- Richtlinie 89 / 336 / EG

Dichiarazione CE di conformità

Dichiariamo, assurmendone la responsasabilità, che i prodotti descritti nel presente manuale sono conformi alle disposizioni delle direttive CEE di cui sott e alle lagislazionni nazionali che li recepiscono :

Direttiva Bassa Tensione (DBT) 73 / 23 / CEE
Direttiva Compatibilità Elettromagnetica 89 / 336 / CEE

Declaración CE de conformidad

Declaramos, bajo nuestra responsabilidad, que los productos designados en este manual son conformes a las disposiciones de las directivas CEE enunuciadas a continuacion, asi como a las legislaciones nacionales que las contemplan :

Directiva Baja Tension (DBT) 73 / 23 /CEE
Directiva Compatibidad Electromagnética 89 / 336 / CEE
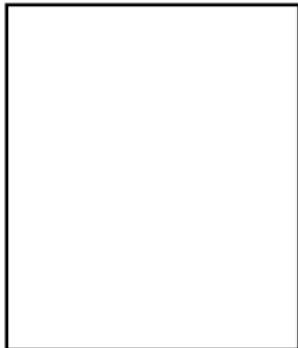
Airwell

$C\epsilon$ AFAQ ISO 9001
AFAQ N°1998/0110

Introduction

Our new control unit has been designed for managing the system operation and temperature control of both individual and communal installations.

Being easy to use, it provides effective management of from 1 to 15 different temperature zones and up to 32 units maximum.

For each one of the controlled zones, the user can alter the set temperatures for heating and cooling modes, and/or select ventilation fan speeds, by a simple programming procedure.

With the aid of a simple RS 485 communication bus (2 twisted wires) the panel provides individual control, in each of the zones, of the following functions :

✓ Dual programming of time and day of the week, control of ON / OFF, standby, and operating modes, ventilation speed (LS, MS, HS, Auto) and set temperatures.

This programming enables 2 time periods to be selected :

- Either individually (for each zone).

- Or globally (for all zones).

✓ Motorised Louvers operation control.

✓ Operating mode.

Description
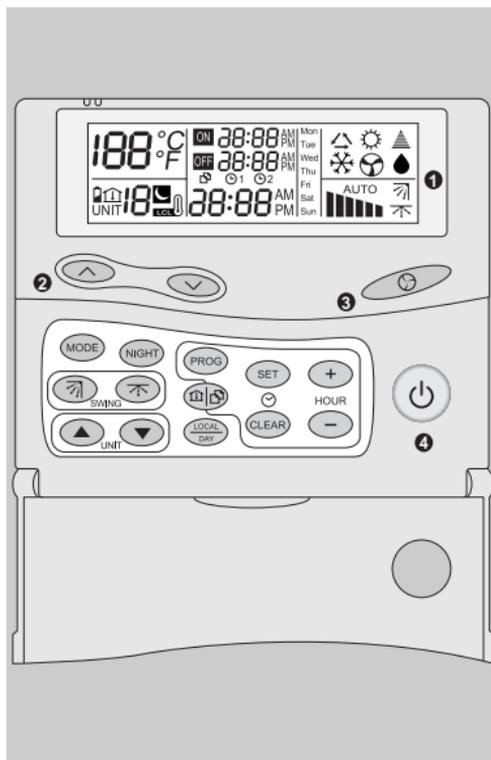
❶ Display screen.

❷ Keys for raising and lowering the set temperature.

❸ Ventilation mode selection :
    ▮▮ Low speed.
    ▮▮▮ Medium speed.
    ▮▮▮▮ High speed.
    AUTO : Automatic speed selection.

❹ ON / Standby.

(SET) Accessing the time setting mode.

(+) Advancing the time setting.

(−) Retarding the time setting.

(CLEAR) Clearing memory of programmed time settings in programming mode.

(LOCAL DAY) Day of the week selection key or sending "I feel" local temperature setting.

(PROG) Programming mode key.

(⌂|⌂) "Copy" key, enabling zone parameters to be duplicated for other zones.

(MODE) Operating mode selection.

(NIGHT) Day /Night key.

(▲) Current zone setting: zone above.

(▼) Current zone setting: zone below.

(↗) Louver : step by step or horizontal.

(↖) Louver : vertical.

Quick settings

Follow the procedure below if your control panel is already installed and wired on site and you just want to set the time, day and basic parameters :
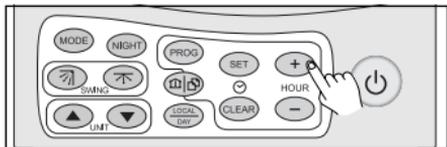
To access time and day settings

Press the (SET) key until the time and day values start flashing.
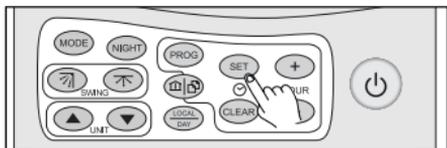
Setting the time

To set the time, press the (+) or (−) keys marked HOUR to advance or retard the time.

Tip : If you keep pressing on the (+) or (−) key the scrolling speed will increase to make time setting quicker.

Time is set on a 24 hours basis.

If the day is already set, press the (SET) key again for a few seconds to validate your setting, or wait for 20 seconds without touching the keyboard. Otherwise, continue the procedure.

Setting the day

To set the day, press the (LOCAL DAY) key to display the corresponding day symbol. The day of the week flashes on the display during the setting procedure.

The days of the week are displayed as follows :

Mon	: Monday
Tue	: Tuesday
Wed	: Wednesday
Thu	: Thursday
Fri	: Friday
Sat	: Saturday
Sun	: Sunday

Press the (SET) key for a few seconds to validate your setting, or wait for 20 seconds without touching the keyboard.

Now the time and date are set. Retrace this procedure for summer time / winter time changes or in the event of a power cut lasting longer than 24 hours.

Setting the desired temperature

Press the keys ⌃ and ⌄ to set the desired temperature in the zone displayed.

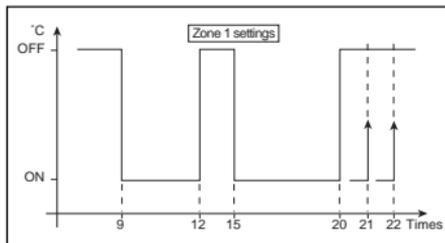The zone is selected by using the ▲ and ▼ keys marked UNIT.

If you wish to set the set temperature for all units (in all zones), you just have to set the set temperature for the zone 0.
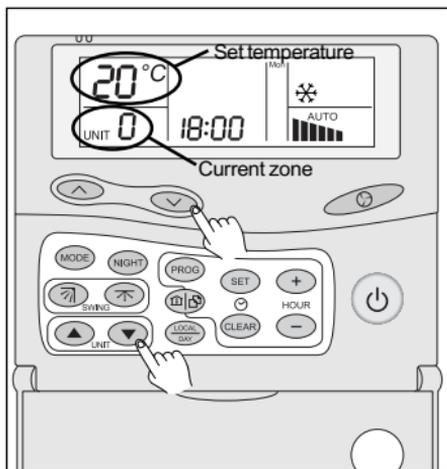
Example : In business premises with the following opening hours :

Morning : 9h to 12h - Afternoon : 15h to 20h.

In summer, you wish to maintain the following set temperatures :

It is quite possible to set two time periods with two different set temperatures.

You should proceed as follows to obtain the system operating conditions as shown above :

Press the (PROG) key for 3 seconds to access the timer setting sequences.

Then you have access to the following settings :

Select ZONE 1 by pressing the (▲) UNIT (▼) keys.

Step 1 : ⏲1 ON : 9 h 00   Step 2 : OFF : 12 h 00

Step 3 : ⏲2 ON : 15 h 00   Step 4 : OFF : 20 h 00

Select ZONE 0 by pressing the (▲) UNIT (▼) keys.

Step 5 : ⏲1 OFF : 21 h 00

Step 6 : ⏲2 OFF : 22 h 00

Press the (+) and (−) HOUR keys until the desired time is obtained.

Press the (SET) key to validate each step. You will then move on to the next step.

For Steps 1 and 3, corresponding to a time cycle start point, you will have to set the corresponding set temperature for each mode (cooling and heating, or automatic). To do this, please refer to Page 12 "Setting the desired temperature". You can also initiate programming of start times for unoccupied mode settings.

In fact, if somebody needs to stay on after the normal business closing time (i.e. staying from 20 h to 21 h), they can use the local remote control to set their preferred set temperature. If only one OFF sequence has been programmed (e.g. a global sequence), the last set temperature entered in the system will be the temperature maintained for the rest of the night.

To avoid this happening, you can enter several sequences for moving onto OFF mode, at different times, as illustrated in the above example.

These settings must be set for each Zone and Day in accordance with the desired time periods.

The * Copy/Paste (⧉) key can help you with this task, notably for times that are the same for several days, e.g. weekdays or weekend days.

For example, you just have to enter all the parameters for Monday in Zone 1 and press the * Copy/Paste (⧉) key. Then, the ⧉ symbol appears, indicating that all the settings for the zone and the day of the week are saved in the memory, for both the Number 1 and Number 2 timers.

There are several ways of Pasting. You can just paste a day or an entire zone by pressing the same key.

In fact, you are copying all the parameters, but for pasting, the parameter flashing in the destination zone is the one that will be saved in memory.

For example, if you wish to copy the timer parameters for Monday in Zone 1 to Tuesday in Zone 2 :

First step :

When you are in programming mode, you just have to go to Zone 1 on Tuesday by using the Zone and Day keys.

Second step :

Press the Copy / Paste key. Then the ⧉ symbol appears on the display. All the parameters of the zone and the day are copied.

Third step :

Use the Zone and Day keys to go to Zone 2 on Tuesday, and then press the Copy / Paste key.

WARNING : During the third step, you must pay particular attention to the flashing zone. In fact, if the ZONE word is flashing, then all the zone programmes for all the days will be copied. On the other hand, if as in our example, you only wish to copy one day, then the Day and the ON -:- messages should be flashing.

To exit the programming mode, keep pressing the (PROG) key until the programming display disappears and the control mode appears on the screen (2 seconds).

After 20 seconds of inactivity in programming mode, the unit will automatically exit this mode. After having returned to control mode, the unit will automatically move on to the Last Zone controlled and will display its status.

Commissioning the control unit (initial parameter settings)

Accessing the control unit parameters

WARNING! The procedures described below are only accessible with the control unit ON/OFF control in the OFF position (no temperature displayed on the LCD screen).

Press both the (SET) and (PROG) keys simultaneously for 5 seconds to access the various parameter settings. Stop pressing the keys as soon as the screen turns black (all the symbols are displayed!).
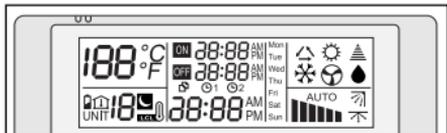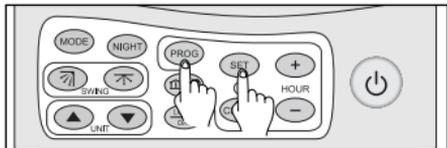
WARNING! If you do not stop pressing the keys when the screen turns black, the RCW2 control unit moves into re-initialisation mode and all previously stored settings will be lost.

Now you have access to the following parameter settings :

✓ Time on a 24 hours basis.

✓ Day of the week,

✓ Access to timer mode,

✓ Access to occupied/unoccupied mode,

✓ Access to air sweep mode,

✓ Access to audible warnings function,

✓ Number of zones controlled by the system,

✓ Type of units controlled by the system,

✓ Access mode.

You can return to the different settings above by pressing both the (SET) and (PROG) keys simultaneously for 5 seconds.

The timer flashes continuously in parameter setting mode. To exit this mode, you just have to not touch any keys for 20 seconds or press the (SET) key for a few seconds.

Setting the time

To set the time, press the (+) and (−) keys marked HOUR to advance or retard the time.

Tip : If you keep pressing on the (+) or (−) key the scrolling speed will increase to make time setting quicker.

Time is set on a 24 hours basis.

Setting the day

To set the day of the week, press the (LOCAL DAY) to display the corresponding day symbol.

The days of the week are displayed as follows :

Mon : Monday

Tue : Tuesday

Wed : Wednesday

Thu : Thursday

Fri : Friday

Sat : Saturday

Sun : Sunday

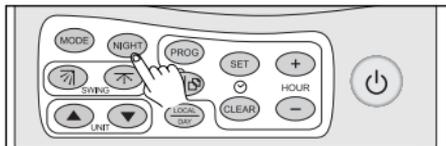### Programming mode accessibility validation

By pressing once, a timer ⏱1 symbol appears, a second press makes it disappear.

When the ⏱1 symbol is displayed, the user has access to the time period programming settings.

Night mode

You can also activate or deactivate the night mode by pressing the (NIGHT) key.

If the ☾ symbol appears, the night mode can be activated. On the other hand, if it is not displayed, the night mode can only be activated after the parameter setting mode has been exited.

This function must not be used on CAC units.

On RAC units, this function enables the night time running function to be activated or deactivated.

Horizontal air sweep function

Depending on the type of terminal used, you can also activate or deactivate the horizontal air sweep function, via the (↗) key.

This function enables a horizontal air sweep louver motor drive to be activated.

Audible warning function

You can also activate or deactivate the audible warning function by pressing the (CLEAR) key.
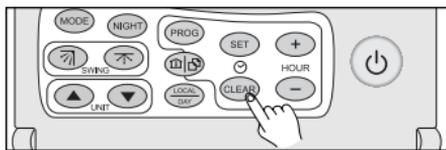
Each time one of the control unit's keys is pressed this function produces an audible warning sound.

The audible warning function is activated if the ▲ symbol is displayed.

Number of zones and type of unit

These two functions are directly dependent on the installation and its architecture.

In fact, you must determine the number of different zones in your system, i.e. locations with different occupancy and unoccupancy patterns (e.g. office blocks and storage areas) as well as locations with different temperature settings (computer room or offices). You must also determine the type of associated air conditioning unit, i.e. chilled water or direct expansion terminal.

The number of zones managed by the control unit is defined by using the (▲) and (▼) marked UNIT. The number can be set between 1 and 15 maximum for either increasing or decreasing the number of regulation zones.

Successive presses on the (MODE) key set the type of unit, following the sequence below :

00_Residential unit (direct expansion), 1 set temperature point.

AU_CAC, 2 set temperature points for AUTO mode.

Successive presses on the (MODE) key set the operating modes accessible by terminal connected to the control unit.

The accessible operating modes are as follows :

- ✓ Cooling mode   ❄
- ✓ Heating mode   ☼
- ✓ Automatic mode   △
- ✓ Ventilation only mode   ۞
- ✓ Deshumidification mode   ♦

The modes that can be set, depending on the applications, are as follows :

All accessible modes (for RAC units),

All modes except the dehumidification mode (CAC and RAC).

Only the cooling and ventilation modes are accessible.

Only the heating and ventilation modes are accessible.

«I Feel» function - Local temperature

This function is only usable when the number of zones is set to 1.

If the ⊾ symbol is displayed, the unit uses the ambient temperature measured by the control unit

N.B.: If this function is activated in parameter setting mode, the user will not be able to cancel it.

Back lighting

The liquid crystal display back lighting illuminates when the control unit passes into Configuration / Initialisation mode and when any key is pressed.

The back lighting switches off if no key is pressed within 20 seconds.

Error messages

In the event of an anomaly, the liquid crystal display will be momentarily erased and the word CLR will appear instead of RTC, with an error code number in the place of the temperature. This message will remain displayed for 2 seconds before disappearing.

If error codes of this nature are displayed, we advise you against continuing to use the unit.

Battery

- In the event of 12 V power supply failure, the BATTERY icon is displayed and the POWER luminous diode flashes to indicate that the control unit is running on battery power.

- The batteries are rechargeable and therefore do not normally require replacing. However, if they do require replacing, use only NIMH 1.2 V rechargeable batteries.

- At the end of their useful life, the batteries should be recovered by an approved waste disposal company, or your supplier.

- The RCW2 control unit can be powered separately via an independent 12 V, 100mA, D.C. power supply between terminals GND (-) and +12 V (+).

Reinitialising the software

Simultaneously press the SET, CLEAR, HOUR + and HOUR - keys to reinitialise the unit.

WARNING! This operation will only erase the time and day settings.

Locking the keypad

The keypad can be locked (with the exception of the software REINITIALISATION keys) by simultaneously pressing the UNIT ▲ and ▼ keys. Then a series of audible warning sounds are emitted and the ≙ triangle is permanently displayed. Just repeat this operation to unlock the keypad. Then, a different series of audible warning sounds is emitted and the ≙ triangle returns to its normal operating status.

Changing the fan operating mode

Repeatedly press the FAN key or maintain pressure on the key.

4 modes are available :

- Low speed ▮▮,

- Medium speed ▮▮▮,

- High speed ▮▮▮▮,

- Auto.

N.B.: In DRY mode, (dehumidification) ◆, the fan will always run in low speed mode and it will not be possible to select any other mode.

Zone in service

When a zone is in service, the following information can be displayed :

- Time,

- Zone number,

- Ambient temperature or set temperature,

- Fan status,

- Mode and, depending on the configuration, "I Feel" status, night time running status and Louvers status.

The ≙ signal may light up to indicate a message.

ON/OFF using the all zone command (zone 0)

When the all zone command (Zone 0) is switched ON or OFF, by direct control or by running a programme, the word "SET" appears instead of the time, and messages are sent sequentially to all zones (depending on the configuration), indicating the zone of despatch.

Once this operation is completed, the time and the active zone (0) are again displayed.

During this time (around 1 second per zone), the unit is locked and does not react to user instructions.

This sequential operation avoids simultaneous unit start-ups.

RCW2 control unit

Max. length = 1000 m
Max. number of units = 32
Max. number of zones = 15

Unit 3

Unit 2

Unit 1

Twisted paired cable
between 0.12 and 0.3 mm^2

RCW2 addresses configuration procedure

1. CAC controller board for rooftop and split-system units

The address is configured by the DIP switches S9, S10, S11 and S12. Refer to the user manual for the addresses.

2. 10V4, 10V5 Storm Units for ducted, wall, cassette units

Follow the procedure below for entering the address in the memory :

1. Install and connect the RCW2.

2. On the unit with the number 1 address, press the "MODE" button for 5 seconds. This button is found on the unit fascia on wall and cassette units. For ducted units, this button is located on the infra red receiver casing.

3. On the RCW2, press UNIT ▲ or ▼ key in order to select "UNIT 1".

4. Press ON / OFF twice..

5. The address is now saved in memory.

6. Unit 1 can be left ON.

7. Repeat the same procedure with UNIT 2.