

# Fan Coil Units

## Fan Coil Control Range



## CB-AUT



## WM-AU



## T-MB2

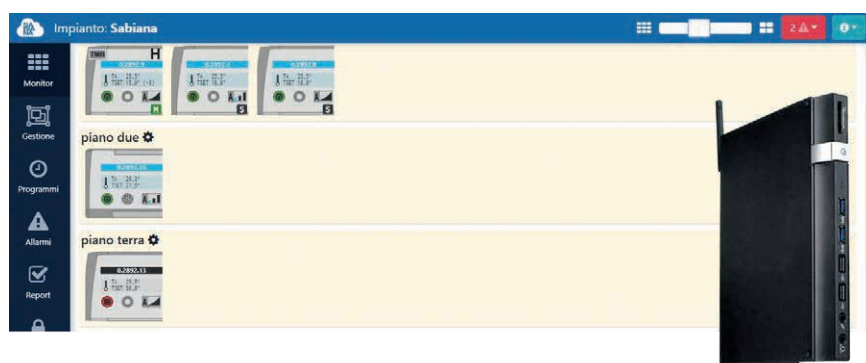


## PSM-DI



## Sabianet

## SabWeb



## TABLE OF CONTENTS

Introduction	p. 4
Controls for fan coil with AC asynchronous motor	p. 6
Controls for fan coil with EC electronic motor and inverter board	p. 14
Power unit and speed switches for controls	p. 17
Accessories for controls	p. 19
MB controls and units - Carisma fan coil range	p. 21
MB controls and units - SkyStar fan coil range	p. 25
MB controls and units	p. 29
Sabianet software	p. 31
MB and SABIANET accessories	p. 35
KNX bus system	p. 36

**For technical details see installation, use and maintenance manual.**

The descriptions and illustrations provided in this publication are not binding: Sabiana reserves the right, whilst maintaining the essential characteristics of the types described and illustrated, to make, at any time, without the requirement to promptly update this piece of literature, any changes that it considers useful for the purpose of improvement or for any other manufacturing or commercial requirements.

### INTRODUCTION

Electronic controls to combine with the following fan coil range with AC asynchronous motor and with EC electronic motor and inverter board.

#### Carisma fan coil units

CRC range with AC asynchronous motor and centrifugal fan  
CRC-ECM range with EC electronic motor and centrifugal fan  
CRT-ECM range with AC asynchronous motor and tangential fan  
CRR-ECM range with AC asynchronous motor and tangential fan



#### Carisma MVI fan coil range

with AC asynchronous motor and centrifugal fan



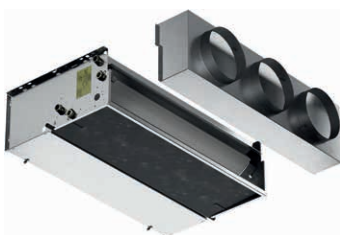
#### Fly fan coil units

CVP range with AC asynchronous motor  
CVP-ECM range with EC electronic motor



#### High pressure Carisma fan coil units

CRSL range with AC asynchronous motor and centrifugal fan  
CRSL-ECM range with EC electronic motor and centrifugal fan



### SkyStar Cassette fan coil units

SK range with AC asynchronous motor  
SK-ECM range with EC electronic motor  
SK-Jumbo-ECM range with EC electronic motor



### Carisma Coanda one way Cassette fan coil units

CCN / CCN-H range with AC asynchronous motor and centrifugal fan  
CCN-ECM / CCN-ECM-H range with EC electronic motor and centrifugal fan



## CONTROLS FOR FAN COIL WITH AC ASYNCHRONOUS MOTOR

For the Carisma and SkyStar range the ambient temperature can be controlled through the use of electronic room thermostats with different solutions according to every environmental conditions; the control range includes indeed the manual or automatic speed switch control, the thermostatic control of the water valves or

of the electric heater, the manual, automatic or centralized summer/winter switch.

With the use of the power unit and of the speed switches it is also possible to control more units with the same thermostat.

Here below there is the description of all controls for the AC asynchronous motor versions.

### Carisma CRC controls fitted on the unit

For Carisma MV and MO-MVB units only.

The Fan coil controls fitted on the unit are only suitable for Sabiana units.

Standard reference: EN 60335-2-40.

#### CB control

To combine with: CRC

ID	Code
CB	9066300



- ON/OFF switch
- Manual 3 speed switch without thermostatic control
- It allows to control the low temperature cut-out thermostat TMM

#### CB-T control

To combine with: CRC

ID	Code
CB-T	9066301



- ON/OFF switch
- Manual 3 speed switch
- Manual Summer/Winter switch
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- It allows to control the low temperature cut-out thermostat TMM
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use CB-R-IAQ control with on/off switch for the electric heater)
- Presence of a LED signal when the thermostat is on.

Control power absorption: 1,5 VA

## CB-C control

To combine with: CRC

ID	Code
CB-C	9066302



- ON/OFF switch
- Manual 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- It allows to control the low temperature cut-out thermostat TME
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use CB-R-IAQ control with on/off switch for the electric heater)
- Presence of a LED signal when the thermostat is on

Control power absorption: 1,5 VA

## CB-AUT control

To combine with: CRC

ID	Code
CB-AUT	9066318



- ON/OFF switch
- Manual/automatic 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Automatic speed switch: on Auto Mode there is the automatic speed selection in accordance to the difference between room temperature and setpoint. When the setpoint is reached the fan goes on OFF
- Electronic room thermostat for water valve control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to control the low temperature cut-out thermostat NTC
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use CB-AUT-IAQ control with on/off switch for the electric heater)
- Presence of a LED signal when the thermostat is on

**P.N.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer winter change-over in accordance to the room temperature (-1 °C = Winter, +1 °C = Summer, Neutral Zone 2 °C)

Control power absorption: 1,5 VA

## CONTROLS FOR FAN COIL WITH AC ASYNCHRONOUS MOTOR

### Carisma CRC controls fitted on the unit with Crystall filter or with electric heater

For Carisma MV-MO-MVB units only.

The Fan coil controls fitted on the unit are only suitable for Sabiana units.

Standard reference: EN 60335-2-40.

#### CB-IAQ control

To combine with: CRC

ID	Code
CB-IAQ	9066305



- ON/OFF switch
- Manual 3 speed switch
- IAQ filter activation button
- Without thermostatic control
- It allows to control the low temperature cut-out thermostat TMM

#### CB-R-IAQ control

To combine with: CRC

ID	Code
CB-R-IAQ	9066306



- ON/OFF switch
- Manual 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Electric heater/electrostatic filter activation switch
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- It allows to control the low temperature cut-out thermostat TME
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL)
- Presence of a LED signal when the thermostat is on

Control power absorption: 1,5 VA



## CB-AUT-IAQ control

To combine with: CRC

ID	Code
CB-AUT-IAQ	9066322



- ON/OFF switch
- Manual/automatic 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Electric heater/electrostatic filter activation switch
- Automatic speed switch: on Auto Mode there is the automatic speed selection in accordance to the difference between room temperature and setpoint. When the setpoint is reached the fan goes on OFF
- Electronic room thermostat for water valve control (ON-OFF)
- It allows to control the low temperature cut-out thermostat NTC
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element
- Presence of a LED signal when the thermostat is on

**P.N.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer winter change-over in accordance to the room temperature (-1 °C = Winter, +1 °C = Summer, Neutral Zone 2 °C)

Control power absorption: 1,5 VA

## CONTROLS FOR FAN COIL WITH AC ASYNCHRONOUS MOTOR

### Carisma and Cassette electronic wall controls

The wall controls are in compliance with the standard reference CEI EN 60730.

#### WM-3V control

To combine with: CRC, CRSL, SK, CCN, CVP, MVI

ID	Code
WM-3V	9066642



- ON/OFF switch
- Manual 3 speed switch without thermostatic control
- It does not control the valves
- It allows to control the low temperature cut-out thermostat TMM

Dimensions: 75x75x30 mm

#### WM-T control

To combine with: CRC, CRSL, SK, CCN, CVP, MVI

ID	Code
WM-T	9066630



- ON/OFF switch
- Manual 3 speed switch
- Manual Summer/Winter switch
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- It allows to control the low temperature cut-out thermostat TMM
- It allows to control the chilled water valve (ON-OFF) and the electric heater (BEL) only in case that hot water is not used in winter (otherwise please use WM-TQR control with on/off switch for the electric heater)
- Presence of a LED signal when the thermostat is on

Control power absorption: 0,25 VA

Dimensions: 135x86x31 mm

## WM-TQR control

To combine with: CRC, CRSL, SK, CCN, CVP, MVI

ID	Code
WM-TQR	9066631



- ON/OFF switch
- Manual 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Electric heater/electrostatic filter activation switch
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to control the low temperature cut-out thermostat NTC
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element
- Energy saving function
- Presence of a LED signal when the thermostat is on

Control power absorption: 1 VA

Dimensions: 135x86x31 mm

## CONTROLS FOR FAN COIL WITH AC ASYNCHRONOUS MOTOR

### WM-AU controls

To combine with: CRC, CRSL, SK, CCN

ID	Code
WM-AU	9066632



The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (with separate packaging).

- ON/OFF switch
- Manual/automatic 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Summer/Winter/Fan/Auto mode switch
- Electric heater/electrostatic filter activation switch
- Electronic room thermostat for fan and water valves control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to use the low temperature cut-out thermostat NTC mounted on the power unit
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element
- Energy saving function
- Presence of a LED signal when the thermostat is on

**P.N.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer winter change-over in accordance to the room temperature (-1 °C = Winter, +1 °C = Summer, Neutral Zone 2 °C)

Control power absorption: see the UP-AU power unit

Dimensions: 135x86x24 mm

### T-MB2 control

To combine with: CRC, CRSL, SK, CCN

ID	Code
T-MB2	9066994E



The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (with separate packaging).

Control with TFT 2,4" coloured graphic display for wall installation, equipped with WiFi module and BLE for the management of the connected unit via Sabiana APP.

The main characteristics are:

- Management by keyboard or via Sabiana APP WiFi
- Management of one single unit or of several units in Master/Slave mode
- ON/OFF switch
- Operation mode setting
- Setpoint configuration or setpoint variation by supervisory program ( +/- 3°C of the set)
- Room temperature internal sensor, which can be defined as a priority compared to the return air sensor on the fan coil
- Fan speed switch
- Advanced daily/weekly ON/OFF programming with 3 pre-settable weekly programs
- Viewing and editing of the unit operating parameters, alarm diagnostics and information about the unit (the viewable parameters depend from the control board model to which the T-MB2 control is connected)
- Activation/deactivation of the room temperature display
- Electric heater or electrostatic filter management
- Possibility to use the T1 sensor which allows the return air control (fitted on the power unit)

Control power absorption: see the UP-AU power unit

Dimensions: 115x72x20 mm

### WM-503-AC-EC control

To combine with: CRC, CRSL, SK, CCN

ID	Code
WM-503-AC-EC	9066686



The control must always be connected with UP-503-AC-EC power unit (separately delivered).

WM-503-AC-EC control allows to regulate the room temperature in both, the heating and the cooling modes, it can control one or two valves and fan coil units with asynchronous motor or fan coil units with EC electronic motors.

The WM-503-AC-EC control for fan coils with valves, is designed to be installed in a 503 wall box.

Easy to use, it is equipped with a large and efficient backlit LCD screen with 4 keys.

The kit lets the thermostat be suitable for all plaques on the market and it is composed by: coloured covers (white, silver and anthracite), frames and adaptators.

- Manual or automatic 3 speed motor control for asynchronous versions
- EC motor control with 0-10V signal for the ECM versions
- Power supply by UP-503-AC-EC by means of the two-core cable
- Input for return air/water/change over probe
- ON/OFF / SET Reduction / remote SUMMER-WINTER digital input
- User interface with LCD display with adjustable back-light and 4 keys
- 2 and 4 pipe fan coil units control
- Button lock controller

Control power absorption: see the UP-503-AC-EC power unit

Dimensions: 68x52.2x(wall protrusion=12) mm

### T2T control

To combine with: CRC, CRSL, SK, CCN, CVP, MVI

ID	Code
T2T	9060174



Only for 2 pipe units only.

- ON/OFF switch
- Manual 3 speed switch
- Manual Summer/Winter switch
- Thermostatic control on the fan
- Thermostatic control on the valve and continuous fan operation
- Simultaneous thermostatic control of the valve and fan
- Cannot be used with speed switch (master-slave)

Control power absorption: 1,5 VA

Dimensions: 128x75x25 mm

### CONTROLS FOR FAN COIL WITH EC ELECTRONIC MOTOR AND INVERTER BOARD

For the Carisma and SkyStar range the ambient temperature can be controlled through the use of electronic room thermostats with different solutions according to every environmental conditions; the control range includes indeed the manual or automatic speed switch control, the thermostatic control of the water valves or

of the electric heater, the manual, automatic or centralized summer/winter switch.

With the use of the power unit and of the speed switches it is also possible to control more units with the same thermostat.

Here below there is the description of all controls for the versions with EC electronic motor and inverter board.

#### Carisma -ECM controls fitted on the unit

The Fan coil controls fitted on the unit are only suitable for Sabiana units.

Standard reference: EN 60335-2-40.

##### CB-T-ECM control

To combine with: CRC-ECM, CRT-ECM, CRR-ECM

ID	Code
CB-T-ECM	9066320



- ON/OFF switch
- Manual 3 speed switch or automatic continuous speed control
- Manual Summer/Winter switch
- Continuous speed control based on the difference between ambient temperature and Set temperature (speed switch in Auto position)
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to control the low temperature cut-out thermostat NTC
- Presence of a LED signal when the thermostat is on

Control power absorption: 1,5 VA

##### CB-T-ECM-IAQ control

To combine with: CRC-ECM, CRT-ECM, CRR-ECM

ID	Code
CB-T-ECM-IAQ	9066308



- ON/OFF switch
- Manual 3 speed switch or automatic continuous speed control
- Manual, automatic or centralized Summer/Winter switch
- Continuous speed control based on the difference between ambient temperature and Set temperature (speed switch in Auto position)
- Electric heater/IAQ filter activation button
- Automatic speed switch: on Auto Mode there is the automatic speed selection in accordance to the difference between room temperature and setpoint. When the setpoint is reached the fan goes on OFF
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to control the low temperature cut-out thermostat NTC
- Presence of a LED signal when the thermostat is on

Control power absorption: 1,5 VA

## Carisma and Cassette electronic wall controls

The wall controls are in compliance with the standard reference CEI EN 60730.

### WM-AU controls

To combine with: CRC-ECM, CRT-ECM, CRR-ECM, CRSL-ECM, SK-ECM, CCN-ECM

ID	Code
WM-AU	9066632



The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (with separate packaging).

- ON/OFF switch
- Manual/automatic 3 speed switch
- Manual, automatic or centralized Summer/Winter switch
- Summer/Winter/Fan/Auto mode switch
- Electric heater/electrostatic filter activation switch
- Electronic room thermostat for fan and water valves control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to use the low temperature cut-out thermostat NTC mounted on the power unit
- It allows to control the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element
- Energy saving function
- Presence of a LED signal when the thermostat is on

**P.N.:** with 4 pipe installations and continuous chilled and hot water supply, it allows the automatic summer winter change-over in accordance to the room temperature (-1 °C = Winter, +1 °C = Summer, Neutral Zone 2 °C)

Control power absorption: see the UP-AU power unit

Dimensions: 135x86x24 mm

### T-MB2 control

To combine with: CRC-ECM, CRT-ECM, CRR-ECM, CRSL-ECM, SK-ECM, CCN-ECM

ID	Code
T-MB2	9066994E



The control must always be connected with UPM-AU power unit (fitted on the unit) or with UP-AU power unit (with separate packaging).

Control with TFT 2,4" coloured graphic display for wall installation, equipped with WiFi module and BLE for the management of the connected unit via Sabiana APP.

The main characteristics are:

- Management by keyboard or via Sabiana APP WiFi
- Management of one single unit or of several units in Master/Slave mode
- ON/OFF switch
- Operation mode setting
- Setpoint configuration or setpoint variation by supervisory program ( +/- 3°C of the set)
- Room temperature internal sensor, which can be defined as a priority compared to the return air sensor on the fan coil
- Fan speed switch
- Advanced daily/weekly ON/OFF programming with 3 pre-settable weekly programs
- Viewing and editing of the unit operating parameters, alarm diagnostics and information about the unit (the viewable parameters depend from the control board model to which the T-MB2 control is connected)
- Activation/deactivation of the room temperature display
- Electric heater or electrostatic filter management
- Possibility to use the T1 sensor which allows the return air control (fitted on the power unit)

Control power absorption: see the UP-AU power unit

Dimensions: 115x72x20 mm

## CONTROLS FOR FAN COIL WITH EC ELECTRONIC MOTOR AND INVERTER BOARD

### WM-503-AC-EC control

To combine with: CRC-ECM, CRT-ECM, CRR-ECM, CRSL-ECM, SK-ECM, CCN-ECM

ID	Code
WM-503-AC-EC	9066686



The control must always be connected with UP-503-AC-EC power unit (separately delivered).

WM-503-AC-EC control allows to regulate the room temperature in both, the heating and the cooling modes, it can control one or two valves and fan coil units with asynchronous motor or fan coil units with EC electronic motors.

The WM-503-AC-EC control for fan coils with valves, is designed to be installed in a 503 wall box.

Easy to use, it is equipped with a large and efficient backlit LCD screen with 4 keys.

The kit lets the thermostat be suitable for all plaques on the market and it is composed by: coloured covers (white, silver and anthracite), frames and adaptators.

- Manual or automatic 3 speed motor control for asynchronous versions
- EC motor control with 0-10V signal for the ECM versions
- Power supply by UP-503-AC-EC by means of the two-core cable
- Input for return air/water/change over probe
- ON/OFF / SET Reduction / remote SUMMER-WINTER digital input
- User interface with LCD display with adjustable back-light and 4 keys
- 2 and 4 pipe fan coil units control
- Button lock controller

Control power absorption: see the UP-503-AC-EC power unit

Dimensions: 68x52.2x(wall protrusion=12) mm

### WM-S-ECM control

To combine with: CRC-ECM, CRT-ECM, CRR-ECM, CRSL-ECM, SK-ECM, CCN-ECM, CVP-ECM-A

ID	Code
WM-S-ECM	9066644



0-10V control with display designed to be mounted on the wall or to be installed on a 503 wall box.

- ON/OFF switch
- Manual 3 speed switch or automatic continuous speed control
- Manual Summer/Winter switch
- Summer/Winter/Fan/Auto mode switch
- Electronic room thermostat for fan control (ON-OFF)
- Electronic room thermostat for water valve control (ON-OFF)
- Simultaneous thermostatic control of the valves and fan
- It allows to control the low temperature cut-out thermostat NTC

Control power absorption: 1,2 VA

Dimensions: 132x87x23,6 mm



## POWER UNIT AND SPEED SWITCHES FOR CONTROLS

### UPM-AU / UP-AU power unit

for WM-AU and T-MB2 controls

**To combine with:** CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK, SK-ECM, CCN, CCN-ECM

ID		Code
UPM-AU	mounted	9066641
UP-AU	not mounted	9066640



Power unit to be installed on the end unit (fan coil interface).

- It controls the fan and the valves of the fan coil
- It is connected to the electric supply
- It receives the information required from the remote control
- Possibility to use the NTC low temperature cut-out thermostat (optional) for the T1 function which allows the return air control
- Possibility to use the NTC probe (optional) for the T2 function which controls the summer/winter switch (change-over)
- Possibility to use the NTC low temperature cut-out thermostat (optional) for the T3 function as low temperature cut-out thermostat
- It allows to control up to 10 units (1 master and 9 slaves)
- Max. network length: 100 meters
- Max cable length between control and first connected power unit: 20 meters

Power unit absorption: 2,3 VA

### UP-503-AC-EC power unit

for WM-503-AC-EC control

**To combine with:** CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK, SK-ECM, CCN, CCN-ECM

ID	Code
UP-503-AC-EC	9066687



Power unit to be installed on the end unit (fan coil interface).

- It receives from the WM-503-AC-EC remote control the information required to control the valves and the motor
- It allows to control up to 5 units (1 master and 4 slaves)
- Must be connected to the electric supply
- Max. Network length: 100 meters
- Max cable length between control and first connected power unit: 20 meters

Power unit absorption: 2 VA

### SEL-CB speed switch (Slave)

for WM-T and WM-TQR controls

**To combine with:** CRC

ID	Code
SEL-CB	9066304



For CRC fan coil series, MV-MVB versions.

- Speed switch (Slave).
- It allows to control up to 8 units with only one centralized wall control (1 speed switch for each unit).

## POWER UNIT AND SPEED SWITCHES FOR CONTROLS

### SEL-CR speed switch (Slave)

for WM-T and WM-TQR controls

To combine with: CRC, CRSL, MVI

ID	Code
SEL-CR	9066311



For CRC fan coil series, MO-IV-IO versions.

- Speed switch (Slave)
- It allows to control up to 8 units with only one centralized wall control (1 speed switch for each unit)

### SEL2M speed switch (Slave)

for WM-T and WM-TQR controls

To combine with: SK, CCN

ID	Code
SEL2M	9079109



- Speed switch (Slave)
- It allows to control up to 8 units with only one centralized wall control (1 speed switch for each unit)

### SEL-CVP speed switch (Slave)

for WM-T and WM-TQR controls

To combine with: CVP

ID	Code
SEL-CVP	9025302



- Speed switch (Slave)
- It allows to control up to 8 units with only one centralized wall control (1 speed switch for each unit)

## ACCESSORIES FOR CONTROLS

### TME low temperature cut-out thermostat

for CB-C and CB-R-IAQ controls

ID	Code
TME	3021091



- To be fitted between the coil fins
- When connecting the control, the TME probe cable must be separated from the power supply wires
- It stops the fan when the water temperature is lower than 38 °C and it starts the fan when is higher than 42 °C

### TMM low temperature cut-out thermostat

for CB, CB-T, CB-IAQ, WM-3V and WM-T controls

ID	Code
TMM	9053048



- To be installed in contact with the hot water circuit
- For units working on heating only
- It stops the fan when the water temperature is lower than 30 °C and it starts the fan when is higher than 38 °C.

### NTC low temperature cut-out thermostat

for CB-AUT, CB-T-ECM, CB-AUT-IAQ, CB-T-ECM-IAQ, WM-TQR, WM-S-ECM, WM-503-AC-EC controls and UP-AU power unit

ID	Code
NTC	3021090



- To be fitted between the coil fins
- When connecting the control, the NTC probe cable must be separated from the power supply wires
- It stops the fan when the water temperature is lower than 28 °C and it starts the fan when is higher than 33 °C

To use as:

- T1 function for the return air control
- T2 function which controls the summer/winter switch
- T3 function as low temperature cut-out thermostat

### Change-over CH 15-25

for CB-C, CB-R-IAQ, CB-T-ECM-IAQ and WM-TQR controls

ID	Code
CH 15-25	9053049



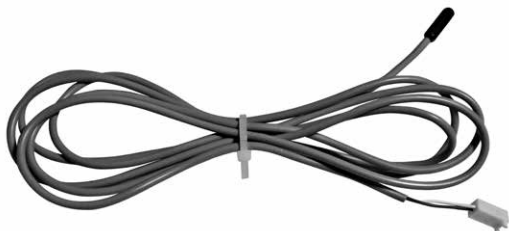
- Automatic summer/winter switch to be installed in contact with the water circuit
- For 2 tube installations only (not to be used with 2 way valve)

## ACCESSORIES FOR CONTROLS

**T2 probe**

for CB-AUT, CB-AUT-IAQ controls and UP-AU power unit

ID	Code
T2	9025310



NTC probe type, to be placed on the water supply pipe upstream of the valves (not to be used with 2 way valves).

The T2 probe must be used as described below:

- Change-Over for the automatic switch of the operating mode. If water temperature is lower than 20 °C, cooling mode is set; on the other hand, if water temperature exceeds 30 °C, heating mode is set
- it can be used on units with electric heater and hot water supply (EXCEPT SkyStar). The T2 priority probe activates the electric heater or water valve, depending on the water temperature detected. If water temperature exceeds 34 °C, the water valve ON-OFF control is activated; on the other hand, if water temperature is lower than 30 °C, the electric heater is activated

## MB CONTROLS AND UNITS - CARISMA FAN COIL RANGE

All the Carisma units can be supplied with a wide range of controls, which allows managing one single unit or several units by using the Modbus RTU - RS 485 communication protocol.

The groups of units can be managed according to the Master/Slave logic (up to 20 units) or by supervisory components.

The system includes a single **MB power board** and a range of technical devices to be used with:

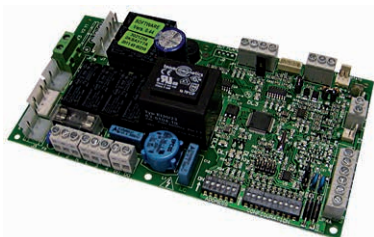
- the **T-MB2** wall control and the **infra-red remote control**, to manage single units;
- the **PSM-DI** multifunctional panel, the **Sabianet** supervisory system, the **T-DI** Touch screen multifunction control pane and the **SabWeb** Web gateway for "**Sabiana Cloud**", to manage one single unit or several units.

### MB electronic board

**To combine with: CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI**

Note: on CVP-MBA and CVP-ECM-MBA fan coil units the electronic board is to be mounted.

ID		Code	
MB-M	mounted	9066332	with electric asynchronous motor
MB-S	not mounted	9066333	
MB-ECM-M	mounted	9066334	with electronic motor and inverter board
MB-ECM-S	not mounted	9066335	
MB-MVI-M	mounted	9070501	with AC asynchronous motor - only for MVI range



The MB electronic board is set to carry out different functions and adjustment modes, in order to meet the installation requirements. These modes are selected by setting the configuration dip switches on the board.

- 2/4 pipe system
- Electronic room thermostat or automatic fan speed modulation for fan control (ON-OFF)
- Valve ON/OFF thermostatic control and continuous ventilation
- Valve and simultaneous ventilation ON/OFF thermostatic control
- Fan operation control depending on the coil temperature (fitted T3 low temperature cut-out thermostat), which can be activated only in heating mode or heating and cooling mode.

- Automatic switch of the operating mode by means of T2 water probe (optional) applied on the 2 pipe system
- Summer/Winter switch by means of remote contact
- Forced fan coil switching off by remote contact (window contact or contact by clock)
- Electric heater or Crystall electronic filter control (the simultaneous control of the heater and of the Crystall filter is not possible)

By activating the T3 low temperature cut-out thermostat function, the fan is stopped in winter when the coil temperature is lower than 32 °C and started when the temperature reaches 36 °C.

In summer mode, the fan stops when the temperature inside the coil exceeds 22 °C and starts when it drops below 18 °C.

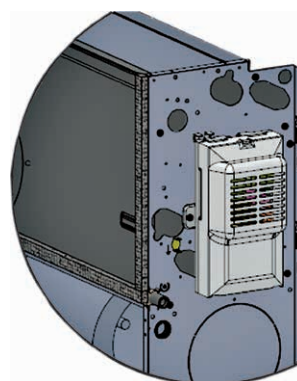
The following connections are located on the power board:

- receiver for infra-red remote control
- T-MB2 wall control
- RS 485 serial connection to manage several fan coils in Master/Slave configuration or to create a supervisory network

NTC probe included for T1 function (return air control).

NTC probe included for T3 function (low temperature cut-out thermostat).

Possibility to use the NTC low temperature cut-out thermostat (optional) for the T2 function which controls the summer/winter switch.



Note: MB electronic board has to be mounted on the fan coil internal unit.

### T-MB2 control

**To combine with:** CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, SK, SK-ECM

To be used with MB electronic board.

ID	Code
T-MB2	9066994E



Control with TFT 2,4" coloured graphic display for wall installation, equipped with WiFi module and BLE for the management of the connected unit via Sabiana APP.

The main characteristics are:

- Management by keyboard or via Sabiana APP WiFi
- Management of one single unit or of several units in Master/Slave mode
- ON/OFF switch
- Operation mode setting
- Setpoint configuration or setpoint variation by supervisory program ( +/- 3°C of the set)
- Room temperature internal sensor, which can be defined as a priority compared to the return air sensor on the fan coil
- Fan speed switch
- Advanced daily/weekly ON/OFF programming with 3 pre-settable weekly programs
- Viewing and editing of the unit operating parameters, alarm diagnostics and information about the unit (the viewable parameters depend from the control board model to which the T-MB2 control is connected)
- Activation/deactivation of the room temperature display
- Electric heater or electrostatic filter management
- Possibility to use the T1 sensor which allows the return air control (fitted on the MB electronic board)
- Vertical air flow function (FLAP) for CVP-TA/CVP-MBA

Dimensions: 115x72x20 mm

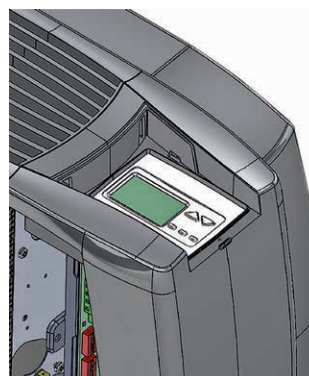
### T-MB2 control fitted on the unit

**To combine with:** CRC, CRC-ECM, CRT-ECM

For fan coil with casing only.

To be used with MB electronic board only.

ID	Code	
T-MB2-M	9066995	T-MB2 control fitted on the unit, for MV / MVB models
T-MB2-S	9066996	T-MB2 control fitted on the unit, supplied with separate packaging, for MV / MVB models



The control is equipped with internal probe to detect the room temperature, which can be defined as a priority compared to the return air probe on the fan coil.

Control functions are:

- ON/OFF switch
- temperature set
- modify the set point (when used as a +/- 3° variation of the set point configured from Sabianet supervisory program or PSM-DI)
- set the fan speed (low, medium, high or auto fan)
- set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature)
- time setting
- weekly ON/OFF program
- display and change of the fan coil operation parameters

### RT04 remote control

To be used with MB electronic board only.

ID	Code	
RT04	3021216	RT04 remote control supplied with separate packaging



Note: not to be used with MVI range.

The remote control allows setting the fan coil operation parameters at a distance and it is equipped with backlit screen.

The RT04 remote control features the following functions:

- switch the unit ON and OFF
- configuration of temperature set
- set the fan speed (low, medium, high or auto fan)
- set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature)
- time setting
- 24 hours ON/OFF program
- Battery status indication
- Direct control of the FLAP position

### RT03 / RR03 remote control

To be used with MB electronic board only.

ID	Code	
RT03 / RR03	3021203	RT03 / RR03 infra-red remote control supplied with separate packaging



Note: not to be used with MVI range.

The infra-red remote control allows setting by a remote position the fan coil operation parameters.

The RT03 / RR03 remote control features the following functions:

- switch the unit ON and OFF
- configuration of temperature set

- set the fan speed (low, medium, high or auto fan)
- set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature)
- time setting
- 24 hours ON/OFF program
- vertical air flow function (FLAP) for serie CVP-TA/CVP-MBA

### Infra-red remote control kit

To be used with MB electronic board only.

ID	Code	
RS-RT	9066337	Infra-red remote control with receiver supplied with separate packaging
RS	9066338	Receiver for infra-red remote control supplied with separate packaging
RS-RT-F	9025301	Infra-red remote control with receiver supplied with separate packaging – <b>only for CVP-TA/CVP-MBA fan coil units</b>
RS-F	9025300	Receiver for infra-red remote control supplied with separate packaging – <b>only for CVP-TA/CVP-MBA fan coil units</b>

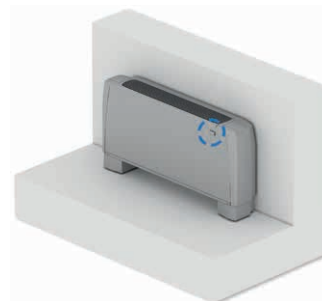
Note: not to be used with MVI range.

### Installation examples with infra-red remote control

#### Concealed Carisma Fan Coil Units



#### Carisma MV-MO-MVB





## MB CONTROLS AND UNITS - CARISMA FAN COIL RANGE

### Carisma Fly



### Carisma Coanda



More fan coils with MB board can be connected with the Bus communication protocol and can be managed at the same time by a T-MB2 single control or by only one infra-red remote control.

Using the special jumper present on the MB board, one unit must be configured as the master, and all the others as slaves.

It is clear that the remote control must be pointed at the receiver on the master unit.

To avoid problems, it is recommended to install and connect the receiver only on the master unit.

### With T-MB2 control

One control for each unit  
(Maximum length of the connection cable = 20 m)



One control for more units (20 units max.)  
(Maximum total length of the connection cable = 800 m)



### With remote control

One control for each unit



One control for more units (20 units max.)  
(Maximum total length of the connection cable = 800 m)



### T2 accessory for units with MB electronic board

ID	Code
T2	9025310



NTC probe type, to be placed on the water supply pipe upstream of the valves (not to be used with 2 way valves).

The T2 probe must be used as described below:

- Change-Over for 2 pipe systems, for the automatic switch of the operating mode. If water temperature is lower than 20 °C, cooling mode is set; on the other hand, if water temperature exceeds 30 °C, heating mode is set
- it can be used on units with electric heater and hot water supply (EXCEPT SkyStar). The T2 priority probe activates the electric heater or water valve, depending on the water temperature detected. If water temperature exceeds 34 °C, the water valve ON-OFF control is activated; on the other hand, if water temperature is lower than 30 °C, the electric heater is activated



## MB CONTROLS AND UNITS - SKYSTAR FAN COIL RANGE

### Cassette SkyStar with AC asynchronous motor and with EC electronic motor and inverter board

All the SkyStar units with MB electronic board can be supplied with a wide range of controls, which allows managing one single unit or several units by using the Modbus RTU - RS 485 communication protocol.

The groups of units can be managed according to the Master/Slave logic (up to 20 units) or by supervisory components.

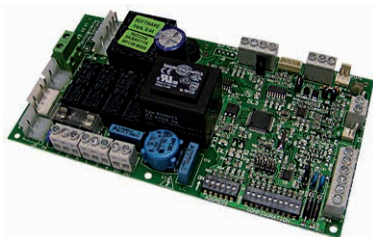
The system includes a single **MB power board** and a range of technical devices to be used with:

- the **T-MB2** wall control and the **infra-red remote control**, to manage single units;
- the **PSM-DI** multifunctional panel, the **Sabianet** supervisory system, the **T-DI** Touch screen multifunction control pane and the **SabWeb** Web gateway for "Sabiana Cloud", to manage one single unit or several units.

#### MB electronic board

To combine with: SK-MB, SK-ECM-MB

Mounted as per standard



The MB electronic board, to be mounted on the SK-MB and SK-ECM-MB versions, is set to carry out different functions and adjustment modes, in order to meet the installation requirements.

The Dip Switches on the board have to be set to carry out different functions:

- 2/4 pipe system
- Electronic room thermostat or automatic fan speed modulation for fan control (ON-OFF)
- Valve ON/OFF thermostatic control and continuous ventilation
- Valve and simultaneous ventilation ON/OFF thermostatic control
- Fan operation control depending on the coil temperature (fitted T3 low temperature cut-out thermostat), which can be activated only in heating mode or heating and cooling mode
- Automatic switch of the operating mode by means of T2 water probe (optional) applied on the 2 pipe system.

- Summer/Winter switch by means of remote contact
- Forced fan coil switching off by remote contact (window contact or contact by clock)
- Electric heater or Crystall electronic filter control (the simultaneous control of the heater and of the Crystall filter is not possible)

By activating the T3 low temperature cut-out thermostat function, the fan is stopped in winter when the coil temperature is lower than 32 °C and started when the temperature reaches 36 °C.

In summer mode, the fan stops when the temperature inside the coil exceeds 22 °C and starts when it drops below 18 °C.

The following connections are located on the power board:

- receiver for infra-red remote control
- T-MB2 wall control
- RS 485 serial connection to manage several fan coils in Master/Slave configuration or to create a supervisory network

NTC probe included for T1 function (return air control).

NTC probe included for T3 function (low temperature cut-out thermostat).

Possibility to use the NTC low temperature cut-out thermostat (optional) for the T2 function which controls the summer/winter switch.

## T-MB2 control

To combine with: SK-MB, SK-ECM-MB

ID	Code
T-MB2	9066994E



Control with TFT 2,4" coloured graphic display for wall installation, equipped with WiFi module and BLE for the management of the connected unit via Sabiana APP.

The main characteristics are:

- Management by keyboard or via Sabiana APP WiFi
- Management of one single unit or of several units in Master/Slave mode
- ON/OFF switch
- Operation mode setting
- Setpoint configuration or setpoint variation by supervisory program ( +/- 3°C of the set)
- Room temperature internal sensor, which can be defined as a priority compared to the return air sensor on the fan coil
- Fan speed switch
- Advanced daily/weekly ON/OFF programming with 3 pre-settable weekly programs
- Viewing and editing of the unit operating parameters, alarm diagnostics and information about the unit (the viewable parameters depend from the control board model to which the T-MB2 control is connected)
- Activation/deactivation of the room temperature display
- Electrostatic filter management
- Possibility to use the T1 sensor which allows the return air control (fitted on the MB electronic board)

Dimensions: 115x72x20 mm

## RT04 remote control

To be used with MB electronic board only.

ID	Code	
RT04	3021216	RT04 remote control supplied with separate packaging



The remote control allows setting the fan coil operation parameters at a distance and it is equipped with backlit screen.

The RT04 remote control features the following functions:

- switch the unit ON and OFF
- configuration of temperature set
- set the fan speed (low, medium, high or auto fan)
- set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature)
- time setting
- 24 hours ON/OFF program
- Battery status indication

## RT03 / RR03 remote control

To be used with MB versions only.

ID	Code	
RT03 / RR03	3021203	RT03 / RR03 infra-red remote control supplied with separate packaging



The infra-red remote control allows setting by a remote position the fan coil operation parameters.

The RT03 / RR03 remote control features the following functions:

- switch the unit ON and OFF
- temperature set
- set the fan speed (low, medium, high or auto fan)
- set the operation mode (fan only, cooling, heating; auto for 4 pipe systems with mode selection depending on the air temperature)
- time setting

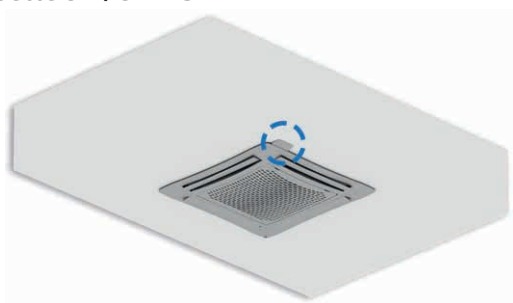
- 24 hours ON/OFF program

## Infra-red remote control kit

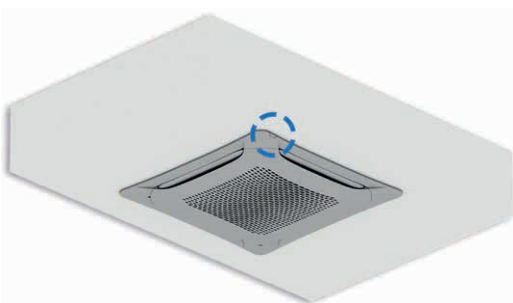
ID	Code	
RCS-RT	9079117	Infra-red remote control with receiver supplied with separate packaging (not to be used with SkyStar Jumbo)
RCS	9079116	Receiver for infra-red remote control supplied with separate packaging (not to be used with SkyStar Jumbo)
RS	9066338	Receiver for infra-red remote control and MD-600 / MD-800 metal diffuser supplied with separate packaging

## Installation examples with infra-red remote control

### Cassette SK / SK-ECM



### Cassette Jumbo SK-ECM



A group of Cassette fan coil units with MB electronic board can be connected via a serial link and can consequently be managed at the same time by just one T-MB2 control or infra-red remote control.

Using the special jumper present on the MB board, one unit must be configured as the master, and all the others as slaves.

It is clear that the remote control must be pointed at the receiver on the master unit.

To avoid problems, it is recommended to install and connect the receiver only on the master unit.

## With T-MB2 control

One control for each unit  
(Maximum length of the connection cable = 20 m)



One control for more units (20 units max.)  
(Maximum total length of the connection cable = 800 m)

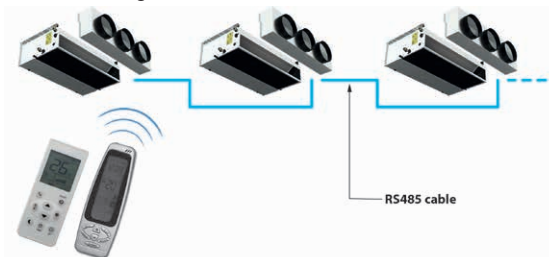


## With remote control

One control for each unit

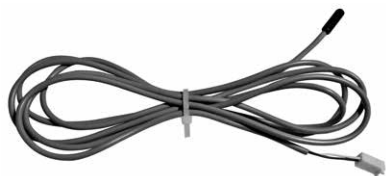


One control for more units (20 units max.)  
(Maximum total length of the connection cable = 800 m)



### T2 accessory for units with MB electronic board

ID	Code
T2	9025310



NTC probe type, to be placed on the water supply pipe upstream of the valves (not to be used with 2 way valves).

The T2 probe must be used as described below:

- Change-Over for 2 pipe systems, for the automatic switch of the operating mode. If water temperature is lower than 20 °C, cooling mode is set; on the other hand, if water temperature exceeds 30 °C, heating mode is set

### NTC probe with receiver for infra-red remote control

To be used with SkyStar Jumbo only.

ID	Code
WM-NTC	9079885



The WM-NTC probe to be used only with the MB board for SkyStarJumboSK-ECM-MB unit, is a control for concealed installation (box interaxle spacing 60 mm) for room temperature control.

This control with fitted NTC probe lets the prevention from stratification problems.

Technical characteristics:

- on/off switch for the fan coil unit
- manual and automatic 3 speed switch
- internal probe for room temperature detection
- receiver for infra-red remote control
- integrated Bluetooth® Module

With the dip-switches it is possible to select the following operating functions:

- room temperature cut-out thermostat only
- ON/OFF switch
- ON/OFF and speed change switches
- operating mode with receiver for infra-red remote control for infra-red remote control
- operating function with receiving/transmitting Bluetooth data®

The WM-NTC probe can be used as stand-alone or master/slave.

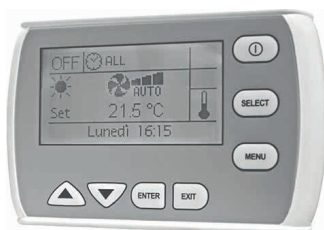
## MB CONTROLS AND UNITS

### Carisma and SkyStar Cassette fan coil ranges with AC asynchronous motor and with EC electronic motor and inverter board

#### PSM-DI multifunction control panel

**To combine with:** CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI

ID	Code	
PSM-DI	3021293	Multifunction control panel (to be used with MB board or MB versions only)



Another option available for the serial communication between the units is the possibility to connect up to 60 double insulated panel fan coils in series and manage them with just one multifunction control panel.

The wall mounted controller can be used to set the operating mode for each individual unit connected, display the operating conditions of each individual unit, and set the ON/OFF time sets for each day of the week (the program can be set for all the units and for a maximum of ten groups of units).

If more than 60 units need to be connected, two or more PSM-DI control panels must be used.

Each unit must have a MB board.

The PSM-DI control is used to manage a series of fan coils, up to a maximum of 60 units (the maximum length of the RS 485 connection cable must not exceed 800 m), from one single control point.

The PSM-DI control communicates via a serial line with all the units connected, with the possibility of controlling them all together or individually.

In fact, the unique address of each individual fan coil means that all the units can be called at the same time, or the individual unit called, to perform the following functions:

- display the current operating mode, the fan speed, the set point
- display the room temperature measured on the individual unit
- turn all the units ON and OFF at the same time or alternatively each unit individually
- change the operating mode (fan only, heating, cooling, automatic change-over)

- change the set point and modify the values and operation parameters of the fan speed

Each function can then be sent to all the units connected, or alternatively to each individual unit.

Different set points or operating modes can be set for each individual unit.

The PSM-DI panel can also be used for the time management of the units over the week.

Four ON times and four OFF times can be set on the units for each day of the week.

A different temperature set that will be considered as Operation set for all connected appliances, can be set for each event.

If the temperature set is not entered for the individual event, it must be set during programming for each individual unit or for the entire network.

Units without receiver or with receiver can be connected within the network: the former can receive instructions only from the PSM-DI wall mounted panel; while the latter can receive information from both the wall mounted panel (PSM-DI) and infra-red remote control. Use the infra-red remote control to force ON mode of the individual unit, if ON/OFF daily time programming has been set.

The unit will regain the settings from the PSM-DI panel during execution of successive start-up program.

#### **The PSM-DI panel cannot be used together with the management program Sabianet.**

Notes:

- set the Dip Switches of each fan coil as illustrated in the remote control installation manual, based on the required solutions
- only one SIOS board is allowed to be used per each PSM-DI control panel
- about "Priority pump function": when just one unit calls for, the relay RL1 on the SIOS board is automatically activated to connect a hot water pump
- the RS 485 network's overall length must not exceed 700/800 metres

## MB CONTROLS AND UNITS

### T-DI Touch screen multifunction control panel

**To combine with: CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI**

ID	Code
T-DI	9066685



The T-DI multifunction control panel lets supervise and control more units with MB or SIOS boards; the panel is equipped with a 7 inches touch screen display and a serie of graphical pages that allows an easy reading of the data sent by the fan coils and the management of up to 60 units (max. 60 units: SIOS + MB).

With the multifunction control panel T-DI it is also possible to control the units from a distance with the specific Sabiana Cloud App for Android and iOS.

The Sabiana Cloud APP is simple to use and lets have complete control of all the connected units.

### Web gateway for Sabiana Cloud

**To combine with: CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI**

ID	Code
SabWeb	9066682



With the Web gateway for " Sabiana Cloud " it is possible to control at a distance up to 60 units, equipped with MB or SIOS boards (max. 60 units: SIOS + MB), with the specific APP for Android and iOS.

The App " Sabiana Cloud " is simple to use and lets have complete control of all the connected units.



## SABIANET SOFTWARE

### Carisma and SkyStar Cassette fan coil ranges with AC asynchronous motor and with EC electronic motor and inverter board

#### Sabianet program for managing a network of Sabiana MB fan coils

**To combine with: CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI**

Hardware/software supervisory system (to be used with MB board and MB versions only)

ID	Code
Sabianet	9079118



Sabianet is a centralised control system for networks of Sabiana MB fan coils, based on software that runs on LINUX™ operating system (the program is provided pre-installed on a PC) and it works in a "stand alone" way, as an ordinary computer, so that it can be connected to a monitor, to a mouse and to a keyboard.

By connecting an Ethernet cable is instead possible to work at a distance and visualize the entire program setting-up through whatever browsers.

The Sabianet software offers a practical and economical solution for managing the units, with the simple click of the mouse.

The main characteristics are:

- simplicity of use
- an extremely complete and functional weekly program
- possibility to access the historical operating data for each individual unit connected
- possibility of data saving on USB key
- visualization of the saved configuration on a new ASUS PC

The program takes advantage from all features of our units with fitted MB board.

The program can be used to:

- create uniform groups (groups of units on individual floors, in offices or rooms)

- save weekly programs configured for different types of operation (summer, winter, mid seasons, closing periods etc.); these can then be recalled and activated with a simple click of the mouse. Weekly on/off cycles can be set for individual units or groups of units
- set the operating conditions for each individual unit or groups of units (operating mode, fan speed, temperature setting)
- set the set point limits for each individual unit or groups of units
- switch each individual unit or groups of units ON or OFF

With the Sabianet multifunction control panel it is also possible to control the units from a distance with the specific APP Sabiana Cloud for Android and iOS.

The Sabiana Cloud APP is simple to use and lets have complete control of all the connected units.

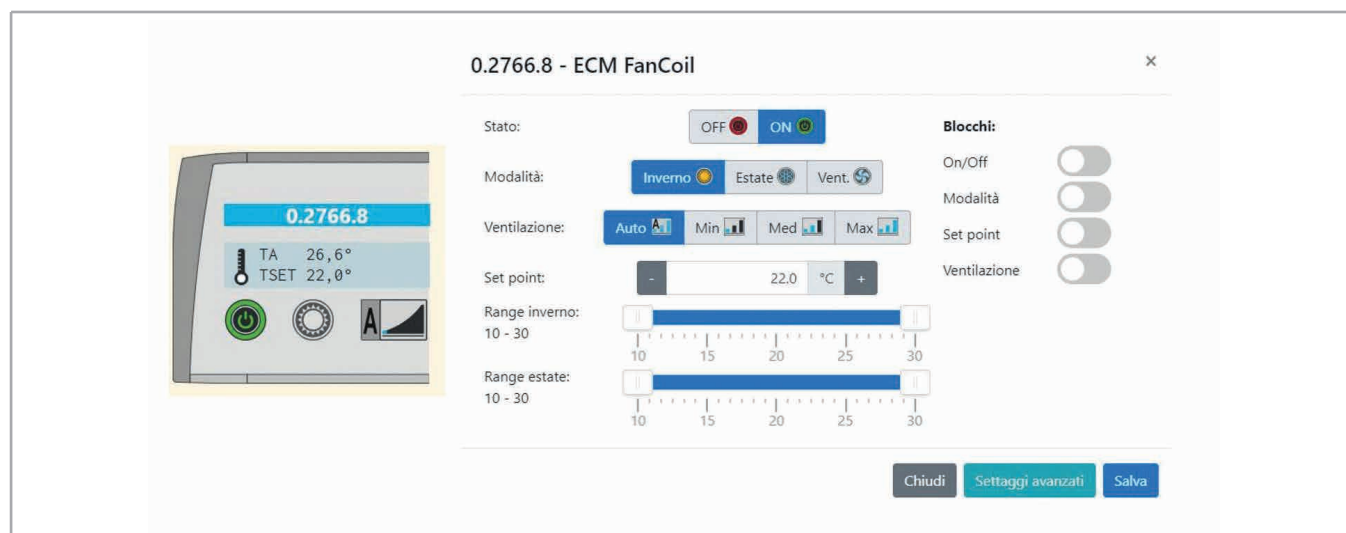
## Graphical pages

The main program screen can display and interact with the entire network of units.

An individual unit, a group of units or the entire network can be called so as to make modifications to the operating mode and the set point.

The user can then check the operating status of each individual unit, read the room temperature, the coil temperature and the operating status of the condensate drain pump or any alarms.

The **"Monitoring"** Screen shows the units that are connected to the network and scanned by the program.



The icon of the terminal unit provides the following information:

- unit name (0.2766.8)
- set temperature (SETP)
- room temperature (AT)
- unit status:



ON (GREEN)



OFF (RED)

- mode:



Summer



Winter



Auto



Fan only

- fan speed:



Low



Medium



High



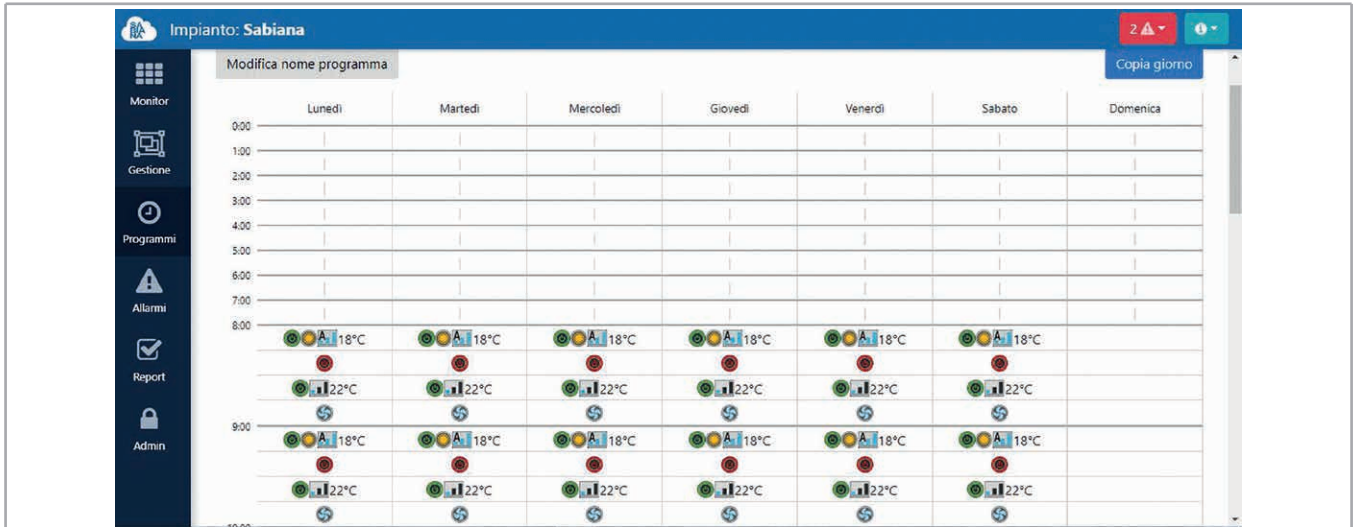
Auto Fan



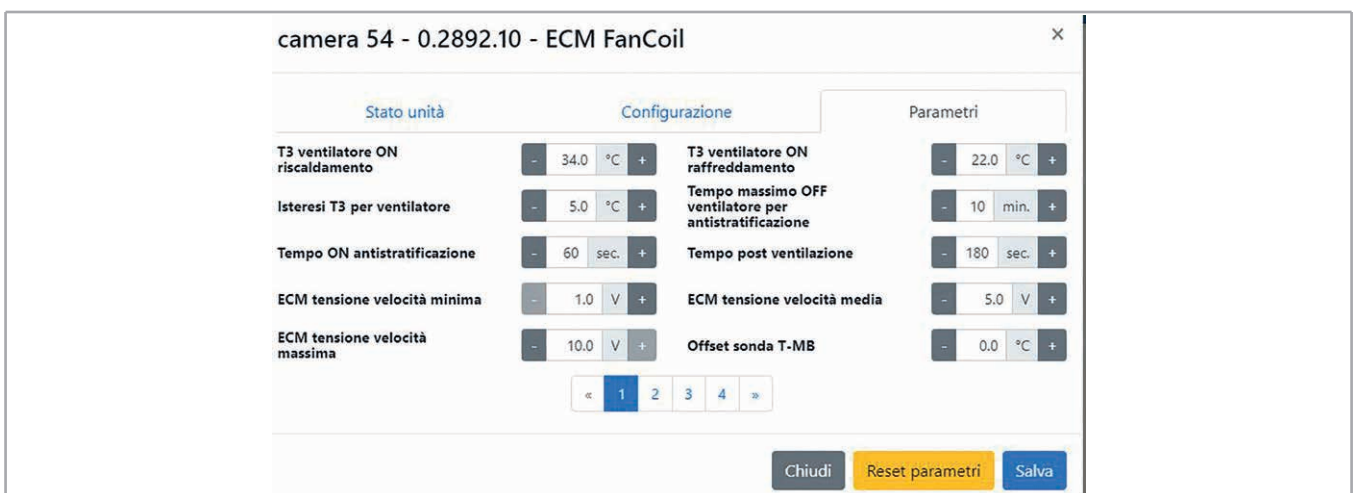
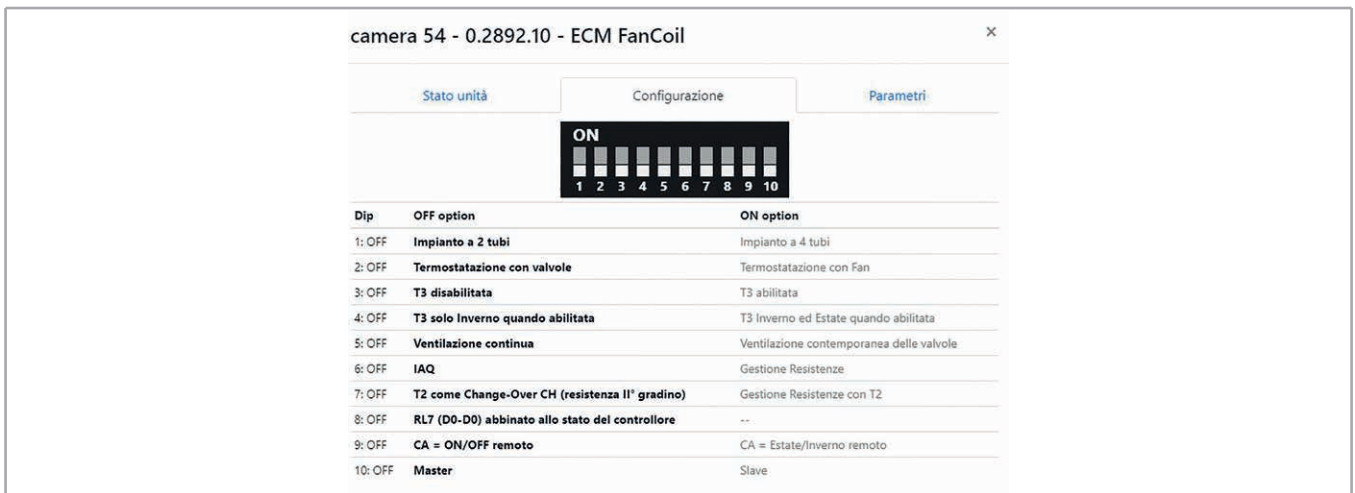
The **"Programs"** Screen, can be used to set the unit operating parameters for each day of the week. Several weekly programs can be set.

Time bands are available for each day of the week. The time and the type of operation to be performed by the unit can be set for each band.

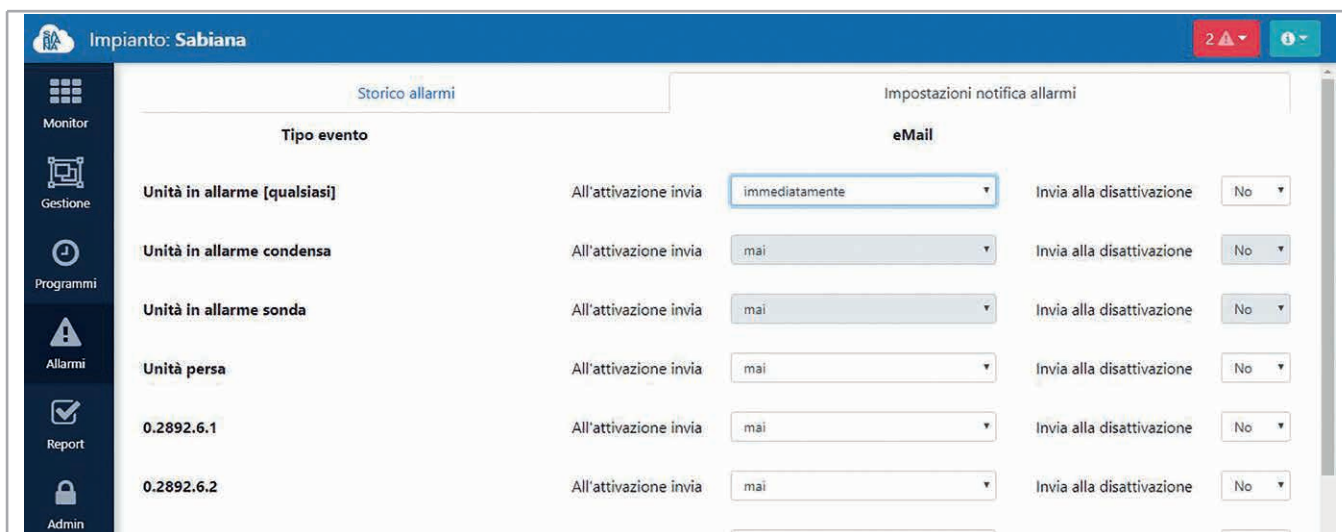
The time and the operating parameters can then be displayed before being sent to the unit and implemented.



Every time that the reading of the set up Dip Switches results not easy (as for example by the false ceiling installations), it is always possible to display them directly through the Sabianet program.



In addition to the alarm set on the **"Alarms"** Screen, it is possible to send the ON-OFF alarm notification via E-mail and sms.



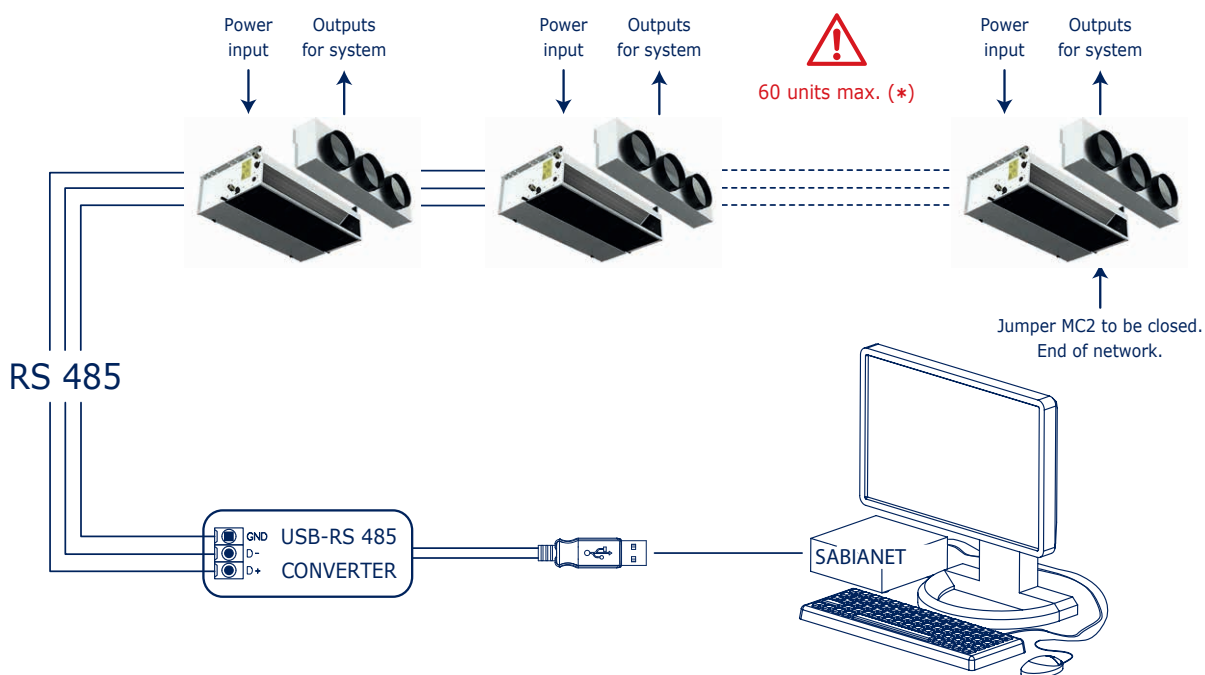
### RS 485 serial connection cable

Shielded cable to be used: RS-485, 1x2x24 AWG SFTP, 120 Ohm.



### PC Sabianet Software

Installation example with a SkyStar network with MB board.



(\*) In the event of more than 60 units, add one or more Router-S (see next page).

## MB AND SABIANET ACCESSORIES

### Carisma and SkyStar Cassette fan coil ranges with AC asynchronous motor and with EC electronic motor and inverter board

#### SIOS board

To combine with: CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI

ID	Code
SIOS	3021292



SIOS is a board equipped with 8 relays with potential free contact to control the activation or deactivation of remote electric utilities.

Moreover, the board has 8 digital inlets to display the actuators or external consents, such as motor or other.

The SIOS boards can be connected:

- inside a network managed by Sabianet
- inside a network managed by T-DI
- inside a network managed by SabWeb
- to a PSM-DI panel (one SIOS for each PSM-DI panel)

#### Router-S

To combine with: CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP-MBA, CVP-ECM-MBA, MVI

ID	Code
Router-S	3021290



The Router-S is an electronic board that allows to control several units inside a network managed by Sabianet (default) or within a sub-network managed by BMS systems, that are not provided by Sabiana (it is necessary to refit a Dip Switch on the board).

#### Managed by Sabianet

The Router-S in the standard version is an electronic board that:

- allows creating networks with more than 60 units (minimum 2 Router-S are required) or to divide the network (per floor, building, ecc.).
- allows creating a Master/Slave sub-network to be controlled as an independent group

The number of Router-S to be used is:

- up to 60 units: no Router-S
- from 61 to 120 units: 2 Router-S
- every 60 subsequent units: 1 additional Router-S

#### Managed by BMS Systems which are not provided by Sabiana

The Router-S becomes an electronic board to use with BMS systems (not by Sabiana), only after having set the Dip Switch on the board and so creating a Master/Slave sub-network to be controlled as an independent group.

The number of Router-S to be used is:

- max 14 Router-S
- maximum 15 Fan Coils per Router-S

## KNX BUS SYSTEM

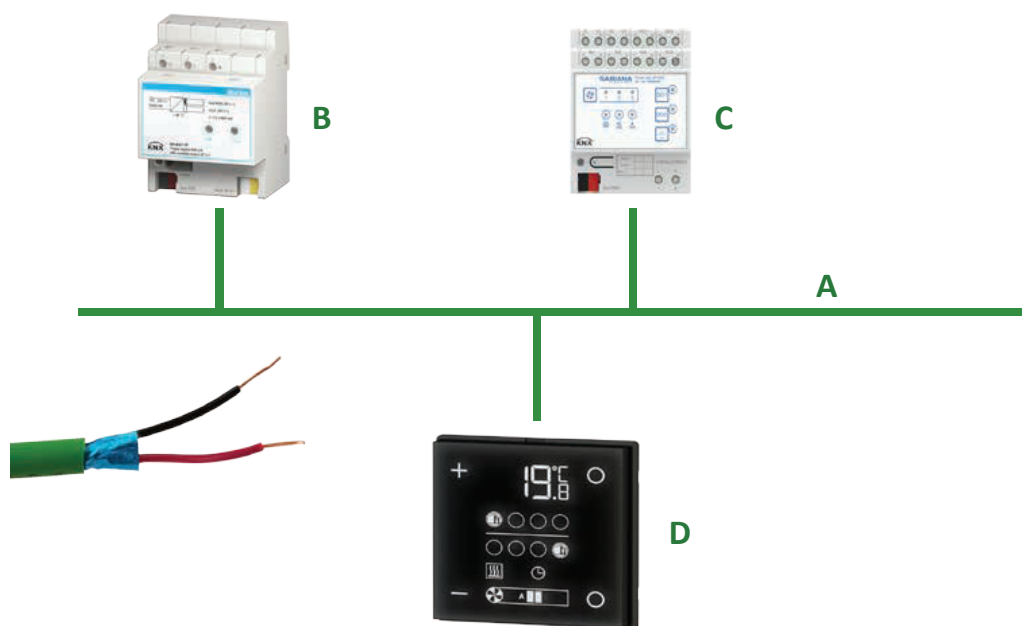
The KNX bus system is a building automation standard for controlling, managing and monitoring a wide range of products for:

- heating, cooling, ventilation
- lighting
- alarm systems
- audio and video systems
- electricity and gas

Since 2016, Sabiana is a certified member of the KNX association and the certified products can be added to this system in compliance with the tests carried out at KNX laboratories.

Communication between KNX devices takes place in digital form, through the serial transmission of information organised in bit sequences called "telegrams".

KNX devices use a twisted pair signal cable as a transmission medium; correct communication is ensured by the use of bus cables with 1 or 2 pairs of wires, made in compliance with the KNX Association KNX TP1 specifications. Sabiana makes the application file for programming the device available on its website; the system engineer, who must be an authorised KNX partner and have the ETS5 software available, can configure the system using this application file.



- A = KNX Bus line  
 B = Bus power supply  
 C = UP-KNX power board  
 D = WM-KNX wall control

## Recessed thermostat WM-KNX

**To combine with:** CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK, SK-ECM, CCN, CCN-ECM, CVP, CVP-ECM-A, MVI

ID	Code
WM-KNX	9066679



The SabianaWM-KNX room thermostat controls and adjusts the temperature of a room or area in a building.

In combination with one or several UP-KNX power units, the thermostat is able to control the operation of terminal units such as fan coils.

The appliance consists of an LCD display with adjustable backlight and a sensor for measuring the room temperature.

WM-KNX is suitable to be fitted in a recessed box, that can be rectangular, squared or round.

Main features:

- temperature reading with sensor on WM-KNX thermostat or on UP-KNX
- Summer/Winter switch from keyboard or automatic switching from bus
- operating modes: comfort, standby, economy and building protection with separate set points for heating and cooling
- power supply from KNX bus

## Power unit UP-KNX

**To combine with:** CRC, CRC-ECM, CRT-ECM, CRR-ECM, CRSL, CRSL-ECM, SK, SK-ECM, CCN, CCN-ECM, CVP, CVP-ECM-A, MVI

ID	Code
UP-KNX	9066680



The UP-KNX power unit is a Fan Coil controller that receives the setpoint from a probe connected to its analog input or from the WM-KNX wall control.

The controller is suitable for 2 or 4 pipe installations with ON/OFF solenoid valves and for fan coil units with asynchronous motor and with EC electronic motor.

The power unit includes also 3 digital inputs to set as analog or digital.

The keypad membrane lets the manual control and includes the signal status LEDs and the keys for the valve and the fan assembly activation.

Main features:

- n° 3 inputs to set as:
  - ambient probe fitted on the fan coil unit
  - water coil temperature probe
  - change-over probe
  - window contact
- n° 2 outputs for ON/OFF 230 Vac valve control
- 230 Vac power supply
- DIN 4 modules plastic case
- Din bar included into the package



Building  
trust  
together.

# Certificate

CISQ/ICIM S.P.A. has issued an IQNET recognized certificate that the organization:

**SABIANA S.P.A.**

VIA PIAVE, 53 20011 CORBETTA MI IT - Italia

For Operative Units see Annex/Annexes

has implemented and maintains a/an

**Quality Management System**

for the following scope:

**Design, production and service of heating and air conditioning equipment (unit heaters, radiant panels, fan coil units and air handling units). Design and production of chimneys.**

which fulfils the requirements of the following standard:

**ISO 9001:2015**

Issued on: **2024-04-10**

First issued on: **1996-06-10**

Expires on: **2027-04-09**

Registration Number:

**IT-4000 ICIM-9001-000545-10**



**Alex Stoichitoiu**  
President of IQNET



**Mario Romersi**  
President of CISQ



This attestation is directly linked to the IQNET Member's original certificate and shall not be used as a stand-alone document.

**IQNET Members\*:**

AENOR Spain AFNOR Certification France APCER Portugal CCC Cyprus CISQ Italy CQC China CQM China COS Czech Republic  
Cro Cert Croatia DQS Holding GmbH Germany EAGLE Certification Group USA FCAV Brazil FONDONORMA Venezuela ICONTEC  
Colombia ICS Bosnia and Herzegovina INTECO Costa Rica IRAM Argentina JQA Japan KFQ Korea LSQA Uruguay MIRTEC Greece  
MSZT Hungary Nemko AS Norway NSAI Ireland NYCE-SIGE Mexico PCBC Poland Quality Austria Austria SII Israel SIQ Slovenia  
SIRIM QAS International Malaysia SGS Switzerland SRAC Romania TSE Turkey YUQS Serbia

\* The list of IQNET Members is valid at the time of issue of this certificate. Updated information is available under [www.iqnet-certification.com](http://www.iqnet-certification.com)





CISQ is a member of



The International Certification Network  
www.iqnet-certification.com

CERTIFICATO N.  
CERTIFICATE No.

ICIM-9001-000545-10

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI  
WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

**SABIANA S.P.A.**

SEDE CENTRALE / HEADQUARTER

VIA PIAVE, 53 20011 CORBETTA MI IT - Italia

PER LE UNITÀ OPERATIVE VEDERE L'ALLEGATO  
FOR OPERATIVE UNITS SEE ATTACHMENT

È CONFORME ALLA NORMA / IS IN COMPLIANCE WITH THE STANDARD

**UNI EN ISO 9001:2015**

Sistema di Gestione per la Qualità / Quality Management System

PER LE SEGUENTI ATTIVITÀ / FOR THE FOLLOWING ACTIVITIES

**EA: 18**

Progettazione, produzione e assistenza di apparecchiature per il riscaldamento e il condizionamento dell'aria (aerotermi, termostrisce radianti, ventilconvettori e unità trattamento aria). Progettazione e produzione di canne fumarie.

*Design, production and service of heating and air conditioning equipment (unit heaters, radiant panels, fan coil units and air handling units). Design and production of chimneys.*

Riferirsi alla documentazione del Sistema di Gestione per la Qualità aziendale per l'applicabilità dei requisiti della norma di riferimento.  
Refer to the documentation of the Quality Management System for details of application to reference standard requirements.

Il presente certificato è soggetto al rispetto del documento ICIM "Regolamento per la certificazione dei sistemi di gestione" e al relativo Schema specifico.  
The use and the validity of this certificate shall satisfy the requirements of the ICIM document "Rules for the certification of company management systems" and specific Scheme.

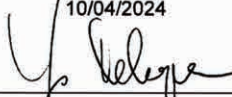
Per informazioni puntuali e aggiornate circa eventuali variazioni intervenute nello stato della certificazione di cui al presente certificato,  
si prega di contattare il n° telefonico +39 02 725341 o indirizzo e-mail info@icim.it.

For timely and updated information about any changes in the certification status referred to in this certificate,  
please contact the number +39 02 725341 or email address info@icim.it.

DATA EMISSIONE  
FIRST ISSUE  
10/06/1996

EMISSIONE CORRENTE  
CURRENT ISSUE  
10/04/2024

DATA DI SCADENZA  
EXPIRING DATE  
09/04/2027



Vincenzo Delacqua  
Rappresentante Direzione / Management Representative  
**ICIM S.p.A.**  
Piazza Don Enrico Magelli, 75 - 20099 Sesto San Giovanni (MI)  
www.icim.it



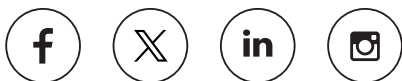
MS N° 0004



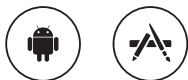
www.cisq.com

CISQ è la Federazione Italiana di Organismi di  
Certificazione dei sistemi di gestione aziendale. CISQ  
is the Italian Federation of management system  
Certification Bodies.

Follow us on



Sabiana app



99A4CC0100



SABIANA SpA

Società a socio unico

via Piave 53 - 20011 Corbetta (MI) Italy

T. +39 02 97203 1 r.a. - F. +39 02 9777282

info@sabiana.it

www.sabiana.it



Sabiana 2 and Sabiana 3 - Operative unit "via Virgilio 2 - Magenta (MI)"

Sabiana 4 - Operative unit "via Zanella 27 - Corbetta (MI)"