# Fan Coil Control Range



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**For technical details read carefully the manual of installation, use and maintenance.**

# Controls by Sabiana

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

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

Carisma MVI fan coils range
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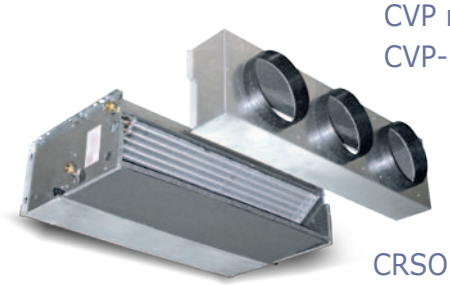

High pressure Carisma fan coils
CRSO range with AC asynchronous motor and centrifugal fan
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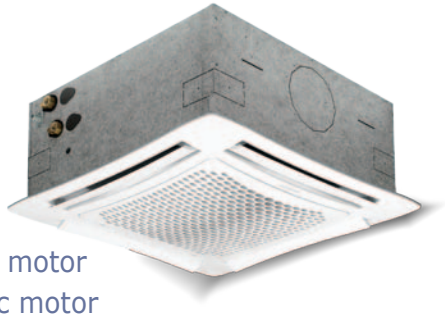

SkyStar Cassette fan coils
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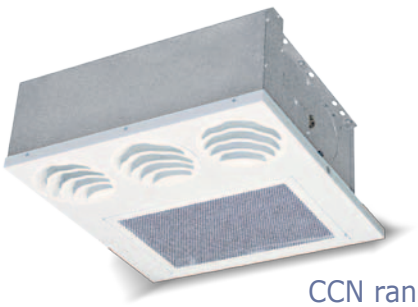

Carisma Coanda one way Cassette fan coils
CCN range with AC asynchronous motor and centrifugal fan
CCN-ECM range with EC electronic motor and centrifugal fan

# Fan coil
# controls fitted on the unit
## with AC asynchronous motor

The Fan coil controls fitted on the unit are only suitable for Sabiana units.
Standard reference: EN 60335-2-40.

| To combine with: | Carisma CRC / CRT | Carisma CRR |
|---|---|---|
| ON-OFF switch | | |
| Electric heater/IAQ filter activation button | | |
| Manual 3 speed switch without thermostatic control | | |
| Manual 3 speed switch | | |
| Automatic 3 speed progressive push button | | |
| Electronic room thermostat for fan control (ON-OFF) | | |
| Electronic room thermostat for one water valve control (2 pipe system) | | |
| Electronic room thermostat for two water valve control (4 pipe system) | | |
| Simultaneous thermostatic control of the valve and fan | | |
| Manual Summer/Winter switch | | |
| Summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2 pipe system) | | |
| Thermostatic control of the chilled water valve (ON-OFF) and the electric heater (BEL) | | |
| Automatic Summer/Winter switch 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 (4 pipe installations with 2 valve) | | |
| Thermostatic control of the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element (4 pipe system + electric heater) - NO Crystall | | |
| Possibility to use a low temperature cut-out thermostat (optional) | | |
| Installation manual codes | | |

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## Identification

| CB | CB-T | CB-C | CB-AUT | CB-IAQ | CB-R-IAQ | CB-AUT-IAQ |
|---|---|---|---|---|---|---|

## Code

| 9066300 | 9066301 | 9066302 | 9066318 | 9066305 | 9066306 | 9066322 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | | | |
| ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| | | | | ✔ | ✔ | ✔ |
| ✔ | | | | ✔ | | |
| | ✔ | ✔ | ✔ | | ✔ | ✔ |
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| ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| 4050875 | 4050876 | 4050877 | 4050857 | 4050880 | 4050881 | 4050898 |
| 10 | 10 | 11 | 11 | 12 | 12 | 12 |

# Fan coil
# wall controls
## with AC asynchronous motor

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

To combine with:

| Carisma CRC / CRT / CRSO / MVI<br>Carisma CCN one way Cassette<br>Cassette SkyStar SK | Carisma Fly CVP |
|---|---|
| ON-OFF switch | |
| Electric heater/IAQ filter activation button | |
| Manual 3 speed switch without thermostatic control | |
| Manual 3 speed switch | |
| Automatic 3 speed progressive push button | |
| Electronic room thermostat for fan control (ON-OFF) | |
| Electronic room thermostat for one water valve control (2 pipe system) | |
| Electronic room thermostat for two water valve control (4 pipe system) | |
| Simultaneous thermostatic control of the valve and fan | |
| Manual Summer/Winter switch | |
| Summer/winter cycle with a centralized and remote switch<br>or with an automatic change-over fitted on the water pipe (for 2 pipe system) | |
| Thermostatic control of the chilled water valve (ON-OFF) and the electric heater (BEL) | |
| Automatic Summer/Winter switch and continuous chilled and hot water supply,<br>it allows the automatic summer winter change-over in accordance to the room temperature<br>-1°C = Winter, +1°C = Summer, Neutral Zone 2°C (4 pipe installations with 2 valve) | |
| Thermostatic control of the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element (4 pipe system + electric heater) - NO Crystall | |
| Button lock controller | |
| Energy saving function | |
| Possibility to use a low temperature cut-out thermostat (optional) | |
| Installation manual codes | |

See page ☞

## Identification

| WM-3V | WM-T | WM-TQR | WM-AU | T-MB | TMO-503-SV2 | T2T |
|---|---|---|---|---|---|---|

## Code

| 9066642 | 9066630 | 9066631 | 9066632 | 9066331E | 9066173 | 9066174 |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |
| ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | | | ● | ● |
| ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
| | | ✔ | ✔ | ✔ | | |
| ✔ | | | | | | |
| | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
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| | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
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| | ✔ | ✔ | ✔ | ✔ | ✔ | |
| | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |
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| | | | | ✔ | ✔ | |
| | | ✔ | ✔ | | | |
| ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | |
| — | 4050961 | 4050962 | 4050963A/B | 4050963A/B | 079303 | — |
| 14 | 14 | 15 | 15 | 15 | 16 | 16 |

# Fan coil controls with EC electronic motor and inverter board

The Fan coil controls fitted on the unit are only suitable for Sabiana units.
Standard reference: EN 60335-2-40.
The wall controls are
in compliance with the standard reference CEI EN 60730.

To combine with:

| Carisma CRC-ECM / CRT-ECM<br>Carisma CRS-ECM<br>Carisma CCN-ECM one way Cassette<br>Cassette SkyStar SK-ECM |
|---|
| ON-OFF switch |
| Electric heater/IAQ filter activation button |
| Manual 3 speed switch |
| Automatic 3 speed progressive push button |
| Automatic continuous speed control |
| Electronic room thermostat for fan control (ON-OFF) |
| Electronic room thermostat for one water valve control (2 pipe system) |
| Electronic room thermostat for two water valve control (4 pipe system) |
| Simultaneous thermostatic control of the valve and fan |
| Manual Summer/Winter switch |
| Summer/winter cycle with a centralized and remote switch<br>or with an automatic change-over fitted on the water pipe (for 2 pipe system) |
| Thermostatic control of the chilled water valve (ON-OFF) and the electric heater (BEL) |
| Automatic Summer/Winter switch and continuous chilled and hot water supply,<br>it allows the automatic summer winter change-over in accordance to the room temperature<br>-1°C = Winter, +1°C = Summer, Neutral Zone 2°C (4 pipe installations with 2 valve) |
| Thermostatic control of the water valves (ON-OFF) and the electric heater managed as main heating element or as an integration element (4 pipe system + electric heater) - NO Crystall |
| Button lock controller |
| Energy saving function |
| Possibility to use a low temperature cut-out thermostat (optional) |
| Installation manual codes |

See page ☞

Identification

| FITTED | | WALL | | |
|---|---|---|---|---|
| CB-T-ECM | CB-T-ECM-IAQ | WM-AU | T-MB | WM-S-ECM |

Code

| 9066320 | 9066308 | 9066632 | 9066331E | 9066644 |
|---|---|---|---|---|
|  |  |  |  |  |
| ● | ● | ● | ● | ● |
| | | ● | ● | ● |
| ✔ | ✔ | ✔ | ✔ | ✔ |
| | ✔ | ✔ | ✔ | |
| ✔ | ✔ | ✔ | ✔ | ✔ |
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| ✔ | ✔ | ✔ | ✔ | ✔ |
| 4050882 | 4050855 | 4050963A/B | 4050963A/B | — |
| 13 | 13 | 17 | 17 | 17 |

# Controls fitted on the unit

For Carisma MV and MVB ranges the room temperature
can be controlled with electronic room thermostats fitted on the unit
with different solutions according to every ambient conditions;
the control range includes manual or automatic speed switch control,
thermostatic control of the water valves or of the electric heater,
manual, automatic or centralized summer/winter switch.
With the suitable speed switches
it is also possible to control with the same thermostat up to 8 units.
Here below there is the description of all controls for the AC asynchronous motor
versions and for the versions with EC electronic motor and inverter board.

## for fan coils
### with AC asynchronous motor

| Identification | Code |
|---|---|
| **CB** | **9066300** |

- Manual 3 speed switch, without thermostatic control.
- It allows to control the low temperature cut-out thermostat (TMM).

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

| Identification | Code |
|---|---|
| **CB-T** | **9066301** |

- Manual 3 speed switch.
- Manual Summer/Winter switch.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF) (the fan keeps working).
- 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).
- Presence of a LED signal when the thermostat is on.

Control power absorption: 1,5 VA

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

# Controls fitted on the unit

## for fan coils
### with AC asynchronous motor

| Identification | Code |
|---|---|
| **CB-C** | **9066302** |

- Manual 3 speed switch.
- Manual, automatic or centralized Summer/Winter switch.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF) (the fan keeps working).
- 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

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

| Identification | Code |
|---|---|
| **CB-AUT** | **9066318** |

- 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 valve control (ON-OFF) (the fan keeps working).
- 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).
- It allows to control the summer/winter cycle with a centralized and remote switch or with an automatic change-over fitted on the water pipe (for 2-tube installations only).
- Presence of a LED signal when the thermostat is on.

N.B.: 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

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

# Controls fitted on the unit

## for fan coils
## with AC asynchronous motor, Crystall electronic filter or electric heater

| Identification | Code |
|---|---|
| **CB-IAQ** | **9066305** |

- Manual 3 speed switch.
- IAQ filter activation button.
- Without thermostatic control.
- It allows to control the low temperature cut-out thermostat (TMM).

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

| Identification | Code |
|---|---|
| **CB-R-IAQ** | **9066306** |

- Manual 3 speed switch.
- Manual, automatic or centralized Summer/Winter switch.
- Electric heater/IAQ filter activation button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF) (the fan keeps working).
- 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

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

| Identification | Code |
|---|---|
| **CB-AUT-IAQ** | **9066322** |

- Manual/automatic 3 speed switch.
- Manual, automatic or centralized Summer/Winter switch.
- 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 valve control (ON-OFF) (the fan keeps working).
- 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.

N.B.: 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

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

# Controls fitted on the unit

## for fan coils
## with EC electronic motor and inverter board

| Identification | Code |
|---|---|
| **CB-T-ECM** | **9066320** |

- 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 and water valve control (ON-OFF).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the temperature cut-out (NTC).
- Presence of a LED signal when the thermostat is on.

Control power absorption: 1,5 VA

To combine with: CRC-ECM CRT-ECM CRS-ECM SK-ECM CCN-ECM CVP-ECM

| Identification | Code |
|---|---|
| **CB-T-ECM-IAQ** | **9066308** |

- 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 valve control (ON-OFF) (the fan keeps working).
- Simultaneous thermostatic control of the valves and fan.
- It allows to control the temperature cut-out (NTC).
- Presence of a LED signal when the thermostat is on.

Control power absorption: 1,5 VA

To combine with: CRC-ECM CRT-ECM CRS-ECM SK-ECM CCN-ECM CVP-ECM

# Wall controls

For the Carisma and SkyStar range the ambient temperature
can be controlled through the use of electronic room thermostats mounted on the wall
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 suitable speed switches
it is also possible to control with the same thermostat until 8 units.
Here below there is the description of all controls for the AC asynchronous motor
versions and for the versions with EC electronic motor and inverter board.

## for fan coils
### with AC asynchronous motor

| Identification | Code |
|---|---|
| **WM-3V** | **9066642** |

- Manual 3 speed switch.
- Without thermostatic control.

Dimensions: 75x75x30 mm

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP | MVI |
|---|---|---|---|---|---|---|---|---|

| Identification | 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 valve control (ON-OFF) (the fan keeps working).
- 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

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP | MVI |
|---|---|---|---|---|---|---|---|---|

# Wall controls

## for fan coils
## with AC asynchronous motor

| Identification | Code |
|---|---|
| **WM-TQR** | **9066631** |

- ON-OFF switch.
- Manual 3 speed switch.
- Manual, automatic or centralized Summer/Winter switch.
- Electric heater/IAQ filter activation button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF).
- Simultaneus 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

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

| Identification | 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 push button.
- Manual or automatic 3 speed progressive push button.
- Manual, automatic or centralized Summer/Winter switch.
- Summer/Winter/Fan/Auto mode push button.
- Electric heater/IAQ filter activation button.
- Electronic room thermostat for fan and water valves control (ON-OFF).
- Simultaneus thermostatic control of the valves and fan.
- It allows to use the low temperature cut-out thermostat (NTC) mounted on the UP-AU 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 push button.
- Presence of a LED signal when the thermostat is on.

N.B.: 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

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

| Identification | Code |
|---|---|
| **T-MB** | **9066331E** |


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

Wall control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The T-MB control features the following functions:

- Switch the unit ON and OFF.
- Temperature set.
- Manual, automatic or centralized Summer/Winter switch.
- 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).
- Possibility of use of the low temperature cut-out thermostat NTC mounted on the UP-AU 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.
- Time setting.
- Weekly ON/OFF program.

Control power absorption: see the UP-AU power unit

Dimensions: 110x72x25 mm

To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

# Wall controls

## for fan coils
## with AC asynchronous motor

| Identification | Code |
|---|---|
| **TMO-503-SV2** | **9060173** |

The TMO-503-SV2 control for fan coils with valves, is designed to be installed in a 503 wall box.
It is easy to use, it has a big and clear display, and a great precision. The control is supplied integral with the external frame, but it is possible to use frames of the most known brand on the market (BTicino, Vimar, AVE, Gewiss).

- Manual or automatic 3 speed switch.
- Manual Summer/Winter switch.
- Electronic thermostat for valves control (ON-OFF).
- Simultaneus thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat, included with the control.

N.B.: 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).

N.B.: only for Carisma CRSO version: on size 4 the SEL-CR switch must be installed.

Control power absorption: 1,5 VA

Dimensions: 118x87x8 mm

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP | MVI |
|---|---|---|---|---|---|---|---|---|

| Identification | 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.

Control power absorption: 1,5 VA

Dimensions: 128x75x25 mm

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP | MVI |
|---|---|---|---|---|---|---|---|---|

# Wall controls

## for fan coils
## with EC electronic motor and inverter board

| Identification | Code |
|---|---|
| **WM-AU** | **9066632** |

Dimensions: 135x86x24 mm

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 push button.
- Manual or automatic 3 speed progressive push button.
- Manual, automatic or centralized Summer/Winter switch.
- Summer/Winter/Fan/Auto mode push button.
- Electric heater/IAQ filter activation button.
- Electronic room thermostat for fan and water valves control (ON-OFF).
- Simultaneus thermostatic control of the valves and fan.
- It allows to use the low temperature cut-out thermostat (NTC) mounted on the UP-AU 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 push button.
- Presence of a LED signal when the thermostat is on.

N.B.: 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

To combine with: CRC-ECM CRT-ECM CRS-ECM SK-ECM CCN-ECM CVP-ECM

| Identification | Code |
|---|---|
| **T-MB** | **9066331E** |


Dimensions: 110x72x25 mm

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

Wall control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The T-MB control features the following functions:
- Switch the unit ON and OFF.
- Temperature set.
- Manual, automatic or centralized Summer/Winter switch.
- 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).
- It allows to use the low temperature cut-out thermostat (NTC) mounted on the UP-AU 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.
- Time setting.
- Weekly ON/OFF program.

Control power absorption: see the UP-AU power unit

To combine with: CRC-ECM CRT-ECM CRS-ECM SK-ECM CCN-ECM CVP-ECM

| Identification | Code |
|---|---|
| **WM-S-ECM** | **9066644** |


Dimensions: 132x87x23,6 mm

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 push button.
- Electronic room thermostat for fan control (ON-OFF).
- Electronic room thermostat for valve control (ON-OFF).
- Simultaneus thermostatic control of the valves and fan.
- It allows to control the low temperature cut-out thermostat (NTC).

Control power absorption: 1,2 VA

To combine with: CRC-ECM CRT-ECM CRS-ECM SK-ECM CCN-ECM CVP-ECM

# Power unit and speed switches

## for controls

### for fan coils

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

| Identification | Code |
|---|---|
| **UPM-AU** (mounted) | **9066641** |
| **UP-AU** (not mounted) | **9066640** |

*for WM-AU and T-MB controls*

Power unit to be installed on the fan coil (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 control.
- Possibility to use the low temperature cut-out thermostat (optional) for the T1 function which allows the return air control.
- Possibility to use the low temperature cut-out thermostat (optional) for the T2 function which controls the summer/winter switch.
- Possibility to use the low temperature cut-out thermostat (optional) for the T3 function as low temperature cut-out thermostat.

Power unit absorption: 2,3 VA

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

| Identification | Code |
|---|---|
| **SEL-CB** | **9066304** |

*for WM-T, WM-TQR and TMO-503-SV2 controls*

For Fan Coils CRC/CRT/CRR, 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).

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

| Identification | Code |
|---|---|
| **SEL-CR** | **9066311** |

*for WM-T, WM-TQR and TMO-503-SV2 controls*

For Fan Coils CRC/CRT, 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).

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

# Power unit and speed switches
## for controls

for fan coils
with AC asynchronous motor and with EC electronic motor and inverter board

| Identification | Code |
|---|---|
| **SEL2M** | **9079109** |

*for WM-T, WM-TQR and TMO-503-SV2 controls*

For Fan Coils Coanda CCN and SkyStar SK versions.

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

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

| Identification | Code |
|---|---|
| **SEL-CVP** | **9025302** |

*for WM-T, WM-TQR and TMO-503-SV2 controls*

For Fan Coils CVP version.

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

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

# Accessories
## for controls

for fan coils
with AC asynchronous motor and with EC electronic motor and inverter board

| Identification | Code | |
|---|---|---|
| **TME** | **3021091** | *for CB-C and CB-R-IAQ controls* |

Low temperature cut-out thermostat

- 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

| Identification | Code | |
|---|---|---|
| **TMM** | **9053048** | *for CB, CB-T, CB-IAQ and WM-T controls* |

Low temperature cut-out thermostat

- 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

| Identification | Code | |
|---|---|---|
| **NTC** | **3021090** | *for CB-AUT, CB-AUT-IAQ, WM-TQR controls and the UP-AU power unit* |

Low temperature cut-out thermostat

- 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

# Accessories
## for controls

### for fan coils
### with AC asynchronous motor and with EC electronic motor and inverter board

| Identification | Code |
|---|---|
| **CH 15-25** | **9053049** |

*for CB-C, CB-R-IAQ, CB-AUT, CB-AUT-IAQ and WM-TQR controls*

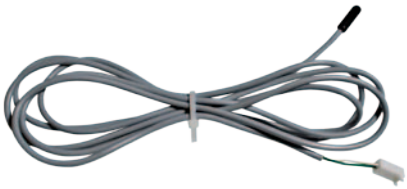
Change-over

- 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).

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

| Identification | Code |
|---|---|
| **T2** | **9025310** |

*for UP-AU power unit*



To be placed on the water supply pipe upstream 3 way valves (not to be used with 2 way valve).

- The T2 sensor 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM |

# FreeSabiana

## wireless control system

for fan coils
with AC asynchronous motor

**FreeSabiana** is an innovative, fully wireless, electronic system for use with fan coil units, based on radio communication.

This technology, that took 4 years to be set-up, provides installation flexibility and a more accurate measurement of the room temperatur.
The probe can be moved until the most suitable position is found, without the worry of changes in the room layout and of its furniture and also without mounting it on a wall. If a new fan coil unit is added, no electrical wiring for the control system is required: just define the control unit and the probe which regulates it.
The improved measurement accuracy is a result of the possibility to position the probe near the user location: this enables to keep the temperature exactly at the required value with energy savings compared with a traditional measurement system.


Transmission is based on communication protocol IEE802.15.4, the most suitable way to transmit a relatively low amount of information with very low consumption and high reliability.

The system has been certified by a leading independent body, officially recognized by the EU authorities and its sale has been authorized in all the EU and EFTA countries.

# FreeSabiana

## wireless control system

for fan coils

with AC asynchronous motor

### Main components:

| Identification | Code |
|---|---|
| **Free-Com** | **9060572** |

Remote control

- A remote control which features a button panel and LCD display and can be wall mounted or positioned on a dedicated table support.
- It enables the control of all the operating variables of the fan coil units in different configurations. The control is battery powered.
- The temperature and the operating speed of the fan coil unit are set with two large buttons featuring user friendly graphics.
- It allows to run by a maximum of 25 units divided into a maximum of 4 areas with different temperatures.

| Identification | Code | |
|---|---|---|
| **Free-Upm** (mounted) | **9060571** | *for Carisma fan coils* |
| **Free-Usm** (mounted) | **9079107** | *for SkyStar fan coils* |
| **Free-Ups** (not mount.) | **9060570** | |

Power unit

- A power unit to be installed on the fan coil (fan coil interface).
- It controls the fan and the valves of the fan coil. The power unit is connected to the electric supply.
- The power unit receives the information required to control the fan coil both from the remote control and locally, such as the temperature of the coil.

| Identification | Code |
|---|---|
| **Free-Sen** | **9060573** |

Temperature probe

- A room temperature probe, which can be wall mounted or positioned on a dedicated table support.
- It is a battery powered device, able to measure the air temperature in the spot where it is positioned, generating temperature information which is communicated to the other devices.

Only one Free-Sen per area.

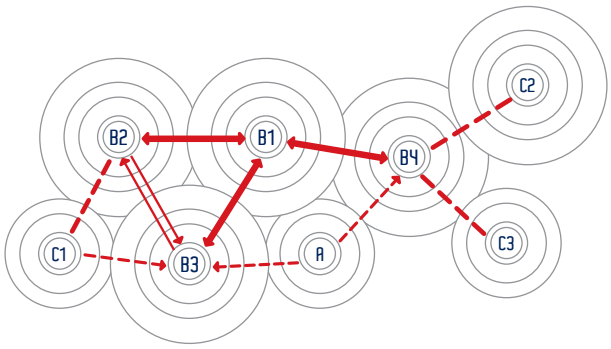
To combine with: CRC CRT CRR CRSO SK CCN CVP MVI

# FreeSabiana

## wireless control system

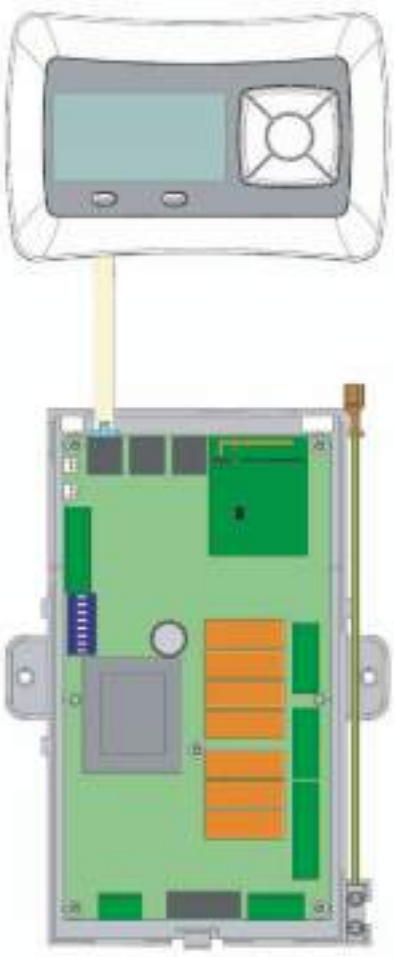
for fan coils
with AC asynchronous motor

### Radio communication among the components:




Mesh network

Affiliation system



The communication protocol has been developed using multi-centre Mesh network logic, where each unit can exchange information with the nearby units.
If a node fails, the other nodes can replace it, automatically rerouting information.
This way, it is possible to realize redundant paths which increase the overall reliability of the system.

Before transmitting information, the system looks for most stable of the 16 available channels and waits for a "return receipt", that is a confirmation of the successful transmission of the information.

All the power unit s on the fan coil unit s continuously transmit any information received to all the components of the network, greatly increasing transmission reliability.

The maximum number of fan coil units which can be controlled by a single control unit is 25, with the possibility to control up to four zones with different temperatures.
In the same building there can be several control units, that is several networks.

The affiliation procedure (the definition of which units are controlled by the control unit and by the probe) is quite simple and is carried out during system commissioning by means of a cable (provided) to be inserted in the specific connectors.

Battery life depends on the frequency of control parameters changes.
Indicatively it last for 12 months.

If a control unit needs to be replaced, for instance due to an accidental fall, during the connection of the new control by cable to the fan coil unit, all the information about the network structure is transferred to the control unit, without having to redefine all the network components and all the temperature/operating values set.

The receiving power of the signal, as maximum distance among each item of the network, is of:
- 12 metres for the normal floor installations;
- 8 metres for the normal floor installations within brick walls or drywall;
- 6 metres for the normal concealed installations (false ceilings,etc.).

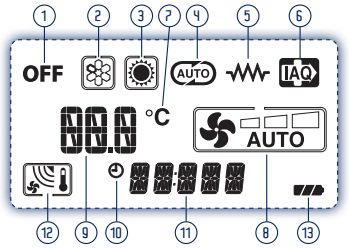
# FreeSabiana

## wireless control system

for fan coils
with AC asynchronous motor

### Main features of the remote control:

It enables the following main actions:
- Fan coil ON/OFF switching.
- Fan speed selection (high - medium - low – automatic).
- Summer/winter operation selection.
- Valve ON/OFF.
- Real time clock setting.
- Temperature setting.
- Daily switch ON/OFF setting (timer function).
- Enable/disable the timer function.
- Activation of the (optional) electrostatic filter.
- Activation of the (optional) electric heater.




Main information displayed:
1) ON/OFF status
2) Summer operation
3) Winter operation
4) Automatic season change
5) Electric heater
6) Electrostatic filter
7) Room temperature (with decimal accuracy)
8) Fan operating speed
9) Required / measured temperature
10) Timer
11) Clock
12) Transmission signal
13) Battery level

### Main features of the power unit to be installed on the fan coil:

The power unit controls the fan and the valves of the fan coil.
The power unit receives the information required to control such units both from the remote control and locally.

It enables the following main actions:
- Fan ON/OFF at a set speed.
- Fan speed change (fan ON/OFF).
- Water valve/s ON/OFF (1 valve for 2 tube system- 2 valves for 4 tube system).
- Fan speed change operating the water valve/s.
- Control of the electric heater as main heating unit or as integration to the battery supplied with hot water.
- Control of the operation of the electrostatic filter (in parallel to the fan).
- Management of the dead zone function for 4-tube systems.
- Available functional inputs:
  - Consent for remote ON/OFF;
  - Consent for remote Summer/Winter switch (centralized);
  - Consent for the activation of the energy saving function with setting change;
  - Minimum probe;
  - Probe for season change.

### Main features of the temperature sensor:

This device is able to measure the temperature of the air in the spot where it is positioned and to transmit it by means of radio communication to the other devices in the system.
It is battery powered and can be freely positioned at a maximum of 6 metres distant from the UP-AU power unit in the area to be air-conditioned.

Display:
- Measured environment temperature.
- Clock.
- Transmission signal.
- Battery status.

# MB

# controls and units

## for the Carisma fan coil range

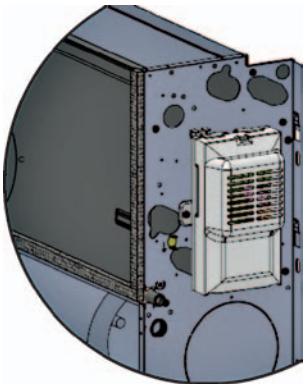
## with AC asynchronous motor and with EC electronic motor and inverter board

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.
Units can be managed according to the Master/Slave logic (up to 20 units) or by supervisory component.
The system consists in a MB board and a series of controls, such as the T-MB control,
the RT03 infra-red remote control, the PSM-DI multifunction control and the Sabianet supervisory program.

| Identification | 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 mount.) | **9066335** | |

To be mounted
on the fan coil internal unit.

Fitted on the unit for
CVP-MB and CVP-ECM-MB



### MB board

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.
- Fan ON/OFF thermostatic control.
- Valve ON/OFF thermostatic control and continuous ventilation.
- Valve and simultaneous ventilation ON/OFF thermostatic control.
- Fan operation control depending on the coil temperature (cut-out T3 probe fitted), 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.
- Seasonal switch by means of remote contact.
- ON/OFF of the fan coil by means of the remote contact (window or clock contact).
- Electric heater or Crystall electronic filter control (the simultaneous control of the heater and of the Crystall filter is not possible).

By activating the cut-out T3 probe 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-MB control.
- RS 485 serial connection to manage several fan coils in Master/Slave configuration or to create a supervisory network.

NTC sensor included for T1 function (return air control).
NTC sensor included for T3 function (low temperature cut-out thermostat).
NTC sensor (option) for T2 function (summer/winter switch).

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM-MB |

# MB
# controls and units

## for the Carisma fan coil range
## with AC asynchronous motor and with EC electronic motor and inverter board

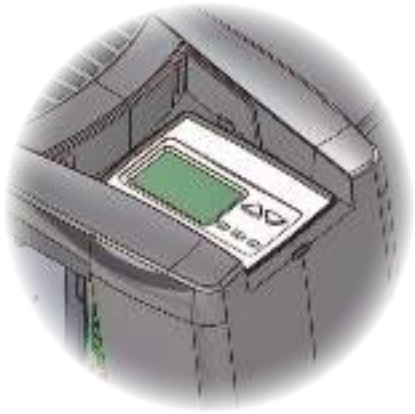
| Identification | Code |
|---|---|
| **T-MB** | **9066331E** |


Dimensions: 110x72x25 mm

### T-MB wall control

Wall control with display that allows controlling one or more units in Master/Slave mode. The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The T-MB control features the following functions:
- Switch the unit ON and OFF.
- 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.
- Vertical air flow function (FLAP) *for the CVP-T/CVP-MB.*



*T-MB version fitted on the unit*

for fan coil with casing only version: CRC / CRC-ECM
CRT / CRT-ECM
CRR

| Description | Identification | Code |
|---|---|---|
| Control fitted on the unit, for MV / MVB models with left connections * | **T-MB-M** | **9066344** |
| Control fitted on the unit, supplied with separate packaging, for MV / MVB models with left connections * | **T-MB-S** | **9066343** |
| Control fitted on the unit, for MV / MVB models with right connections * | **T-MB-M-DX** | **9066346** |
| Control fitted on the unit, supplied with separate packaging, for MV / MVB models with right connections * | **T-MB-S-DX** | **9066345** |

* = to combine with MB board only

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM-MB |

# MB
# controls and units

## for the Carisma fan coil range
## with AC asynchronous motor and with EC electronic motor and inverter board

| Description | Identification | Code |
|---|---|---|
| RT03 infra-red remote control with fitted receiver, for MV / MO-MVB models * | **RM-RT03** | **9066336** |
| RT03 infra-red remote control with receiver supplied with separate packaging * | **RS-RT03** | **9066337** |
| RT03 infra-red remote control with receiver supplied with separate packaging * | **RT03** | **3021203** |
| Receiver for RT03 infra-red remote control fitted on the unit, for MV / MO-MVB models * | **RM** | **9066339** |
| Receiver for RT03 infra-red remote control supplied with separate packaging * | **RS** | **9066338** |
| Receiver for RT03 infra-red remote control supplied with separate packaging (to be used with MB board only) – *only for CVP-T-MB fan coil units* | **RS-RT03-F** | **9025301** |
| Receiver for RT03 infra-red remote control supplied with separate packaging (to be used with MB board only) – *only for CVP-T-MB fan coil units* | **RS-F** | **9025300** |

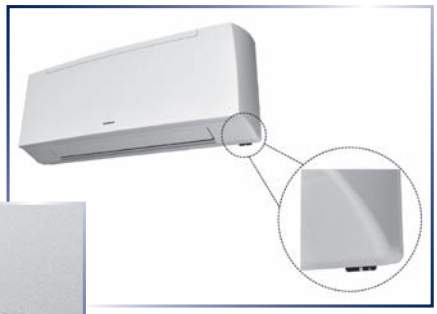
* = to combine with MB board only

### RT03 infra-red remote control

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

The RT03 infra-red remote control features the following functions:
- Switch the appliance ON and OFF.
- Temperature set.
- Set the fan speed (low, medium, high or autofan).
- 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 the CVP-T/CVP-MB.*

### Installation examples with RT03 infra-red remote control



| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM-MB |

# MB
# controls and units

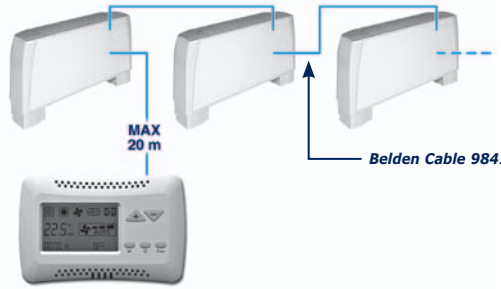
## for the Carisma fan coil range
## with AC asynchronous motor and with EC electronic motor and inverter board

A group of Carisma 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-MB control or RT03 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-MB 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)

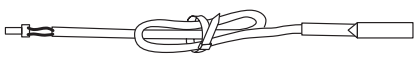



### With RT03 infra-red remote control

One control for each unit

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


| Identification | Code |
|---|---|
| **T2** | **9025310** |



T2 accessory for units with MB electronic board

The T2 sensor can be combined with MB boards to be placed on the water supply pipe upstream 3 way valves (not to be used with 2 way valve).

The T2 sensor must be used as described below:

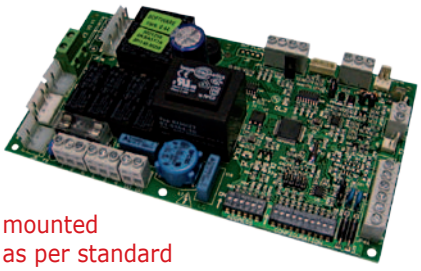
- Change-Over for 2-pipe system for the automatic switch of the operating mode.
  If water temperature is lower than 20°C, cooling mode is set; on the other hand, if water temperature exceeds 30°C, heating mode is set.
- It can be used on units with electric heater and hot water supply.
  The T2 priority 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM | CCN-ECM | CVP-ECM-MB |

# MB
# controls and units

## for the SkyStar SK–MB / SK–ECM–MB fan coil ranges
## with AC asynchronous motor and with EC electronic motor and inverter board

All the Cassette 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. Units can be managed according to the Master/Slave logic (up to 20 units) or by supervisory components. The system consists in a MB board and a series of controls, such as the T-MB control, the RT03 infra-red remote control, the PSM-DI multifunction control and the Sabianet supervisory program.



mounted
as per standard

### MB board

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. These modes are selected by setting the configuration dip switches on the board.

- 2/4 pipe system.
- Fan ON/OFF thermostatic control.
- Valve ON/OFF thermostatic control and continuous ventilation.
- Valve and simultaneous ventilation ON/OFF thermostatic control.
- Fan operation control depending on the coil temperature (cut-out T3 probe fitted), 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.
- Seasonal switch by means of remote contact.
- ON/OFF of the fan coil by means of the remote contact (window or clock contact).
- Electric heater or Crystall electronic filter control (the simultaneous control of the heater and of the Crystall filter is not possible).

By activating the cut-out T3 probe 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-MB control.
- RS 485 serial connection to manage several fan coils in Master/Slave configuration or to create a supervisory network.

| To combine with: | CRC / CRC-ECM | CRT / CRT-ECM | CRR / MVI | CRSO / CRS-ECM | SK-MB / SK-ECM-MB | CCN / CCN-ECM | CVP / CVP-ECM |
|---|---|---|---|---|---|---|---|

# MB

## controls and units

for the SkyStar SK-MB / SK-ECM-MB fan coil ranges
with AC asynchronous motor and with EC electronic motor and inverter board

| Identification | Code |
|---|---|
| **T-MB** | **9066331E** |


Dimensions: 110x72x25 mm

### T-MB wall control

Wall control with display that allows controlling one or more units in Master/Slave mode.
The control is equipped with internal sensor to detect the room temperature, which can be defined as a priority compared to the return air sensor on the fan coil.

The T-MB control features the following functions:
- Switch the unit ON and OFF.
- 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK-MB | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM-MB | CCN-ECM | CVP-ECM |

# MB
## controls and units

for the SkyStar SK–MB / SK–ECM–MB fan coil ranges
with AC asynchronous motor and with EC electronic motor and inverter board

| Description | Identification | Code |
|---|---|---|
| RT03 infra-red remote control with receiver supplied with separate packaging (to be used with SK-MB and SK-ECM-MB version only) | **RCS-RT03** | **9079117** |
| Receiver for RT03 infra-red remote control supplied with separate packaging (to be used with SK-MB and SK-ECM-MB version only) | **RCS** | **9079116** |
| Receiver for RT03 infra-red remote control and MD-600 metal diffuser supplied with separate packaging (to be used with SK-MB and SK-ECM-MB version only) | **RS** | **9066338** |

RCS-RT03

RCS

| Description | Identification | Code |
|---|---|---|
| RT03 infra-red remote control supplied with separate packaging (to be used with SK-MB and SK-ECM-MB version only) | **RT03** | **3021203** |

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

The RT03 infra-red remote control features the following functions:
- Switch the appliance ON and OFF.
- Temperature set.
- Set the fan speed (low, medium, high or autofan).
- 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.

Installation examples
with RT03 infra-red remote control

To combine with: CRC, CRC-ECM, CRT, CRT-ECM, CRR, MVI, CRSO, CRS-ECM, SK-MB, SK-ECM-MB, CCN, CCN-ECM, CVP, CVP-ECM

# MB
# controls and units

## for the SkyStar SK-MB / SK-ECM-MB fan coil ranges
## with AC asynchronous motor and with EC electronic motor and inverter board

A group of Cassette 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-MB control or RT03 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-MB 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 RT03 infra-red remote control

One control for each unit

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


| Identification | Code |
|---|---|
| **T2** | **9025310** |

T2 accessory for units with MB electronic board

The T2 sensor can be combined with MB boards to be placed on the water supply pipe upstream 3 way valves (not to be used with 2 way valve).

The T2 sensor must be used as described below:

- Change-Over for 2-pipe system 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.

| To combine with: | CRC | CRT | CRR | CRSO | SK-MB | CCN | CVP |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM-MB | CCN-ECM | CVP-ECM |

# MB
# controls and units

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

| Description | Identification | Code |
|---|---|---|
| Multifunction control<br>(to be used with Carisma MB board and Cassette MB versions only) | **PSM-DI** | **3021293** |


### PSM-DI multifunction control panel

Another option available for the serial communication between the units is the possibility to connect up to 60 Cassette units in series and manage them with just one wall mounted PSM-DI controller.
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 changeover);
- change the set point;
- 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 Sabianet management program.

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.

| To combine with: | CRC | CRT | CRR | CRSO | SK-MB | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM-MB | CCN-ECM | CVP-ECM-MB |

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

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

| Description | Identification | Code |
|---|---|---|
| Hardware/software supervisory system<br>(to be used with Carisma MB board and Cassette MB versions only) | **Sabianet** | **9079118** |

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

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 to save automatically every 6 h the data on SD support and to force the saving with a button;
- possibility of data saving also on other items, as for example USB key-boards;
- visualization of the saved configuration on a new ASUS PC.

The program exploits all the potential of our units with remote controls, representing an addition to the latter.

The Sabianet program is a control tool that can be used as a replacement for the remote control, or in parallel, however the settings made using Sabianet can have priority over those made using the remote control or T-MB.

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.

| To combine with: | CRC | CRT | CRR | CRSO | SK-MB | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM-MB | CCN-ECM | CVP-ECM-MB |

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

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

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.

Carisma "MONITORING" Screen

SkyStar "MONITORING" Screen

### Displaying a unit

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:

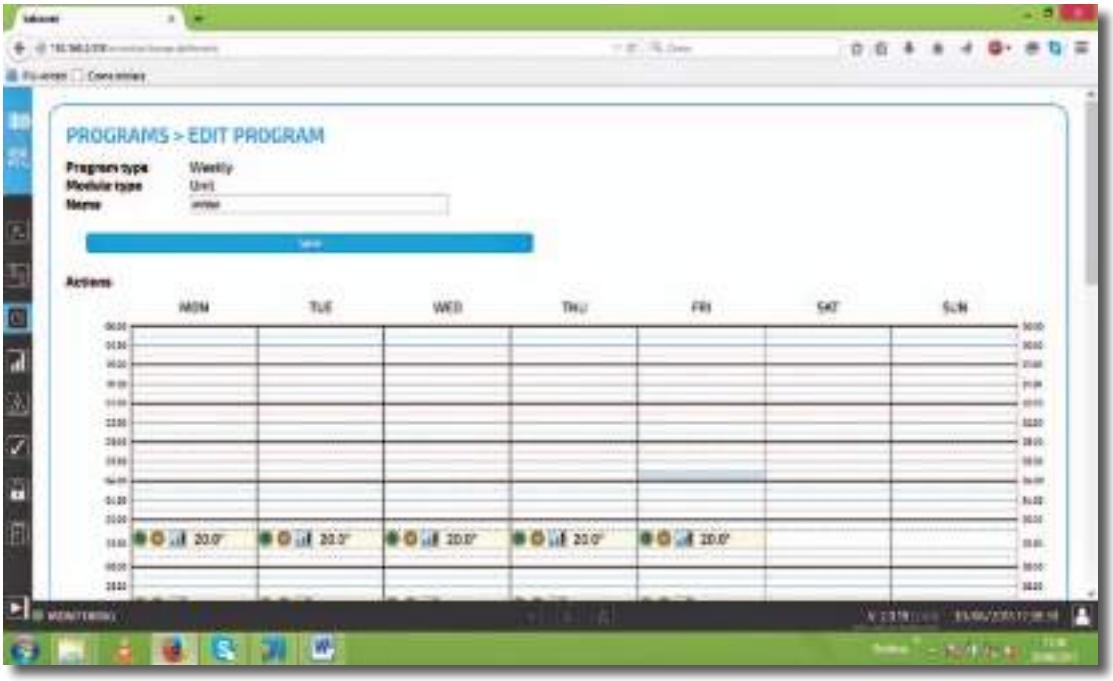
- Unit name (00.01.01)
- Set temperature (SETP)
- Room temperature (AT)
- Unit status: ON or OFF
- Mode: • Summer • Winter • Auto • Fan only
- Fan speed: • Low • Medium • High • Auto Fan

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

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

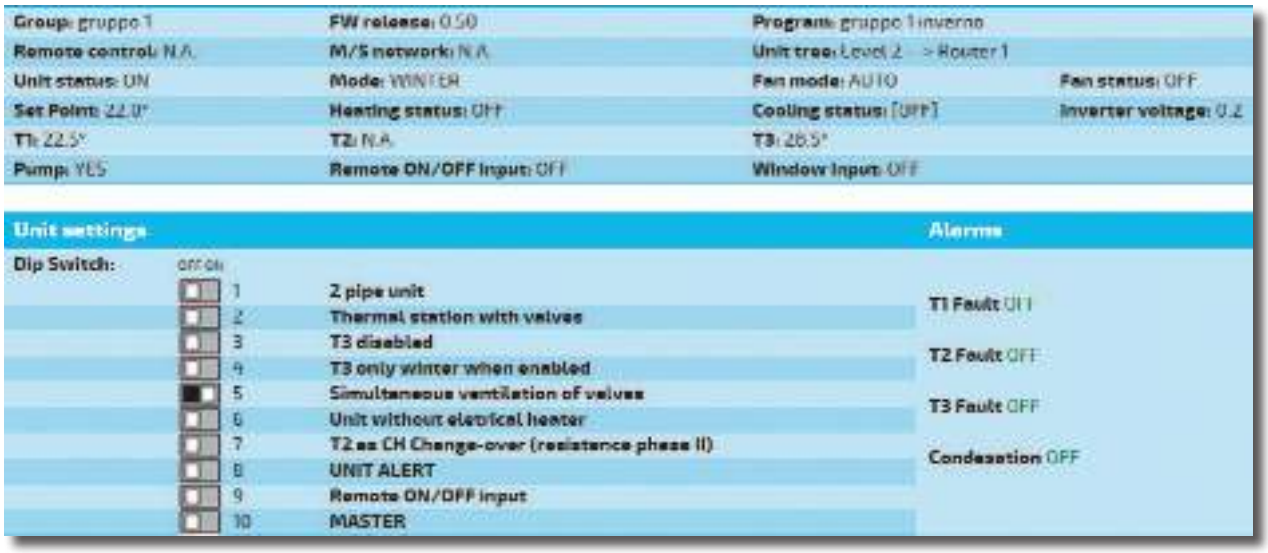
The "Weekly Program" can be used to set the unit operating parameters for each day of the week.
Several weekly programs can be set Time bands are available for each day of the week.
The time and the type of operation to be performed by the unit can be set for each band.
The time and the operating parameters can then be displayed before being sent to the unit and implemented.

"EVENT MANAGEMENT" Screen




Displaying of the parameters and Dip Switches set up

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.



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

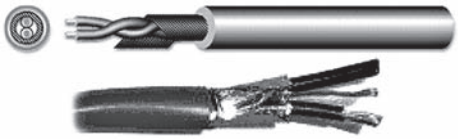
## for the Carisma and SkyStar Cassette fan coil ranges with AC asynchronous motor and with EC electronic motor and inverter board

### Alarm control by E-mail and sms

In addition to the alarm set on the Sabianet display, it is possible to send the ON-OFF alarm notification via E-mail and sms.


### RS 485 serial connection cable

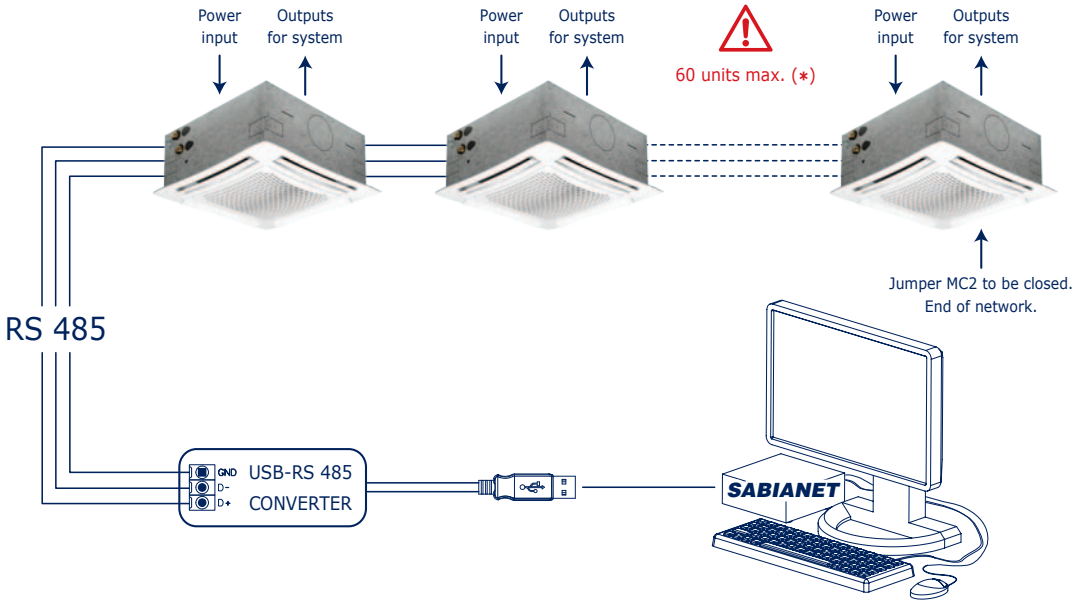
Shielded cable to be used: Belden 9841, RS-485, 1x2x24 AWG SFTP, 120 Ohm.



### 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).

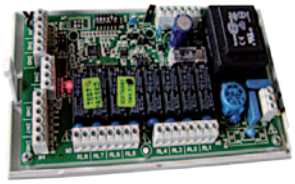


# MB and SABIANET

## accessories

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

| Identification | Code |
|---|---|
| **SIOS** | **3021292** |



### SIOS

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.
- to a PSM-DI panel (one SIOS for each PSM-DI panel).

| Identification | Code |
|---|---|
| **Router-S** | **3021290** |

### Router-S

The Router-S 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, etc.).
- it allows creating a Master/Slave sub-network to be controlled as an indipendent group.

The Router-S can be used only inside a network managed by Sabianet.

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.

| To combine with: | CRC | CRT | CRR | CRSO | SK-MB | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM-MB | CCN-ECM | CVP-ECM-MB |

# Accessories for BMS systems

## which are not provided by Sabiana

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

| Identification | Code |
|---|---|
| **Router-BMS** | **3021340** |

### Router-BMS

The Router-BMS (ModBus) is an electronic board to use with BMS systems not supplied by Sabiana:
- it allows to set-up a Master/Slave sub-network to check as an indipendent network.

The number of Router-BMS (ModBus) to use is:
- maximum 14 Router-BMS.
- maximum 15 fan coils per Router-BMS.

| To combine with: | CRC | CRT | CRR | CRSO | SK-MB | CCN | CVP-MB |
|---|---|---|---|---|---|---|---|
| | CRC-ECM | CRT-ECM | MVI | CRS-ECM | SK-ECM-MB | CCN-ECM | CVP-ECM-MB |

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