AERMEC

air conditioning

INSTRUCTIONS FOR THE INSTALLER

VMF-E5

AERMEC

COMPANY QUALITY SYSTEM

ICIM

ISO 9001:2000 - Cert. n° 0128/5

CISQ IQNet

AERMEC S.P.A.

CE

6795773_00

GB

6795773 / A5 - Ver. 00

Index

Precautions and Safety Standards 4

HOW TO USE THIS MANUAL 5

VMF system - Guidelines for system 6

List of material required to implement system: 7
VMF System - Material required 7
Hydraulic diagram of VMF system 9
VMF System - Implement the technical room 10
Material for ZONE A 12
VMF system - Implement zone A 12
Material for ZONE B 14
VMF system - Implement zone B 14
Material for ZONE C 16
VMF system - Implement zone C 16
Material for ZONE D 18
VMF system - Implement zone D 18
Material for ZONE E 20
VMF system - Implement zone E 20
Complete VMF system 22
VMF networks serial connections 23

VMF system - Software settings 26

ASSISTANCE menu procedures 26

Browsing and choice of ASSISTANCE menu 26
Enter the assistance menu (Password 202) 26
Setting number of MASTER fan coils present in system 27
Enable or disable the automatic changeover function of the fan coils 27
Procedure for self-addressing MASTER fan coils of the system 28
Force visualization of an address 29
Visualization of systems status 30
Set the presence of the VMF-ACS accessory module 31
Set management of simultaneous loads 31
Set delay in switching on electric resistance 32
Set loading priority in domestic hot water production 33
Set the type of system managed by VMF-ACS accessory 34
SINGLE VALVE system - System 1 type: 35
SINGLE VALVE system - System 2 type: 35
SINGLE VALVE system - System 3 type: 36
MULTI-VALVE system: 37
Set the multi-function output on the VMF-ACS accessory: 38
Set the band on heating setting for ECONOMY mode 39
Set the band on cooling setting for ECONOMY mode 39
Set heating temperature for chiller 40
Set cooling temperature for chiller 40
Set frequency for dynamic variation of setting in ECONOMY mode 41
Set the extent for decrease of setting in ECONOMY mode 41
Set the extent for increase of setting in ECONOMY mode 42
Set the compensation temperature setting based on external air for comfort mode 43
Set the domestic hot water temperature for the chiller 44
Set the ON/OFF band on the domestic hot water production setting 44
Set maximum value for domestic hot water production 45
Set the type of chiller/heat pump board 45
Set the chiller switch off delay after conclusion of system demand 46
Set the presence of the VMF-CRP recovery unit/ boiler module 46
Set the management mode of the installed heat recovery units 47
Set the number of pumps managed by the VMF system 48
Associate each fan coil to its own pump 49

AERMEC S.p.A.
I-37040 Bevilacqua (VR) Italy– Via Roma, 996
Tel. (+39) 0442 633111
Telefax 0442 93730 – (+39) 0442 93566
www .aermec. com - info @aermec. com

VMF-E5 panel

SERIAL NUMBER	

EC DECLARATION OF CONFORMITY

We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:

NAME E5

TYPE Remote panel.

To which this declaration refers, complies with the following harmonised standards:

IEC EN 60730-1 Safety standard.

IEC EN 61000-6-1
IEC EN 61000-6-3 Immunity and electromagnetic emissions for residential environments.

Thereby, compliant with the essential requirements of the following directives:

- LVD Directive: 2006/95/EC.
- Electromagnetic Compatibility Directive 2004/108/EC.

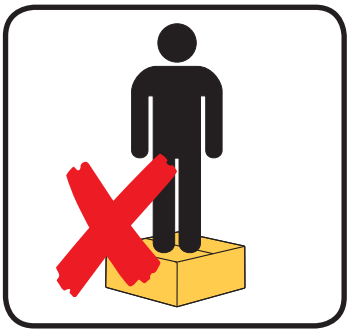
Bevilacqua 15/01/2008

Marketing Manager
Signature

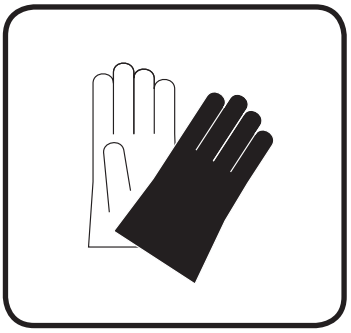
Precautions and Safety Standards

Keep package dry

DO NOT step on the packaging



Handle with care



Indications regarding waste disposal

Attention: this product contains electric and electronic appliances that cannot be disposed of through normal municipal waste collection channels. There are special centres for the separate collection for these products.

The electric and electronic appliances must be treated separately and in compliance with the laws in force in the country of use.
Batteries or accumulators present in the appliances must be disposed of separately according to the local regulations.

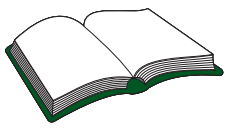
Safety symbols

Voltage hazard

Attention

Danger moving parts

Notes concerning manuals



Keep the manuals in a dry place, in order to prevent deterioration, for at least 10 years for any further reference.

Read all of the information contained in this manual carefully and completely. Pay particular attention to the user regulations accompanied by "DANGER" or "ATTENTION" in so much as, if not complied with, the unit or objects may be damaged and/or persons injured. For anomalies not contemplated by this manual, contact the area After-sales Service as soon as possible.
The appliance must be installed in such a way that maintenance and/or repair operations are possible.

The appliance warranty does not cover the costs for ladder trucks, scaffolding or other elevation systems that may become necessary for carrying out servicing under warranty. AERMEC S.p.A. declines all responsibility for any damage due to improper use of the machine, partial or hasty reading of the information contained in this manual.

HOW TO USE THIS MANUAL

This manual is intended to provide a complete support for installation of VMF systems. These systems are made up of several elements which, once installed correctly, must communicate one with another forming a network of devices which will work automatically.
VMF systems can differ by number and type of elements making up an air conditioning system. This documentation has been drawn up analysing in detail an example of a system which uses all the accessories managed by the VMF system.

THE INFORMATION PROVIDED IN THIS MANUAL IS DEDICATED TO VMF SYSTEM INSTALLERS. WE RECOMMEND PAYING THE UTMOST ATTENTION WHILE PERFORMING THE ELECTRICAL CONNECTIONS OF THE COMPONENTS AND SETTING THE SYSTEM SOFTWARE AS INCORRECT OPERATIONS COULD DAMAGE THE SYSTEM.

VMF system - Guidelines for system

As specified in the introduction, this manual will guide the installer for the correct implementation of a VMF system based on a practical comprehensive example.

① **Management of 5 distinct zones thus divided:**

Ⓐ A NIGHT zone (composed of two rooms) where a **ducted INVERTER** unit is installed, making it possible to control the unit by a **wall-mounted panel** as well as by a centralised panel.

Ⓑ A second NIGHT zone where a **fan coil** unit is installed, making it possible to control the units by a **wall-mounted panel** as well as by a centralised panel.

Ⓒ A DAY zone where a **fan coil** unit is installed, making it possible to control the units by **controls on-board the machine** as well as by a centralised panel.

Ⓓ A DAY zone where **fan coils** are installed, making it possible to control the units by **controls on-board the machine** as well as by a centralised panel.

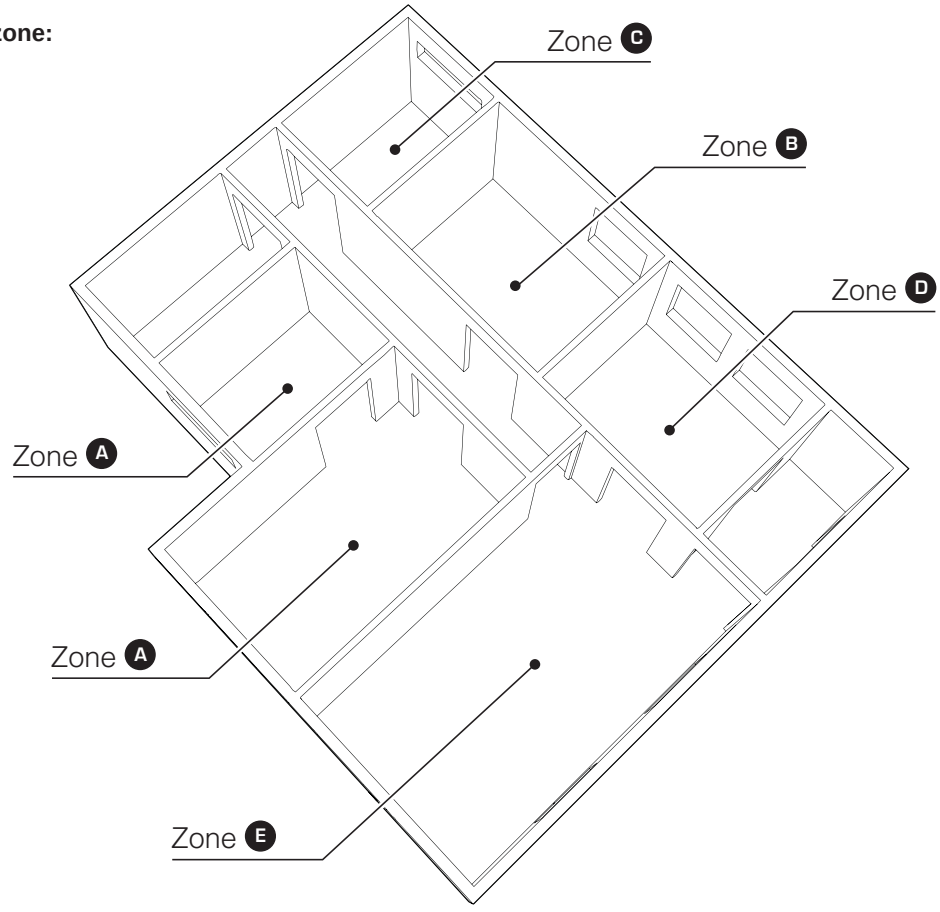
Ⓔ A second DAY zone where **fan coils** are installed, making it possible to control the units by **controls on-board the machine** as well as by a centralised panel.

② **Management of an INVERTER heat pump.**

③ **Management of domestic hot water production with integration by an electric resistance.**

④ **Management of a heat recovery unit and an air quality probe.**

Division of rooms by zone:



VMF System - Material required

NOTE: the proposed example requires different system components and relative accessories; this section provides a detailed list of the material required for each zone.

ATTENTION: some elements of the system are NOT available as AERMEC accessories; the installer is in charge of choosing, dimensioning and adapting material to the VMF system; however, in this example, these components will be listed generically WITHOUT REFERRING TO ANY SPECIFIC SIZE.

List of material required to implement system:

Zone A		
Quantity	**Element**	**Notes**
1	FCXI P	The selected ductable inverter unit will allow both rooms of the zone to be served without inserting further units; naturally proper ducts must be implemented to do this.
x 1	VMF-E18	This thermostat is necessary to manage an inverter unit in a VMF system.
x 1	VMF - E4	This wall-mounted panel allows to pilot the master of the zone to which it is connected.

Zone B		
Quantity	**Element**	**Notes**
x 1	Omnia HL	This zone has only one room which will be served by one sole fan coil.
x 1	VMF-E1	This thermostat is necessary to manage a MASTER unit in a VMF system.
x 1	VMF - E4	This wall-mounted panel allows to pilot the master of the zone to which it is connected.

Zone C		
Quantity	**Element**	**Notes**
x 1	Omnia HL	This zone has only one room which will be served by one sole fan coil.
x 1	VMF-E1	This thermostat is necessary to manage a MASTER unit in a VMF system.
x 1	VMF-E2H	This interface allows to pilot the master fan coil selected for the zone.

Zone D		
Quantity	**Element**	**Notes**
x 2	Omnia HL	This zone has only one room, which will be served by two fan coils (one MASTER and one SLAVE).
x 1	VMF-E1	This thermostat is necessary to manage a MASTER unit in a VMF system.
x 1	VMF - E0	This thermostat is necessary to manage a SLAVE unit in a VMF system.
x 1	VMF-E2H	This interface allows to pilot the master fan coil selected for the zone.

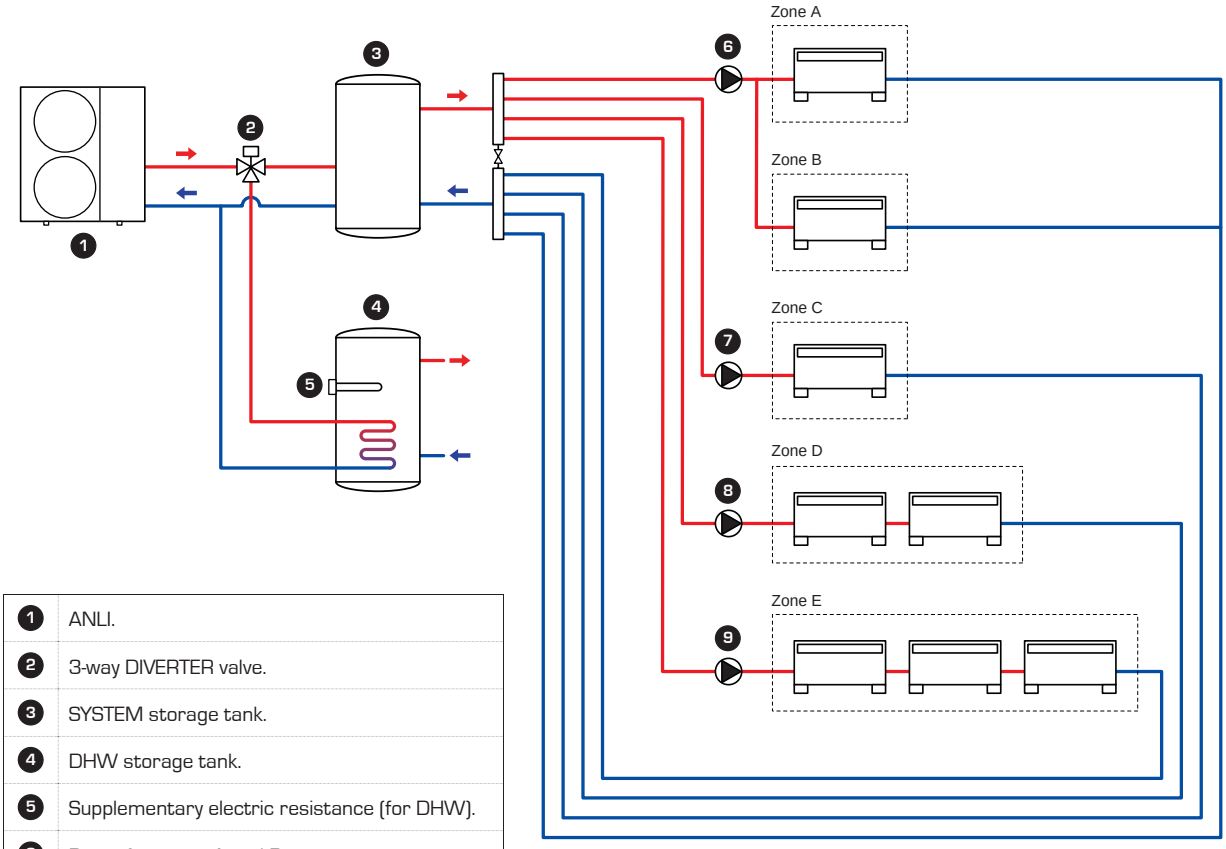
Zone E		
Quantity	**Element**	**Notes**
x 3	Omnia HL	This zone has only one room, which will be served by three fan coils (one MASTER and two SLAVES).
x 1	VMF-E1	This thermostat is necessary to manage a MASTER unit in a VMF system.
x 2	VMF - E0	This thermostat is necessary to manage a SLAVE unit in a VMF system.
x 1	VMF-E2H	This interface allows to pilot the master fan coil selected for the zone.
x 1	VMF-E5	This interface allows to pilot the ENTIRE VMF system; this component is not part of any zone as it pilots all of them.

Technical room		
Quantity	**Element**	**Notes**
x 1	ANLI70HX	Heat pump to provide the required output to heat and condition the system (heat pump with compressor and inverter hydraulic pump).
x 1	MODU - 485A	RS-485 interface for supervision systems with modbus protocol (accessory necessary to implement communication between the chiller/heat pump and VMF system).
x 1	VMF - ACS3KTM	Electric control board to control loads involved in management and production of domestic hot water.
x 2	VMF-CRP	To implement the system used in this example, two accessory VMF - CRP expansion boards are necessary; one is used to manage the recovery unit, the VOC probe and the boiler; the other manages the 4 pumps serving the zones.
x 1	VMF-VOC	Air quality detection probe; an air recovery unit can be managed based on that detected by this probe.
x 1	UR	Air recovery unit; thanks to the VMF - VOC probe, this unit is used to guarantee air exchange inside the VMF system.
x 1	System Storage Tank	All of these parts are NOT supplied by Aermec, but are considered as necessary parts to implement the VMF system; the general connections to insert them in the VMF system will be indicated for them.
x 1	Supplementary electric resistance for DHW	
x 1	DHW storage tank	
x 1	3-way diverter valve	
x 1	Temperature probe for DHW storage tank	
x 4	Pumps	

Hydraulic diagram of VMF system

NOTE: VMF systems fully manage an air conditioning/heating system and relative domestic hot water production; however before implementing a control system, the loads which will be connected to it must be highlighted.

ATTENTION: the installation of the components to implement the system are not taken into consideration in this manual; for further information concerning installation of the individual hydraulic components, refer to the component's specific documentation.

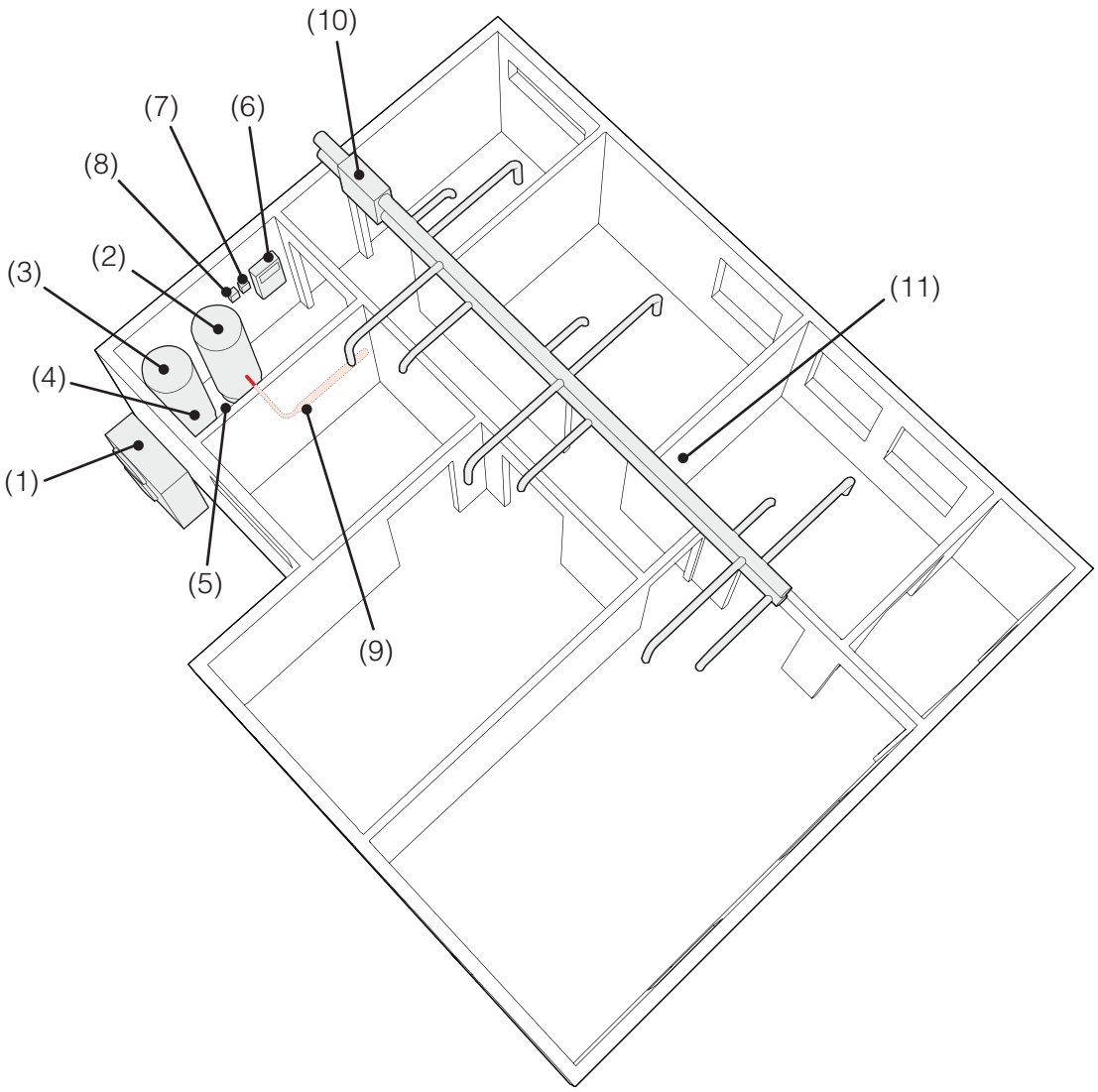


1	ANLI.
2	3-way DIVERTER valve.
3	SYSTEM storage tank.
4	DHW storage tank.
5	Supplementary electric resistance (for DHW).
6	Pump for zones A and B.
7	Pump for zone C.
8	Pump for zone D.
9	Pump for zone E.

VMF System - Implement the technical room

All the components required to manage the hydronic system for heating/air-conditioning and production of domestic hot water will be installed inside the technical room; in this specific case, the elements installed in the technical room are:

(1) Heat pump ANLI070HX (this component is installed outside);
(2) System storage tank;
(3) DHW storage tank;
(4) Supplementary electric resistance for DHW;
(5) 3-way diverter valve per selection of system or DHW water production;
(6) Domestic hot water production electric control board VMF-ACS3KTM;
(7) VMF-CRP expansion board for recovery unit and VMF-VOC probe management;
(8) VMF-CRP expansion board for management of pumps (a), (b), (c), (d);
(9) Collector with hydraulic pumps (a), (b), (c), (d) to feed the zones;
(10) Heat recovery unit UR;
(11) VMF-VOC probe (this component is installed outside of the technical room, but not belonging to any specific zone, it is grouped in the technical room).



Sequence of operations to be performed to install the various components:

(1) Install the selected heat pump; the unit must be appropriately installed electrically and hydraulically according to that described in the system design. The heat pump is connected to the MODBUS serial line by means of the MODU-485A accessory (see the relevant documentation to install this accessory).

(2) Install the system storage tank; the system storage tank must be installed according to standards in force, making sure all the components required for its correct use are supplied (loading unit, pressure gauge, safety valves, etc...).

(3) Install the DHW storage tank; the DHW storage tank must also be installed according to standards in force, making sure all the components required for its correct use are supplied (loading unit, pressure gauge, safety valves, etc...); remember to pay the utmost attention when selecting the supplementary electric resistance, the size of which is linked to the dimension of the tank itself (the supplementary resistance will also affect the type of electric control board to be purchased).

(4) Install the supplementary electric resistance for DHW storage tank; the DHW storage tank must be provided with a 3kW single-phase supplementary electric resistance with relative safety thermostat, to be used in some phases of domestic hot water production (for example during the anti-legionella cycle). The resistance must be installed on the storage tank, According to the procedures indicated on the relevant documentation; the resistance power supply must be connected to the specific terminals on the VMF-ACS3KTM accessory (as indicated in the VMF-ACS board installation procedure).

(5) Install the 3-way diverter valve; this valve allows the VMF system to divert water from the air-conditioning system to the DHW storage tank; this valve must be installed on the heat pump flow line, upstream the storage tanks (as highlighted in the VMF system hydraulic diagram) connecting it to the VMF-ACS3KTM control board (as indicated in the VMF-ACS control board installation procedure, provided further on).

(6) Install the VMF-ACS3KTM accessory; this accessory allows to manage the loads involved in domestic hot water production, based on the intended type of system; in the proposed example the accessory will manage:
- The probe inserted in the system storage tank;
- The probe inserted in the DHW storage tank;
- The 3-way diverter valve;
- The electric resistance (3kW single-phase) inserted in the DHW storage tank.

To install the VMF-ACS electric control board, refer to the specific documentation.

(7) Install the VMF-CRP expansion board (1); this expansion board manages different types of loads; in this case it will manage the heat recovery unit and the VMF-VOC accessory.

(8) Install the VMF-CRP expansion board (2); this expansion board manages different types of loads; in this case it will manage the 4 zone pumps. The installation of the two VMF-CRP expansion boards requires appropriate positioning in a specific electric box inside the technical room. The electric box, the fixing brackets, the transformer powering the VMF-CRP modules and all the protective elements necessary are not supplied. For further information concerning assembly of the VMF-CRP modules, refer to the specific documentation.

(9) Install a collector with relative zone pumps; this element allows to manage the hydraulic lines and the pumps of each individual zone from a point located in the technical room, as indicated in the standard hydraulic diagram in the chapter “Hydraulic diagram of VMF system”.

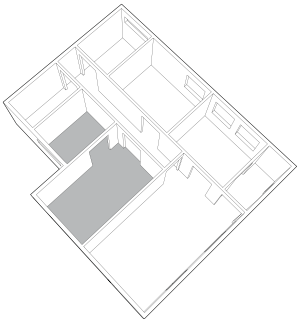
(10) Install the heat recovery unit; the UR unit provides an air exchange in the various rooms. For further information concerning assembly of the heat recovery unit, refer to the specific documentation.

(11) Install the VMF-VOC probe; the accessory VMF-VOC probe detects air quality and therefore pilots a heat recovery unit. For further information concerning assembly of the heat recovery unit, refer to the specific documentation.

VMF system - Implement zone A

The figure to the left indicates which rooms make up zone A; the master unit installed in this zone is identified on VMF-E5 by the label "NIGHT A".

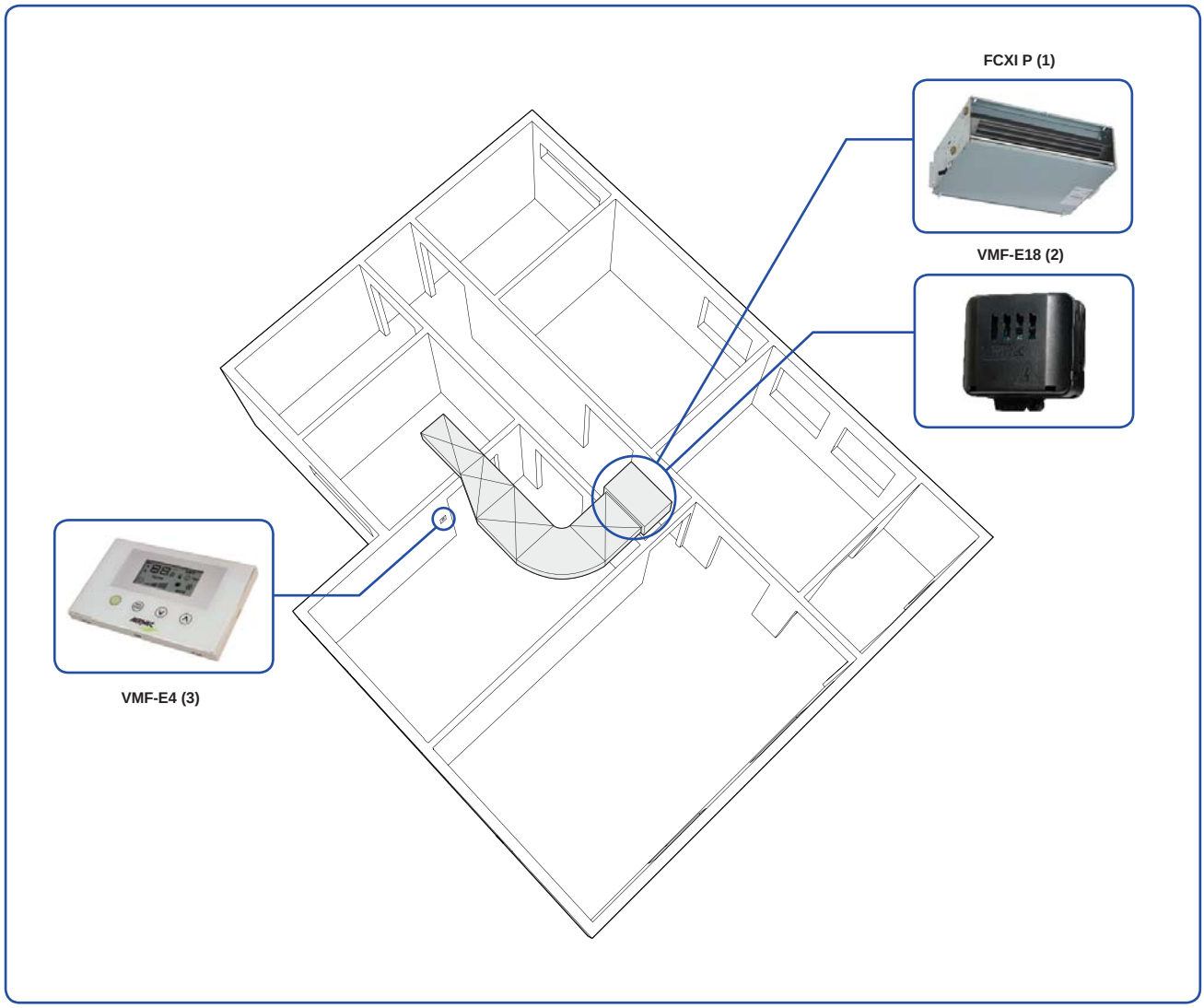
In this case, the zone is served by one unit alone, and it is therefore managed as master. The type of unit chosen obliges the installer to use the VMF-E18 thermostat as it is an inverter fan coil.



Material for ZONE A

An FCXI-P series unit has been selected in this zone to meet requests; by making a suitable duct, this unit can air condition both rooms making up this zone; the unit will be managed by installing a wall-mounted VMF-E4 panel.

The material required to implement this zone is:



Sequence of operations to be performed to install the various components:

(1) Install the FCXI-P fan coil: this unit is the only fan coil of the zone (MASTER). The unit must be appropriately installed electrically and hydraulically following the instructions provided in the fan coil documentation; the duct must be properly sized based on the features of the fan coil.

(2) Install the VMF-E18 thermostat: to manage the INVERTER fan coil via a VMF network, a VMF-E18 thermostat must be installed on the fan coil. This accessory allows to connect the control interface for the zone master (in the proposed example, the interface is represented by a VMF-E4), and to connect the thermostat to the VMF system serial network (for detailed information on installation and connection of the VMF-E18 thermostat, refer to the specific documentation). The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E18 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the inverter control module (we recommend referring to the wiring diagrams of the unit to perform this connection).
(d) earth the VMF-E18 thermostat;
(e) connect the power supply to the VMF-E18 thermostat;
(f) connect the air probe to the VMF-E18 thermostat (the air probe is indicated as SA in the wiring diagrams);
(g) connect the water probe to the VMF-E18 thermostat (the water probe is indicated as SW in the wiring diagrams);
(h) connect the wall-mounted VMF-E4 control panel (this connection can be made even if the box of the VMF-E18 thermostat is closed);
(i) connect the VMF-E18 thermostat to the VMF network (these connections will be specified more in detail in the chapter VMF NETWORKS SERIAL CONNECTIONS).

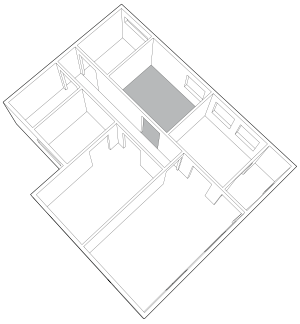
ATTENTION: the VMF-E18 thermostat boards have dip switches which MUST be set correctly based on the features of the fan coil to which the thermostat is connected. Refer to the thermostat documentation to set these dip switches correctly.

(3) Install the wall-mounted VMF-E4 panel: to manage the FCXI-P fan coil directly from the room of Zone A, the wall-mounted VMF-E4 panel must be fitted (refer to the specific documentation to install the panel).

VMF system - Implement zone B

The figure to the left indicates which rooms make up zone B; the master unit installed in this zone is identified on VMF-E5 by the label "NIGHT B".

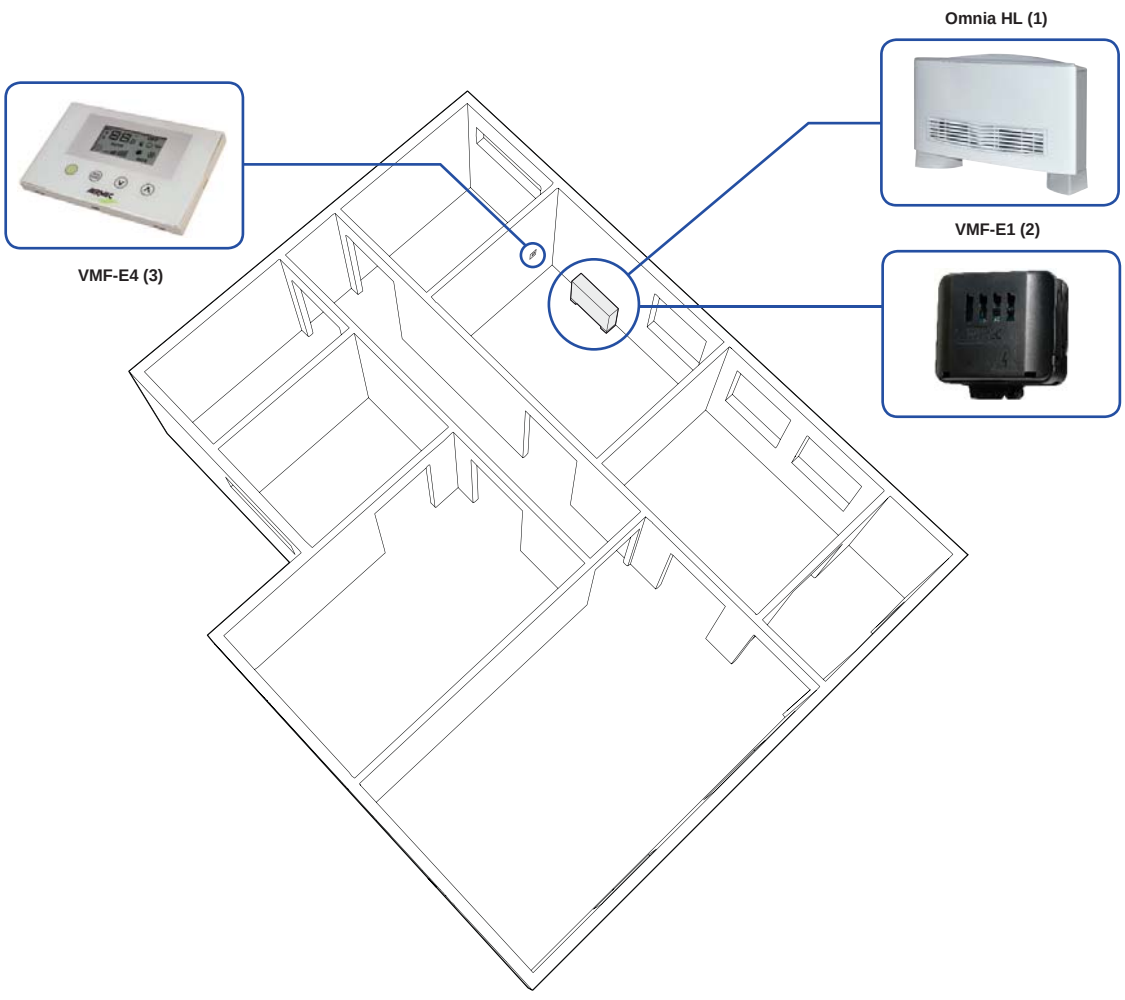
In this case, the zone is served by one unit alone, and it is therefore managed as master. The type of unit chosen obliges the installer to use the VMF-E1 thermostat.



Material for ZONE B

An OMNIA HL unit has been selected in this zone to meet requests; the fan coil will be piloted by installation of a wall-mounted VMF-E4 panel.

The material required to implement this zone is:



Sequence of operations to be performed to install the various components:

(1) Install the Omnia HL fan coil: this unit is the only fan coil of the zone (MASTER). The unit must be appropriately installed electrically and hydraulically following the instructions provided in the fan coil documentation.

(2) Install the VMF-E1 thermostat: to be able to manage the fan coil via a VMF network, a VMF-E1 thermostat must be installed on the fan coil, to which the user interface will be linked (in the specific example it is a VMF-E4). For detailed information on installation and connection of the VMF-E1 thermostat, refer to the specific documentation. The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E1 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the electric motor controls (we recommend referring to the wiring diagrams of the unit to perform this connection);
(d) connect the power supply to the VMF-E1 thermostat;
(e) connect the air probe to the VMF-E1 thermostat (the air probe is indicated as SA in the wiring diagrams);
(f) connect the water probe to the VMF-E1 thermostat (the water probe is indicated as SW in the wiring diagrams);
(g) connect the wall-mounted VMF-E4 control panel (this connection can be made even if the box of the VMF-E1 thermostat is closed);
(h) connect the VMF-E1 thermostat to the VMF network (these connections will be specified more in detail in the chapter VMF NETWORKS SERIAL CONNECTIONS).

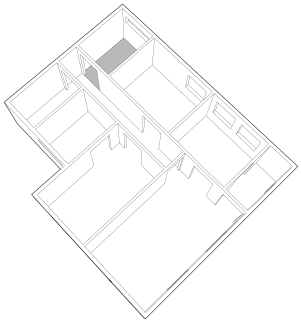
ATTENTION: the VMF-E18 thermostat boards have dip switches which MUST be set correctly based on the features of the fan coil to which the thermostat is connected. Refer to the thermostat documentation to set these dip switches correctly.

(3) Install the wall-mounted VMF-E4 panel: to manage the FCXI-P fan coil directly from the room of Zone A, the wall-mounted VMF-E4 panel must be fitted (refer to the specific documentation to install the panel).

VMF system - Implement zone C

The figure to the left indicates which rooms make up zone C; the master unit installed in this zone is identified on VMF-E5 by the label "Bathroom".

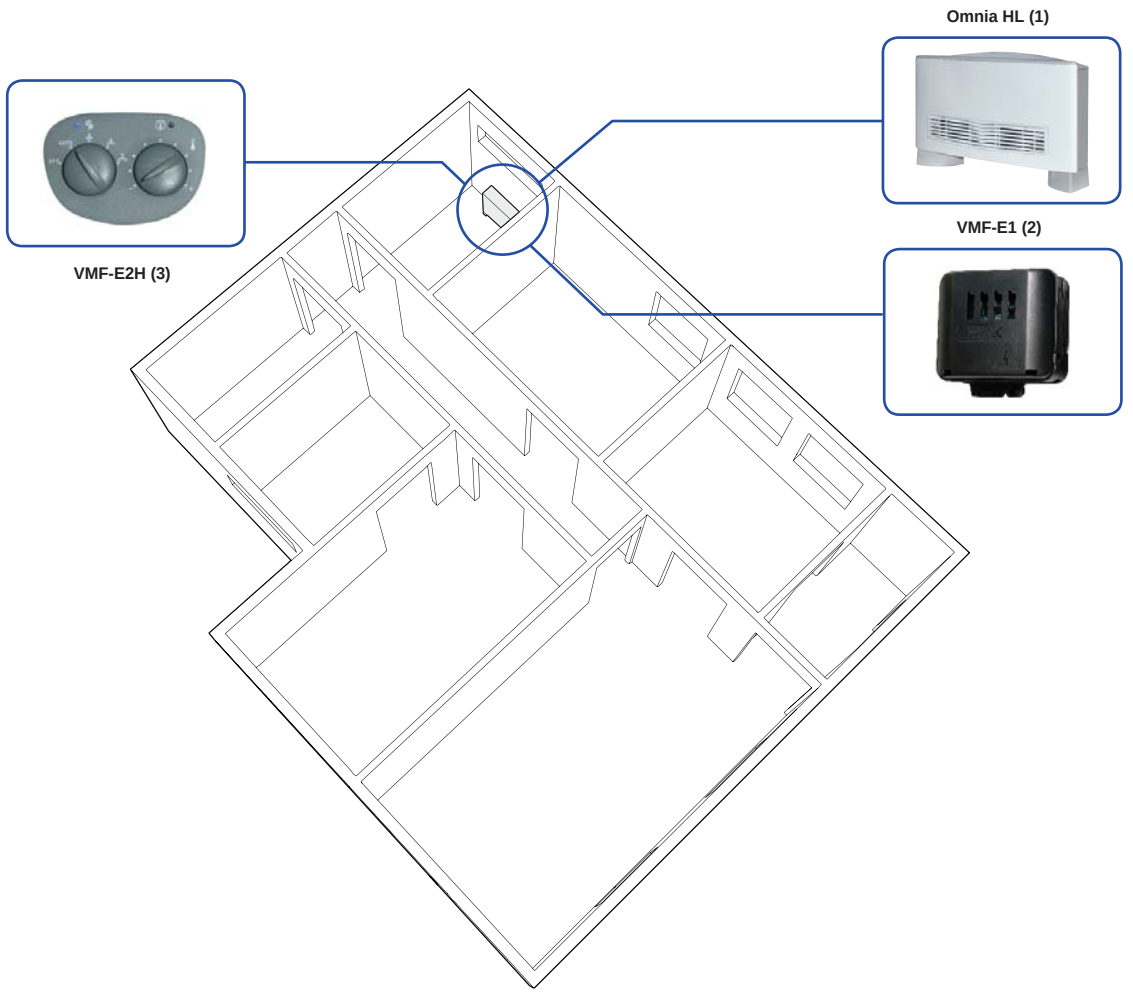
In this case, the zone is served by one unit alone (master); the type of unit chosen obliges the installer to use the VMF-E1 thermostat.



Material for ZONE C

An OMNIA HL unit has been selected in this zone to meet requests; the unit will be piloted by installation of a VMF-E2H control interface.

The material required to implement this zone is:



Sequence of operations to be performed to install the various components:

(1) Install the Omnia HL fan coil: this unit is the only fan coil of the zone (MASTER). The unit must be appropriately installed electrically and hydraulically following the instructions provided in the fan coil documentation.

(2) Install the VMF-E1 thermostat: to be able to manage the fan coil via a VMF network, a VMF-E1 thermostat must be installed on the fan coil (for detailed information on installation and connection of the thermostat, refer to the specific documentation). The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E1 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the electric motor controls (we recommend referring to the wiring diagrams of the unit to perform this connection);
(e) connect the power supply to the VMF-E1 thermostat;
(f) connect the air probe to the VMF-E1 thermostat (the air probe is indicated as SA in the wiring diagrams);
(g) connect the water probe to the VMF-E1 thermostat (the water probe is indicated as SW in the wiring diagrams);
(h) connect the VMF-E2H control interface (this connection can be made even if the box of the VMF-E1 thermostat is closed);
(i) connect the VMF-E1 thermostat to the VMF network (these connections will be specified more in detail in the chapter VMF NETWORKS SERIAL CONNECTIONS).

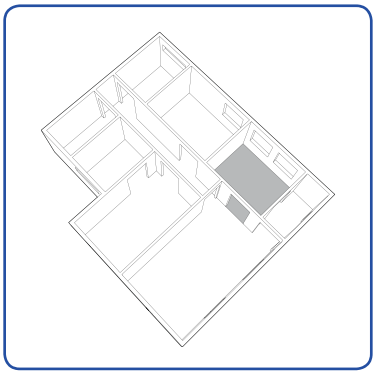
ATTENTION: the VMF-E18 thermostat boards have dip switches which MUST be set correctly based on the features of the fan coil to which the thermostat is connected. Refer to the thermostat documentation to set these dip switches correctly.

(3) Install the VMF-E2H control interface: to manage the Omnia HL fan coil directly from the unit, the VMF-E2H control interface must be fitted (refer to the specific documentation to install the control).

VMF system - Implement zone D

The figure to the left indicates which rooms make up zone D; the master unit installed in this zone is identified on VMF-E5 by the label "Kitchen".

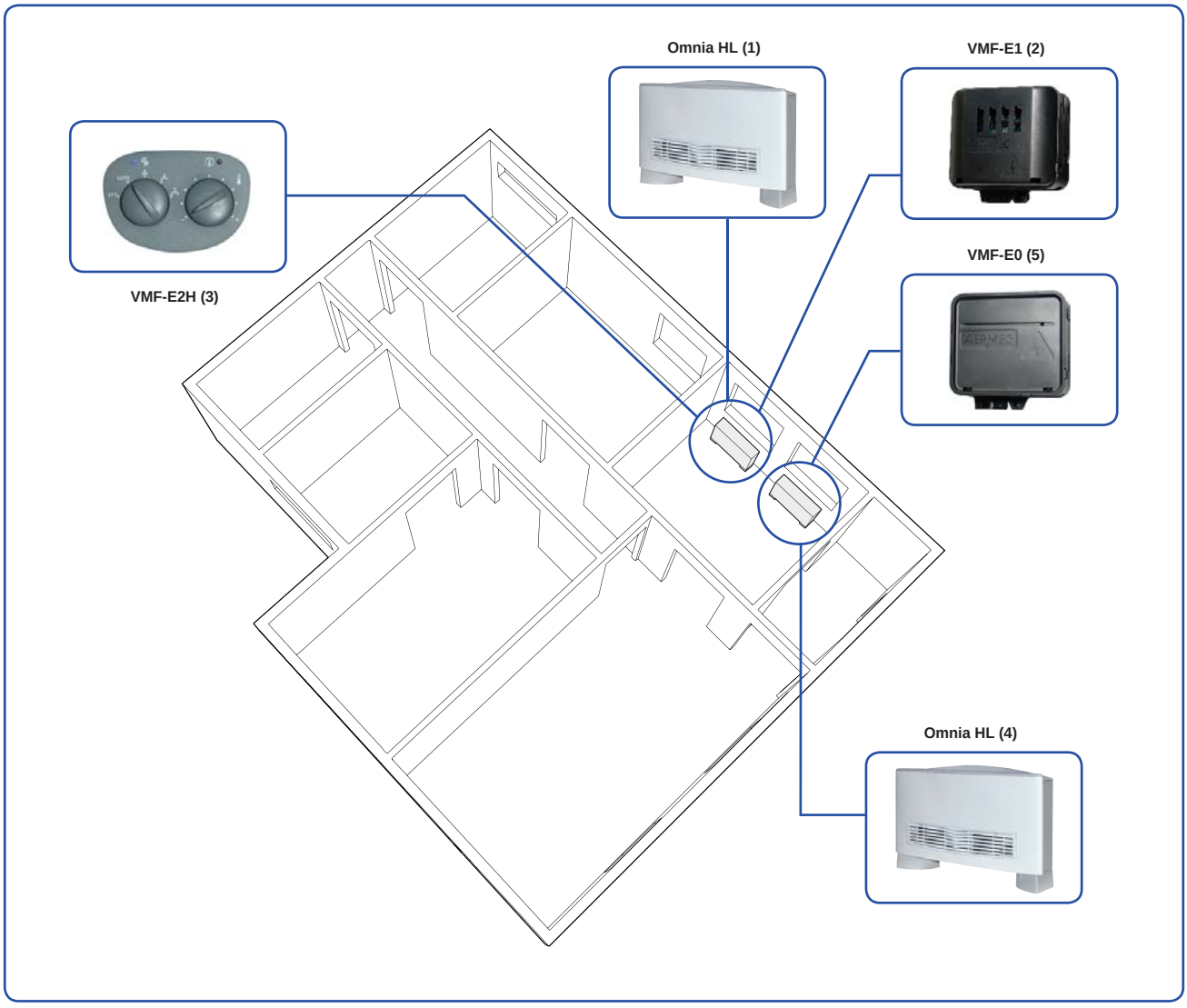
In this case, the zone is served by two units (one master and one slave); the type of unit chosen obliges the installer to use the VMF-E1 thermostat for the master and VMF-E0 for the slave.



Material for ZONE D

An OMNIA HL unit has been selected in this zone to meet requests; the user interface intended for the zone is VMF-E2H.

The material required to implement this zone is:



Sequence of operations to be performed to install the various components:

(1) Install the Omnia HL fan coil: this unit is the MASTER fan coil of the zone; the unit must be appropriately installed electrically and hydraulically following the instructions provided in the fan coil documentation.

(2) Install the VMF-E1 thermostat: to be able to manage the fan coil via a VMF network, a VMF-E1 thermostat must be installed on the fan coil (for detailed information on installation and connection of the thermostat, refer to the specific documentation). The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E1 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the electric motor controls (we recommend referring to the wiring diagrams of the unit to perform this connection);
(d) connect the power supply to the VMF-E1 thermostat;
(e) connect the air probe to the VMF-E1 thermostat (the air probe is indicated as SA in the wiring diagrams);
(f) connect the water probe to the VMF-E1 thermostat (the water probe is indicated as SW in the wiring diagrams);
(g) connect the VMF-E2H control interface (this connection can be made even if the box of the VMF-E1 thermostat is closed);
(h) connect the VMF-E1 thermostat to the VMF network (these connections will be specified more in detail in the chapter VMF NETWORKS SERIAL CONNECTIONS).

ATTENTION: the VMF-E18 thermostat boards have dip switches which MUST be set correctly based on the features of the fan coil to which the thermostat is connected. Refer to the thermostat documentation to set these dip switches correctly.

(3) Install the VMF-E2H control interface: to manage the Omnia HL fan coil directly from the unit, the VMF-E2H control interface must be fitted (refer to the specific documentation to install the control).

(4) Install the Omnia HL fan coil: this unit is the SLAVE fan coil of the zone; the unit must be appropriately installed electrically and hydraulically following the instructions provided in the fan coil documentation.

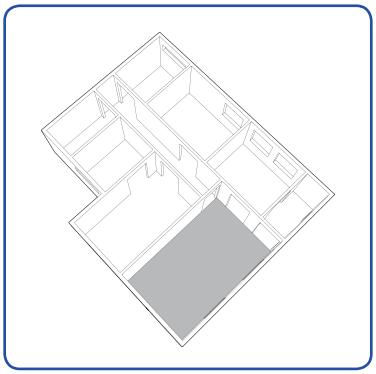
(5) Install the VMF-E0 thermostat: to be able to manage the SLAVE fan coil (controlled by the MASTER terminal via serial controls on a TTL network), a VMF-E0 thermostat must be installed on the fan coil (for detailed information on installation and connection of the VMF-E0 thermostat, refer to the specific documentation). The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E0 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the electric motor controls (we recommend referring to the wiring diagrams of the unit to perform this connection);
(d) connect the power supply to the VMF-E0 thermostat;
(e) connect the air probe to the VMF-E0 thermostat (the air probe is indicated as SA in the wiring diagrams);
(f) connect the water probe to the VMF-E0 thermostat (the water probe is indicated as SW in the wiring diagrams);
(g) connect the VMF-E0 thermostat to the VMF-E1 thermostat of the master unit (via TTL zone network).

ATTENTION: the VMF-E0 thermostat boards have a dip switch which MUST be set correctly based on the features of the system to which the thermostat is connected; refer to the thermostat documentation to set this dip switch correctly.

VMF system - Implement zone E

The figure to the left indicates which rooms make up zone E; the master unit installed in this zone is identified on VMF-E5 by the label "Day".

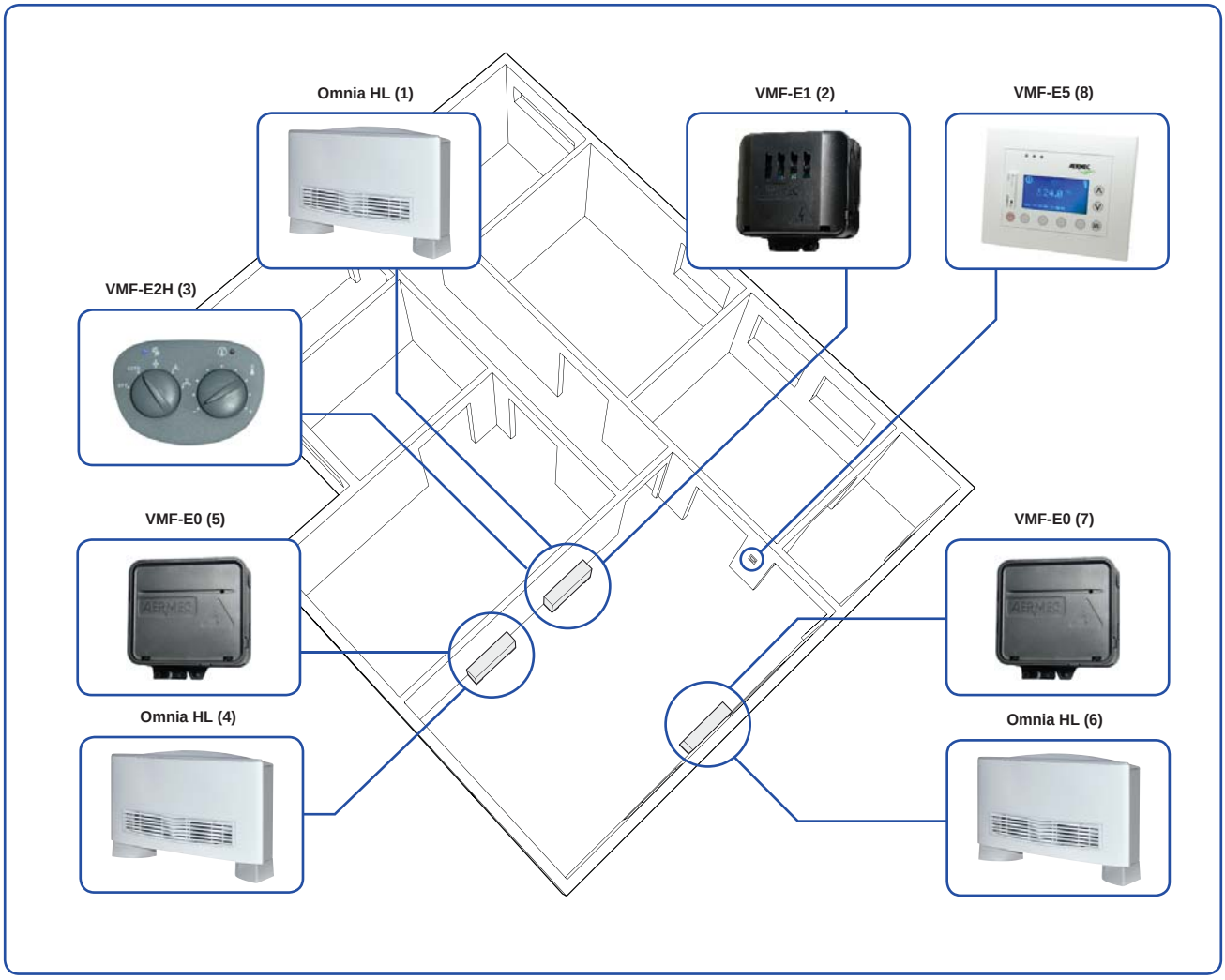
In this case, the zone is served by three units (one master and two slaves); the type of unit chosen obliges the installer to use the VMF-E1 thermostat for the master and two VMF-E0 for the slaves.



Material for ZONE E

Three OMNIA HL units have been selected in this zone to meet requests; the master unit will be piloted by installation of a VMF-E2H control interface.

The material required to implement this zone is:



Sequence of operations to be performed to install the various components:

(1) (4) (6) Install the Omnia HL fan coil: this unit is the MASTER fan coil of the zone; the unit must be appropriately installed electrically and hydraulically following the instructions provided in the fan coil documentation.

(2) Install the VMF-E1 thermostat: to be able to manage the fan coil via a VMF network, a VMF-E1 thermostat must be installed on the fan coil (for detailed information on installation and connection of the thermostat, refer to the specific documentation). The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E1 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the electric motor controls (we recommend referring to the wiring diagrams of the unit to perform this connection);
(d) connect the power supply to the VMF-E1 thermostat;
(e) connect the air probe to the VMF-E1 thermostat (the air probe is indicated as SA in the wiring diagrams);
(f) connect the water probe to the VMF-E1 thermostat (the water probe is indicated as SW in the wiring diagrams);
(g) connect the VMF-E2H control interface (this connection can be made even if the box of the VMF-E1 thermostat is closed);
(h) connect the VMF-E1 thermostat to the VMF network (these connections will be specified more in detail in the chapter VMF NETWORKS SERIAL CONNECTIONS).

ATTENTION: the VMF-E18 thermostat boards have dip switches which MUST be set correctly based on the features of the fan coil to which the thermostat is connected. Refer to the thermostat documentation to set these dip switches correctly.

(3) Install the VMF-E2H control interface: to manage the Omnia HL fan coil directly from the unit, the VMF-E2H control interface must be fitted (refer to the specific documentation to install the control).

(5) (7) Install the VMF-E0 thermostat: to be able to manage the SLAVE fan coil (controlled by the MASTER terminal via serial controls on a TTL network), a VMF-E0 thermostat must be installed on the fan coil (for detailed information on installation and connection of the VMF-E0 thermostat, refer to the specific documentation). The following is a summary of the operations required for installation of the proposed example:
(a) remove the service terminal board from the side of the fan coil;
(b) mount the box of the VMF-E0 thermostat in place of the service terminal board;
(c) using the connection cables previously detached from the terminal board, connect the thermostat with the electric motor controls (we recommend referring to the wiring diagrams of the unit to perform this connection);
(d) connect the power supply to the VMF-E0 thermostat;
(e) connect the air probe to the VMF-E0 thermostat (the air probe is indicated as SA in the wiring diagrams);
(f) connect the water probe to the VMF-E0 thermostat (the water probe is indicated as SW in the wiring diagrams);
(g) connect the VMF-E0 thermostat to the VMF-E1 thermostat of the master unit (via TTL zone network).

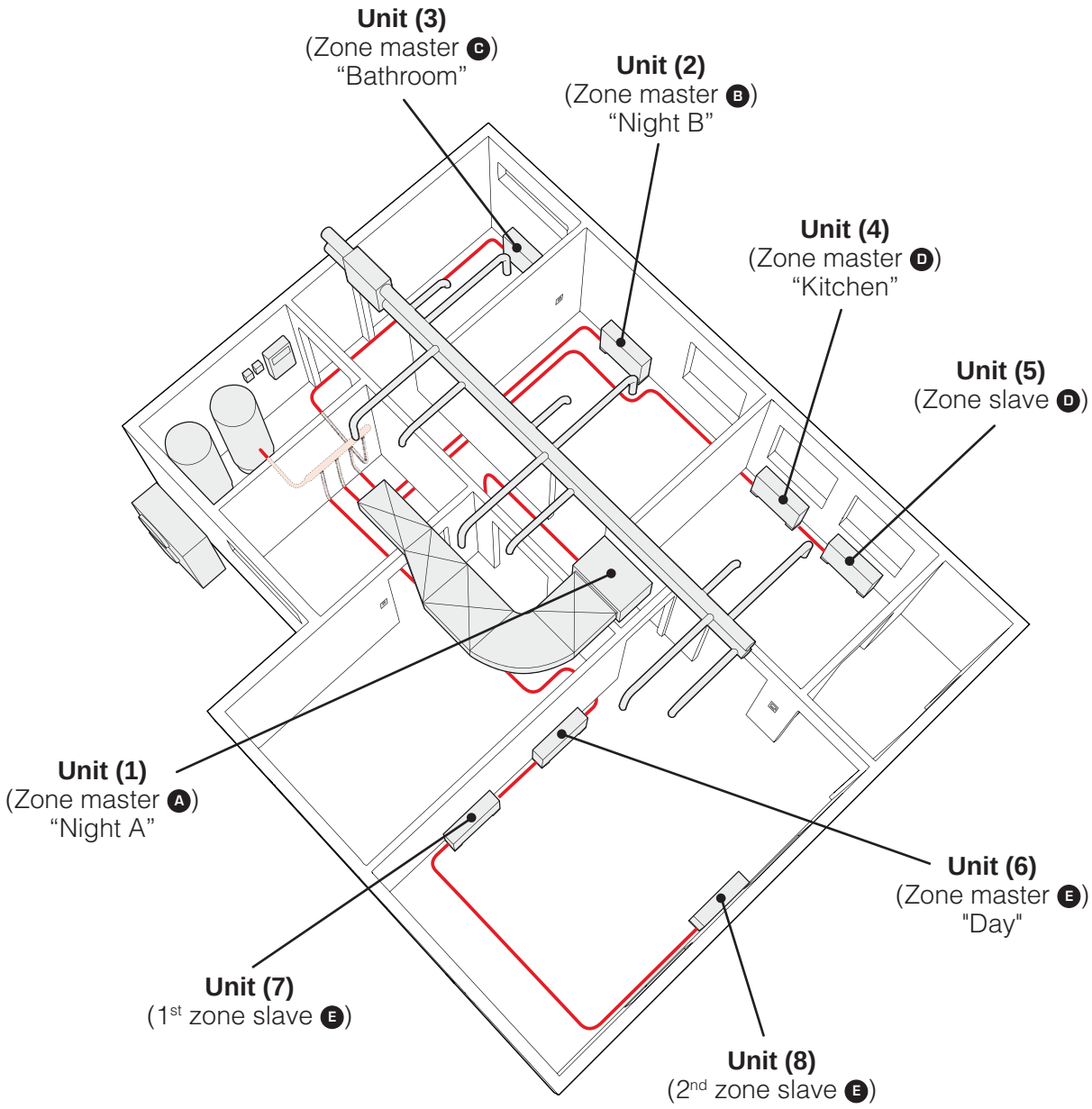
ATTENTION: the VMF-E0 thermostat boards have a dip switch which MUST be set correctly based on the features of the system to which the thermostat is connected; refer to the thermostat documentation to set this dip switch correctly.

(8) Install the advanced VMF-E5 panel: to manage the entire VMF system, the VMF-E5 system control panel must be fitted (refer to the specific documentation to install the panel).

Complete VMF system

The figure below describes the air-conditioning system used as a reference in this manual. This section describes in detail the hydraulic connections between the fan coils and the collector in the technical room.

ATTENTION: the figure only indicates the hydraulic connections of all the indoor units.



VMF networks serial connections

VMF systems allow managing different air conditioning plant elements with just one control panel; this centralisation is provided by MODBUS serial communication which, depending on the various components of the system, can be characterised in the following types:

(1) Serial connections via MASTER and relative control interface;
(2) TTL connections between MASTER and SLAVE;
(3) Main RS485 connection for communication between system and centralised control elements.

The features of each of these categories are:

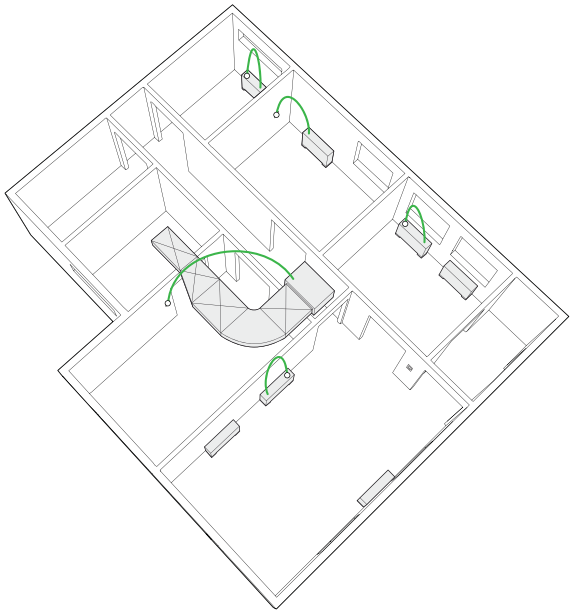
(1) Serial connections via MASTER and relative control interface

This type of connection is made between the thermostat of a Master unit and the relative control device. The thermostats used as Master can be:
- *VMF-E0 (only if a supervision system with VMF-E5 is not foreseen);*
- *VMF-E1;*
- *VMF-E18 (only for inverter units);*
- *VMF-FCL (only for FCL units).*

The control devices that can be linked to these thermostats can be:
- *VMF-E2;*
- *VMF-E2H;*
- *VMF-E4.*

The electric connection of the user interfaces (VMF-E4) to the master thermostats must be implemented with cables having the following features:
- *Shielded cable for twisted-pair transmission, AWG 22 - 24 (0.33 - 0.20mm^2 - 4 poles);*
- *Maximum length of the connection 30m.*

For detailed information on the connection between the thermostat board and control interface, refer to the specific documentation of the accessories.

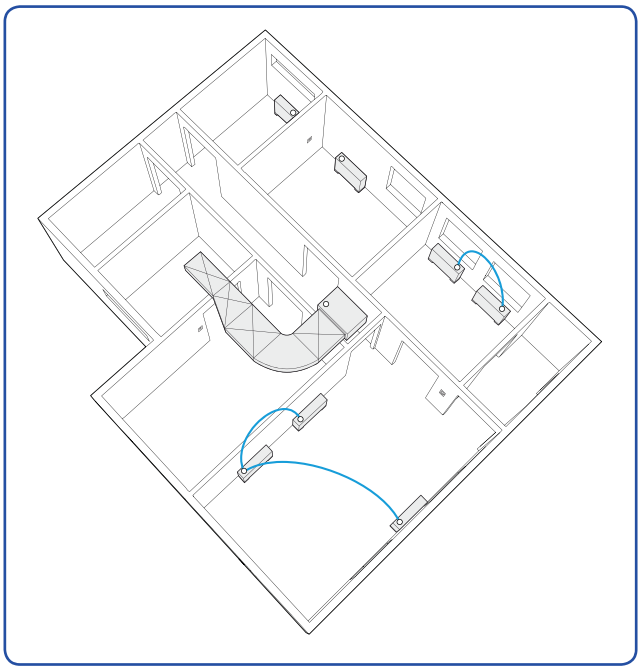


(2) TTL connections between MASTER and SLAVE

This type of connection is made between the thermostat of a Master unit and that of the next Slave unit (if present). The thermostats used as Master or Slave can be:
• VMF-E0 (usable as Master only if a supervision system with VMF-E5 is not foreseen);
• VMF-E1;
• VMF-E18 (only for inverter units);
• VMF-FCL (only for FCL units).

The electric connection between a MASTER thermostat and the next SLAVE must be implemented by using a cable having the following features:
• Shielded cable AWG 22 - 3 (0.34mm² - 2 poles);
• Maximum length of the connection (by maximum length we mean the distance of the LAST Slave from the Master) 30m.

For detailed information on the connection between the thermostat board and control interface, refer to the specific documentation of the accessories.

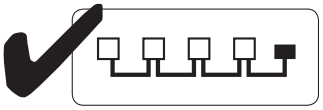


(3) Main RS485 connection for communication between system and centralised control elements

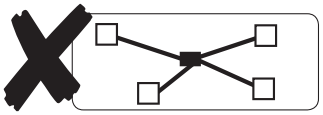
This type of connection is made between:
• The chiller board (if supplied with relative accessory for RS485 communication);
• Accessory VMF-CRP modules (if foreseen);
• VMF-ACS electric control board for production of domestic hot water (if foreseen);
• All thermostats of the Master units (VMF-E1, VMF-E18, VMF-FCL).

The RS485 interface standard guarantees safe data transmission with high disturbance immunity at long distances (max 1000 m) between components of the system. Data transmission is differential:
• T+ (terminal 1-A of connector CN11 of VMF-E5 panel);
• T- (terminal 2-B of connector CN11 of VMF-E5 panel);
• GND (terminal 3-GND of connector CN11 of VMF-E5 panel).

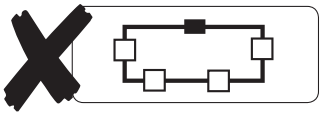
For proper communication, the RS485 bus must respect the type of connection carried below:



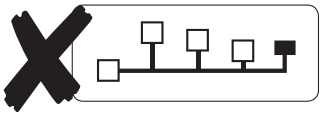
Point-point type;
(CORRECT type)



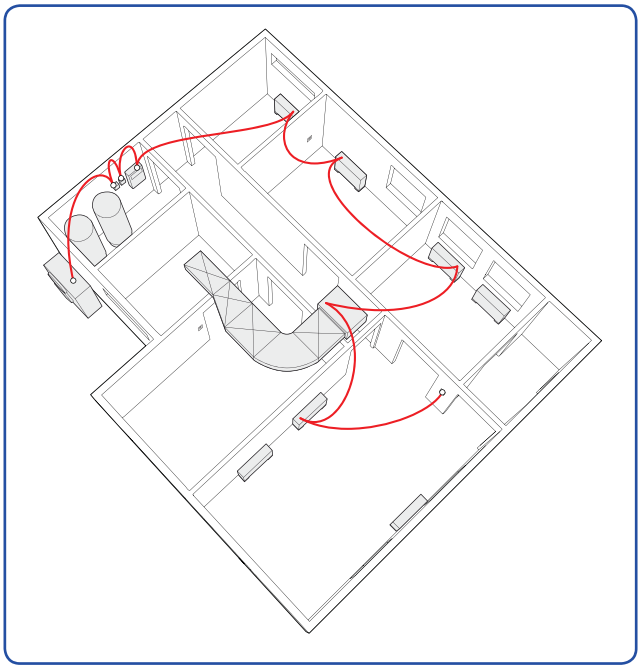
Star type;
(Type NOT ALLOWED)



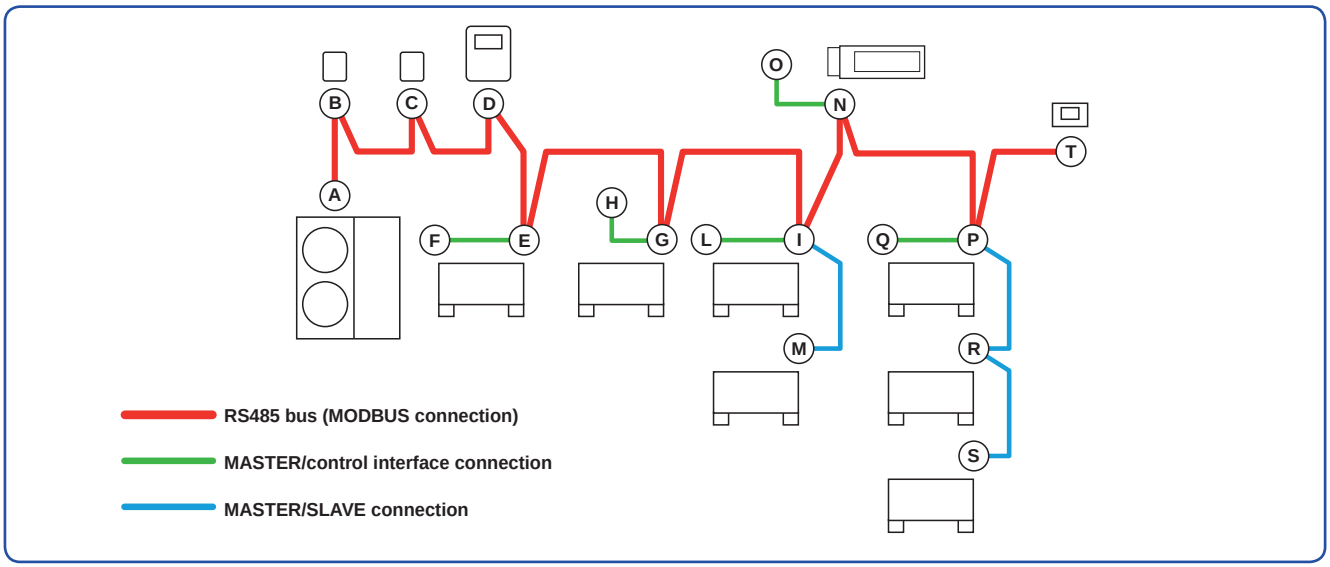
Loop type;
(Type NOT ALLOWED)



Bus type;
(Type NOT ALLOWED)



For detailed information on the connection between the thermostat board and control interface, refer to the specific documentation of the accessories.



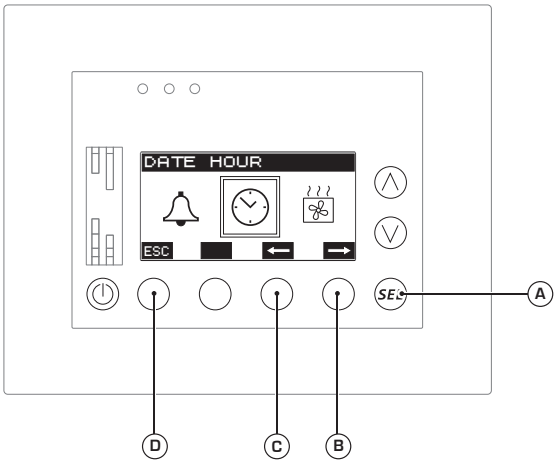
Connection				Type of cable	Notes on the connection
FROM		TO			
Ⓐ	MODU-485A	Ⓑ	VMF CRP (1)	3-pole cable + shield 0.34mm² (AWG22)	
Ⓑ	VMF CRP (1)	Ⓒ	VMF CRP (2)	3-pole cable + shield 0.34mm² (AWG22)	
Ⓒ	VMF CRP (2)	Ⓓ	VMF-ACS	3-pole cable + shield 0.34mm² (AWG22)	
Ⓓ	VMF-ACS	Ⓔ	VMF-E1	3-pole cable + shield 0.34mm² (AWG22)	The collector for the RS485 connection of the VMF-E1 thermostat has 5 poles; the two terminals to power the VMF-E5 are not used in this example.
Ⓔ	VMF-E1	Ⓕ	VMF-E2H	4-pole user interface connection cable (AWG22)	Supplied with VMF-E2H thermostat as per standard.
Ⓔ	VMF-E1	Ⓖ	VMF-E1	3-pole cable + shield 0.34mm² (AWG22)	The collector for the RS485 connection of the VMF-E1 thermostat has 5 poles; the two terminals to power the VMF-E5 are not used in this example.
Ⓖ	VMF-E1	Ⓗ	VMF - E4	Shielded cable for twisted-pair transmission 0.33~0.20mm² (AWG22~24)	
Ⓖ	VMF-E1	Ⓘ	VMF-E1	3-pole cable + shield 0.34mm² (AWG22)	The collector for the RS485 connection of the VMF-E1 thermostat has 5 poles; the two terminals to power the VMF-E5 are not used in this example.
Ⓘ	VMF-E1	Ⓛ	VMF-E2H	4-pole user interface connection cable (AWG22)	Supplied with VMF-E2H thermostat as per standard.
Ⓘ	VMF-E1	Ⓜ	VMF - E0	2-pole cable + shield 0.34mm² (AWG22)	TTL local serial line.
Ⓘ	VMF-E1	Ⓝ	VMF-E18	3-pole cable + shield 0.34mm² (AWG22)	The collector for the RS485 connection of the VMF-E1 thermostat has 5 poles; the two terminals to power the VMF-E5 are not used in this example.
Ⓝ	VMF-E18	Ⓞ	VMF - E4	Shielded cable for twisted-pair transmission 0.33~0.20mm² (AWG22~24)	
Ⓝ	VMF-E18	Ⓟ	VMF-E1	3-pole cable + shield 0.34mm² (AWG22)	The collector for the RS485 connection of the VMF-E1 thermostat has 5 poles; the two terminals to power the VMF-E5 are not used in this example.
Ⓟ	VMF-E1	Ⓠ	VMF-E2H	4-pole user interface connection cable (AWG22)	Supplied with VMF-E2H thermostat as per standard.
Ⓟ	VMF-E1	Ⓡ	VMF - E0	2-pole cable 0.34mm² (AWG22)	TTL local serial line.
Ⓡ	VMF - E0	Ⓢ	VMF - E0	2-pole cable 0.34mm² (AWG22)	TTL local serial line.
Ⓟ	VMF-E1	Ⓣ	VMF-E5	5-pole cable + shield 0.34mm² (AWG22)	The collector for the RS485 connection of the VMF-E1 thermostat has 5 poles: three for the signal and two for the power supply.

VMF system - Software settings

After the system has been installed and the components connected, the software parameters required to activate the system via interface of the advanced VMF-E5 panel are set; these parameters are contained in a menu protected by a password for the installer.
ATTENTION: an incorrect setting of the parameters in the assistance menu can cause the entire system to malfunction; these parameters can ONLY be modified by installation and technical assistance personnel.

ASSISTANCE menu procedures

• Browsing and choice of ASSISTANCE menu



On the menu selection page, the icon inside the frame represents the selectable submenu (the identification string is provided at the top left). At this moment the possible operations are:

- Enter the selected menu (by pressing the Ⓐ key).

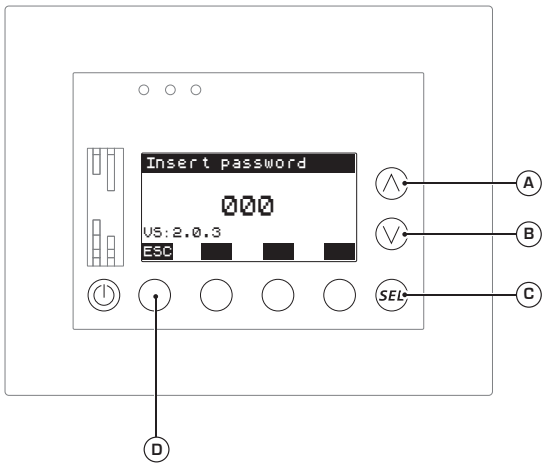
- Select the subsequent menu (by pressing the Ⓑ key).

- Select the previous menu (by pressing the Ⓒ key).

- Exit the menu selection mode, returning to the main screen (by pressing the Ⓓ key).

ATTENTION: the icon identifying the assistance submenu is the following: .

• Enter the assistance menu (Password 202)



The first window of the ASSISTANCE menu allows the installer to access the menu by entering a three digit password; to set this password, it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the first digit representing the password will begin to flash.

(2) Press the Ⓐ key to increase the selected value or else press the Ⓑ key to decrease it.

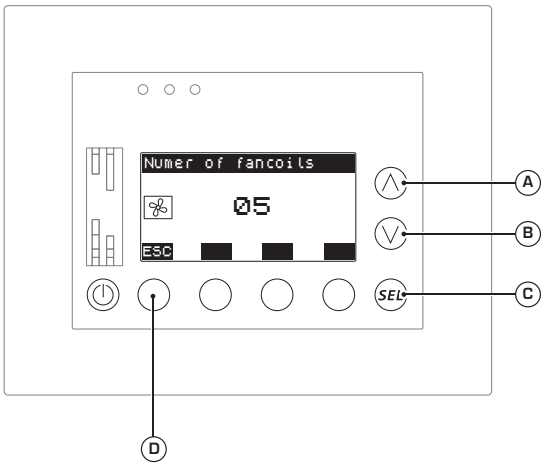
(3) Press the Ⓒ key to confirm the entered value and to pass on to the next digit.

(4) Repeat points (2) and (3) for digits two and three.

After the system password has been entered, you access the first screen of the assistance menu directly.

ATTENTION: the password to be entered is 202.

• Setting number of MASTER fan coils present in system



The master fan coil number identifies the number of zones present in the system; the VMF-E5 panel can manage up to 64 master units (up to 5 slave units can be connected to each of them, repeating the settings of their master). In order to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the numbers which represent the number of system master fan coils will begin to flash.

(2) Press the Ⓐ key to increase the selected value or else press the Ⓑ key to decrease it.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the numbers will have quit flashing, thus indicating that the modification procedure has concluded.

After the number of fan coils has been entered, it will be possible to:

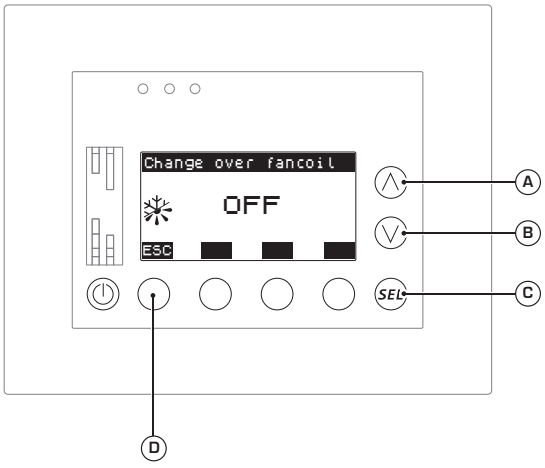
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

In the proposed system example, the value of this parameter is 5, as there are 5 master fan coils.

• Enable or disable the automatic changeover function of the fan coils



The changeover function present in each master fan coil automatically changes the season depending on the water or air temperature detected by the thermostat. This function can be enabled or disabled. If disabled, the season of the fan coil reflects that set in the VMF-E5 panel. In order to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current setting will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the setting; the settings of this function can be:
• OFF (function disabled, therefore season set by VMF-E5 panel);
• ON (function enabled, therefore automatic changeover based on settings of each MASTER thermostat).

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

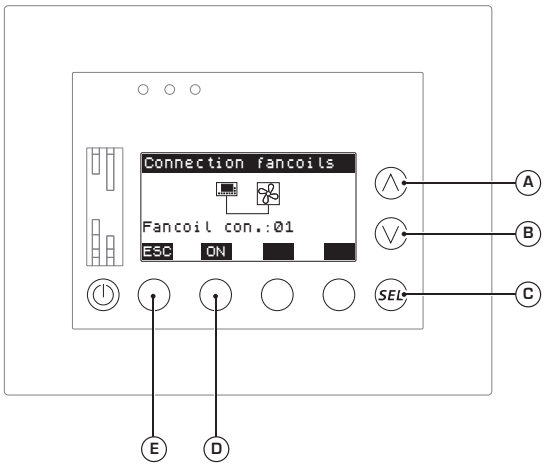
- Pass on to the following window by pressing the Ⓑ key.

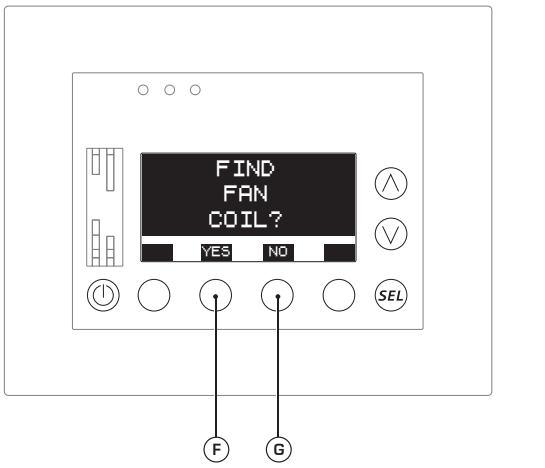
- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

In the proposed system example, the value of this parameter is OFF, since the user will change the season for the system.

• Procedure for self-addressing MASTER fan coils of the system





The VMF-E5 control panel implements the self-detection procedure which allows each thermostat connected to the MASTER fan coils to automatically be assigned with a univocal address.In order to activate this procedure it is necessary to:

(1) Activate the search mode by pressing the (D) key; once this key has been pressed, the screen will appear on the display allowing the actual start of the procedure.

(2) To start the master search, press the (F) key.

(3) When the master search procedure has started, the display will show the animation of the symbol ( ) and the index of the master fan coil to be entered in the network, (this index starts from 1, and increases automatically after each fan coil is acknowledged by the system).

(4) Go to the control interface of the fan coil you wish to give the index 01, and move (in any position or mode) a control interface selector (either VMF-E2, E2H or E4).

(5) After the system has correctly received the response from the fan coil which the address was assigned to, the system passes on to automatically address the next fan coil.

(6) Repeat points (4) and (5) until the address has been assigned to the last master of the system, or until the procedure is interrupted (press the (D) key to interrupt the procedure).

After the addresses have been assigned to the MASTER fan coils, it will be possible to:

- Pass on to the following window by pressing the (B) key.

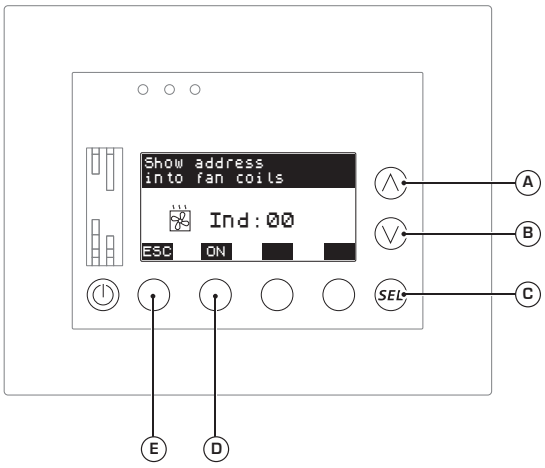
- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

In the proposed system example, the indexes assigned to the units are:

- *Index 01: FCXI-P of zone A (Modbus Address 06);*
- *Index 02: Omnia HL of zone B (Modbus Address 07);*
- *Index 03: Omnia HL of zone C (Modbus Address 08);*
- *Index 04: Omnia HL of zone D (Modbus Address 09);*
- *Index 05: Omnia HL of zone E (Modbus Address 10).*

• Force visualization of an address



In the proposed system example, this function could be used to test serial communication between the VMF-E5 accessory and the various MASTERS of the system, allowing the correct connection of the system components to be checked already during this phase.

After each MASTER of the system has been assigned with a serial address, it can be checked by the forced visualization function on the terminal. With the specified address, this function allows the serial address to be viewed on the master by means of a series of LED flashes on the control interface (for further information on light indication coding, refer to instructions of the thermostats on the fan coils). To activate this procedure, it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current setting will be highlighted.

(2) Press the (A) or (B) key to modify the address of the master upon which the visualization of its address must be forced; the addresses which can be viewed go from 6 to 70 (if the address 00 is used, the command is given to ALL MASTERS of the system).

(3) To start forced visualization of the address on the terminal, press the (D) key; it will change from ON to OFF (pressing this key again will stop the procedure and will change the label on the key once again).

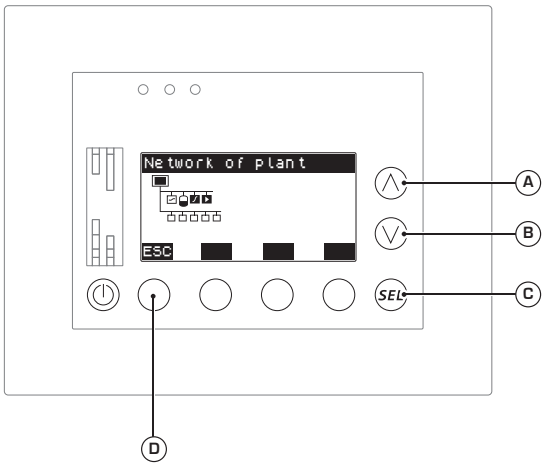
After having completed the checks or verifications possible with this function, it will be possible to:

- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (E) key to return to the selection of the menus.

• Visualization of systems status



This window indicates the graphic resulting from all parts connected to the VMF system; the diagram is created dynamically and represents the status of the serial communications between the VMF-E5 accessory and the other parts of the system; the symbols displayed in the graphic are arranged in several rows; the first can include (from left to right):

• CHILLER:
( )= Communication with chiller OK;
( )= Communication with chiller absent.

• DHW accessory:
( )= Communication with DHW OK;
( )= Communication with DHW absent.

• VMF-CRP (1) accessory (recovery unit boiler module):
( )= Communication with VMF-CRP (1) OK;
( )= Communication with VMF-CRP (1) absent.

• VMF-CRP (2) accessory (pumps 1 module):
( )= Communication with VMF-CRP (2) OK;
( )= Communication with VMF-CRP (2) absent.

• VMF-CRP (3) accessory (pumps 2 module):
( )= Communication with VMF-CRP (3) OK;
( )= Communication with VMF-CRP (3) absent.

• VMF-CRP (4) accessory (pumps 3 module):
( )= Communication with VMF-CRP (4) OK;
( )= Communication with VMF-CRP (4) absent.

The lower rows represent the MASTER fan coils connected to the VMF network. For these as well the system has an appropriate symbol describing the status of the serial communication:

- MASTER fan coil:
( )= Communication with MASTER fan coil OK;
( )= Communication with MASTER fan coil absent.

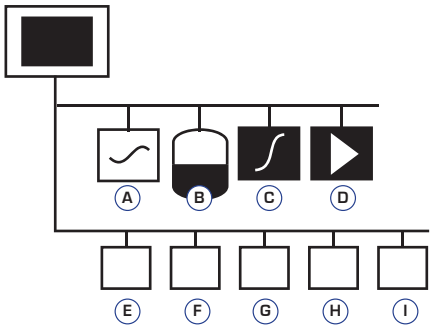
After the status of the network has been controlled, it will be possible to:

- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

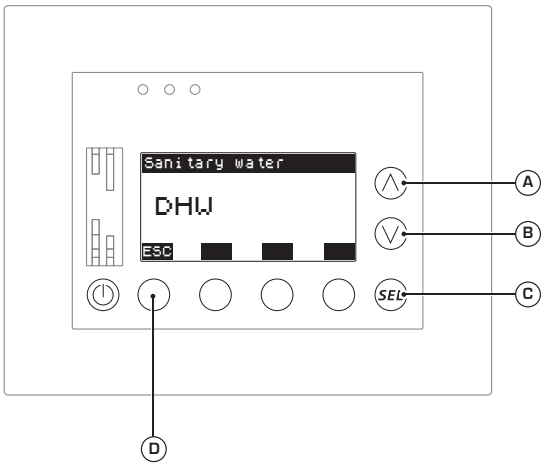
- Press the (D) key to return to the selection of the menus.

In the proposed system example, the system graphic viewed in this window will reflect all the settings considered up to now, and the result will be:



(A) *Chiller;*
(B) *VMF-ACS;*
(C) *VMF-CRP (1) (Boiler and recovery units);*
(D) *VMF-CRP (2) (Pumps);*
(E), (F), (G), (H), (I) *MASTER fan coil.*

• Set the presence of the VMF-ACS accessory module



The presence of the VMF-ACS accessory in the system is the fundamental requirement to allow production of domestic hot water. This parameter specifies whether this accessory is present in the system; to set this value, it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current setting will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the setting; the settings of this function can be:
• DHW (VMF-ACS accessory present);
• NO DHW (VMF-ACS accessory not present).

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

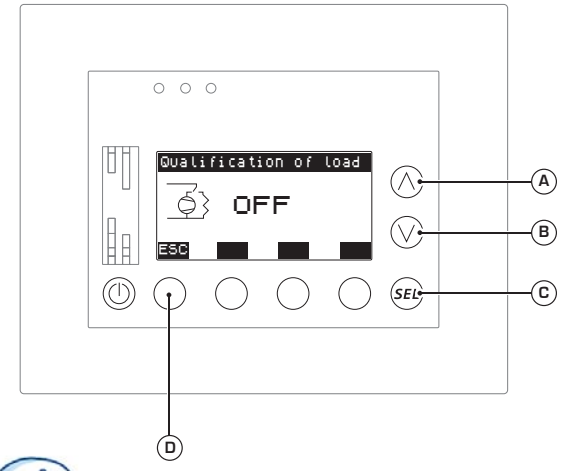
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

In the proposed system example, the value of this parameter is DHW, since the system is provided with the production of domestic hot water, and the consequent installation of the VMF-ACS accessory.

• Set management of simultaneous loads



This parameter specifies whether the system allows simultaneous activation of chiller loads (compressor plus possible supplementary electric resistance inside the chiller) and those linked to domestic hot water (electric resistance in DHW storage tank); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current setting will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the setting; the settings of this function can be:
- ON (simultaneous loads allowed);
- OFF (simultaneous loads denied).

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

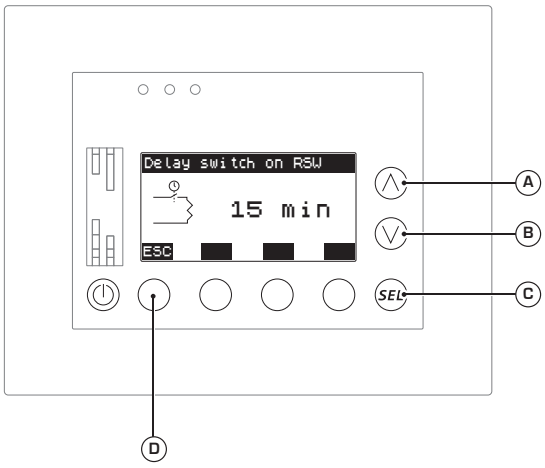
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The setting of this parameter depends on the type of electric system installed in the plant; should the sum of the loads exceed the maximum limit set by the electric system, simultaneous loads must be avoided; in the example system, simultaneous loads will be avoided since it is assumed to be powered by a normal domestic electrical system.

• Set delay in switching on electric resistance



This function allows to set the control of the correct operation in domestic hot water production; once the chiller starts to produce domestic hot water, this control checks the trend of the temperature inside the DHW storage tank; if this temperature does not increase or decrease for the period of time specified in this parameter, the system will assume a problem with the heat pump and will activate the supplementary resistance on the DHW storage tank to meet the domestic hot water demand (to deactivate this control, the time must be set at 0); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current setting will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the setting of the minutes after which to activate the supplementary resistance on the DHW storage tank.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

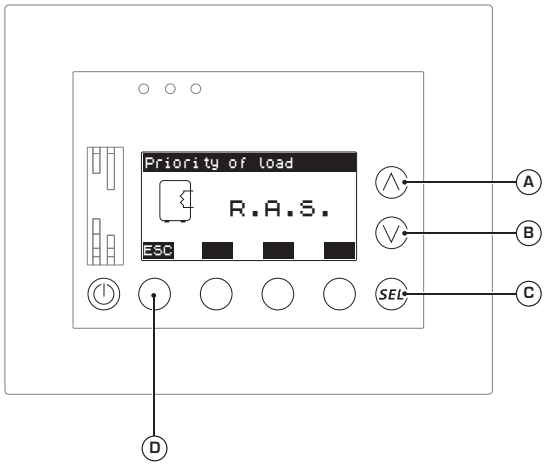
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The proposed example hypothesises the safety control to be activated after an indicative time of 15 minutes, as, based on the volume of the DHW storage tank, the exchange surface of the heat exchanger in the storage tank and the intended thermal output of the heat pump, this value will likely allow to identify functioning problems with the heat pump.

• Set loading priority in domestic hot water production



The VMF systems can have installations with two electric resistances, one on the heat pump and another in the DHW storage tank; this function allows to establish which of these resistances is used during domestic hot water production; to set this value, it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current setting will be highlighted.

(2) Press the (A) or (B) key to modify the setting; the settings of this function can be:
- R.I. (uses electric resistance on unit);
- R.A.S. (uses electric resistance on DHW storage tank).

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

- Pass on to the following window by pressing the (B) key.

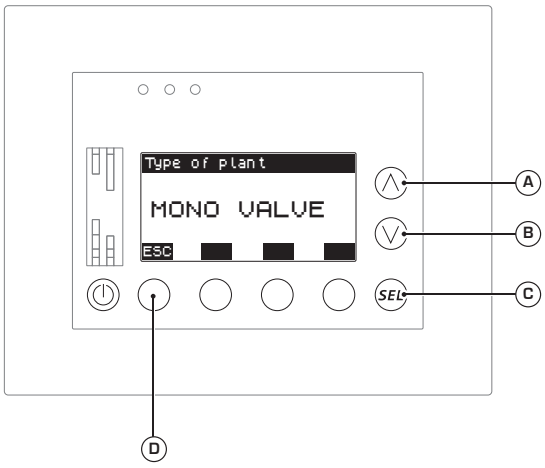
- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

ATTENTION: this function CANNOT be used when:
• the subsequent parameter is set as “multi-valve” system;
• the heat pump installed on the VMF system is not managed by a Moducontrol board.

In the proposed system example, the chiller does not foresee an on-board electric resistance and therefore this parameter must be set on use of the supplementary electric resistance on the DHW storage tank (R.A.S.).

• Set the type of system managed by VMF-ACS accessory



In the proposed system example, the type is SINGLE VALVE, and therefore this parameter will be set as such.

This function allows to set the type of system on which the VMF-ACS accessory will be used; naturally this parameter is only considered if the system foresees use of this accessory (and therefore management of domestic hot water is included in the system); two types of systems can be managed by the VMF-ACS accessory (SINGLE VALVE or MULTI-VALVE), for further information on the type of systems, refer to the following diagrams; to set this value it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current setting will be highlighted.

(2) Press the (A) or (B) key to modify the setting; the settings of this function can be:
• SINGLE VALVE;
• MULTI-VALVE.

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

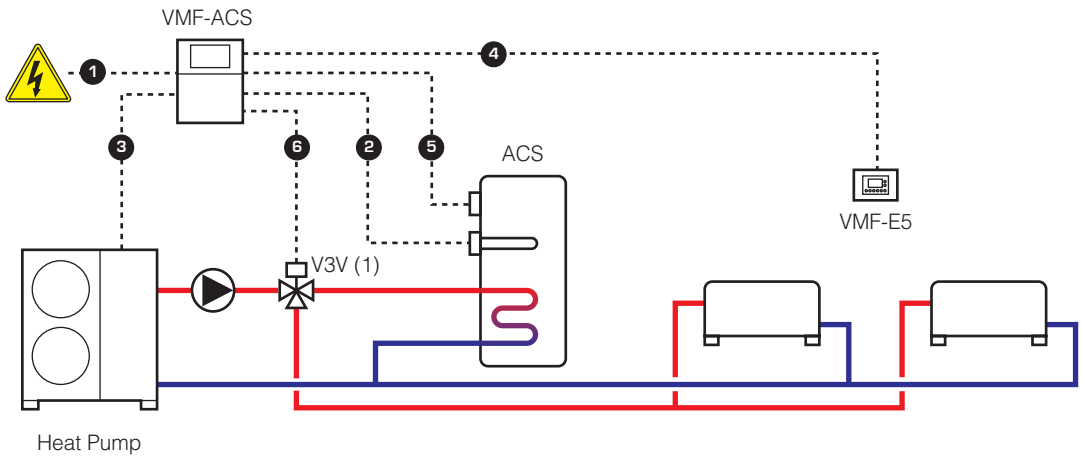
- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

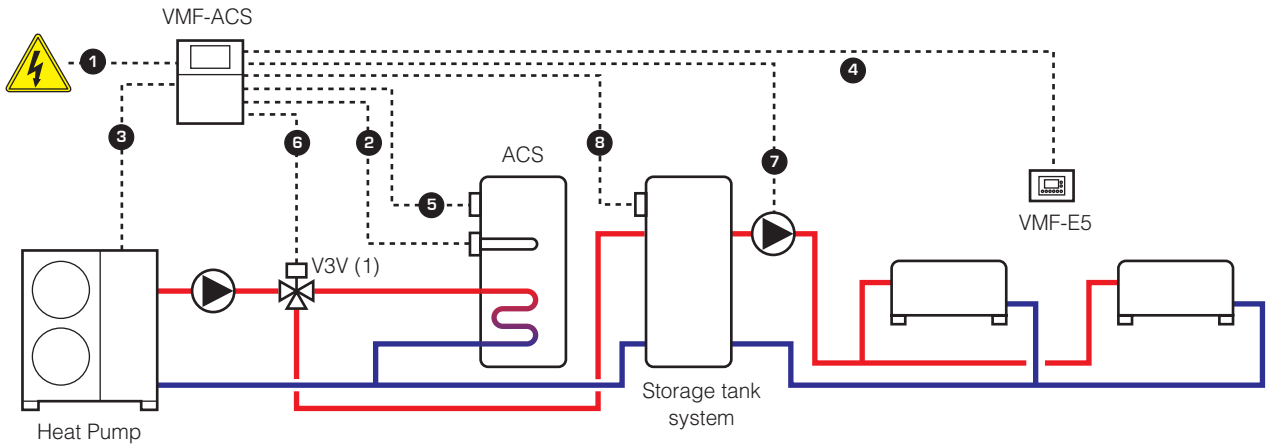
ATTENTION: to implement MULTI-VALVE systems, the chiller must have a Moducontrol board.

SINGLE VALVE system - System 1 type:



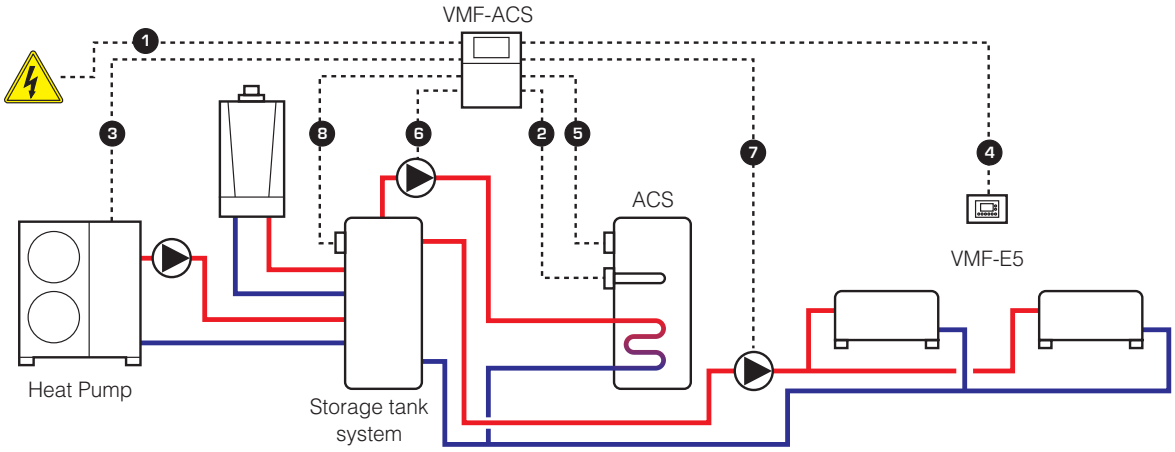
Connection	Reference chapters for implementation of the connections
1	VMF-ACS power supply.
2	Connect the supplementary electric resistance.
3	RS485 serial connection.
4	VMF-E5 serial connection.
5	DHW probe connection.
6	Connection V3V (1) or DHW pump.

SINGLE VALVE system - System 2 type:



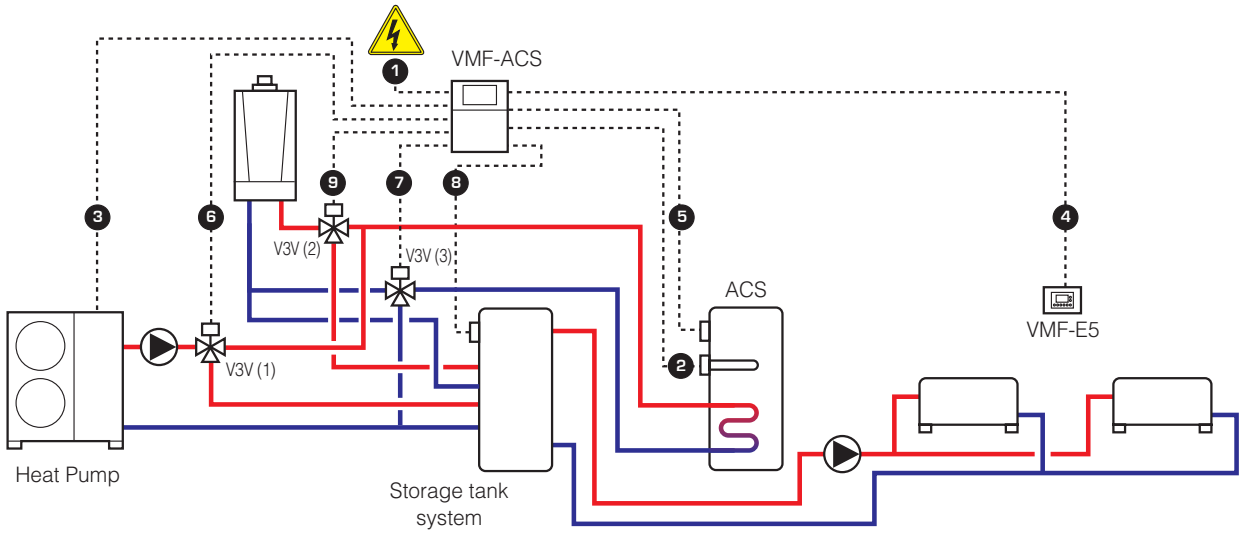
Connection	Reference chapters for implementation of the connections
1	VMF-ACS power supply.
2	Connect the supplementary electric resistance.
3	RS485 serial connection.
4	VMF-E5 serial connection.
5	DHW probe connection.
6	Connection V3V (1) or DHW pump.
7	Boiler or V3V (3) or system pump connection.
8	System storage tank probe connection.

SINGLE VALVE system - System 3 type:



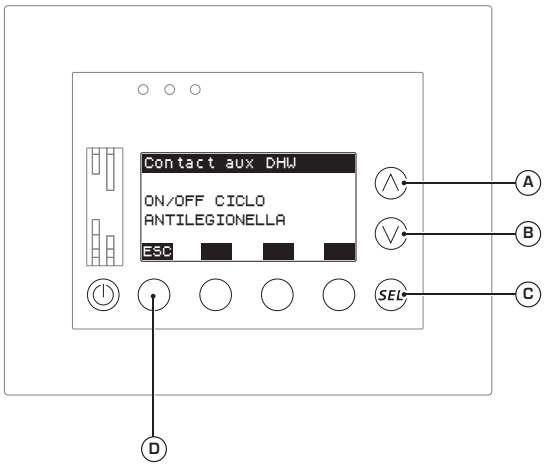
Connection	Reference chapters for implementation of the connections
1	VMF-ACS power supply.
2	Connect the supplementary electric resistance.
3	RS485 serial connection.
4	VMF-E5 serial connection.
5	DHW probe connection.
6	Connection V3V (1) or DHW pump.
7	Boiler or V3V (3) or system pump connection.
8	System storage tank probe connection.

MULTI-VALVE system:



Connection	Reference chapters for implementation of the connections
1	VMF-ACS power supply.
2	Connect the supplementary electric resistance.
3	RS485 serial connection.
4	VMF-E5 serial connection.
5	DHW probe connection.
6	Connection V3V (1) or DHW pump.
7	Boiler or V3V (3) or system pump connection.
8	System storage tank probe connection.
9	Multifunction output or V3V (2) connection.

• Set the multi-function output on the VMF-ACS accessory:



In the proposed system example, the multi-function output is used to connect a light indicator signalling to the user whether the anti-legionella cycle is in progress; this indicator is not supplied as an accessory.

This allows to set the function to be assigned to the multi-function output available on the VMF-ACS accessory; for further information on this output, refer to the VMF-ACS accessory manual in section “Multi-function output connection“; to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current setting will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the setting; the settings of this function can be:

• DHW ALARM PRESENCE (the contact closes in the presence of an alarm inherent to DHW);
• DOMESTIC HOT WATER RESISTANCE ON/OFF (the contact closes when the supplementary resistance present in the DHW storage tank is activated);
• DOMESTIC HOT WATER CYCLE ON/OFF (the contact remains closed during the entire period of time in which the system is producing DHW);
• ANTI-LEGIONELLA CYCLE ON/OFF (the contact remains closed during the entire time period of the anti-legionella cycle);
• FAN COIL THERMOSTATS ON/OFF (the contact closes if at least one thermostat of a fan coil requests to function);
• SUPPLEMENTARY RESISTANCE ON/OFF (the contact closes when the supplementary resistance/boiler is active);
• HEAT PUMP ALARM (the contact closes when the heat pump is in alarm conditions).

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

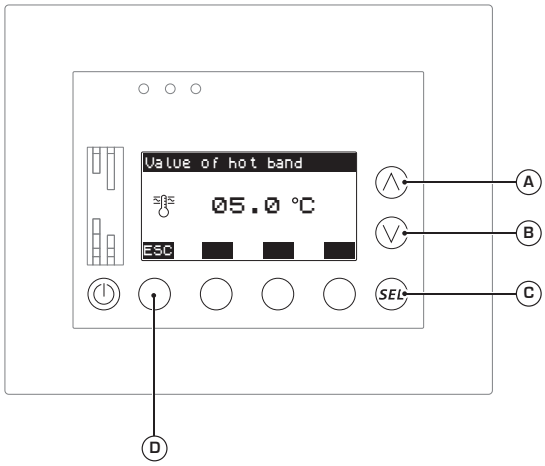
After the data has been entered, it will be possible to:

- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

• Set the band on heating setting for ECONOMY mode



In VMF systems, if the user sets the Economy mode, the heating work setting will vary dynamically based on the actual thermal load required by the system (maximizing energy-saving); the variation of the heating work setting is included in a band which goes from the work setting to the same setting minus the value specified in this parameter (the value of this parameter can be from 3.0 to 20.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the band value to be applied to the heating work setting during Economy mode.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

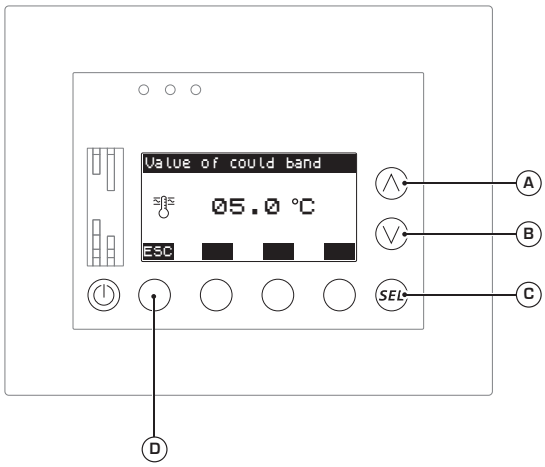
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The proposed example hypothesises that if the user activates Economy mode, the heating work setting will vary dynamically with the value included between the normal heat setting and the value of the same setting minus 5°C.

• Set the band on cooling setting for ECONOMY mode



In VMF systems, if the user sets the Economy mode, the cooling work setting will vary dynamically based on the actual thermal load required by the system (maximizing energy-saving); the variation of the cooling work setting is included in a band which goes from the work setting to the same setting minus the value specified in this parameter (the value of this parameter can be from 3.0 to 20.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the band value to be applied to the heating work setting during Economy mode.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

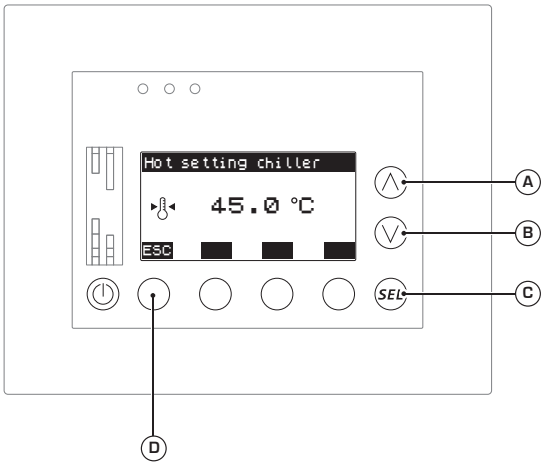
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The proposed example hypothesises that if the user activates Economy mode, the cooling work setting will vary dynamically with the value included between the normal cooling setting and the value of the same setting minus 5°C.

• Set heating temperature for chiller



In winter, the user will set the desired room air temperature by means of the thermostat on the master fan coils. To reach this temperature, the unit will produce hot water at the temperature set by the installer indicated in this parameter (between 30.0 and 70.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the heating work setting of the chiller.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

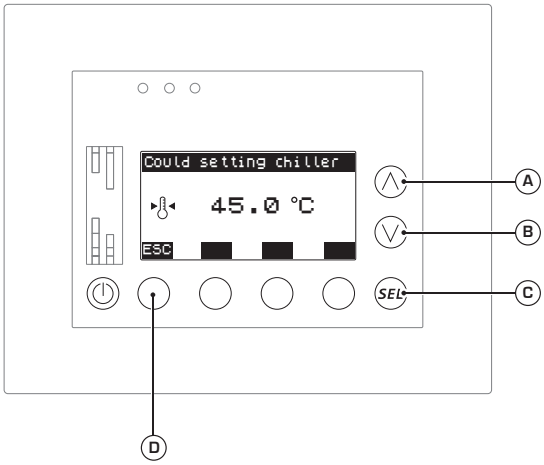
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

In the proposed example, the temperature of the hot water produced by the chiller for the system demand is 45°C, as this value is appropriate for the type of utility (fan coil) used in the system.

• Set cooling temperature for chiller



In summer, the user will set the desired room air temperature by means of the thermostat on the master fan coils. To reach this temperature, the unit will produce cold water at the temperature set by the installer indicated in this parameter (between 00.0 and 20.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the cooling work setting of the chiller.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

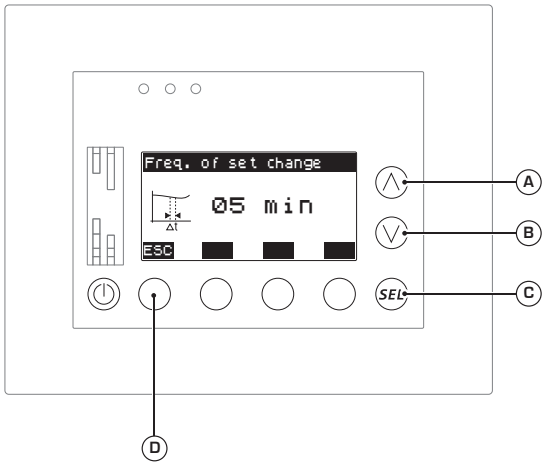
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

In the proposed example, the temperature of the hot water produced by the chiller for the system demand is 45°C, as this value is appropriate for the type of utility (fan coil) used in the system.

• Set frequency for dynamic variation of setting in ECONOMY mode



If economy mode has been set in the system, the work setting will be varied dynamically based on the actual system demand; this demand is calculated by checking the status of each thermostat each given time interval and this parameter allows to specify this interval (it can be between 5 and 60 minutes); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the band value to be applied to the heating work setting during Economy mode.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

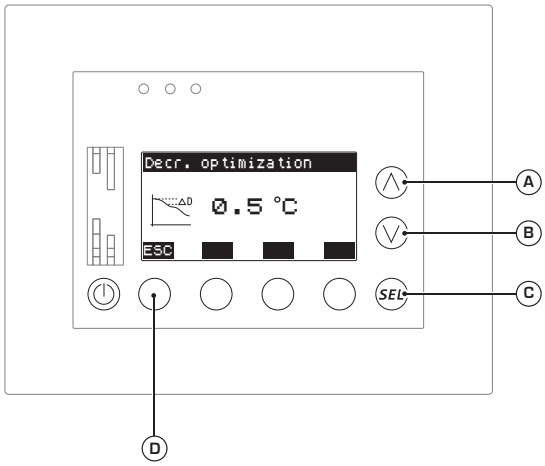
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The proposed example hypothesises that thermostats are controlled to vary the setting in Economy mode once every 5 minutes.

• Set the extent for decrease of setting in ECONOMY mode



If economy mode has been set in the system, the work setting will be varied dynamically based on the actual system demand; this variation is performed every given amount of time, modifying the setting by increasing it or decreasing it by a certain value (while remaining within the limits described by the bands set for Economy mode in heating and cooling); this parameter determines by how much the work setting is decreased if the control on the system requires it (value between 0.1 and 2.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the band value to be applied to the heating work setting during Economy mode.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

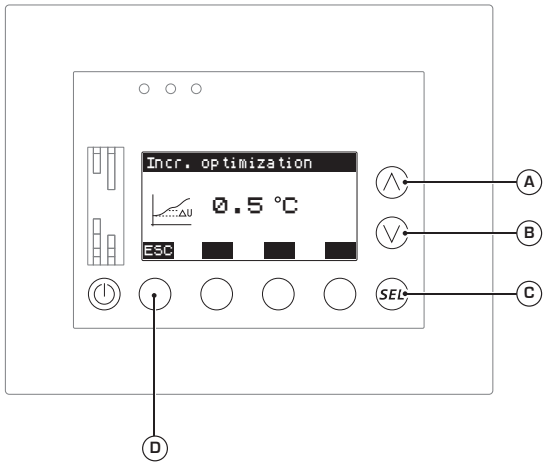
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The proposed example hypothesises that the automatic decrease (if necessary) at each control during Economy mode is 0.5°C.

• Set the extent for increase of setting in ECONOMY mode



The proposed example hypothesises that the automatic increase (if necessary) at each control during Economy mode is 0.5°C.

If economy mode has been set in the system, the work setting will be varied dynamically based on the actual system demand; this variation is performed every given amount of time, modifying the setting by increasing it or decreasing it by a certain value (while remaining within the limits described by the bands set for Economy mode in heating and cooling); this parameter determines by how much the work setting is increased if the control on the system requires it (value between 0.1 and 2.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the band value to be applied to the heating work setting during Economy mode.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

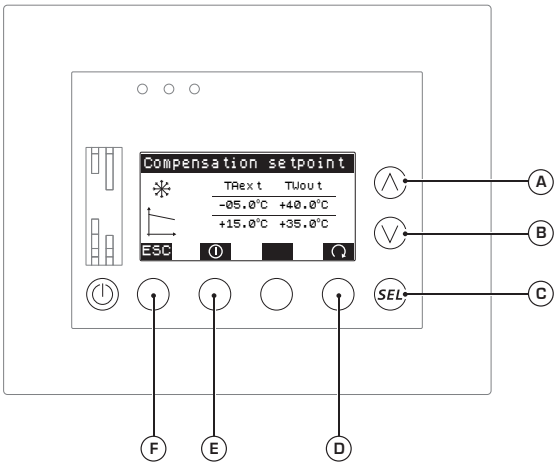
After the data has been entered, it will be possible to:

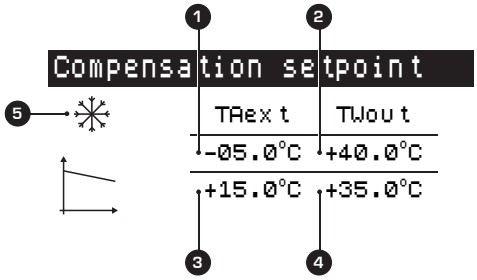
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

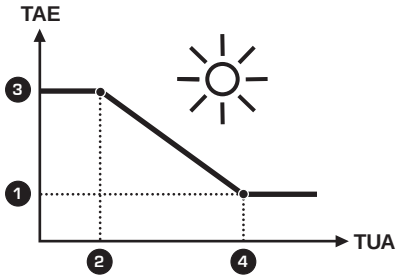
- Press the Ⓓ key to return to the selection of the menus.

• Set the compensation temperature setting based on external air for comfort mode



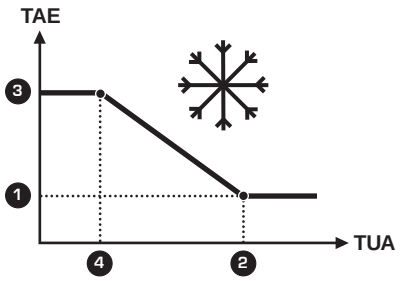


Compensation logic at COOLING:



ATTENTION: 1 < 3, 2 < 4

Compensation logic at HEATING:



ATTENTION: 1 < 3, 2 > 4

TAE= External air temperature.
TUA= Produced water temperature.

If comfort mode has been set in the system, the work setting can be varied automatically based on the external air temperature; this variation will follow a compensation curve (a specific curve for each season) defined by the installer in this window; this window displays the following information:

- External air temperature value (1) (1): indicates the minimum external air temperature value which the compensation function refers to; depending on the functioning mode (heating or cooling) this value will be connected to the maximum or minimum produced water setting, as indicated in the curves below.

- Work setting value (1) (2): indicates the maximum or minimum work setting value (depending on the heating or cooling functioning mode) connected to the MINIMUM external air value.

- External air temperature value (2) (3): indicates the maximum external air temperature value which the compensation function refers to; depending on the functioning mode (heating or cooling) this value will be connected to the minimum or maximum produced water setting, as indicated in the curves below.

- Work setting value (2) (4): indicates the minimum or maximum work setting value (depending on the heating or cooling functioning mode) connected to the MAXIMUM external air value.

- Compensation label (5): indicates whether the data displayed refers to cooling or heating compensation:
- COOLING compensation (☼);
- HEATING compensation (✳).

From this window it is possible to:

(1) Select heating or cooling compensation: by pressing the key (D) the data displayed will pass from that referred to heating compensation to that referred to cooling; this data is identified by the relative labels (5).

(2) Set the values for the compensation function: pressing the key (C) will allow you to enter the modification mode and the value (1) will be displayed; by pressing the keys (A) or (B) it will be possible to modify the value, while pressing the key (C) will confirm the choice, automatically selecting the value (2), which can be modified the same way as the previous value; whenever a value is confirmed by pressing the key (C), the next value will be selected until all four values have been entered.

(3) Activate or deactivate the compensation function: to activate or deactivate compensation (both heating and cooling, as it is not possible to activate or deactivate them individually), press the key (E); when this key is pressed, the symbol highlighted above it will change, according to one of the following states:
- (○) compensation DISABLED;
- (⏻) compensation ENABLED.

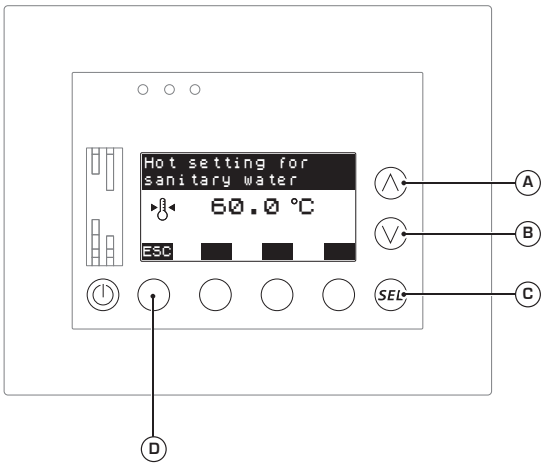
(3) Pass on to the next window: to go to the next window of this menu, press the key (B).

(4) Go back to the previous window: to go back to the previous window of this menu, press the key (A).

(5) Exit this window:
Press the key (F) to return to the selection of the USER menus.

The proposed example hypothesises the use of Economy mode, and therefore the data of this function does not affect the system in the example.

• Set the domestic hot water temperature for the chiller



When the system demands domestic hot water, the unit will produce hot water at the temperature indicated in this parameter (the value can be between 30.0 and 70.0°C); to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the cooling work setting of the chiller.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

- Pass on to the following window by pressing the Ⓑ key.

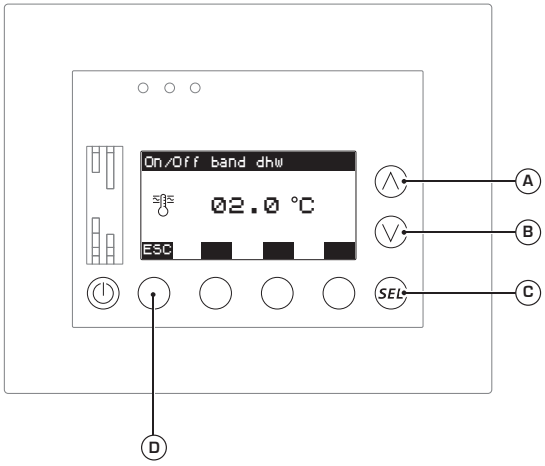
- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

ATTENTION: this parameter is read only if the unit has the Moducontrol board.

In the proposed example, this parameter is read-only as the selected unit (ANLI) is equipped with a moducontrol board.

• Set the ON/OFF band on the domestic hot water production setting



During production of domestic hot water, an activation or deactivation band for the DHW demand can be applied to the work setting; to set this value it is necessary to:

(1) Enter modification mode by pressing the Ⓒ key; after this key has been pressed, the current band value will be highlighted.

(2) Press the Ⓐ or Ⓑ key to modify the ON/OFF band value to be applied to the domestic hot water production setting.

(3) Press the Ⓒ key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

After the data has been entered, it will be possible to:

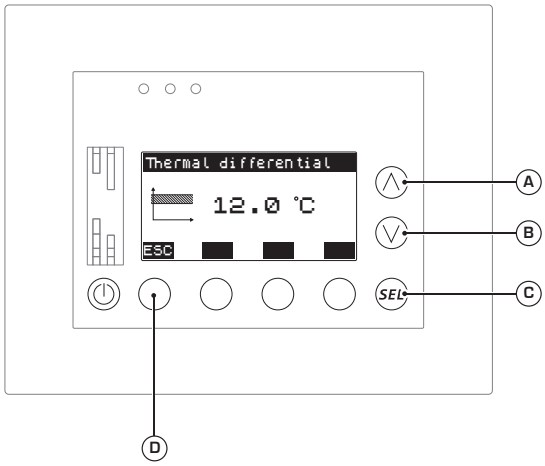
- Pass on to the following window by pressing the Ⓑ key.

- Go back to the previous window by pressing the Ⓐ key.

- Press the Ⓓ key to return to the selection of the menus.

The proposed example hypothesises that the installer wishes to set an ON/OFF band for domestic hot water production setting of 2°C.

• Set maximum value for domestic hot water production



In the proposed example, the installer sets the maximum possible differential, by setting this parameter at 12°C.

This parameter specifies the maximum value that can be associated to the DHW setting relating to the given chiller setting for domestic hot water. In this case, the DHW production setting is calculated by the system with the relation: chiller setting for DHW - heat differential. In order to set this differential it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current differential value will be highlighted.

(2) Press the (A) or (B) key to modify the differential value to be applied to the maximum heating setting.

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

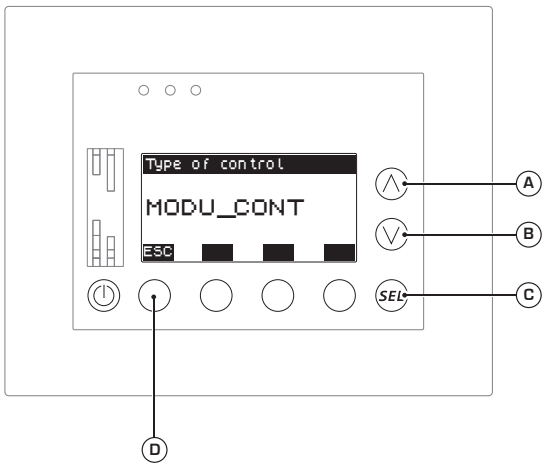
After the data has been entered, it will be possible to:

- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

• Set the type of chiller/heat pump board



In the proposed example, the installer sets MODU_CONT, as the heat pump is an ANLI.

This parameter specifies the type of board mounted on the chiller or heat pump of the VMF system; to set this value it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current differential value will be highlighted.

(2) Press the (A) or (B) key to modify the type of board mounted on the chiller/heat pump; the types of control available are:
• NO CHILLER (the VMF system has no chiller);
• MODU_CONT (the VMF system has a chiller with a Moducontrol board);
• GR3 (the VMF system has a chiller with a GR3 board);
• PCO2 (the VMF system has a chiller with a PCO series board, or else another Aermec board not included in the previous ones).

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

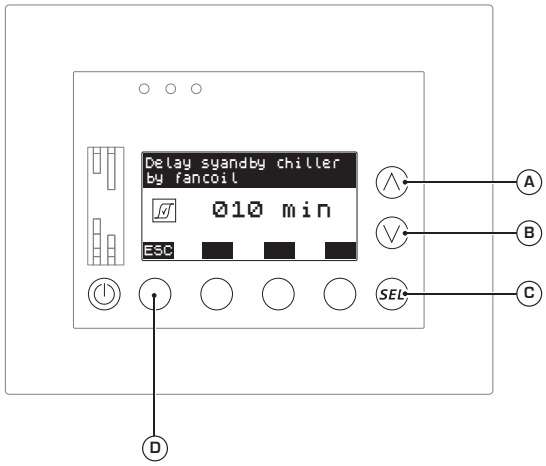
After the data has been entered, it will be possible to:

- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

• Set the chiller switch off delay after conclusion of system demand



The proposed example hypothesises that the chiller remains active for 10 minutes after all thermostats have been satisfied.

In VMF systems, the chiller is activated when there is a heat output demand by at least one of the thermostats connected to the fan coils; the chiller can be deactivated when all the thermostats have fulfilled their demand; nonetheless the unit can be switched off with a certain delay respect to the conclusion of the demand by the thermostats, making it possible to avoid switching the chiller on and off unnecessarily (the value of this interval must be from 0 to 120 minutes); to set this value it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current interval value will be highlighted.

(2) Press the (A) or (B) key to modify the delay time to be applied to switch the chiller off.

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

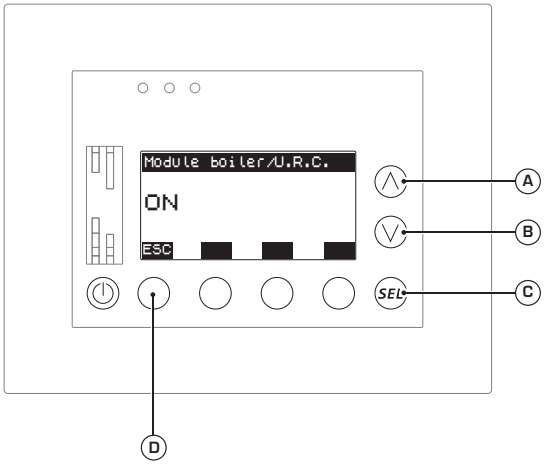
After the data has been entered, it will be possible to:

- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

• Set the presence of the VMF-CRP recovery unit/ boiler module



The system in the example has a heat recovery unit installed managed by a VOC probe; therefore a specific VMF-CRP expansion board has been foreseen; the correct setting of this parameter in the example must be at ON.

If the VMF system manages a boiler or one or more heat recovery units, a VMF-CRP module must be installed to manage them; this parameter specifies whether a VMF-CRP expansion board for the boiler and recovery units is foreseen in the system (for further information on the type and specific settings of each expansion module, see the VMF-CRP accessory documentation); to set this value it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the current band value will be highlighted.

(2) Press the (A) or (B) key to modify the value; the settings of this function can be:
• ON (presence of VMF-CRP module for boiler and recovery unit);
• OFF (no VMF-CRP module for boiler and recovery unit).

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

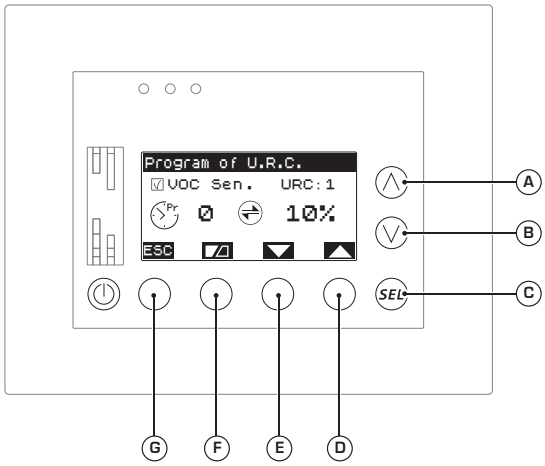
After the data has been entered, it will be possible to:

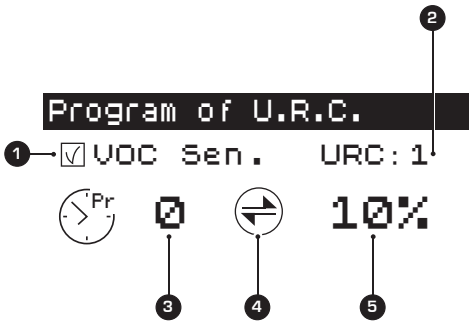
- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

• Set the management mode of the installed heat recovery units





In the proposed example, the system has a heat recovery unit managed by a VMF-VOC probe; this recovery unit is not linked to any time period (therefore the relative field is at 0), while the recovery unit should be activated if the room air deteriorates, and the value read by the VOC probe exceeds 10%.

If a heat recovery unit is installed in the system, piloted by the relative VMF-CRP expansion board, it will be possible to set the logic with which this component is managed; this window displays the following information:

- Presence of accessory VMF-VOC (1): automatically indicates whether an accessory VMF-VOC probe (to establish air quality) has been connected to the additional VMF-CRP module for recovery unit management.

- Recovery unit index (2): indicates which recovery unit the data and settings currently displayed refer to; the VMF-CRP module of the boiler and recovery units can manage up to 3 different recovery units.

- Hourly program (3): indicates which hourly program to associate to the recovery unit operation (for further information on hourly programs, refer to the VMF-E5 panel user manual);

- Air quality value (VOC) (4): if selected, it indicates that the value in percentage (5) represents the value currently read by the VOC probe installed on the system.

- Air quality limit for recovery unit activation (5): if the icon (4) is not selected, it indicates the threshold beyond which to activate the recovery unit; this threshold is only used if a VMF-VOC probe is installed in the system (keep in mind that the best air quality corresponds to 0%, while if the value increases it means that carbon dioxide is increasing).

From this window it is possible to:

(1) Associate an hourly program to the recovery unit: pressing the C key will select the field (3); by pressing the A or B key, the value can be changed; press C to confirm the set value, moving the selection to parameter (5).

(2) Set the activation threshold of the recovery unit with VOC: pressing the C key will select the field (3), press C to confirm the set value, moving the selection to parameter (5); at this point by pressing the A or B key the value can be modified; press C to confirm the set value, bringing the window to the visualization status (no value selected).

(3) View the reading of the VMF-VOC probe: to view the value currently read by the VMF-VOC probe (if installed), press the F key, the icon (4) will be highlighted and the value (5) will represent the current value read by the VOC probe; pressing the F key again will return the window to the normal display.

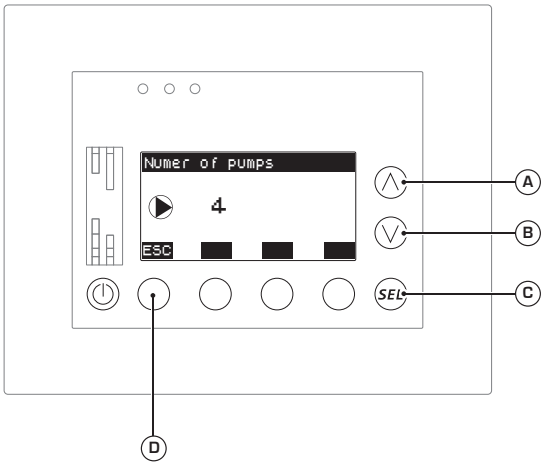
(4) Select a recovery unit: if several recovery units are installed in the system, by pressing the E or D key it will be possible to pass from one recovery unit to another; the recovery unit which the displayed data refers to is indicated by the label (2).

(5) Pass on to the next window: to go to the next window of this menu, press the key B.

(6) Go back to the previous window: to go back to the previous window of this menu, press the key A.

(7) Exit this window: press the G key to return to the selection of the menus.

• Set the number of pumps managed by the VMF system



The example system has 4 pumps, therefore an additional VMF-CRP module to manage the pumps has been included in the design.

The VMF system can manage up to 12 pumps. The number of VMF-CRP expansion boards to be installed in the system is calculated automatically by the VMF-E5 application relating to the actual number of pumps present, according to the relation:
- from 1 to 4 pumps= (x1) VMF-CRP;
- from 2 to 8 pumps= (x2) VMF-CRP;
- from 9 to 12 pumps= (x3) VMF-CRP.

In order to set this value it is necessary to:

(1) Enter modification mode by pressing the (C) key; after this key has been pressed, the number of pumps installed on the system will be highlighted.

(2) Press the (A) or (B) key to modify the value.

(3) Press the (C) key to confirm the value entered; once this key has been pressed, the current setting will be highlighted normally, thus indicating that the modification procedure has concluded.

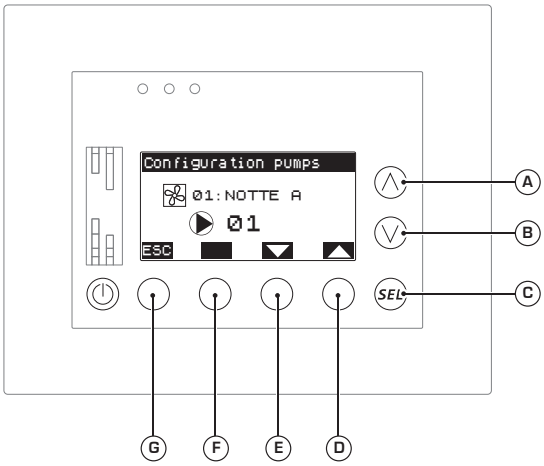
After the data has been entered, it will be possible to:

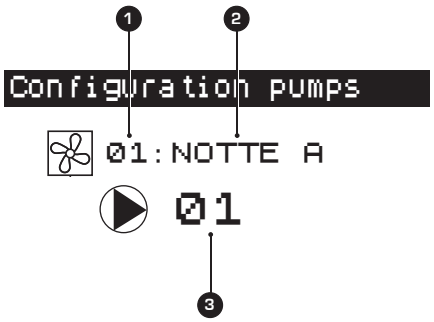
- Pass on to the following window by pressing the (B) key.

- Go back to the previous window by pressing the (A) key.

- Press the (D) key to return to the selection of the menus.

• Associate each fan coil to its own pump





To manage activation of the pumps, they must be associated to the master fan coils of the zone they serve; this window displays the following information:

- Index of the zone of reference (1): indicates which zone (and therefore which master fan coil) the currently displayed data refers to.

- Zone label (2): indicates the label (set by the user on the last page of the fan coil menu; for further information, see the VMF-E5 panel user manual) associated to the master fan coil which the currently displayed data refers to.

- Pump number (3): if the system foresees its management, the indicates which pump must be associated to the master fan coil currently displayed in points (1) and (2).

From this window it is possible to:

(1) Associate a specific pump to a master fan coil: this operation consists in two distinct operations:
• Select the master fan coil, using the (E) or (D) key to browse the master fan coils currently installed on the system;
• Select a pump to associate to the selected fan coil, press (C) to select the field (3), press the (A) or (B) key to select the pump number to be associated and finally confirm by pressing (C) once again.
Naturally these two procedures must be performed for ALL master fan coils of the system in order to make sure that each zone is associated to a pump.

(2) Go back to the previous window: to go back to the previous window of this menu, press the key (A).

(3) Exit this window: press the (G) key to return to the selection of the menus.

In the proposed example, the system has 4 pumps which must serve:
- 2 Night zones (named: Night A and Night B);
- 3 day zones (named: Bathroom, Kitchen, Day).

However keep in mind that the night zones (in the example served by master fan coils 1 and 2), must be managed by one pump and therefore both masters must be associated to the same pump (in our example, pump 1); while each of the other zones will be associated to a specific pump; to summarise, the setting of the example system will be:

MASTER fan coil 01: NIGHT A= Pump 01;
MASTER fan coil 02: NIGHT B= Pump 01;
MASTER fan coil 03: BATHROOM= Pump 02;
MASTER fan coil 04: KITCHEN= Pump 03;
MASTER fan coil 05: DAY= Pump 04.

AERMEC S.p.A.
I-37040 Bevilacqua (VR) - Italia
Via Roma, 996 - Tel. (+39) 0442 633111
Telefax (+39) 0442 93730 - (+39) 0442 93566
www .aermec. com - info @aermec. com