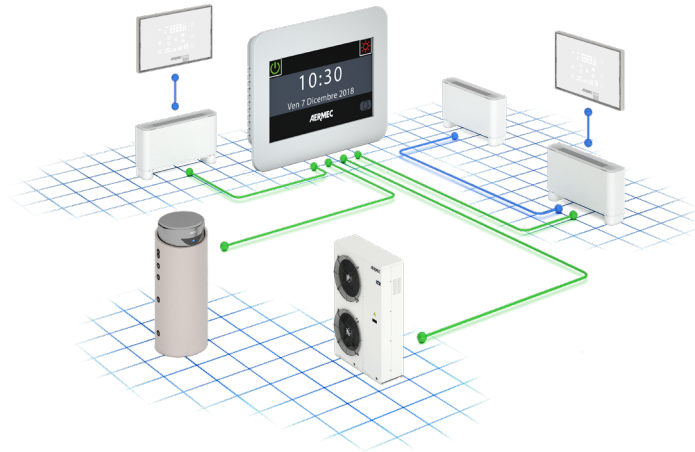


VMF

Multi Flow Variable Systems

- Components for plant management
- Air conditioning
- Heating
- Hot domestic water (HDW)



DESCRIPTION

Hydronic system management and control unit for air conditioning, heating and domestic hot water production.

The VMF system ensures the complete control of every single component of a hydronic system, both local and centralised, through communication between the various system components, managing the performance without neglecting the end user's request for comfort at any time, but reaching it as efficiently as possible, with consequent energy savings.

Summing up the advantages of a such an innovative control with the flexibility of a hydronic system, you achieve a more effective and efficient alternative to variable refrigerant volume (VRF) systems.

The VMF system can manage different areas, each of which has one of the following types of terminals:

- Fancoil;
- Radiant only (heating only);
- Fancoil + Radiant;
- MZC Zone;
- MZC Zone + Radiant.

FEATURES

The VMF system is extremely flexible, to the extent that it offers various control and management steps, also expandable at different times:

1. Control of a single zone;
2. Control of a Master/Slave zone (one MASTER fancoil and up to 5 SLAVE fancoils);
3. Control of a network consisting of several independent zones (one MASTER fancoil and up to 5 SLAVE fancoils for each zone, or another of the types of terminals provided);
4. Control of several zones, plus heat pump management (if compatible with the VMF system);
5. Control of several zones, of heat pumps and management of the domestic hot water;
6. Control of several zones, heat pumps, domestic hot water production and additional pumps (up to a maximum of 12 using 3 additional VMF-CRP modules);
7. Control of several zones, heat pumps, domestic hot water production, additional pumps and management of up to 3 heat recovery units (with the possibility to manage up to 3 VMF-VOC probes) and/or a boiler;

CONTROL PANELS

The VMF system can pilot and manage a different number of areas, depending on the panel used:

- **VMF-E6**: maximum 64 zones (so a maximum of 64 Master Fancoil, each of which will pilot 5 Slave, for a total of 384 Fancoil);

In addition to the centralised control provided by the VMF-E6 panel, the MASTER system terminal must be equipped with a local control interface; this interface can be mounted on board the terminal itself or on a wall panel. Via panel VMF-E6 it is possible to control several functions:

- Identify the various zones by giving each of them a name that characterises it;
- Control and set the ON-OFF function and the temperature setting of each zone;
- Set and manage the heat pump temperature;
- Schedule time slots.

Simple installation of the fancoil network thanks to the SELF-DETECTION function of the MASTER fancoils.

SYSTEM COMPONENTS

AerSuite

The AerSuite application is used to remotely control the DI24 user interface, with VMF-E19/VMF-E19I thermostats, using Smart Devices with iOS and Android operating systems.

This is an application for Smartphones and Tablets with which the user can access and control the system operation remotely.

For more information about the use of the application and the available functions, refer to the respective documentation on the website.



Command interfaces

DI24: Flush-mounted interface (503 box) with 2.4" touch screen display to be combined with VMF-E19, VMF-E19I accessories. It allows you to regulate and monitor the temperature inside rooms precisely and on time; in addition to accessing and interacting with your system's operating information, parameters and alarms, it allows you to set time slots. Thanks to its Wi-Fi connection, DI24 in combination with the AerSuite APP (available for Android and iOS) can also be remotely controlled. All programming and most functions are done in a simple and intuitive way using the APP. To allow for customization of the interface so that it seamlessly integrates with the style of any home, DI24 is compatible with switch plates from major brands available on the market. For more information, please refer to our documentation. However, a switch plate with its graphite gray support, DI24CP, is also available as a separate accessory in our catalog.

VMF-E2D: Machine user interface to be combined with VMF-E19 accessory, dedicated to the DUALJET range. It has 2 selector switches, one for temperature and the other for speed control.

VMF-E2H: User interface on the machine, to be combined with the VMF-E19 accessory, dedicated to the HL series. It has 2 selector switches, one for temperature and the other for speed control.

VMF-E2Z: User interface on the fan coil, with two selectors, one for temperature and the other for speed control; to be combined with accessories VMF-E19 and VMF-E19I.

VMF-E3: Wall mounted user interface, to be combined with accessories VMF-E19, VMF-E19I, with grids GLF_N/M and GLL_N, can be controlled with VMF-IR control.

VMF-E4DX: A wall-mounted user interface to be combined with VMF-E19, VMF-E19I, VMF-E24 ed VMF-E24I accessories. Featuring an innovative, extremely slim and cost-effective design, it allows running functions via a capacitive touchscreen keyboard with LCD display. You can choose to adjust the environment temperature with a panel-mounted sensor probe (standard), or with the VMF-E19/E19I probe, or through mediated reading. It also enables the activation of an air purifier (Cold Plasma/ UV lamp) and a heating element. Light grey front panel PANTONE 425C (METAL).

VMF-E4X: A wall-mounted user interface to be combined with VMF-E19, VMF-E19I, VMF-E24 ed VMF-E24I accessories. Featuring an innovative, extremely slim and cost-effective design, it allows running functions via a capacitive touchscreen keyboard with LCD display. You can choose to adjust the environment temperature with a panel-mounted sensor probe (standard), or with the VMF-E19/E19I probe, or through mediated reading. It also enables the activation of an air purifier (Cold Plasma/ UV lamp) and a heating element. Light grey front panel PANTONE COOL GRAY 1C.

VMF-E6: White flush-mounting panel with 4.3 inch colour touchscreen. For the centralised command/control of a complete hydronic/aerualic system consisting of: fan coils (up to 64 fan coil zones formed of 1 master + max. 5 slaves), heat pumps (up to 4), MZC accessories (up to 5) for the management of radiant panels (using a suitable number of VMF-REB accessories, up to 64 radiant panels associated with the fan coil zones and up to 32 radiant panels associated with the zones served by MZC), the complete management of DHW production, control of the RAS heater and/or the boiler, management of digital I/Os, control of heat recovery units and VOC probes (up to 4).

VMF-IR: User interface compatible with the AER503IR, VMF-E3 thermostat and with all the grids of cassettes equipped with the infrared receiver compatible with the VMF system.

VMF-VOC: Air quality detection accessory.

VMHI: The VMHI panel can be used as a user interface for VMF-E19/E19I thermostats, GLFxN/M or GLLxN grids, or as an interface for the MZC system. What determines the function to be performed by the user interface is determined by its correct parametrisation and by following the electrical connections between interface and thermostat or interface and plenum.

Thermostats

VMF-E19: Thermostat, accessory to be secured to the side of the fan coil, fitted as standard with an air probe and a water probe, it controls systems with 2 pipes, 4 pipes, 2 pipes + Cold Plasma, 2 pipes + UV lamps, 2 pipes + Heating element. Equipped with an external contact to be used as a remote ON-OFF at low voltage. By means of 2-wire serial communication, it allows for the creation of a single fan coil area (1 master + maximum 5 slaves). Compared to the previous model, thanks to a different dip switch configuration, it allows implementing new features: 1. In systems with two pipes and a heating element, the latter can be activated as a complete replacement, allowing you to warm the environment exclusively with this accessory. 2. Dualjet features are available in standard software and can be set via dip switch. 3. Economy contact/presence sensor. 4. Additional water sensor for overall control in 4-pipe systems (with VMF-SW1 accessory). 5. Serial RS485, ModBus RTU protocol, for centralised control. 6. Possibility of inserting expansion boards for future developments. The VMF-E19 accessory must be therefore used in masters in the presence of multiple zones, or for communication with the chiller/heat pump. 7. Compatibility with the VMF-IO accessory. Compatibility with VMF-LON expansion board. The thermostat is protected by a fuse.

VMF-E19I: Thermostat to be secured to the side of the fan coil, fitted as standard with an air probe and a water probe, it controls systems with 2 pipes, 4 pipes, 2 pipes + Cold Plasma, 2 pipes + UV lamps, 2 pipes + Heating element. Equipped with an external contact to be used as a remote ON-OFF at low voltage. By means of 2-wire serial communication, this thermostat allows for the creation of a single fan coil area (1 master + maximum 5 slaves). Compared to the previous model, thanks to a different dip switch configuration, it allows implementing new features: In systems with two pipes and a heating element - the latter can be activated as a complete replacement - allowing you to warm the environment exclusively with this accessory - Dualjet features are available in standard software and can be set via dip switch - Economy contact/presence sensor - Additional water sensor for overall control in 4-pipe systems (with VMF-SW1 accessory) - Serial RS485, ModBus RTU protocol, for centralised control - Possibility of inserting expansion boards for future developments. The VMF-E19 accessory must be therefore used in masters in the presence of multiple zones, or for communication with the chiller/heat pump - Compatibility with the VMF-IO accessory - Compatibility with VMF-LON expansion board. The thermostat is protected by a fuse.

VMF-E19Y: Thermostat, accessory to be secured to the side of the fan coil, fitted as standard with an air probe and a water probe, it controls systems with 2 pipes, 4 pipes, 2 pipes + Cold Plasma, 2 pipes + UV lamps, 2 pipes + Heating element. Equipped with an external contact to be used as a remote ON-OFF at low voltage. By means of 2-wire serial communication, it allows for the creation of a single fan coil area (1 master + maximum 5 slaves). Compared to the previous model, thanks to a different dip switch configuration, it allows implementing new features: 1. In systems with two pipes and a heating element, the latter can be activated as a complete replacement, allowing you to warm the environment exclusively with this accessory. 2. Dualjet features are available in standard software and can be set via dip switch. 3. Economy contact/presence sensor. 4. Additional water sensor for overall control in 4-pipe systems (with VMF-SW1 accessory). 5. Serial RS485, ModBus RTU protocol, for centralised control. 6. Possibility of inserting expansion boards for future developments. The VMF-E19 accessory must be therefore used in masters in the presence of multiple zones, or for communication with the chiller/heat pump. 7. Compatibility with the VMF-IO accessory. Compatibility with VMF-LON expansion board. The thermostat is protected by a fuse.

VMF-FMD: The VMF-FMD panel is a flush-mounted thermostat that, when used in stand-alone mode or within a centralised supervisory system (BMS), can manage plant requirements where an actuator (a heating furniture valve, radiant system head, zone valve, zone circulator) is to be controlled as a function of room temperature.

VMF-IO: Manage the unit exclusively from a centralized VMF control panel without area control panel.

VMF-LON: Expansion allowing the thermostat to interface with BMS systems that use the LON protocol.

VMF-YCC: Electric on/off completion unit for the VMF-E19Y accessory (mandatory for the unit with options P and X).

VMF-YCCH: Electric on/off completion unit for the VMF-E19Y accessory (mandatory for the unit with option H).

VMF-YICC: Electric inverter completion unit for the VMF-E19Y accessory (mandatory for the unit with options P and X).

VMF-YICCH: Electric inverter completion unit for the VMF-E19Y accessory (mandatory for the unit with option H).

Intake grids and distribution of the air, compulsory accessory

GLF10M: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm adapts perfectly to standard false ceilings without overlapping parts. It is equipped with an infrared receiver with an emergency operation button, a thermostat card which also requires the installation of the VMF-E4 panel or the VMF-IR remote control. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be orientated with the remote control. (size 840x840 not available).

GLF10N: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4 or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated. (size 800x800 mm not available).

GLF110M: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm adapts perfectly to standard false ceilings without overlapping parts. It is equipped with an infrared receiver with an emergency operation button, a thermostat card which also requires the installation of the VMF-E4 panel or the VMF-IR remote control. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be orientated with the remote control. (size 840x840 not available).

GLF110N: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4 or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated. (size 800x800 mm not available).

GLL10N: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4X or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated.

GLL20N: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 840x840 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4X or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated.

GLLI100N: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 600x600 mm; adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4X panel as well, and suitable for use with the RXLE heater. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated.

GLLI20N: Recovery and air supply grille in plastic, RAL 9010 colour, measuring 840x840 mm, adapts perfectly to standard false ceilings without overlapping parts. Fitted with a thermostat board that necessarily requires the installation of the VMF-E4X or VMF-IR panel as well. Intake is in the central part, where the easily removable air filter is housed. Delivery is via the perimeter slits that can be manually orientated.

Probes

VMF-SW: Water probe (L = 2.5m) used if required in place of the standard unit supplied with the VMF-E19 and VMF-E19I thermostats for mounting it upstream of the valve.

VMF-SW1: Additional water probe (L = 2.5m) to be used if required for 4-pipe systems with the VMF-E19 and VMF-E19I thermostats for maximum control in the cold range

Modules

AERCAB: 100 meter skein of shielded cable (4-pole wire + shield) for connection with RS485 serial port and CAN.

VMF-CRP: Accessory module that, if associated with the VMF-E6 panel, will be able to manage heat recovery units, RAS, boiler, sanitary management, I/O control, pumps.

IC-2P: Connector for communication via Mod Bus or VMF -485LINK. Accessory compulsory if combined with VMF-485LINK, or for third party supervision systems.

VMF-485LINK: Expansion to interface the unit with the VMF communication protocol, making it possible to manage it from the VMF-E6 supervisor.

VMF-REB: Only available for VMF-E6, manages the heads of the radiant panels (each module can manage up to 8), one pump and up to 3 thermostats through digital input.

VMF-SIT3: Interface boards that allow connecting thermostats to a fan coil with a high-power motor (for selection, see all the thermostat and fan coil documentation); if a VMF-E19 thermostat is used, this accessory will be replaced by the normal SIT3.

VMF-SIT3V: Relay interface board. Mandatory accessory on units where motor absorption exceeds 0.7 A. The relay interface board is supplied with a 2A fuse to protect the fan coil. If the fan coil absorbs more than 2A and up to 4A, the fuse inside must be replaced with a 4A fuse supplied.

Electrical panels for DHW (Domestic hot water management for other suppliers' storage tanks, not available for VMF-E6)

VMF-ACS3KM: Electrical panel for the complete command/control of a hot water storage tank (3-way control valve, integrated single phase 3kW resistor command, anti-legionella function and temperature sensor)

VMF-ACS3KTN: Quadro elettrico per il comando / controllo completo di un accumulo acqua sanitaria (comando valvola 3 vie , comando resistenza integrativa da 3kW trifase, antilegionella e sonda di temperatura).

VMF-ACS6KTN: Quadro elettrico per il comando / controllo completo di un accumulo acqua sanitaria (comando valvola 3 vie , comando resistenza integrativa da 6kW trifase, antilegionella e sonda di temperatura).

VMF-ACS8KTN: Quadro elettrico per il comando / controllo completo di un accumulo acqua sanitaria (comando valvola 3 vie , comando resistenza integrativa da 8kW trifase, antilegionella e sonda di temperatura).

Heat storage tank with integrated domestic hot water management (no need to be combined with a VMF-ACS accessory)

SAF: Thermal buffer tank kit with instantaneous Domestic Hot Water production. For more information about SAF refer to the dedicated documentation.

Control systems

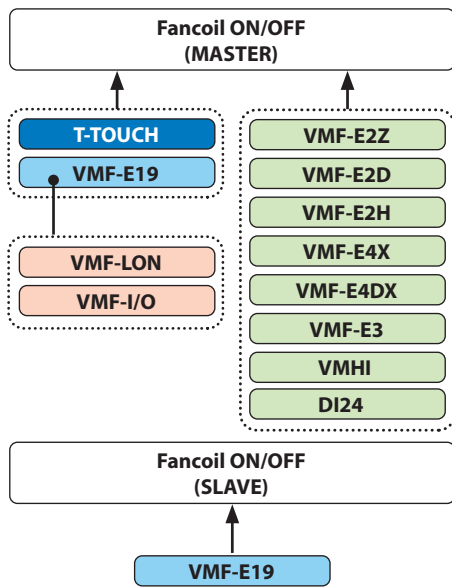
AERCONNECT: Web server allowing local and remote supervision of the VMF-E6 system (by appropriately configuring the DNS service supplied with the purchase of the accessory) via web pages; allows simultaneous access for up to 8 users

AERLINK: Aerlink is a WiFi gateway with an RS485 serial port that allows a wide range of Aermec products (heat pumps/chillers/system controllers) equipped with this interface to connect easily and securely to a Wi-Fi network. It works both as an access point (AP access point) and as a client (WiFi Station), it can be connected to a single generator or system centraliser, allowing anyone to easily integrate them into any network. Thanks to the AerApp and AerPlants apps, which can be used on Android and iOS platforms, the remote management of the air conditioning systems developed by Aermec becomes intuitive and simple.

BMConverter: The BMConverter accessory consists of the FPC-N54 network device which allows units that communicate via the Modbus RTU protocol on RS485, to be controlled by a third-party BMS system via the BACNet TCP-IP protocol.

SGD: Electronic expansion that enables connecting to the photovoltaic system and heat pumps to accumulate heat in the DHW tank or in the heating system during the photovoltaic production phase and release it at times when heating demand is highest.

COMPATIBILITY OF VMF COMPONENTS WITH ON/OFF FAN COILS



Type of component:

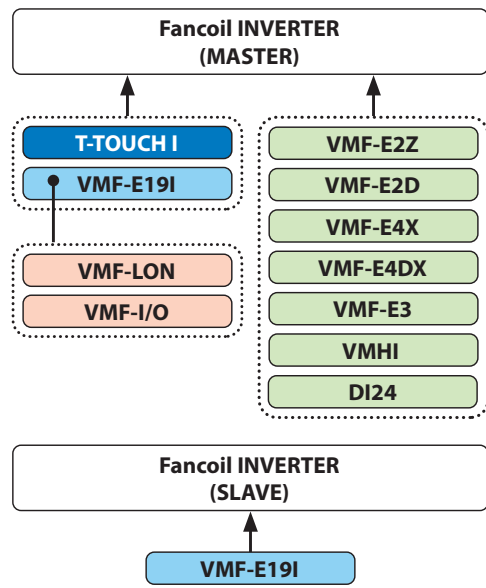
- Thermostat board
- Thermostat board + Command interface
- Expansion board
- Command interfaces

Note:

- Each fan coil (Master or Slave) may have just one thermostat board, selected from those that are compatible;
- The E19 thermostat board can manage just one expansion board, selected from those available;
- Each Master fan coil must have just ONE command interface, selected from those that are compatible:

Command interfaces	Compatible ranges or models
VMF-E2Z	FCZ (AS-AF-U-UA-UF)
	FCZ-D (DS)
	FCZ-H
VMF-E2D	Omnia UL (S)
VMF-E2H	Omnia HL (S-SM)
VMF-E4X (E4DX) / VMF-E3	FCZ (AS-AF-U-UA-UF)
	FCZ-D (DS)
	FCZ-H
	Omnia UL (S)
	Omnia radiant
T-TOUCH	FCW
	FCZ (AS-AF-U-UA-UF-DS)
	FCZ-D (DS)
VMHI / DI24	FCZ-H
	FCZ (AS-AF-U-UA-UF)
	FCZ-D (DS)
	FCZ-H
	Omnia UL (S)
	Omnia radiant

COMPATIBILITY OF VMF COMPONENTS WITH INVERTER FAN COILS



Type of component:

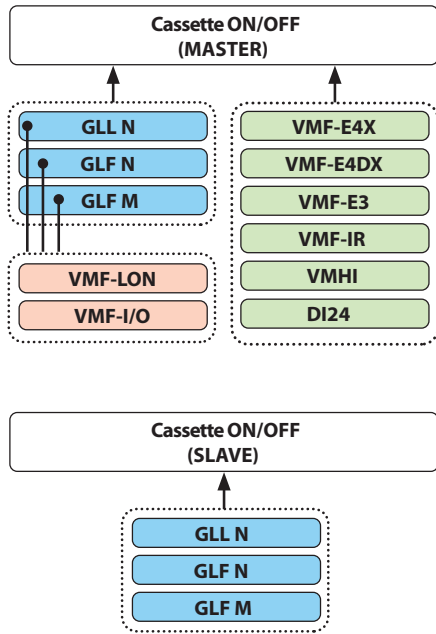
- Thermostat board
- Thermostat board + Command interface
- Expansion board
- Command interfaces

Note:

- Each fan coil (Master or Slave) may have just one thermostat board, selected from those that are compatible;
- The E19I thermostat board can manage just one expansion board, selected from those available;
- Each Master fan coil must have just ONE command interface, selected from those that are compatible:

Command interfaces	Compatible ranges or models
VMF-E2Z	FCZI (AS-AF-U-UF)
	FCZI-H
VMF-E2D	Omnia ULI (S)
	FCZI (AS-AF-U-UF)
	FCZI-D (DS)
VMF-E4X (E4DX) / VMF-E3	Omnia ULI (S)
	Omnia radiant plus
	FCWI
T-TOUCH-I	FCZI (AS-AF-U-UF)
	FCZI (AS-AF-U-UF)
VMHI / DI24	FCZI-D (DS)
	Omnia ULI (S)
	Omnia radiant plus

COMPATIBILITY OF VMF COMPONENTS WITH ON/OFF CASSETTES



Type of component:

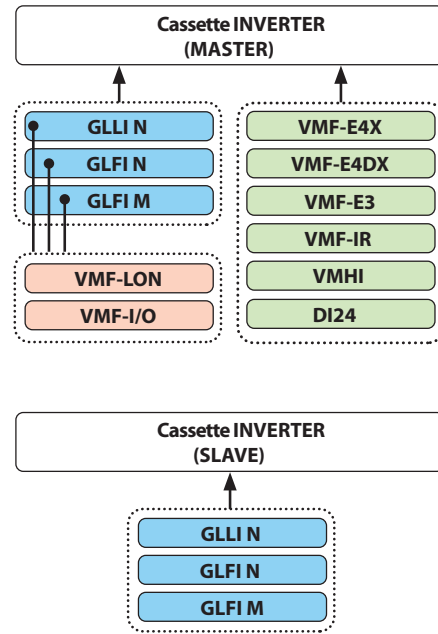
- Delivery suction grille with thermostat board
- Expansion board
- Command interfaces

Note:

- Each Cassette (Master or Slave) must have a delivery recovery grille (fitted with a VMF thermostat board) selected from those that are compatible;
- The delivery recovery grilles can manage just one expansion board, selected from those available;
- Each Master Cassette must have just ONE command interface, selected from those that are compatible:

Command interfaces	Compatible ranges or models
VMF-E4X (E4DX) / VMF-E3	FCL VEC
VMF-IR	FCL VEC
VMHI / DI24	FCL VEC

COMPATIBILITY OF VMF COMPONENTS WITH INVERTER CASSETTES



Type of component:

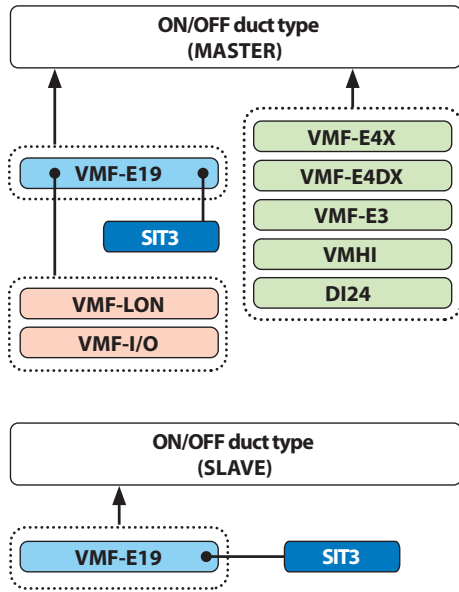
- Delivery suction grille with thermostat board
- Expansion board
- Command interfaces

Note:

- Each Cassette (Master or Slave) must have a delivery recovery grille (fitted with a VMF thermostat board) selected from those that are compatible;
- The delivery recovery grilles can manage just one expansion board, selected from those available;
- Each Master Cassette must have just ONE command interface, selected from those that are compatible:

Command interfaces	Compatible ranges or models
VMF-E4X (E4DX) / VMF-E3	FCLI VEC-I
VMF-IR	FCLI VEC-I
VMHI / DI24	FCLI VEC-I

COMPATIBILITY OF VMF COMPONENTS WITH ON/OFF DUCT TYPE FAN COILS



Type of component:

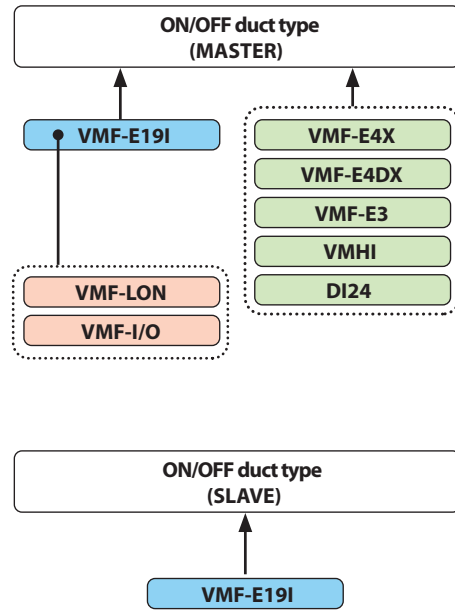
- Thermostat board
- Motor control board
- Expansion board
- Command interfaces

Note:

- Each duct type fan coil (Master or Slave) may have just one thermostat board, selected from those that are compatible;
- The VMF-E19 thermostat board can manage just one expansion board, selected from those available;
- Depending on the size of the duct type fan coil, a motor control board (VMF-SIT3 or SIT3) may be needed;
- Each Master fan coil must have just ONE command interface, selected from those that are compatible:

Command interfaces	Compatible ranges or models
VMF-E4X (E4DX) / VMF-E3	VED
	VES
	FCZ PO
	FCY
	Omnia UL (P - PAF)
VMHI / DI24	FCZ-H (P-PO)
	VED
	VES
	FCZ PO
	FCY
	Omnia UL (P - PAF)
	FCZ-H (P-PO)

COMPATIBILITY OF VMF COMPONENTS WITH INVERTER DUCT TYPE FAN COILS



Type of component:

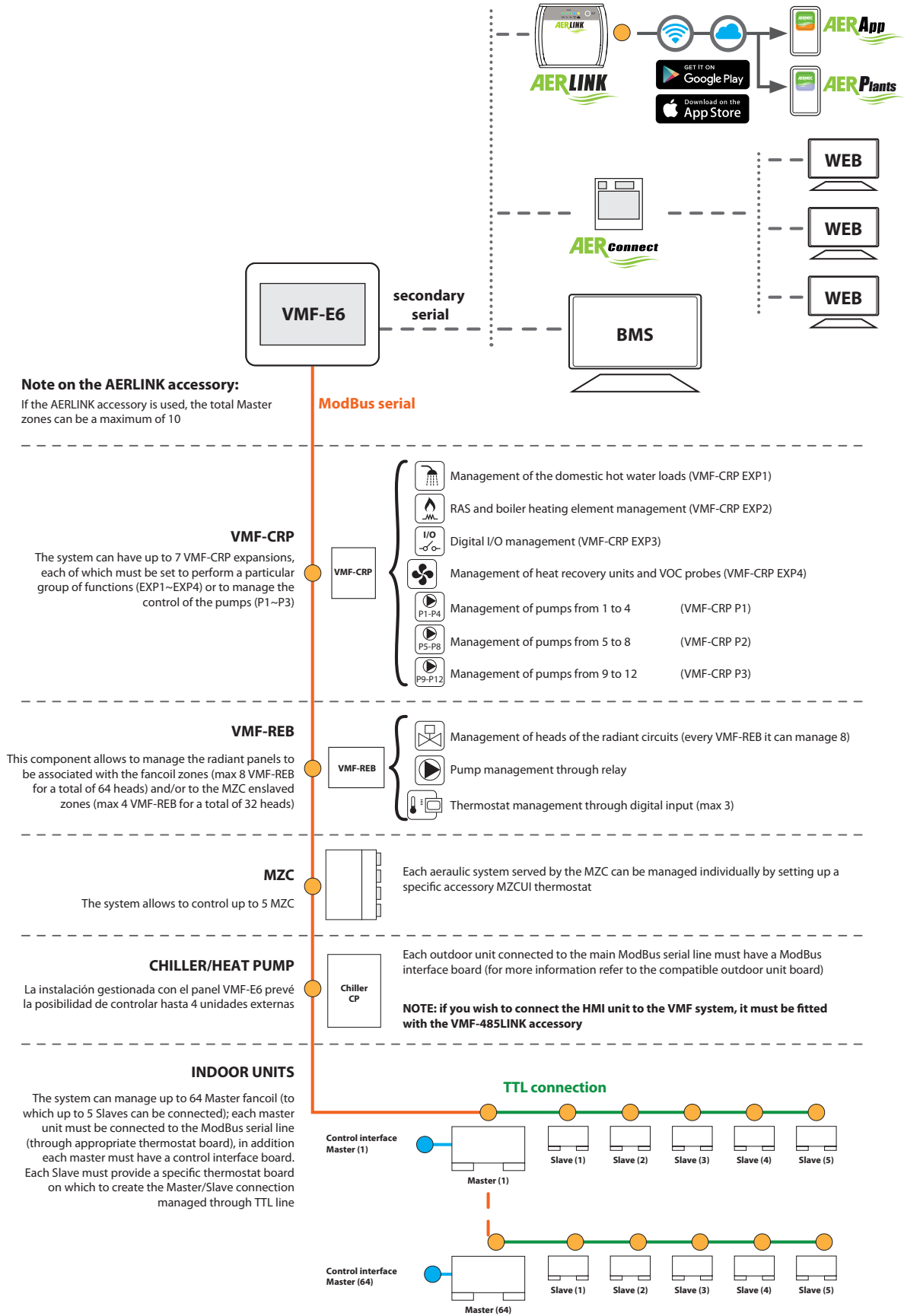
- Thermostat board
- Expansion board
- Command interfaces

Note:

- Each duct type fan coil (Master or Slave) may have just one thermostat board, selected from those that are compatible;
- The VMF-E19I thermostat board can manage just one expansion board, selected from those available;
- Each Master fan coil must have just ONE command interface, selected from those that are compatible:

Command interfaces	Compatible ranges or models
VMF-E4X (E4DX) / VMF-E3	VED I
	VES I
	FCZI P
	FCYI
	Omnia UL (P - PAF)
VMHI / DI24	FCZI-H (P-PO)
	VED I
	VES I
	FCZI P
	FCYI
	Omnia UL (P - PAF)
	FCZI-H (P-PO)

EXAMPLE OF SYSTEM COMPONENTS WITH VMF-E6



ATTENTION: if one (or more) areas are controlled with an FCWI fan coil (each of which require the VMF-485LINK interface), these areas cannot have a Slave unit.