

PXA I

PANNELLO COMANDI ELETTRONICO PER
VENTILCONVETTORI
INSTALLAZIONE A BORDO DEL VENTILCONVETTORE

ELECTRONIC CONTROL PANEL FOR FAN COILS
INSTALLATION ON THE FAN COIL

PANNEAU DE COMMANDE ELECTRONIQUE POUR
VENTILO-CONVECTEURS
INSTALLATION EMBARQUÉE SUR LE VENTILO-CONVECTEUR

ELEKTRONISCHE BEDIEN Tafel FÜR
GEBLÄSEKONVEKTOREN
INSTALLATION AM GEBLÄSEKONVEKTOR

TABLERO DE MANDOS ELECTRÓNICO PARA FAN COILS
INASTALACIÓN A BORDO DEL FAN COIL



Congratulations for purchasing the PXA I Aermec electronic control panel with thermostat. Made with top quality materials rigourously abiding by safety rules, the "PXA E" is easy to use and will be with you for many years to come.

The PXA I regulation thermostats are control panels for fan coils for installation on the machine.

They control the fan coil functioning in accordance with the mode set, the room temperature and the water temperature in the circuit to maintain the set temperature in the room.

The panels must be used on four- or two-pipe plus PLASMACLUSTER® purifier systems with the possibility of connecting two On - Off valves to cut off the supply of water to the coils or one valve and a® air purifier.

Each control panel can control a single fan coil.

The control panel only consists of mains voltage (230V) electrical circuits; all the inputs for the probes and controls must therefore be correspondingly insulated for this voltage.

The valve servo commands must also be scaled for 230V.

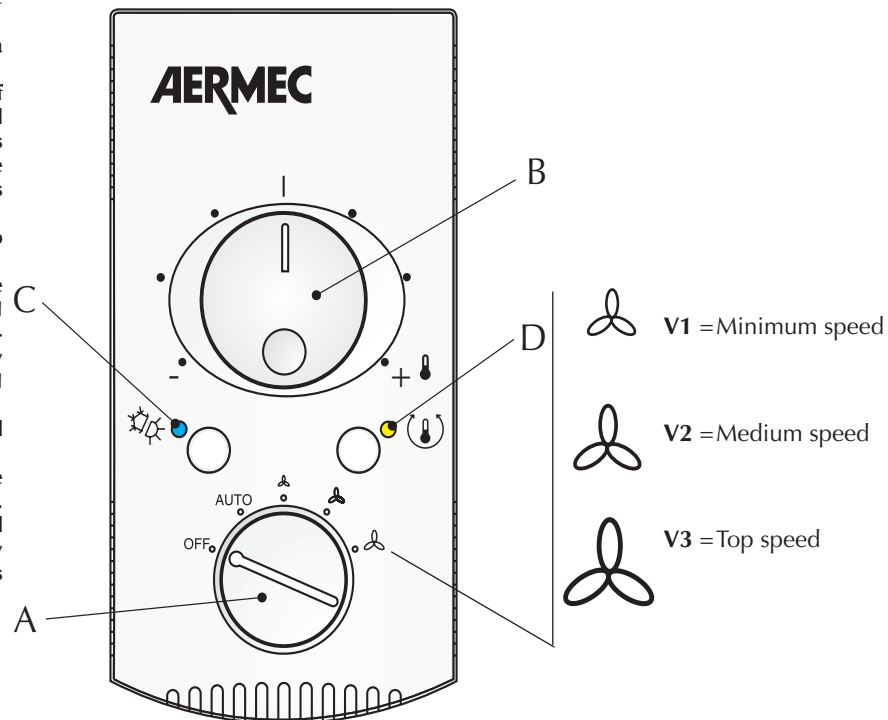
PXA meets the requirement of the Low Voltage directives 73/23 (EN 60730-1, EN 60730-2-9, EN 60335-1) and electromagnetic compatibility directive 89/336 (EN 61000-4-1, EN 55011, 55022, 55014).

The panel may only be opened and installed by specialised personnel.

Cut off the supply voltage before removing the lid of the control panel. Touching live components could electrocute you. This is particularly true also for the setting of contacts on the Sw1 and Sw2 cut outs.

The panel comprises:

- (A) on-off selector switch and ventilation speed;
- (B) temperature selector;
- (C) blue / red/ fuchsia leds, operation mode (Cooling/ Heating/ Antifreeze/ Autotest)
- (D) yellow led, fan coil operation, Autotest.



OPERATION

The thermostat's job is to keep the temperature set on selector (B) constant in the room.

Frost Protection, with selector switch (A) in the OFF, position it prevents premises that are uninhabited for long periods from falling to temperatures below 7°C, which would make them difficult to heat again when they are to be reused. If the fan coil is fed with warm water it will start in **AUTO** until the room temperature is 9°C.

The Frost Protection function must be programmed by the installation engineer.

All Off, selector (A) in the OFF position, the fan coil is completely off.

VENTILATION

In the two-pipe system, the thermostat makes it possible to enable the heating ventilation only if the temperature of the water exceeds 35° or 39°C (programmable in the installation phase); in the same way, the ventilation in the cooling mode is only enabled if the water temperature is less than 17°C or 22°C (programmable during installation).

Ventilation is delayed compared with the start and turn off commands.

The functions described on the one hand prevent unwanted cold ventilation in winter mode and, on the other, allow all the terminals to come on and go off depending on the temperature of the water.

The ventilation mode is set with selector (A).

Manual mode (selector in position V1, V2, V3) the fan uses On-Off cycles on the selected speeds.

Automatic mode (selector in **AUTO** position) the fan speed is managed by the microprocessor of the PXA.

The delay between opening or closing of the warm water valve and the turning on or off of the fan can last for up to 2' 40".

AUTOMATIC CHANGE OVER AIR SIDE

The control makes it possible to automatically set the fan coil functioning mode at heating or cooling.

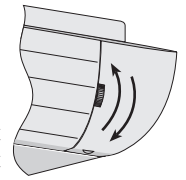
- In the two-pipe no valve systems or those with probe up line from the valve, the functioning mode change is determined by the temperature of the water circulating in the system.

- In the four-pipe no valve systems or with probe up line of the valve, the functioning mode change is determined by the temperature of the water circulating in the plant if this is at a value higher than the enabling threshold. If the temperature of the water circulating is lower than the disabling threshold, the functioning mode change is determined by the difference between the temperature measured in the room and the set temperature.

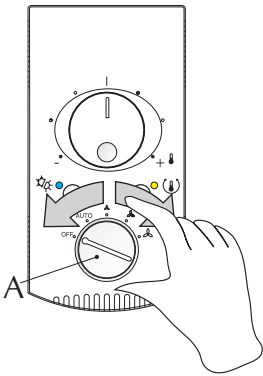
- In two-pipe systems with probe downline from the valve and in all the systems without water temperature probes, the change of operational mode is determined by the difference between the temperature measured in the room and the set temperature.

Controls

To turn on the FCX U - FCS U - Omnia HL S / SM - Omnia UL S / MS fan coils first open the fins.



Speed selector (A)



OFF Power down command. Standstill status might be of two types, Frost Protection or All Off (contact the installation engineer to find out the set configuration).

All Off: The fan coil is turned off.

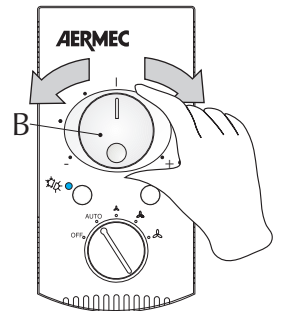
Frost Protection: The fan coil is off but can start again in heating mode if the room temperature falls below 7°C (the boiler must be on).

AUTO The thermostat keeps the set temperature by changing the fan speed automatically.

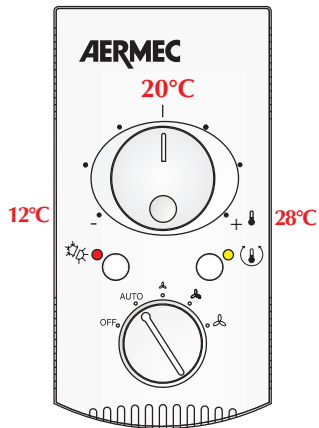
The thermostat keeps the set temperature using the minimum, medium and top speeds of the fan.

This permits the required temperature to be set. The temperature corresponding with the selector set at the central position depends on the set functioning mode (Heating 20°C, Cooling 25°C). The differences of minimum and maximum temperature with respect to the central position are +8°C and -8°C.

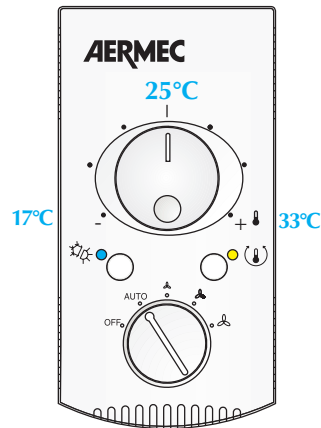
Temperature selector (B);



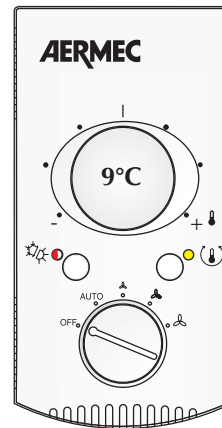
HEATING



COOLING

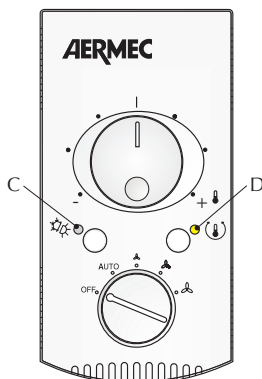


FROST PROTECTION



DISPLAYS

Indicator lights



(C)		(D)		Working mode
Red	Blue	Fuchsia	Yellow	
○	○	○	○	Switched off
●	○	○	●	Heating
○	●	○	●	Cooling
⏪	○	⏪	○	Stand by Heating (water temperature not sufficient)
⏪	○	⏪	⏪	Stand by Heating in units with PLASMACLUSTER® (water temperature not high enough)
○	⏪	⏪	○	Stand by cooling (water temperature too high)
○	⏪	⏪	⏪	Stand by Cooling in units with PLASMACLUSTER® (water temperature too high)
⏪	○	○	○	Antifreeze
○	○	⏪	⏪	Autotest for installation (combination of blinking of the two colours)
○	○	○	⏪	Contact the After Sales Service

- = Switched off
- = Switched on
- ⏪ = Flashing

DIP-SWITCH CONFIGURATION

SETTINGS

To be done in the installation phase, only by expert personnel. Some functions are not compatible with each other and, for this reason, limits to Dip-Switch configurations have been set. By turning on or off Dip-Switches inside the thermostat, we get the following functions:

Sw1 Dip 1 (Default OFF)

Water valve fitted:

- Present, set (ON).
- Absent, set (OFF).

Sw1 Dip 2 (Default OFF)

Position of the water temperature probe:

- Water temperature probe positioned up line from the valve, set (ON).
- Water temperature probe positioned down line from the valve, set (OFF).

Sw1 Dip 3 (Default OFF)

Water valve management:

- Optimised, set (ON).
heating mode: valve closure delayed compared to the turning off of the ventilation;
cooling: valve closure earlier than the turning off of the ventilation.
- Normal, set (OFF).

Sw1 Dip 4 (Default OFF)

Probe adjustment:

- Fixed adjustment, set (ON).
- Dynamic correction, set (OFF),
calculated on the basis of the water temperature.

Sw1 Dip 5 (Default OFF)

Heating mode enabling temperature:

- Reduced, set (ON).
Minimum water temperature 35 °C
- Normal, set (OFF).
Minimum water temperature 39 °C.

Sw1 Dip 6 (Default OFF)

Cooling mode enabling temperature:

- Reduced, set (ON).
Maximum water temperature 22°C
- Normal, set (OFF).
Maximum water temperature 17°C

Sw2 * Dip 1 (Default OFF)

Selection of the type of plant in which the fan coil is included:

- Four-pipe system, set (ON).
- Two-pipe system, set (OFF).

Sw2 * Dip 2 (Default OFF)

Presence of PLASMACLUSTER® air purifier:

- Present, set (ON).
- Absent, set (OFF).

Sw2 Dip 3 (Default OFF)

Air temperature probe enabling:

- Internal control panel probe, set (ON).
- Probe in fan coil, set (OFF).

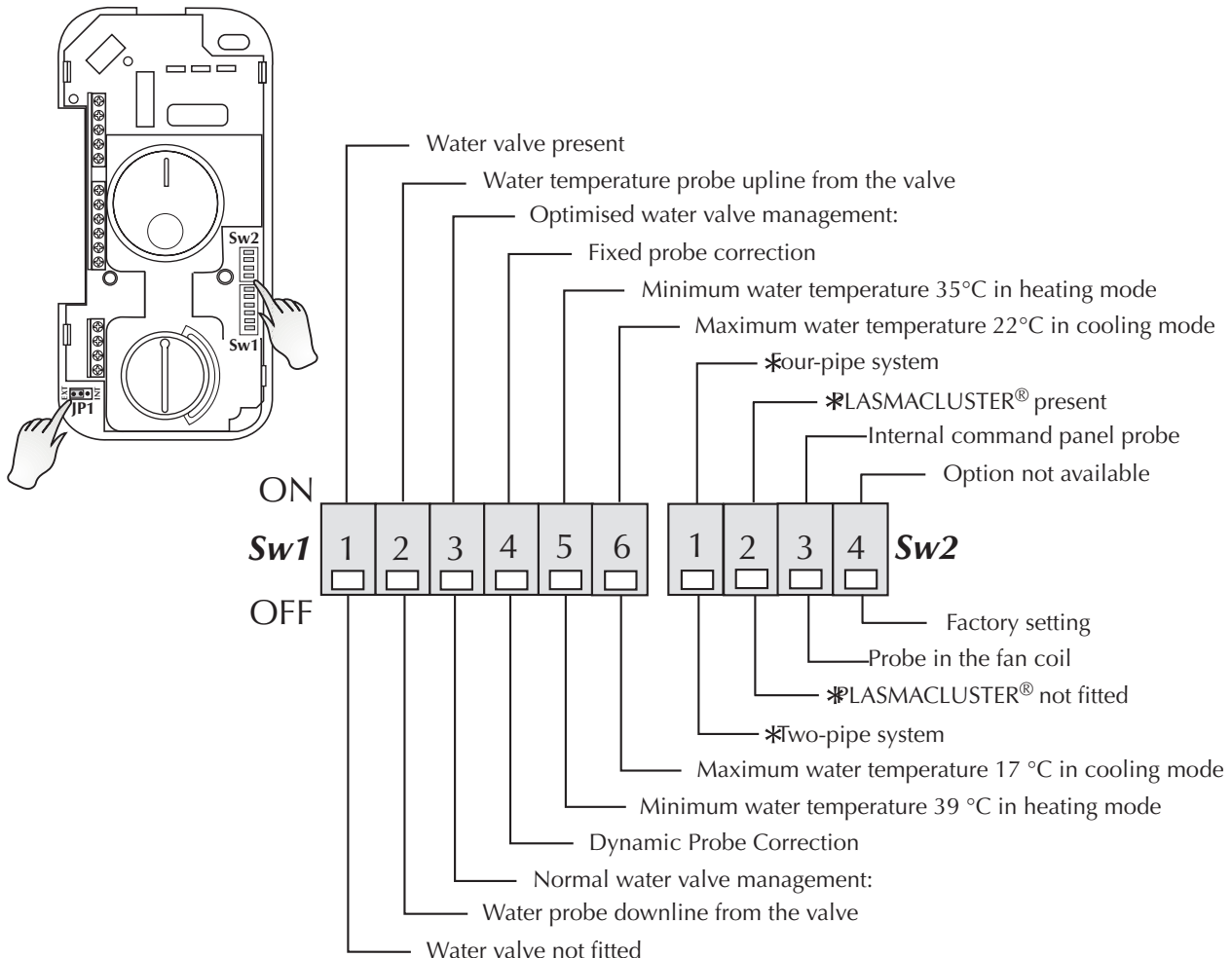
Sw2 Dip 4 (Default OFF)

Option not available

NOTES:->

* = In the fan coils with two valves installed in four-pipe systems the installation of a PLASMACLUSTER® air purifier is not allowed.

- For the proper functioning of the SA ambient probe make sure that Sw2 Dip3 is in the OFF position and the jumper JP1 at EXT Position.



INSTALLATION

WARNING: check that the power supply is disconnected before performing operations on the unit.

WARNING: electrical wiring, installation of the fan coils and relevant accessories should be performed by a technician who has the necessary technical and professional expertise to install, modify, extend and maintain systems and who is able to check the systems for the purposes of safety and correct operation.

In the specific case of electrical connections, the following must be checked:

- Measurement of the electrical system insulation strength.
- Continuity test of the protection wires.

Instructions essential for the proper installation of the equipment are shown here.

The completion of all the operations in accordance with the specific requirements is however left to the experience of the installation engineer.

HAZARD: Be particularly careful when fitting the environment probe. As it might be subjected to network voltage of 230V it must be firmly fixed.

WARNING: To protect the unit against short circuits, fit an omnipolar thermal trip max. 2A 250V (IG) to the power line with a minimum contact opening distance of 3 mm.

WARNING: CHECK THAT THE INSTALLATION HAS BEEN CARRIED OUT PROPER. It is necessary to perform the Autotest function to check the ventilator, valve and resistance.

FIXING ON THE MACHINE

To fix the command panel on the fan coil (only on models designed for the purposes), do the following:

- Cut off the voltage to the unit;
- Remove the fan coil housing
- set the switches on the control panel;
- apply the panel support to the side panel opposite the water connections and fix it with the screw provided;
- Make the electrical wiring between the control panel and the fan coil terminal strip then lock the control panel onto the support;
- if the fan coil has a valve (accessory), apply the SW temperature probe upstream from the valve, otherwise put it into the coil and lock it with the probe stop;
- refit the housing being careful of the buttons and indication leds;
- the connection cables must be laid inside the device in such a way that the cover fixing screw cannot come into contact with the mains voltage even under unusual conditions (disconnected wires);
- lock into place with the fixing screw.

If the fan coil has a water cut-off valve, the SW probe must be positioned up line from the said valve. If it does not, insert it in the coil and lock it into place with the probe stop.

Caution: the probe is fitted with double insulation because it is subject to a voltage of 230Vac.

AUTOTEST FOR INSTALLATION

It is possible to activate an Autotest mode that makes it possible to check the turning on of all the loads.

The Autotest sequence is as follows:

- Selector switch (A) in the OFF position.
- Position the temperature selector (B) centrally.
- With the selector (A) go through the following sequences quickly: **AUTO - OFF - V1 - OFF - V2 - OFF - V3 - OFF.**

At this point you enter the AUTOTEST mode (the left-hand led blinks fuchsia).

- With selector (A) in the AUTO position the valves or, if there is one, the PLASMACLUSTER® come on.

The yellow led (D) performs cycles of 1 blink.

- With the temperature selector (B) in the V1 position minimum speed V1 comes on.

The yellow led (D) performs cycles of 2 blinks.

- With the selector (A) in position V2 medium fan speed V2 comes on.

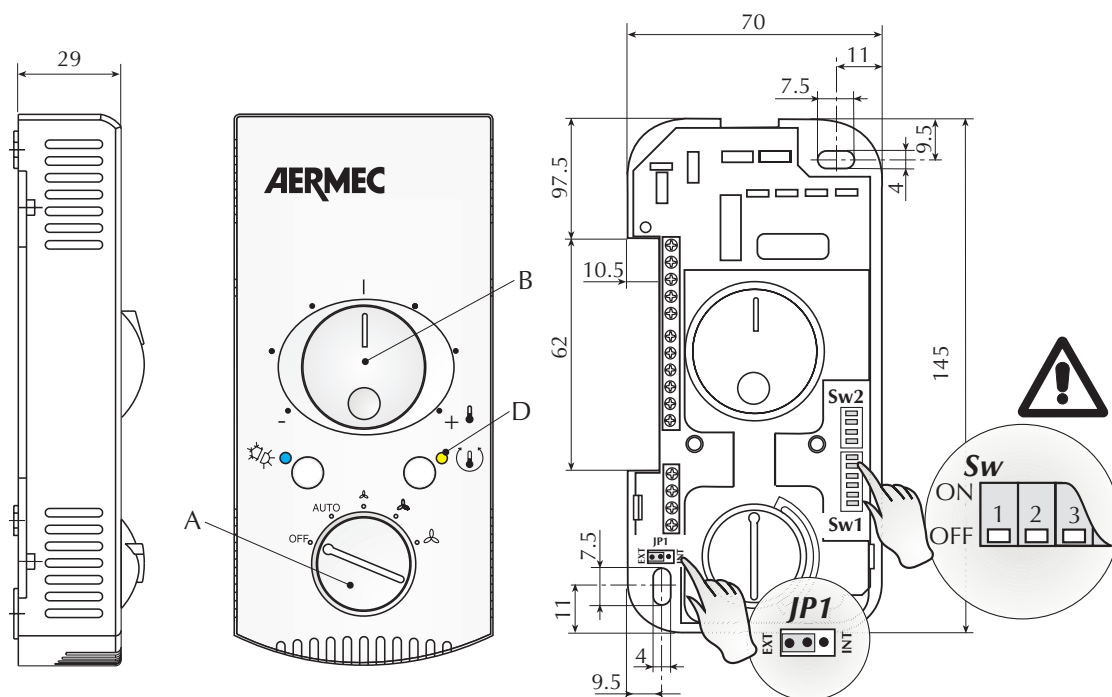
The yellow LED (D) performs cycles of 3 blinks.

- With selector (A) in position V3 top fan speed V3 comes on.

The yellow LED (D) performs cycles of 4 blinks.

The control panel leaves the Autotest mode automatically after a minute.

During the Autotest if temperature selector (A) is at minimum, the yellow led (D) remains permanently on while, if it is at maximum, the yellow led (D) remains off, in both cases the loads are not tested.



LEGENDA • READING KEY • LEGENDE • LEGENDE • LEYENDA

CE = Contatto esterno External control Contact extérieur Externer Kontakt Contacto externo	SC = Scheda di controllo Electronic control board Platine de contrôle Steuerschaltkreis Tarjeta de control	Y1 = Valvola a tre vie Three way valves Vanne à trois voies Dreibegeventil Válvula agua de 3 vías
IG = Interruttore magnetotermico Main switch Interrupteur général Hauptschalter Interruptor magnetotérmico	SA = Sonda aria Room sensor Sonde ambiante Raumtemperaturfühler Sonda ambiente	Y2 = Valvola a tre vie • Plasmacluster Three way valves • Plasmacluster Vanne à trois voies • Plasmacluster Dreibegeventil • Plasmacluster Válvula agua de 3 vías • Plasmacluster
L = Linea Line Ligne Phasenleiter Línea	SW = Sonda acqua batteria Water sensor Sonde eau Fühler Wassertemperatur Sonda temperatura del agua	← - - - = Collegamenti a cura dell'installatore Connections to be made by installer Branchements aux bons soins de l'installateur Bauseitig durchzuführende verdrahtung Conexiones a efectuar en el lugar de instalación
N = Neutro Neutral Neutre Neutralleiter Neutro	V1 = Velocità minima Minimum fan speed Vitesse minimale Mindestgeschwindigkeit Velocidad mínima	□ - - - = Componenti non forniti Components not supplied Composants non fournis Nicht gelieferte Komponenten Componentes no suministrados
MV = Motore ventilatore Fan motor Moteur ventilateur Lüftermotor Motor ventilador	V2 = Velocità media Medium fan speed Vitesse moyenne Mittlere Geschwindigkeit Velocidad media	
PE ⊕ = Collegamento di terra Earthing connection Branchement à la terre Erdung Toma de tierra	V3 = Velocità massima Maximum fan speed Vitesse maximale Höchstgeschwindigkeit Velocidad máxima	

CARATTERISTICHE DEI CAVI DI COLLEGAMENTO

Usare cavi tipo H05V-K oppure N07V-K con isolamento 300/500 V se incassato in tubo o canalina.

Per installazioni con cavo in vista usare cavi con doppio isolamento di tipo H05W-F.

CARACTERISTIQUES DES CABLES DE RACCORDEMENT

Utiliser des câbles du type H05V-K ou N07V-K avec isolation 300/500 V en cas d'installation dans une conduite ou une goulotte.

Pour des installations avec câble apparent, utiliser des câbles à double isolation du type H05W-F.

CONNECTION CABLE SPECIFICATIONS

Use H05V-K or N07V-K type with 300/500 V insulation if piped or ducted.

In the case of exposed wiring, use H05W-F type cable with double insulation.

MERKMALE DER ANSCHLUSSKABEL

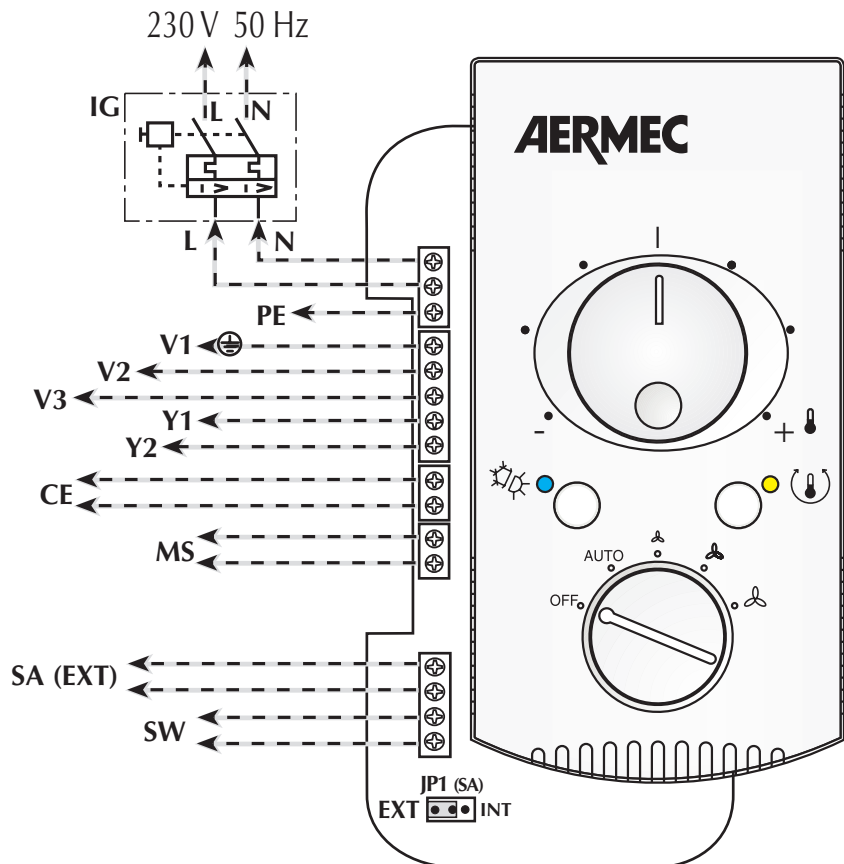
Bei Verlegung im Rohr oder im Kanal Kabel vom Typ H05V-K oder N07V-K mit Isolierung 300/500 V verwenden.

Bei Installationen mit offenliegendem Kabel doppelte Isolierung vom Typ H05W-F verwenden.

CARACTERÍSTICAS DE LOS CABLES DE CONEXIÓN

Utilice cables del tipo H05V-K o bien N07V-K con aislamiento 300/500 V si van cubiertos en tubo o en canal de cables.

Para instalaciones con cable a la vista, utilice cables con doble aislamiento de tipo H05W-F.



Gli schemi elettrici sono soggetti ad aggiornamento; è opportuno fare riferimento allo schema elettrico allegato all' apparecchio.

Wiring diagrams may change for updating. It is therefore necessary to refer always to the wiring diagram inside the units.

Les schémas électriques peuvent être modifiés en conséquence des mises à jour. Il faut toujours se référer aux schémas électriques dans les appareils.

Die Schaltschemas können geändert werden; es empfiehlt sich immer auf das mit dem Zubehör verpackte El. Schaltschema zu beziehen.

Los esquemas eléctricos pueden ser actualizados; es conveniente tener en cuenta el esquema eléctrico adjunto al aparato.

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