INTERFACES

QUICK MIND
W3
W310

C0220121-05-04-GB

GB

1 CONTENTS

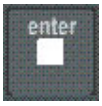
2 Use

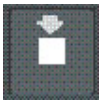
This document may only be used for the BO04 or later versions of the Quick Mind electronically-controlled CLIMAVENETA units.
Information on the version of the electronic controller is shown in the programming menu which can be accessed as shown below.

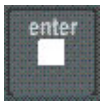
Press the **"PROG"** key to access the masks used to programme user parameters:

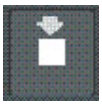
```
Enter
user
password
                0000
```

Default setting 1234.
A new password can be established.

Press the key  to go to the password field

Use the keys   to enter the password

To confirm the password press the key 

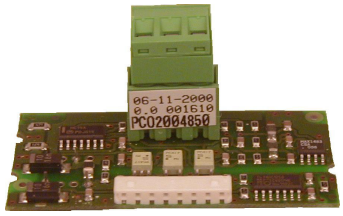
Press the key  to scroll the menu pages

The electronic controller may only be installed and programmed by adequately trained technical staff.

3 Interfacing with the FWS

3.1 Components required

Serial interface card

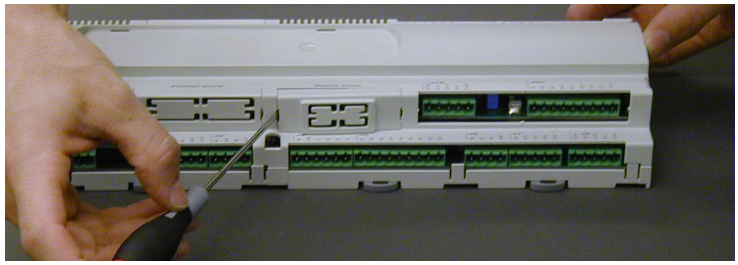


Electronic control card.
(Already fitted to the unit)
The photos refer to the card with the highest number of terminals, but the procedure is identical for the smaller cards

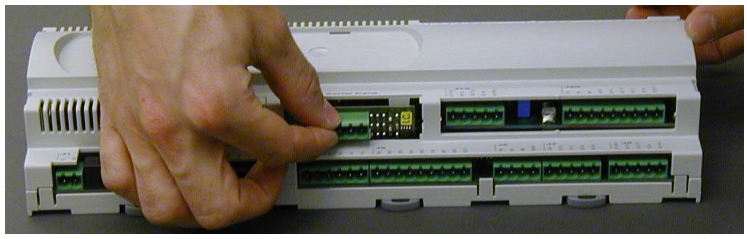
3.2 Installing the serial interface card

The operations required to install and connect the components for interfacing the electronic controller with the FWS are shown below.
The cards must not be powered during these operations.

Remove the "Serial Card" cover



Fit the FWS serial interface card (if not present) into the slot.



Put back the cover.

3.3 Setting supervisor parameters

To communicate with the FWS, set the parameters as shown below.

Enter the programming menu, type in the password and scroll down to the following masks.

```
On/off enable from
digital input      N
Sum/win enable from
digital input      N
```

Enables external signals.

```
Supervisor
enable :
        Enabled
```

Communication towards a supervisor system must be enabled.

```
On/off enable from
Supervisor         Y
Summer/winter enable
from Supervisor    Y
```

Selects the on/off status and summer/winter switchover of the unit through a supervision system.
Supervisor enables must be set as shown to the left:

- On/off enable: **Yes**
- Summer/winter enable: **Yes** (only for units fitted with the winter mode)

```
Supervisor settings
Protocol Modbus
Speed 9600 baud
Unit ID          001
```

The supervisor connection parameters must be set as shown to the left:

- Protocol: **Modbus**
- Communication speed: **9600 baud**
- Unit ID: from **001** to **200**

3.4 Setting up the supervisor network

The supervisor network must be set up as shown below.

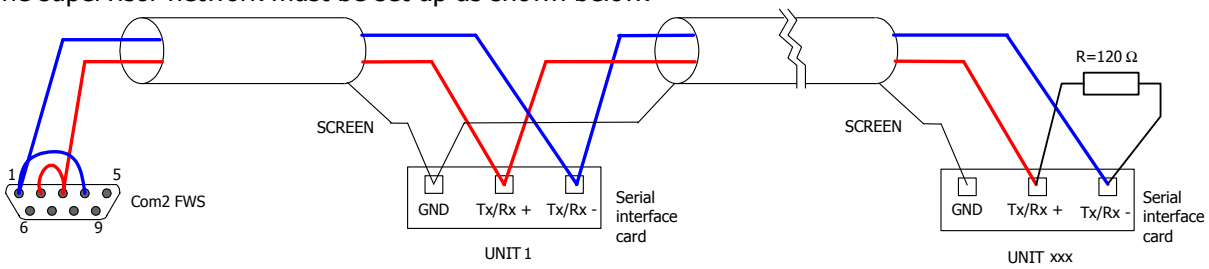


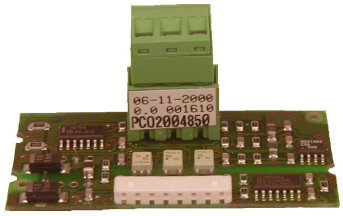
Fig.1

The serial connection cable between the FWS and the units must be shielded and twisted and have a cross-section of 2x1mm² up to a length of 300 metres and 2x1.5mm² up to a length of 1000 metres.
The length of the cable running from Com2 of the FWS to the last unit must not exceed 1000 metres.
The serial connection is made with a single cable running from the FWS to the first (nearest) unit, from the first to the second (in order of distance), and so one.
The serial cable must be kept separate from the power cables.
A maximum of 200 units can be connected to the network.

4 Interfacing with the BMS

4.1 Components required

Serial interface card.

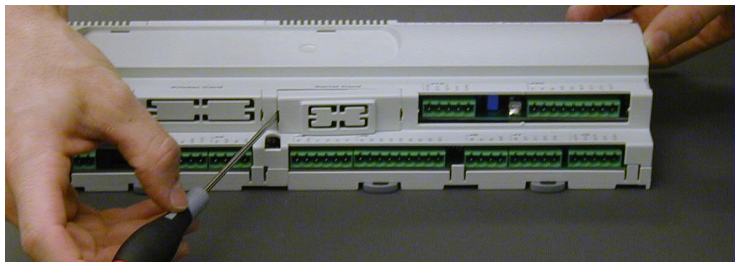


Electronic control card.
(Already fitted to the unit)
The photos refer to the card with the highest number of terminals, but the procedure is identical for the smaller cards

4.2 Installing the serial interface card

The operations required to install and connect the components for interfacing the electronic controller with the BMS are shown below.
The cards must not be powered during these operations.

Remove the "Serial Card" cover



Fit the BMS serial interface card (if not present) into the slot.

Put back the cover.

4.3 Setting supervisor parameters

To communicate with BMS, set the parameters as shown below.

Enter the programming menu, type in the password and scroll down to the following masks.

```
On/off enable from
digital input      N
Sum/win enable from
digital input      N
```

Enables external signals.

```
Supervisor
enable :
        Enabled
```

Communication towards a supervisor system must be enabled.

```
On/off enable from
Supervisor         Y
Summer/winter enable
from Supervisor    Y
```

Selects the on/off status and summer/winter switchover of the unit through a supervision system.
Supervisor enables must be set as shown to the left:

- On/off enable: **Yes**
- Summer/winter enable: **Yes** (only for units fitted with the winter mode)

```
Supervisor settings
Protocol Modbus
Speed 9600 baud
Unit ID          011
```

Protocol: **Modbus / Standard**
Communication speed: from **1200 baud** to **19200 baud**
Unit ID: from **001** to **200**

4.4 Setting up the supervisor network

The supervisor network must be set up as shown below.

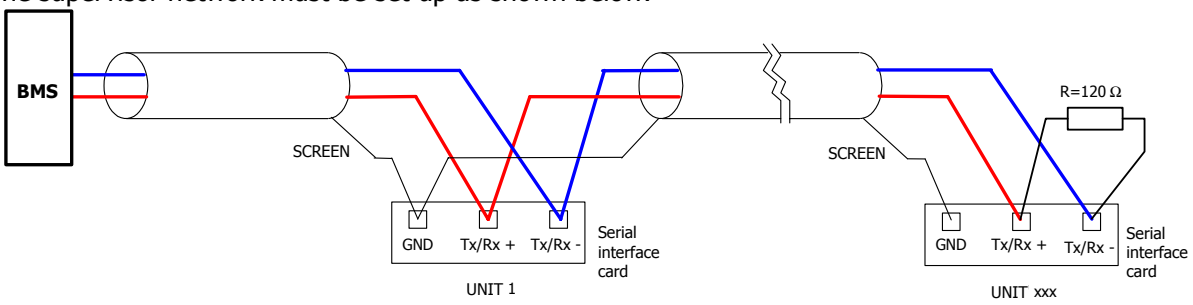


Fig.2

The serial connection cable between the BMS and the units must be shielded and twisted and have a cross-section of 2x1mm² up to a length of 300 metres and 2x1.5mm² up to a length of 1000 metres.
The length of the cable running from the BMS to the last unit must not exceed 1000 metres.
The serial connection is made with a single cable running from the BMS to the first (nearest) unit, from the first to the second (in order of distance), and so one.
The serial cable must be kept separate from the power cables.
A maximum of 200 units can be connected to the network.

4.5 Interface database

Address	*Type*	*Flow*	*Description*
001	B	OUT	Status of unit (0:Off - 1:On)
002	B	OUT	Summer/winter status of unit (0:Summer; 1:Winter)
003	B	OUT	Evaporator pump status (0:Off - 1:On)
004	B	OUT	Evaporator 2 pump status (0:Off - 1:On)
005	B	IN / OUT	On/off enable from supervisor (0:No - 1:Yes)
006	B	IN / OUT	Summer/winter enable from supervisor (0:No - 1:Yes)
007	B	IN / OUT	On/Off command from supervisor (0:Off - 1:On)
008	B	IN / OUT	Summer/winter command (0:summer; -1:winter)
010	B	IN / OUT	Time bands enable (0:deactivated - 1:activated)
011	B	IN / OUT	Time band programming type (0:standard - 1:advanced)
003	I	OUT	Software version
005	I	OUT	Type of unit configuration (40 : Water/air unit Chiller with axial fans - 42 : Water/air unit Heat pump with axial fans – 44: Chiller condensing unit - 45: Evaporating unit Chiller – 46: Water/water unit Chiller – 47: Water/water unit Heat pump - 48 : Water/air unit Chiller with centrifugal fans - 49 : Water/air unit Heat pump with centrifugal fans)
006	I	OUT	N° circuits
007	I	OUT	Configuring the number of compressors
008	I	OUT	N° steps
009	I	OUT	Type of compressors (1:Hermetic - 2:Semi-hermetic - 3:Screw)
010	I	OUT	Unit configuration status [1] (Bit0: 0:Heat pump disabled, 1:Heat pump enabled Bit1: 0:Step adjustment, 1:Standard adjustment Bit2: 0:Input adjustment, 1:Output adjustment Bit3: 0:FreeCooling disabled, 1:FreeCooling enabled Bit4: 0:FreeHeating disabled, 1:FreeHeating enabled Bit5: 0:Dehumidification disabled, 1:Dehumidification enabled Bit6: 0:Humidification disabled, 1:Humidification enabled Bit7: 0:Summer enthalpy disabled, 1:Summer enthalpy enabled Bit8: 0:Winter enthalpy disabled, 1:Winter enthalpy enabled Bit9: 0:Room washing disabled, 1:Room washing enabled Bit10: 0:Start-up disabled, 1:Start-up enabled Bit11: 0:Gas injection disabled, 1:Gas injection enabled Bit12: 0:Hot valve disabled, 1:Hot valve enabled Bit13: 0:Heating elements disabled, 1:Heating elements enabled Bit14: 0:Heat modules disabled, 1:Heat modules enabled Bit15: 0:Ventilation only disabled, 1:Ventilation only enabled)
011	I	OUT	Unit configuration status [2] (Bit0: 0:Hour intervals disabled, 1:Hour intervals enabled Bit1: 0:Pumpdown disabled, 1:Pumpdown enabled Bit2: 0:Setpoint modification disabled, 1:Setpoint modification enabled Bit3: - Bit15: Not used)
012	I	OUT	Unit status (0:ON from keyboard - 1:ON from digital input - 2:ON from hour intervals – 3:ON from supervisor - 4:OFF from alarm - 5:OFF from supervisor - 6:OFF from hour intervals – 7:OFF from digital input - 8:OFF from keyboard - 9:Manual mode)
013	I	OUT	Unit timer status (0:Unit off - 1:Starting - 2:heating - 3:Unit start-up - 4:Switching off - 5:Compressor timing - 6:Pump/main fan timing)

Address	*Type*	*Flow*	*Description*
014	I	OUT	Operating mode (Bit0: 0:summer,1:winter Bit1: 0:OFF FreeCooling/FreeHeating, 1:ON FreeCooling/FreeHeating Bit1: 0:OFF Dehumidification/Humidification, 1:ON Dehumidification/Humidification Bit3: 0:OFF Enthalpy, 1:ON Enthalpy Bit4: 0:OFF Room washing, 1:ON Room washing Bit5: 0:OFF Start-up, 1:ON Start-up Bit5: 0:Ventilation only OFF, 1:Ventilation only ON Bit7-Bit15 not used)
015	I	OUT	Compressor 1 status (Bit0: 0:Configured, 1:Unconfigured Bit1: 0:Disabled, 1:Enabled Bit2: 0:OFF , 1:ON Bit3: 0:Pump-down inactive, 1:Pump-down active Bit4: 0:Alarm inactive, 1:Alarm active Bit5: 0:--- ,1:ON with 3 steps active Bit6: 0:--- ,1:ON with 2 steps active Bit7: 0:--- ,1:ON with 1 step active Bit8: 0:--- ,1:ON entire Bit9: 0:--- ,1:chiller Bit10: 0:--- ,1:heat pump Bit11: 0:--- ,1:recovery Bit12: 0:--- ,1:defrosting Bit13: Not used Bit14: Not used Bit15: Not used)
016	I	OUT	Compressor 2 status (see compressor 1 status)
017	I	OUT	Compressor 3 status (see compressor 1 status)
018	I	OUT	Compressor 4 status (see compressor 1 status)
020	I	OUT	Pump hours (thousands)
021	I	OUT	Pump hours
022	I	OUT	Pump 2 hours (thousands)
023	I	OUT	Pump 2 hours
024	I	OUT	Compressor hours 1 (thousands)
025	I	OUT	Compressor hours 1
026	I	OUT	Compressor hours 2 (thousands)
027	I	OUT	Compressor hours 2
028	I	OUT	Compressor hours 3 (thousands)
029	I	OUT	Compressor hours 3
030	I	OUT	Compressor hours 4 (thousands)
031	I	OUT	Compressor hours 4
032	I	OUT	Alarm code active (with higher priority)
034	I	OUT	Request for cold thermoregulator (%)
035	I	OUT	Active power of cold thermoregulator (%)
036	I	OUT	Request for hot thermoregulator (%)
037	I	OUT	Active power of hot thermoregulator (%)
038	I	IN / OUT	Power limitation in summer mode (%)
039	I	IN / OUT	Power limitation in winter mode (%)
073	I	IN / OUT	Monday hour intervals (0:not used - 1:'A' bands - 2:'B' bands)
074	I	IN / OUT	Tuesday hour intervals (0:not used - 1:'A' bands - 2:'B' bands)
075	I	IN / OUT	Wednesday hour intervals (0:not used - 1:'A' bands - 2:'B' bands)
076	I	IN / OUT	Thursday hour intervals (0:not used - 1:'A' bands - 2:'B' bands)
077	I	IN / OUT	Friday hour intervals (0:not used - 1:'A' bands - 2:'B' bands)
078	I	IN / OUT	Saturday hour intervals (0:not used - 1:'A' bands - 2:'B' bands)
079	I	IN / OUT	Sunday hour intervals (0:not used - 1:'A' intervals - 2:'B' intervals)
080	I	IN / OUT	Unit status in hour interval 1 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)
081	I	IN / OUT	End of hour interval 1 'A' (hours)
082	I	IN / OUT	End of hour interval 1 'A' (minutes)
083	I	IN / OUT	Unit status in hour interval 2 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)

Address	*Type*	*Flow*	*Description*
084	I	IN / OUT	End of hour interval 2 'A' (minutes)
085	I	IN / OUT	End of hour interval 2 'A' (hours)
086	I	IN / OUT	Unit status in hour interval 3 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)
087	I	IN / OUT	End of hour interval 3 'A' (minutes)
088	I	IN / OUT	End of hour interval 3 'A' (hours)
089	I	IN / OUT	Unit status in hour interval 4 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)
090	I	IN / OUT	End of hour interval 4 'A' (minutes)
091	I	IN / OUT	End of hour interval 4 'A' (hours)
092	I	IN / OUT	Unit status in hour interval 5 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)
093	I	IN / OUT	Unit status in hour interval 1 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)
094	I	IN / OUT	End of hour interval 1 'B' (hours)
095	I	IN / OUT	End of hour interval 1 'B' (minutes)
096	I	IN / OUT	Unit status in hour interval 2 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)
097	I	IN / OUT	End of hour interval 2 'B' (hours)
098	I	IN / OUT	End of hour interval 2 'B' (minutes)
099	I	IN / OUT	Unit status in hour interval 3 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)
100	I	IN / OUT	End of hour interval 3 'B' (hours)
101	I	IN / OUT	End of hour interval 3 'B' (minutes)
102	I	IN / OUT	Unit status in hour interval 4 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)
103	I	IN / OUT	End of hour interval 4 'B' (hours)
104	I	IN / OUT	End of hour interval 4 'B' (minutes)
105	I	IN / OUT	Unit status in hour interval 5 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)
001	A	IN / OUT	Summer temperature set point
002	A	IN / OUT	Winter temperature set point
008	A	IN / OUT	Temperature adjustment band summer
009	A	IN / OUT	Temperature adjustment band winter
013	A	OUT	Analogue input B1
014	A	OUT	Analogue input B2
015	A	OUT	Analogue input B3
016	A	OUT	Analogue input B4
017	A	OUT	Analogue input B5
018	A	OUT	Analogue input B6
019	A	OUT	Analogue input B7
020	A	OUT	Analogue input B8
021	A	OUT	Analogue input B9
022	A	OUT	Analogue input B10
052	A	IN / OUT	Summer temperature set point in hour interval 1 'A'
053	A	IN / OUT	Winter temperature set point in hour interval 1 'A'
056	A	IN / OUT	Summer temperature set point in hour interval 2 'A'
057	A	IN / OUT	Winter temperature set point in hour interval 2 'A'
060	A	IN / OUT	Summer temperature set point in hour interval 3 'A'
061	A	IN / OUT	Winter temperature set point in hour interval 3 'A'
064	A	IN / OUT	Summer temperature set point in hour interval 4 'A'
065	A	IN / OUT	Winter temperature set point in hour interval 4 'A'
068	A	IN / OUT	Summer temperature set point in hour interval 5 'A'
069	A	IN / OUT	Winter temperature set point in hour interval 5 'A'
072	A	IN / OUT	Summer temperature set point in time band 1 'B'
073	A	IN / OUT	Winter temperature set point in time band 1 'B'
076	A	IN / OUT	Summer temperature set point in time band 2 'B'
077	A	IN / OUT	Winter temperature set point in time band 2 'B'
080	A	IN / OUT	Summer temperature set point in time band 3 'B'
081	A	IN / OUT	Winter temperature set point in time band 3 'B'

Address	*Type*	*Flow*	*Description*
084	A	IN / OUT	Summer temperature set point in time band 4 'B'
085	A	IN / OUT	Winter temperature set point in time band 4 'B'
088	A	IN / OUT	Summer temperature set point in time band 5 'B'
089	A	IN / OUT	Winter temperature set point in time band 5 'B'

Address:
This is the address of the supervision variable in the electronic controller; in the ModBus protocol, for whole variables add 128 to the address.
(e.g.: Software address 3 -> Modbus address 131 [128+3])

Type:
B: Boolean variable (Coils for the Modbus protocol)
I: Whole variable (Registers for the Modbus protocol)
A: Analogue variable (Registers for the Modbus protocol)

Flow:
OUT: Read-only variable for the BMS
IN / OUT: read/write variable for the BMS

4.6 Meaning of variables

Analogue variables are expressed with a decimal number (e.g.: 12.0bar -> 120; 33.8°C -> 338)
If a probe is in an alarm condition a value equal to -99.9 is sent.
If a probe or a parameter is not configured a value equal to –88.8 is sent.

5 Interfacing with the TREND system

5.1 Components required

The components required to interface the CLIMAVENETA units fitted with the electronic controller to the TREND system are described below.

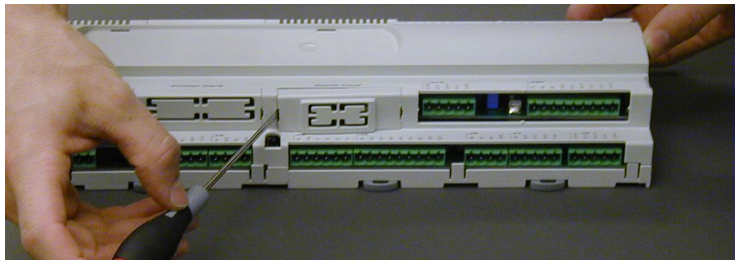
Serial interface card to the TREND system. (Not supplied by CLIMAVENETA).

Electronic control card.
Already fitted to the unit.
The photos refer to the card with the highest number of terminals, but the procedure is identical for the smaller cards

5.2 Installing the serial interface card to the TREND system

The operations required to install and connect the components for interfacing the electronic controller with the TREND system are shown below.
The cards must not be powered during these operations.

Remove the "Serial Card" cover



Fit the TREND system serial interface card (if not present) into the slot.

Put back the cover.

5.3 Setting supervisor parameters

To communicate with the TREND system, set the parameters as shown below.

Enter the programming menu, type in the password and scroll down to the following masks.

```
On/off enable from
digital input      N
Sum/win enable from
digital input      N
```

Enables external signals.

```
Supervisor
enable :
        Enabled
```

Communication towards a supervisor system must be enabled.

```
On/off enable from
Supervisor         Y
Summer/winter enable
from Supervisor    Y
```

Selects the on/off status and summer/winter switchover of the unit through a supervision system.
Supervisor enables must be set as shown to the left:

- On/off enable: **Yes**
- Summer/winter enable: **Yes** (only for units fitted with the winter mode)

```
Supervisor settings
Protocol Carel
Speed   19200 baud
Unit ID         001
```

The supervisor connection parameters must be set as shown to the left.

- Protocol: **Standard**
- Communication speed: **19200 baud**
- Unit ID: **001**

5.4 Setting up the supervisor network

The supervisor network is set up by TREND staff.

5.5 Programming the TREND system serial interface card

The serial interface cards are programmed by TREND staff according to the following table.

Table A: CDE file for units with two compressors.

```
[CONTROLLER]
CODHW= 0
CODAPP=QUICK MIND (BA07)

[VARLIST]
"VAR001";1;1;1;"Status of unit (0:Off - 1:On)";"";"";
"VAR002";1;2;1;"Summer/winter status of unit (0:Summer; 1:Winter)";"";"";
"VAR003";1;3;1;"Status of evaporator pump (0:Off - 1:On)";"";"";
"VAR004";1;4;1;"Status of evaporator pump 2 (0:Off - 1:On)";"";"";
"VAR005";1;5;3;"On/off enable from supervisor  (0:No - 1:Yes)";"";"";
"VAR006";1;6;3;"Summer/winter enable from supervisor  (0:No - 1:Yes)";"";"";
"VAR007";1;7;3;"On/off command from supervisor (0:Off - 1:On)";"";"";
"VAR008";1;8;3;"Summer/winter command (0:summer; -1:winter)";"";"";
"VAR009";1;10;3;"Enable hour intervals (0:disabled - 1:enabled)";"";"";
"VAR010";1;11;3;"Hour interval programming type (0:standard - 1:advanced)";"";"";
"VAR011";3;3;1;"Software version";"";"";
"VAR012";3;5;1;"Unit type configuration (40: Water/air unit Chiller with axial fans - 42: Water/air
unit Heat pump with axial fans - 44: Chiller condensing unit – 45: Evaporating unit Chiller - 46:
Water/water unit Chiller - 47: Water/water unit Heat pump - 48: Water/water unit Chiller with
centrifugal fans - 49: Water/air unit Heat pump with centrifugal fans)";"";"";
"VAR014";3;7;1;"Configuring the number of compressors";"";"";
"VAR015";3;8;1;"N° steps";"";"";
"VAR016";3;9;1;"Type of compressors (1:Hermetic - 2:Semi-hermetic - 3:Screw)";"";"";
"VAR017";3;10;1;"Unit configuration status [1](Bit0: 0:Heat pump disabled , 1:Heat pump enabled
Bit1: 0:Step adjustment, 1:RStandard adjustment Bit2: 0:Input adjustment , 1:Output adjustment Bit3:
0:FreeCooling disabled , 1:FreeCooling enabled Bit4: 0:FreeHeating disabled , 1:FreeHeating enabled
Bit5: 0:Dehumidification disabled , 1:Dehumidification enabled Bit6: 0:Humidification disabled ,
```

```
1:Humidification enabled Bit7: 0:Summer enthalpy disabled , 1:Summer enthalpy enabled Bit8: 0:Winter enthalpy disabled , 1:Winter enthalpy enabled Bit9: 0:Room washing disabled , 1:Room washing enabled Bit10: 0:Start-up disabled , 1:Start-up enabled Bit11: 0:Gas injection disabled , 1:Gas injection enabled Bit12: 0:Hot valve disabled , 1:Hot valve enabled Bit13: 0:Heating elements disabled , 1:Heating elements enabled Bit14: 0:Heating elements disabled , 1:Heating elements enabled Bit15: 0:Ventilation only disabled , 1:Ventilation only enabled)";"";"";
"VAR018";3;11;1;"Unit configuration status [2](Bit0: 0:Hour intervals disabled , 1:Hour intervals enabled Bit1: 0:Pumpdown disabled , 1:Pumpdown enabled Bit2: 0:Setpoint variation disabled , 1:Setpoint variation enabled Bit3: - Bit15: Not used)";"";"";
"VAR019";3;12;1;"Unit status (0:ON from keyboard - 1:ON from digital input - 2:ON from hour intervals - 3:ON from supervisor - 4:OFF from alarm - 5:OFF from supervisor - 6:OFF from hour intervals - 7:OFF from digital input - 8:OFF from keyboard - 9:Manual mode)";"";"";
"VAR020";3;13;1;"Unit timer status (0:Unit off - 1:Starting - 2:Heating - 3:Unit start-up - 4:Switching off - 5:Compressor timing - 6:Pump/main fan timing)";"";"";
"VAR021";3;14;1;"Operating mode (Bit0: 0:summer,1:winter Bit1: 0:OFF FreeCooling/FreeHeating , 1:ON FreeCooling/FreeHeating Bit2: 0:OFF Dehumidification/Humidification , 1:ON Dehumidification/Humidification Bit3: 0:OFF Enthalpy , 1:ON Enthalpy Bit4: 0:OFF Room washing , 1:ON Room washing Bit5: 0:OFF Start-up , 1:ON Start-up Bit5: 0:OFF Ventilation only , 1:ON Ventilation only Bit7-Bit15 not used)";"";"";
"VAR022";3;15;1;"Compressor status 1(Bit0: 0:Configured , 1:Unconfigured Bit1: 0:Disabled , 1:Enabled Bit2: 0:OFF , 1:ON Bit3: 0:Pump-down inactive , 1:Pump-down active Bit4: 0:Alarm inactive , 1:Alarm active Bit5: 0:--- ,1:ON with 3 steps active Bit6: 0:--- ,1:ON with 2 steps active Bit7: 0:--- ,1:ON with 1 step active Bit8: 0:--- ,1:ON entire Bit9: 0:--- ,1:chiller Bit10: 0:--- ,1:heat pump Bit11: 0:--- ,1:recovery Bit12: 0:--- ,1:defrosting Bit13: Not used Bit14: Not used Bit15: Not used)";"";"";
"VAR023";3;16;1;"Compressor 2 status (see compressor 1 status)";"";"";
"VAR024";3;17;1;"Compressor 3 status (see compressor 1 status)";"";"";
"VAR025";3;18;1;"Compressor 4 status (see compressor 1 status)";"";"";
"VAR026";3;20;1;"N° hours pump (thousands)";"";"";
"VAR027";3;21;1;"N° hours pump 2";"";"";
"VAR028";3;22;1;"N° hours pump (thousands)";"";"";
"VAR029";3;23;1;"N° hours pump 2";"";"";
"VAR030";3;24;1;"N° hours compressor 1 (thousands)";"";"";
"VAR031";3;25;1;"N° hours compressor 1";"";"";
"VAR032";3;26;1;"N° hours compressor 2 (thousands)";"";"";
"VAR033";3;27;1;"N° hours compressor 2";"";"";
"VAR034";3;28;1;"N° hours compressor 3 (thousands)";"";"";
"VAR035";3;29;1;"N° hours compressor 3";"";"";
"VAR036";3;30;1;"N° hours compressor 4 (thousands)";"";"";
"VAR037";3;31;1;"N° hours compressor";"";"";
"VAR038";3;32;1;"Alarm code active (with increased priority)";"";"";
"VAR039";3;34;1;"Request for cold thermoregulator (%)";"";"";
"VAR040";3;35;1;"Active power of cold thermoregulator (%)";"";"";
"VAR041";3;36;1;"Request for hot thermoregulator (%)";"";"";
"VAR042";3;37;1;"Active power of hot thermoregulator (%)";"";"";
"VAR043";3;38;3;"Power limitation in summer mode (%)";"0";"0";
"VAR044";3;39;3;"Power limitation in winter mode (%)";"0";"0";
"VAR045";3;73;3;"Monday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR046";3;74;3;"Tuesday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR047";3;75;3;"Wednesday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR048";3;76;3;"Thursday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR049";3;77;3;"Friday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR050";3;78;3;"Saturday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR051";3;79;3;"Sunday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR052";3;80;3;"Unit status in hour interval 1 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR053";3;81;3;"End of hour interval 1 'A' (hours)";"0";"23";
"VAR054";3;82;3;"End of hour interval 1 'A' (minutes)";"0";"59";
"VAR055";3;83;3;"Unit status in hour interval 2 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR056";3;84;3;"End of hour interval 2 'A'(minutes)";"0";"59";
"VAR057";3;85;3;"End of hour interval 2 'A' (hours)";"";"23";
"VAR058";3;86;3;"Unit status in hour interval 3 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR059";3;87;3;"End of hour interval 3 'A' (minutes)";"0";"59";
"VAR060";3;88;3;"End of hour interval 3 'A' (hours)";"";"23";
"VAR061";3;89;3;"Unit status in hour interval 4 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR062";3;90;3;"End of hour interval 4 'A' (minutes)";"0";"59";
"VAR063";3;91;3;"End of hour interval 4 'A' (hours)";"";"23";
"VAR064";3;92;3;"Unit status in hour interval 5 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR065";3;93;3;"Unit status in hour interval 1 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR066";3;94;3;"End of hour interval 1 'B' (hours)";"0";"23";
"VAR067";3;95;3;"End of hour interval 1 'B' (minutes)";"0";"59";
"VAR068";3;96;3;"Unit status in hour interval 2 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR069";3;97;3;"End of hour interval 2 'B' (hours)";"";"23";
"VAR070";3;98;3;"End of hour interval 2 'B' (minutes)";"0";"59";
"VAR071";3;99;3;"Unit status in hour interval 3 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR072";3;100;3;"End of hour interval 3 'B' (hours)";"";"23";
"VAR073";3;101;3;"End of hour interval 3 'B' (minutes)";"0";"59";
"VAR074";3;102;3;"Unit status in hour interval 4 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR075";3;103;3;"End of hour interval 4 'B' (hours)";"";"23";
"VAR076";3;104;3;"End of hour interval 4 'B' (minutes)";"0";"59";
"VAR077";3;105;3;"Unit status in hour interval 5 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
```

```
"VAR078";2;1;3;"Summer temperature set point";"";"";
"VAR079";2;2;3;"Winter temperature set point";"";"";
"VAR080";2;8;3;"Temperature adjustment band summer";"0";"0";
"VAR081";2;9;3;"Temperature adjustment band winter";"0";"0";
"VAR082";2;13;1;"Analogue input B1 ";"";"";
"VAR083";2;14;1;"Analogue input B2 ";"";"";
"VAR084";2;15;1;"Analogue input B3 ";"";"";
"VAR085";2;16;1;"Analogue input B4 ";"";"";
"VAR086";2;17;1;"Analogue input B5";"";"";
"VAR087";2;18;1;"Analogue input B6";"";"";
"VAR088";2;19;1;"Analogue input B7";"";"";
"VAR089";2;20;1;"Analogue input B8";"";"";
"VAR090";2;21;1;"Analogue input B9";"";"";
"VAR091";2;22;1;"Analogue input B10";"";"";
"VAR092";2;52;3;"Summer temperature set point in hour interval 1 'A'";"";"";
"VAR093";2;53;3;"Winter temperature set point in hour interval 1 'A'";"";"";
"VAR094";2;56;3;"Summer temperature set point in hour interval 2 'A'";"";"";
"VAR095";2;57;3;"Winter temperature set point in hour interval 2 'A'";"";"";
"VAR096";2;60;3;"Summer temperature set point in hour interval 3 'A'";"";"";
"VAR097";2;61;3;"Winter temperature set point in hour interval 3 'A'";"";"";
"VAR098";2;64;3;"Summer temperature set point in hour interval 4 'A'";"";"";
"VAR099";2;65;3;"Winter temperature set point in hour interval 4 'A'";"";"";
"VAR100";2;68;3;"Summer temperature set point in hour interval 5 'A'";"";"";
"VAR101";2;69;3;"Winter temperature set point in hour interval 5 'A'";"";"";
"VAR102";2;72;3;"Summer temperature set point in hour interval 1 'B'";"";"";
"VAR103";2;73;3;"Winter temperature set point in hour interval 1 'B'";"";"";
"VAR104";2;76;3;"Summer temperature set point in hour interval 2 'B'";"";"";
"VAR105";2;77;3;"Winter temperature set point in hour interval 2 'B'";"";"";
"VAR106";2;80;3;"Summer temperature set point in hour interval 3 'B'";"";"";
"VAR107";2;81;3;"Winter temperature set point in hour interval 3 'B'";"";"";
"VAR108";2;84;3;"Summer temperature set point in hour interval 4 'B'";"";"";
"VAR109";2;85;3;"Winter temperature set point in hour interval 4 'B'";"";"";
"VAR110";2;88;3;"Summer temperature set point in hour interval 5 'B'";"";"";
"VAR111";2;89;3;"Winter temperature set point in hour interval 5 'B'";"";"";
```

Table B: CDE file for units with four compressors.

```
[CONTROLLER]
CODHW=201
CODAPP=QUICK MIND (BA07)

[VARLIST]
"VAR001";1;1;1;"Status of unit (0:Off - 1:On)";"";"";
"VAR002";1;2;1;"Summer/winter status of unit (0:Summer; 1:Winter)";"";"";
"VAR003";1;3;1;"Evaporator pump status (0:Off - 1:On)";"";"";
"VAR004";1;4;1;"Evaporator pump 2 status (0:Off - 1:On)";"";"";
"VAR005";1;5;3;"On/off enable from supervisor  (0:No - 1:Yes)";"";"";
"VAR006";1;6;3;"Summer/winter enable from supervisor  (0:No - 1:Yes)";"";"";
"VAR007";1;7;3;"On/off command from supervisor (0:Off - 1:On)";"";"";
"VAR008";1;8;3;"Summer/winter command (0:summer; -1:winter)";"";"";
"VAR009";1;10;3;"Enable hour intervals (0:disabled - 1:enabled)";"";"";
"VAR010";1;11;3;"Hour interval programming type (0:standard - 1:advanced)";"";"";
"VAR011";3;3;1;"VSoftware version";"";"";
"VAR012";3;5;1;"Unit configuration status 40: Water/air unit   Chiller with axial fans - 42: Water/water unit Heat pump with axial fans - 44: Chiller condensing unit - 45: Evaporating unit Chiller - 46: Water/water unit Chiller - 47: Water/water unit  Heat pump - 48: Water/air unit Chiller with centrifugal fans - 49: Water/water air Heat pump with centrifugal fans)";"";"";
"VAR014";3;7;1;"Configuring the number of compressors";"";"";
"VAR015";3;8;1;"Nº steps";"";"";
"VAR016";3;9;1;"Type of compressors (1:Hermetic - 2:Semi-hermetic - 3:Screw)";"";"";
"VAR017";3;10;1;"Unit configuration status [1](Bit0: 0:Heat pump disabled , 1:Heat pump enabled Bit1: 0:Step adjustment , 1:Standard adjustment Bit2: 0:Input adjustment , 1:Output adjustment Bit3: 0:FreeCooling disabled , 1:FreeCooling enabled Bit4: 0:FreeHeating disabled , 1:FreeHeating enabled Bit5: 0:Dehumidification disabled , 1:Dehumidification enabled Bit6: 0:Humidification disabled , 1:Humidification enabled Bit7: 0:Summer enthalpy disabled , 1:Summer enthalpy enabled Bit8: 0:Winter enthalpy disabled , 1:Winter enthalpy enabled Bit9: 0:Room washing disabled , 1:Room washing enabled Bit10: 0:Start-up disabled , 1:Start-up enabled Bit11: 0:Gas injection disabled , 1:Gas injection enabled Bit12: 0:Hot valve disabled , 1:Hot valve enabled Bit13: 0:Heating elements disabled , 1:Heating elements enabled Bit14: 0:Heat modules disabled , 1:Heat modules enabled Bit15: 0:0:Ventilation only disabled , 1:Ventilation only enabled)";"";"";
"VAR018";3;11;1;"Unit configuration status [2](Bit0: 0:Hour intervals disabled , 1:Hour intervals enabled Bit1: 0:Pumpdown disabled , 1:Pumpdown enabled Bit2: 0:Setpoint variation disabled , 1:Setpoint variation enabled Bit3: - Bit15: Not used)";"";"";
"VAR019";3;12;1;"Unit status (0:ON from keyboard - 1:ON from digital input - 2:ON from hour intervals - 3:ON from supervisor - 4:OFF from alarm - 5:OFF from supervisor - 6:OFF from hour intervals - 7:OFF from digital input - 8:OFF from keyboard - 9:Manual mode)";"";"";
"VAR020";3;13;1;"Unit timer status (0:Unit off - 1:Starting - 2:Heating - 3:Unit start-up - 4:Switching off - 5:Compressor timing - 6:Pump/main fan timing)";"";"";
```

```
"VAR021";3;14;1;"Operating mode (Bit0: 0:summer,1:winter Bit1: 0:OFF FreeCooling/FreeHeating , 1:ON FreeCooling/FreeHeating Bit2: 0:OFF Dehumidification/Humidification , 1:ON Dehumidification/Humidification Bit3: 0:OFF Enthalpy , 1:ON Enthalpy Bit4: 0:OFF Room washing , 1:ON Room washing Bit5: 0:OFF Start-up , 1:ON Start-up Bit5: 0:OFF Ventilation only , 1:ON Ventilation only Bit7-Bit15 not used)";"";"";
"VAR022";3;15;1;"Compressor status 1(Bit0: 0:Configured , 1:Unconfigured Bit1: 0:Disabled , 1:Enabled Bit2: 0:OFF , 1:ON Bit3: 0:Pump-down inactive , 1:Pump-down active Bit4: 0:Alarm inactive , 1:Alarm active Bit5: 0:--- ,1:ON con 3 with 3 steps active Bit6: 0:--- ,1:ON with 2 steps active Bit7: 0:--- ,1:ON with 1 step active Bit8: 0:--- ,1:ON entire Bit9: 0:--- ,1:chiller Bit10: 0:--- ,1:heat pump Bit11: 0:--- ,1:recovery Bit12: 0:--- ,1:defrosting Bit13: Not used Bit14: Not used Bit15: Not used)";"";"";
"VAR023";3;16;1;"Compressor 2 status (see compressor 1 status)";"";"";
"VAR024";3;17;1;"Compressor 3 status (see compressor 1 status)";"";"";
"VAR025";3;18;1;"Compressor 3 status (see compressor 1 status)";"";"";
"VAR026";3;20;1;"N° hours pump (thousands)";"";"";
"VAR027";3;21;1;"N° hours pump";"";"";
"VAR028";3;22;1;"N° hours pump 2 (thousands)";"";"";
"VAR029";3;23;1;"N° hours pump 2";"";"";
"VAR030";3;24;1;"N° hours compressor 1 (thousands)";"";"";
"VAR031";3;25;1;"N° hours compressor 1";"";"";
"VAR032";3;26;1;"N° hours compressor 2 (thousands)";"";"";
"VAR033";3;27;1;"N° hours compressor 2";"";"";
"VAR034";3;28;1;"N° hours compressor 3 (thousands)";"";"";
"VAR035";3;29;1;"N° hours compressor 3";"";"";
"VAR036";3;30;1;"N° hours compressor 4 (thousands)";"";"";
"VAR037";3;31;1;"N° hours compressor 4";"";"";
"VAR038";3;32;1;"Alarm code active (with increased priority)";"";"";
"VAR039";3;34;1;"Request for cold thermoregulator (%)";"";"";
"VAR040";3;35;1;"Active power of cold thermoregulator (%)";"";"";
"VAR041";3;36;1;"Request for hot thermoregulator (%)";"";"";
"VAR042";3;37;1;"Active power of hot thermoregulator (%)";"";"";
"VAR043";3;38;3;"Power limitation in summer mode (%)";"0";"0";
"VAR044";3;39;3;"Power limitation in winter mode (%)";"0";"0";
"VAR045";3;73;3;"Monday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR046";3;74;3;"Tuesday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR047";3;75;3;"Wednesday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR048";3;76;3;"Thursday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR049";3;77;3;"Friday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR050";3;78;3;"Saturday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR051";3;79;3;"Sunday hour intervals (0:not used - 1:Intervals 'A' - 2:Intervals 'B')";"0";"";
"VAR052";3;80;3;"Unit status in hour interval 1 'A' (0:Lavaggio - 1:Spenta - 2:Regolazione - 3:Regime)";"";"";
"VAR053";3;81;3;"End of hour interval 1 'A' (hours)";"0";"23";
"VAR054";3;82;3;"End of hour interval 1 'A' (minutes)";"0";"59";
"VAR055";3;83;3;"Unit status in hour interval 2 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR056";3;84;3;"End of hour interval 2 'A' (minutes)";"0";"59";
"VAR057";3;85;3;"End of hour interval 2 'A' (hours)";"";"23";
"VAR058";3;86;3;"Unit status in hour interval 3 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR059";3;87;3;"End of hour interval 3 'A' (minutes)";"0";"59";
"VAR060";3;88;3;"End of hour interval 3 'A' (hours)";"";"23";
"VAR061";3;89;3;"Unit status in hour interval 4 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR062";3;90;3;"End of hour interval 4 'A' (minutes)";"0";"59";
"VAR063";3;91;3;"End of hour interval 4 'A' (hours)";"";"23";
"VAR064";3;92;3;"Unit status in hour interval 5 'A' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR065";3;93;3;"Unit status in hour interval 1 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR066";3;94;3;"End of hour interval 1 'B' (hours)";"0";"23";
"VAR067";3;95;3;"End of hour interval 1 'B' (minutes)";"0";"59";
"VAR068";3;96;3;"Unit status in hour interval 2 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR069";3;97;3;"End of hour interval 2 'B' (hours)";"";"23";
"VAR070";3;98;3;"End of hour interval 2 'B' (minutes)";"0";"59";
"VAR071";3;99;3;"Unit status in hour interval 3 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR072";3;100;3;"End of hour interval 3 'B' (hours)";"";"23";
"VAR073";3;101;3;"End of hour interval 3 'B' (minutes)";"0";"59";
"VAR074";3;102;3;"Unit status in hour interval 4 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR075";3;103;3;"End of hour interval 4 'B' (hours)";"";"23";
"VAR076";3;104;3;"End of hour interval 4 'B' (minutes)";"0";"59";
"VAR077";3;105;3;"Unit status in hour interval 5 'B' (0:Wash - 1:Off - 2:Adjustment - 3:On)";"";"";
"VAR078";2;1;3;"Summer temperature set point";"";"";
"VAR079";2;2;3;"Winter temperature set point";"";"";
"VAR080";2;8;3;"Temperature adjustment band summer";"0";"0";
"VAR081";2;9;3;"Temperature adjustment band winter";"0";"0";
"VAR082";2;13;1;"Analogue input B1 ";"";"";
"VAR083";2;14;1;"Analogue input B2 ";"";"";
"VAR084";2;15;1;"Analogue input B3 ";"";"";
"VAR085";2;16;1;"Analogue input B4 ";"";"";
"VAR086";2;17;1;"Analogue input B5";"";"";
"VAR087";2;18;1;"Analogue input B6";"";"";
"VAR088";2;19;1;"Analogue input B7";"";"";
"VAR089";2;20;1;"Analogue input B8";"";"";
"VAR090";2;21;1;"Analogue input B9";"";"";
```

```
"VAR091";2;22;1;"Analogue input B10";"";"";
"VAR092";2;52;3;"Summer temperature set point in hour interval 1 'A'";"";"";
"VAR093";2;53;3;"Winter temperature set point in hour interval 1 'A'";"";"";
"VAR094";2;56;3;"Summer temperature set point in hour interval 2 'A'";"";"";
"VAR095";2;57;3;"Winter temperature set point in hour interval 2 'A'";"";"";
"VAR096";2;60;3;"Summer temperature set point in hour interval 3 'A'";"";"";
"VAR097";2;61;3;"Winter temperature set point in hour interval 3 'A'";"";"";
"VAR098";2;64;3;"Summer temperature set point in hour interval 4 'A'";"";"";
"VAR099";2;65;3;"Winter temperature set point in hour interval 4 'A'";"";"";
"VAR100";2;68;3;"Summer temperature set point in hour interval 5 'A'";"";"";
"VAR101";2;69;3;"Winter temperature set point in hour interval 5 'A'";"";"";
"VAR102";2;72;3;"Summer temperature set point in hour interval 1 'B'";"";"";
"VAR103";2;73;3;"Winter temperature set point in hour interval 1 'B'";"";"";
"VAR104";2;76;3;"Summer temperature set point in hour interval 2 'B'";"";"";
"VAR105";2;77;3;"Winter temperature set point in hour interval 2 'B'";"";"";
"VAR106";2;80;3;"Summer temperature set point in hour interval 3 'B'";"";"";
"VAR107";2;81;3;"Winter temperature set point in hour interval 3 'B'";"";"";
"VAR108";2;84;3;"Summer temperature set point in hour interval 4 'B'";"";"";
"VAR109";2;85;3;"Winter temperature set point in hour interval 4 'B'";"";"";
"VAR110";2;88;3;"Summer temperature set point in hour interval 5 'B'";"";"";
"VAR111";2;89;3;"Winter temperature set point in hour interval 5 'B'";"";"";
```

5.6 Meaning of variables

Analogue variables are expressed with a decimal number (e.g.: 12.0bar -> 120; 33.8°C -> 338)
If a probe is in an alarm condition a value equal to -99.9 is sent.
If a probe or a parameter is not configured a value equal to –88.8 is sent.

6 Interfacing with the LONWORKS system

6.1 Components required

The components required to interface the CLIMAVENETA units fitted with the electronic controller to the LONWORKS system are described below.

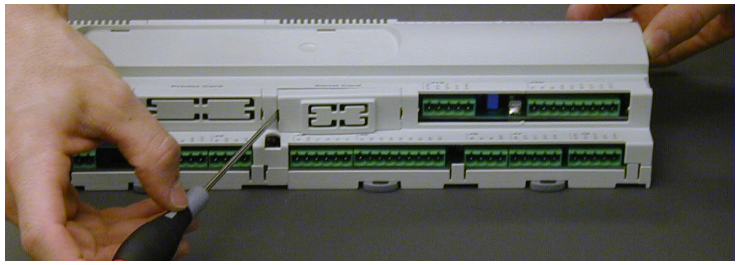
Serial interface card to the LONWORKS system.

Electronic control card.
Already fitted to the unit.
The photos refer to the card with the highest number of terminals, but the procedure is identical for the smaller cards

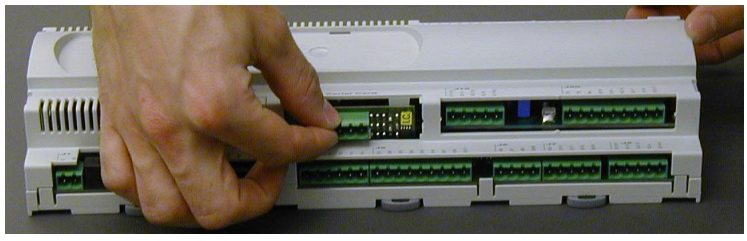
6.2 Installing the serial interface card to the LONWORKS system

The operations required to install and connect the components for interfacing the electronic controller with the LONWORKS system are shown below.
The cards must not be powered during these operations.

Remove the "Serial Card" cover



Fit the LONWORKS system serial interface card (if not present) into the slot.



Put back the cover.

6.3 Setting supervisor parameters

To communicate with the LONWORKS system, set the parameters as shown below.

Enter the programming menu, type in the password and scroll down to the following masks.

On/off enable from digital input N Sum/win enable from digital input N

Enables external signals.

Supervisor enable : Enabled

Communication towards a supervisor system must be enabled.

On/off enable from Supervisor Y Summer/winter enable from Supervisor Y

Selects the on/off status and summer/winter switchover of the unit through a supervision system.
Supervisor enables must be set as shown to the left:
- On/off enable: **Yes**
- Summer/winter enable: **Yes** (only for units fitted with the winter mode)

Supervisor settings LonWorks protocol Speed 4800 baud Unit ID 001

The supervisor connection parameters must be set as shown to the left.
- Protocol: **LonWorks**
- Communication speed: 4800 **baud**
- Unit ID: **001**

6.4 Setting up the supervisor network

The supervisor network is set up by LONWORKS staff.

6.5 Programming the LONWORKS system serial interface card

The reference database for systems using the LONWORKS networks is shown below:

Addr.	Type	NV type	Flow	Description
001	A	105	IN / OUT	Summer temperature set point
002	A	105	IN / OUT	Winter temperature set point
001	B	95	OUT	Status of unit (0:Off - 1:On)
002	B	95	OUT	Summer/winter status of unit (0:Cooling; 1:Heating)
007	B	95	IN / OUT	On/Off command from supervisor (0:Off - 1:On)
008	B	95	IN / OUT	Summer/winter command (0:summer; -1:winter)
003	I	8	OUT	Software version
005	I	8	OUT	Type of unit configuration (WATER SCREW 0:30; W3/W310 0:40 - 1:42 - 2:44 - 3:45 - 4:46 - 5:47 - 6:48 - 7:49; AIR3000 0:60 - 1:62 - 2:68 - 3:69)
006	I	8	OUT	N° circuits
007	I	8	OUT	Configuration of number of compressors or motors
008	I	8	OUT	N° steps
009	I	8	OUT	Type of compressors (1:Hermetic - 2:Semi-hermetic - 3:Screw - 301 - 601 - 901)

Addr.	Type	NV type	Flow	Description
010	I	83	OUT	Unit configuration status [1] (Bit0: 0:Heat pump disabled, 1:Heat pump enabled Bit1: 0:Step, 1:Standard Bit2: 0:Input, 1:Output Bit3: 0:FreeCooling disabled, 1:FreeCooling enabled Bit4: 0:FreeHeating disabled, 1:FreeHeating enabled Bit5: 0:Dehumidification disabled, 1:Dehumidification enabled Bit6: 0:Humidification disabled, 1:Humidification enabled Bit7: 0:Summer enthalpy disabled, 1:Summer enthalpy enabled Bit8: 0:Winter enthalpy disabled, 1:Winter enthalpy enabled Bit9: 0:Room washing disabled, 1:Room washing enabled Bit10: 0:Start-up disabled, 1:Start-up enabled Bit11: 0:Gas injection disabled, 1:Gas injection enabled Bit12: 0:Hot valve disabled, 1:Hot valve enabled Bit13: 0:Heating elements disabled, 1:Heating elements enabled Bit14: 0:Heat modules disabled, 1:Heat modules enabled Bit15: 0:Ventilation only disabled, 1:Ventilation only enabled)
011	I	83	OUT	Unit configuration status [2] (Bit0: 0:Hour intervals disabled, 1:Hour intervals enabled Bit1: 0:Pumpdown disabled, 1:Pumpdown enabled Bit2: 0:Setpoint modification disabled, 1:Setpoint modification enabled Bit 3: 0:air-condensing, 1:water-condensing Bit3: - Bit15: Not used)
012	I	83	OUT	Unit status (0:ON from keyboard - 1:ON from digital input - 2:ON from hour intervals – 3:ON from supervisor - 4:OFF from alarm - 5:OFF from supervisor - 6:OFF from hour intervals – 7:OFF from digital input - 8:OFF from keyboard - 9:Manual mode)
013	I	83	OUT	Unit timer status (0:Error - 1:Starting - 2:heating - 3:Unit start-up - 4:Switching off - 5:Compressor timing - 6:Pump/main fan timing)
014	I	83	OUT	Operating mode (Bit0: 0:summer,1:winter Bit1: 0:OFF FreeCooling/FreeHeating, 1:ON FreeCooling/FreeHeating Bit1: 0:OFF Dehumidification/Humidification, 1:ON Dehumidification/Humidification Bit3: 0:OFF Enthalpy, 1:ON Enthalpy Bit4: 0:OFF Room washing, 1:ON Room washing Bit5: 0:OFF Start-up, 1:ON Start-up Bit6: 0:Ventilation only OFF, 1:Ventilation only ON Bit7-Bit15 not used)
015	I	83	OUT	Compressor 1 or Motor status (Bit0: 0:Configured, 1:Unconfigured Bit1: 0:Disabled, 1:Enabled Bit2: 0:OFF , 1:ON Bit3: 0:Pump-down inactive, 1:Pump-down active Bit4: 0:Alarm inactive, 1:Alarm active Bit5: 0:--- ,1:ON with 3 steps active Bit6: 0:--- ,1:ON with 2 steps active Bit7: 0:--- ,1:ON with 1 step active Bit8: 0:--- ,1:ON entire Bit9: 0:--- ,1:chiller Bit10: 0:--- ,1:heat pump Bit11: 0:--- ,1:recovery Bit12: 0:--- ,1:defrosting Bit13: 0:--- ,1:FreeCooling Bit14: Not used Bit15: Not used)
016	I	83	OUT	Compressor 2 status (see compressor 1 status)
017	I	83	OUT	Compressor 3 status (see compressor 1 status)
018	I	83	OUT	Compressor 4 status (see compressor 1 status)
032	I	8	OUT	Alarm code active (with higher priority)
034	I	81	OUT	Request for cold thermoregulator (%)
035	I	81	OUT	Active power of cold thermoregulator or motor speed (%)
036	I	81	OUT	Request for hot thermoregulator (%)
037	I	81	OUT	Active power of hot thermoregulator or motor speed (%)

Addr.	Type	NV type	Flow	Description
038	I	81	IN / OUT	Cold thermoregulator limitation (%)
039	I	81	IN / OUT	Hot thermoregulator limitation (%)

6.6 Meaning of variables

Analogue variables are expressed with a decimal number (e.g.: 12.0bar -> 120; 33.8°C -> 338)
If a probe is in an alarm condition a value equal to -99.9 is sent.
If a probe or a parameter is not configured a value equal to –88.8 is sent.

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