

OPERATING AND COMMISSIONING INSTRUCTIONS



OPERATING AND COMMISSIONING INSTRUCTIONS

Table des matières

I.	RECEIVING THE EQUIPMENT.....	4
I.1.	Checks on reception.....	4
I.2.	Unpacking.....	4
I.3.	Storing.....	5
I.4.	End of life.....	5
II.	INSTALLATION.....	5
II.1.	Handling.....	5
II.2.	Space required.....	5
II.2.a.	NEOTIME.....	5
II.2.b.	CARMA.....	Erreur ! Signet non défini.
II.1.	Installation.....	7
III.	GENERAL FONCTIONNING.....	8
III.1.	GENERAL.....	8
III.2.	ANALYSE FONCTIONNELLE.....	8
REGULATION MODE.....		9
III.3.....		9
III.3.a.	SEASON :.....	9
III.3.b.	ECO :.....	9
III.3.c.	DIVA.....	9
III.3.d.	LOBBY® :.....	9
III.3.e.	MAC2® : (impossible with version FREETIME 500-800 et HEXAMOTION 05-08).....	10
III.3.f.	QUATTRO® : (impossible with version FREETIME 500-800 et HEXAMOTION 05-08).....	10
III.4.	COMPOSITION.....	10
III.4.a.	NEOTIME.....	10
III.4.b.	CARMA.....	Erreur ! Signet non défini.
III.5.	ELEMENTS IN THE REGULATION.....	14
III.5.a.	NEOTIME.....	14
III.5.b.	CARMA.....	Erreur ! Signet non défini.
IV.	ELECTRIC WIRING.....	16
IV.1.	POWER SUPPLY.....	16
IV.1.a.	NEOTIME.....	16
IV.1.b.	CARMA.....	Erreur ! Signet non défini.
IV.2.	CONTROL WIRING (SEASON).....	16
IV.2.a.	Remote alarm.....	16
IV.2.b.	External 0-10V (potentiometer).....	17
IV.2.c.	Bypass.....	17
IV.2.a.	Automatic deicing.....	17
IV.3.	CONTROL WIRING (ECO/DIVA/LOBBY/MAC2/QUATTRO).....	18
IV.3.a.	Temperature sensor.....	18
IV.3.b.	Terminal blocks.....	18
IV.4.	Electrical wiring and funtionong of the plate exchanger.....	19
IV.5.	Automatic deicing.....	20
IV.6.	Filters pressure switches wiring and connection.....	20
IV.7.	Fan switches wiring and connection.....	20
.....		21
IV.8.	Pressure transmitter LOBBY® MAC2® QUATTRO® winring and connection.....	21

OPERATING AND COMMISSIONING INSTRUCTIONS

IV.9.	Motors wiring.....	21
IV.10.	CO2 transmitter wiring	21
	21
IV.11.	Night Cooling.....	21
IV.12.	Hot water / cool water or changeover water coil	22
IV.13.	DX battery (cold or reversible).....	23
IV.14.	Electrical Battery.....	23
IV.15.	Deicing battery.....	23
IV.16.	Fire funtion.....	24
IV.17.	Dehumidification function	24
IV.18.	MODBUS / WEB / BACNET wiring.....	25
IV.19.	Repeater wiring.....	25
IV.20.	LON.....	26
V.	SETTINGS	26
V.1.	Display	26
V.2.	Exemple of setting.....	27
V.3.	Standard settings (opérateur menu)	27
V.3.a.	Running mode menu	28
V.3.b.	Temperature menu	29
V.3.c.	Ventilation menu.....	29
V.3.d.	Timer menu	30
V.4.	Operator parameters modification (password 3333 required).....	31
V.4.a.	Dates and hours clocks setting.....	31
V.4.b.	Speed /pressure modification in LS and HS	31
V.4.c.	Temperature setpoint modification.....	32
V.4.d.	Forced stop of the unit or forced start LS or HS on the remote control	32
V.4.e.	Choice of language	32
V.5.	Intermediate settings (service level).....	32
V.5.a.	Menu configuration en accès service	33
V.6.	Modification of the services parameters (password 2222).....	33
V.6.a.	Regulation mode of the unit	33
V.6.b.	Overventilation parameters.....	33
V.6.c.	CO2 setpoint for DIVA / QUATTRO option.....	33
V.7.	Administrator settings.....	34
V.7.a.	Configuration menu with admin level access	34
V.8.	Modification of the service parameters	35
V.8.a.	MODBUS.....	35
V.8.b.	Repetitors and EXO communication	35
V.8.c.	WEB Communication	35
V.8.d.	BACNET IP Communication with BASC type	36
V.8.e.	Communication LON (si CORRIGO avec option LON)	36
V.8.f.	Fire function activation	36
V.8.g.	Activation of the function dehumidification.....	37
VI.	REPAIR	37
VI.1.	Differnet type of defaults.....	37
VI.2.	List of alarms	37
VI.3.	Acknowledge the default « timer service »	39
VII.	MAINTENANCE	39

OPERATING AND COMMISSIONING INSTRUCTIONS

VII.1.	Obligatory maintenance	39
VII.2.	Battery replacement	40
VIII.	ANNEXES	41
VIII.1.	Control scheme	41
VIII.2.	Motor wiring NEOTIME 600-900	42
VIII.3.	Moto wiring NEOTIME 1300-1800-2500	43
VIII.4.	Motor wiring CARMA 9008	44
VIII.5.	Motor wiring CARMA 9010-9070	45
VIII.6.	Curves NEOTIME	46
VIII.7.	Curves CARMA	47
VIII.8.	Table MODBUS et BACNET	51
VIII.1.	Table MODBUS et BACNET	51
IX.	NOTES	53

SAFETY INSTRUCTIONS

In compliance with the current norms, the machine should be installed only by a technical person qualified for this type of work.

Use the required personal protection devices so as to avoid injuries caused by electrical and mechanical hazards (injuries by touching panels, sharp edges, etc.). Use EN170 protective eyewear and ear protection.

Do not use the unit for an other used which it designed. This unit can't be use for extract or supply dangerous air.

Move the machine as given in chapter *handling*.

Grounding is carried out in compliance with current standards. Never start the device without grounding

Before any intervention ensure that device is powered off and wait for complete stop of every rotative component such as damper, fan, rotative exchanger...

During device is running inspection doors must be mounted and closed.

Start is to be done only with padlockable swith.

Do not shut off or short circuit the safety and control equipment.

During interventions, be carefull with hot components such as hot water coil or electric resistances.

The machine should be installed in compliance with fire norms.

The waste must be disposed of in compliance with the current standards. No packaging should be discarded into the environment.

We disclaim any responsibility for any damages resulting from wrong utilisation of the equipment, reparation, modification or non compliance of these instructions.

I. RECEIVING THE EQUIPMENT

The units are delivered fixed on longitudinal members or on blocks then wrapped in plastic film.

I.1. Checks on reception

When the equipment is received, the state of the packaging and the equipment must be checked. In the event of damage, make an accurate note of any problems on the carrier's delivery note

I.2. Unpacking

When the equipment is unpacked, check the following:

- The total number of packages is present.
- All accessories are present (dampers, roof, electric switchgear, etc.). After unpacking the equipment, the waste must be disposed of in compliance with the current standards. No packaging should be discarded into the environment

OPERATING AND COMMISSIONING INSTRUCTIONS

I.3. Storing

The equipment must be stored in shade, in a dry place, at a temperature between -20°C and 40°C. The packaging can't be considered sufficient for an external storage.

I.4. End of life

In accordance with the partnerships with the compagny ECOLOGIC. CALADAIR fulfills the obligations to finance the collection, removal and treatment of Waste Electrical and Electronic Equipment.

At the end of the life of this equipment, the user contacts the company ECOLOGIC who will propose a collection solution or a place of deposit for the product.

Contacts for pick-up requests:

E-mail: operations-pro@ecologic-france.com

Phone: 01 30 57 79 14

Internet: www.e-dechet.com

II. INSTALLATION

II.1. Handling

The units must only be moved in their installation position.

If the device is handled using a fork-lift truck, ensure this supports the load-bearing structure

If the device is moved using a crane, use four cables of identical lengths. These must be at least as long as the greatest distance between two fastening points.

If L + W + H > 5m P then the case must be lifted using a lifting beam

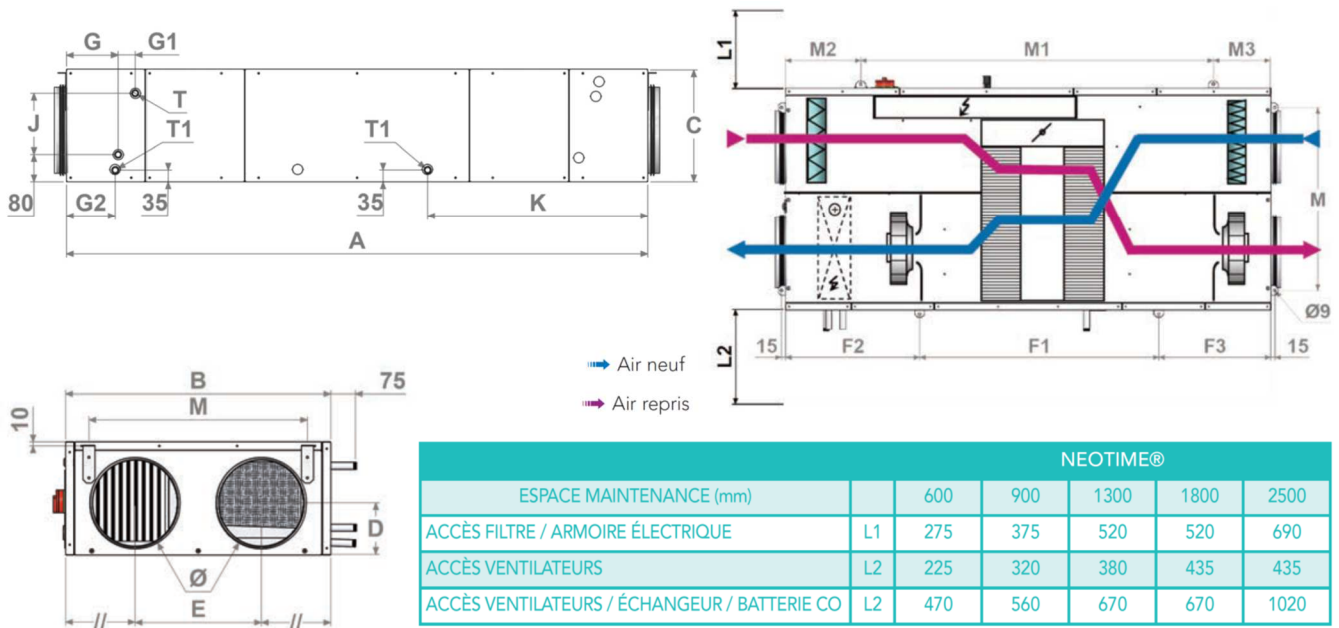
II.2. Space required

Generally speaking, it is desirable to provide access space of at least the width of the unit on the each side for maintenance. These units require a siphon and must be installed at a sufficient height to allow this to be installed.

II.2.a. NEOTIME

Modèle NEOTIME®	Ø	A	B	C	D	E	F1	F2	F3	G	G1	G2	J	K	M	M1	M2	M3	T	T1	SEASON	FIRST SMART	PREMIUM BE INFINIT BE	PREMIUM CO INFINIT CO
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg	Kg	Kg	Kg
600	250	1700	780	330	160	370	-	-	-	150	50	145	170	645	640	-	-	-	1/2"	1/2"	120	127	130	135
900	315	2020	965	415	210	460	-	-	-	150	50	145	250	780	750	-	-	-	1/2"	1/2"	180	190	195	200
1300	355	2190	1220	415	190	600	795	735	660	430	50	425	250	880	950	1170	510	510	1/2"	1/2"	255	265	270	275
1800	400	2275	1220	495	245	600	915	725	635	430	50	425	330	885	950	1115	580	580	1/2"	1/2"	275	285	290	295
2500	400	2395	1740	495	235	910	840	785	770	430	50	425	330	985	1350	1235	580	580	3/4"	1/2"	380	390	400	405

OPERATING AND COMMISSIONING INSTRUCTIONS



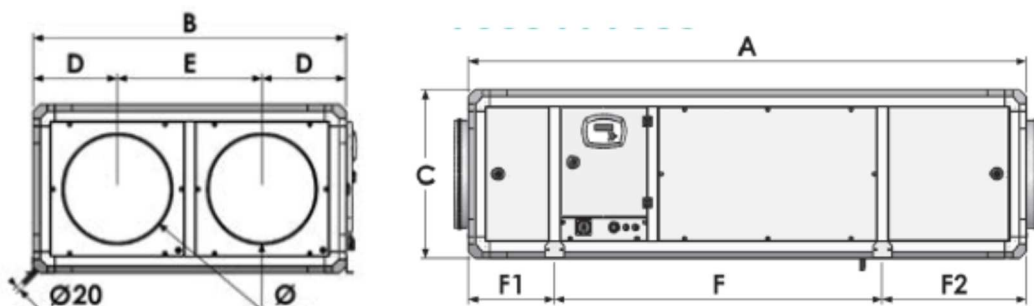
II.2.b. CARMA

Modèle CARMA®	Ø mm	A mm	B mm	C mm	D mm	E mm	F mm	F1 mm	F2 mm	G mm	J mm	K mm	T Ø	SEASON kg	FIRST kg	SMART kg	PREMIUM kg	INFINITE kg
9008	315	2010	915	505	255	405	1097	362	517	500	245	540	1/2	210	215	217	218	220
9010	315	2010	915	505	255	405	1097	362	517	500	245	540	1/2	215	220	222	223	225
9016	400	2230	1115	605	305	505	1261	362	607	565	345	690	1/2	295	295	298	300	303
9023	450	2345	1315	705	355	605	1376	362	607	565	445	690	3/4	390	395	400	402	407
9035	500	2625	1515	805	405	705	1520	450	655	640	545	740	3/4	545	550	554	560	564
9048*	630	2970	1715	1030	455	805	1677	535	758	685	645	840	1"	715	720	727	735	742
9070	voir côtes ci-dessous												1"	895	900	915	930	945

* Disponible uniquement en configuration verticale.

II.2.b.1. Horizontal configuration (L et P)

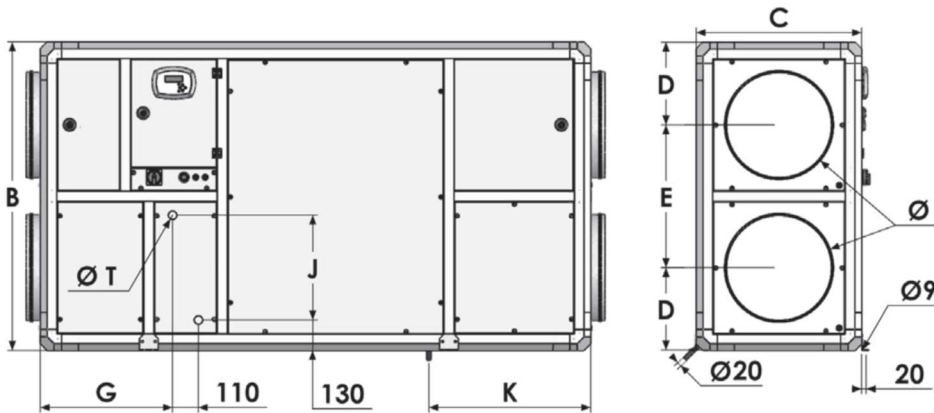
Provide access cote C on each side



OPERATING AND COMMISSIONING INSTRUCTIONS

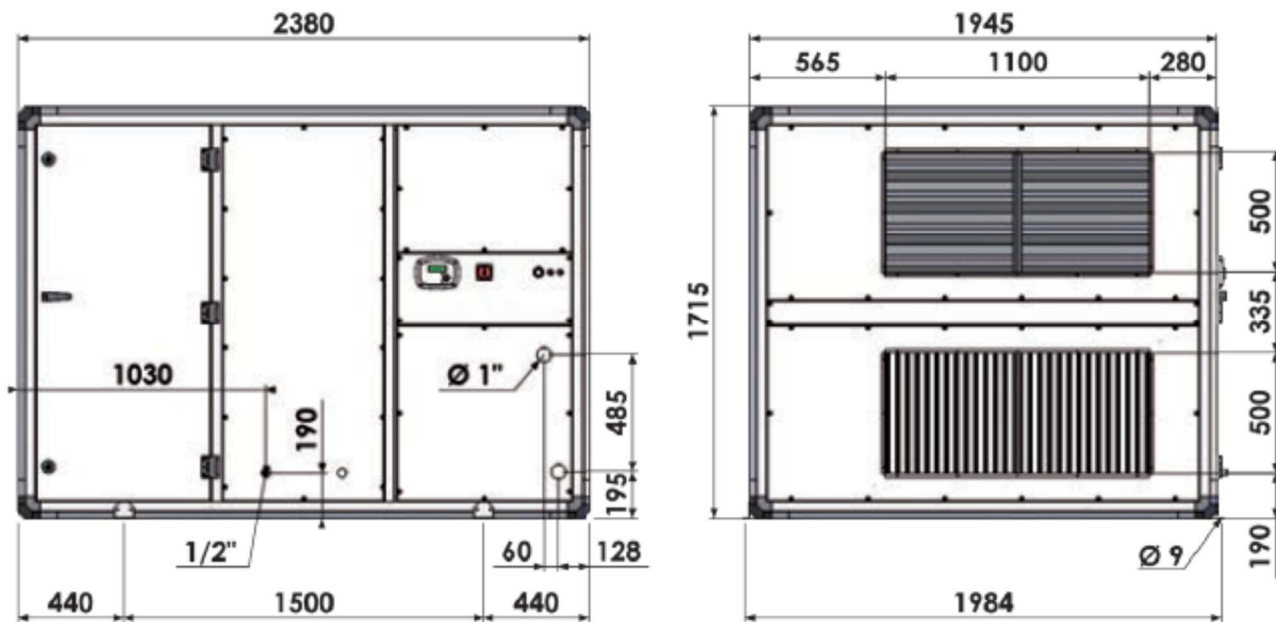
II.2.b.2. Vertical configuration (W et Y)

Provide more than 300mm at the rear of the unit to connect condensate pipe.
Provide access cote C on front side



II.2.b.3. Taille 9070

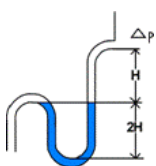
Provide more than 1100mm on front side



II.1. Installation

The unit must be suspended or laid on a sufficiently rigid and flat surface (use vibration mounts if necessary). For the HVAC connection, select duct sections based on dimensions of the flexible bands that should be properly stretched.

Install the unit such that bad weather or ambient temperature cannot damage the internal items of the unit during installation as well as when used later (possibly provide a protective cap).



Provide a siphon on each condensate drainage pipe. A siphon can only be used for one drainage system.
Note: the siphon must be connected in accordance with Best Practices in order that the condensates are removed as efficiently as possible.

The height H must be at least equal to the maximum internal negative pressure of the unit (Dp in mm).

Example : Dp = 500 Pa @ 50 mm CE

⇒ H > 50 mm 2H > 100 mm

For CARMA range, provide a slope of 2 to 3% for the removal of the condensate in direction of the width

OPERATING AND COMMISSIONING INSTRUCTIONS

Installation of the units in ceiling : units can be suspended with threaded rods. They can also be laid on a frame, suspended on the building structure, within the load capacity of the frame (frame in charge of the installator).

Outdoor installation of the unit (CARMA only): For raising the unit above the ground (protection from water), a set of feet may optionally be supplied (PCB). A roof (DPC) as well as grated bevelled nozzles (BBG) or rain cowls (AGC) must also be provided if necessary (available as options).



For NEOTIME LOBBY :Brancher la prise de pression de façon à ce qu'elle ne soit pas perturbée par le flux d'air Make sure to connect the pressure tube to the supply duct via the pressure socket located between extract and supply connection. Connect the pressure tube so that it is not disturbed by the air flow

III. GENERAL FONCTIONNING

III.1. GENERAL

NEOTIME® and CARMA® ranges are a programme of double-flow units with high efficiency recovery, self-regulating recovery meant for office and industrial installations. Its performance is greater than 90%.

SEASON : Manages the fans by potentiometers and Bypass. No battery can be associated.

FIRST : Economical management of fans and Bypass. Allows managing a non-integrated changeover battery or (hot water battery non-integrated or and cold water battery non integrated) If required, it can also manage a non-integrated electric battery and a non-integrated cold water battery.

PREMIUM CO (NEOTIME only) : Economical management of the fans, Bypass and a changeover integrated battery.

PREMIUM BC (CARMA only): Economical management of the fans, Bypass and a integrated hot water battery. If required, it can also manage a non-integrated cold water battery.

PREMIUM BE : Economical management of the fans, Bypass and a integrated electrical battery. If required, it can also manage a non-integrated cold water battery.

INFINIT CO (NEOTIME only) : Economical management of the fans, Bypass, an integrated changeover battery and an integrated defrost battery.

INFINITE BC (CARMA only): Economical management of the fans, Bypass and a integrated hot water battery and an integrated defrost battery. If required, it can also manage a non-integrated cold water battery.

INFINIT BE : Economical management of the fans, Bypass and a integrated electrical battery and an integrated defrost battery. If required, it can also manage a non-integrated cold water battery.

SMART : Economical management of the fans, Bypass and an integrated defrost battery. If required, it can also manage a non-integrated cold and/or hot water battery.

III.2. ANALYSE FONCTIONNELLE

Except SEASON version

Starting sequence :

- The supply air fan starts and the fresh air register opens.
- The extract air fan starts and the extract air register opens
- Temperature regulation starts defined in the regulation mode set. Electric heater (if set), starts with airflow controller. Pumps start.
- After a defined time, alarms management function is activated. Installation is in normal mode.

Start conditions :

Installation starts when one of these conditions are filled:

- Timer normal or reduced are activate
- Manual start is activated with controller
- One of the digital input for extended operation is activated.

Stop sequence :

Installation stops with following process:

- Deactivation of the alarm management function.
- Electric heater stops (if set).

OPERATING AND COMMISSIONING INSTRUCTIONS

- After a defined time (individually defined for each fan) fans are stopped.
- Supply and return air registers are closed .
- Signals toward actuator are reset and pumps closed

Stop conditions :

Installation stops when one these conditions are filled:

- Timers normal or reduced are not activated and digital input for extended operation is not activated.
- Digital Input for External stop is activated.
- Manual stop is activated with controller
- An alarm configured with stop function is activated. Installation will automatically start when alarm is reset.

III.3.REGULATION MODE

III.3.a. SEASON :

1 Adjustable speeds from potentiometers

Each fan is individually adjustable from integrated potentiometer.

Possibility to add a remote forced stop (in standard on supply contactor (not supplied))

III.3.b. ECO :

1 or 2 speeds adjustable with display unit / remote controller / external command « MODE VENTIL (%) »

Adjustment of a minimum speed (LS - 1/2) and a maximum speed (HS - 1/1) in %.

Fitted with a factory turned clocked set :

- (HS - 1/1) from 06h00 to 22h00
- (LS - 1/2) from 22h00 to 06h00

Possibility of adding a remote forced start (LS - 1/2) or (HS - 1/1) (free voltage contact NO)

Possibility of adding a remote forced stop (free voltage contact NO)

III.3.c. DIVA

Proportional ventilation between two airflows (LS/HS) with CO2 management

« **AUTO CO2 MODE** »

Adjustment of a minimum speed (LS - 1/2) and a maximum speed (HS - 1/1) in %.

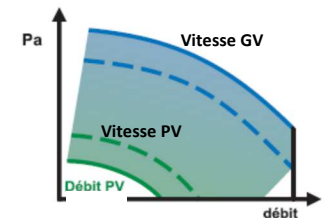
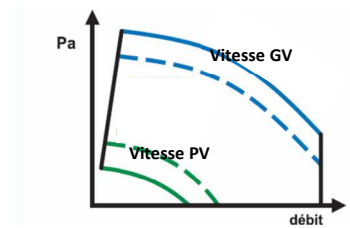
CO2's setpoint is set in factory to 1000ppm (compliant to French RT2012).

Variation between (LS - 1/2) and (HS - 1/1) is managed from CO2 level

Fitted with a factory turned clocked set in (LS - 1/2) from 00h00 to 24h00.

Possibility of adding a remote forced start (LS - 1/2) or (HS - 1/1) (free voltage contact NO)

Possibility of adding a remote forced stop (free voltage contact NO)



Nota : In order for the CO2 regulation works, installation must follow these constraints :



- Clock (HS - 1/1) is not activated (normal speed timer)
 - Clock (LS - 1/2) is activated (reduced speed Timer)
- External operation (HS - 1/1) and external stop are not activated

III.3.d. LOBBY® :

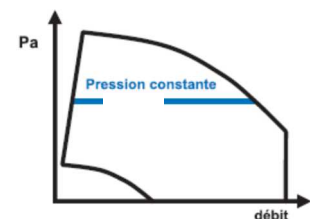
Constant pressure ventilation. (Pa) « CONSTANT PA MODE»

Constant pressure adjustment (Pa).

Fitted with a factory turned clocked set in (LS - 1/2) from 00h00 to 24h00.

Possibility of adding a remote forced start (LS - 1/2) (free voltage contact NO)

Possibility of adding a remote forced stop (free voltage contact NO)



OPERATING AND COMMISSIONING INSTRUCTIONS

III.3.e. MAC2® : (impossible with version FREETIME 500-800 et HEXAMOTION 05-08)

1 or 2 constant air flow (m³/h) adjustable « MODE CONSTANT M3/H »

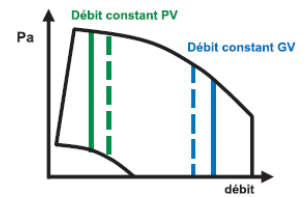
Adjustment of a minimum constant air flow (LS - 1/2) and a maximum air flow (HS - 1/1) in m3/h.

Fitted with a factory turned clocked set :

- (HS - 1/1) from 06h00 to 22h00
- (LS - 1/2) from 22h00 to 06h00

Possibility of adding a remote forced start (LS - 1/2) or (HS - 1/1) (free voltage contact NO)

Possibility of adding a remote forced stop (free voltage contact NO)



III.3.f. QUATTRO® : (impossible with version FREETIME 500-800 et HEXAMOTION 05-08)

Proportional ventilation between two constant airflows (m³/h) adjustable with CO2 management

Adjustment of a minimum constant air flow (LS - 1/2) and a maximum air flow (HS - 1/1) in m3/h.

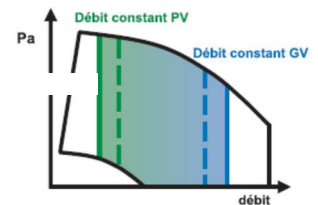
CO2's setpoint is set in factory to 1000ppm (compliant to French RT2012).

Variation between (LS - 1/2) and (HS - 1/1) is managed from CO2 level

Fitted with a factory turned clocked set in (LS - 1/2) from 00h00 to 24h00.

Possibility of adding a remote forced start (LS - 1/2) or (HS - 1/1) (free voltage contact NO)

Possibility of adding a remote forced stop (free voltage contact NO)



Nota : In order for the CO2 regulation works, installation must follow these constraints :

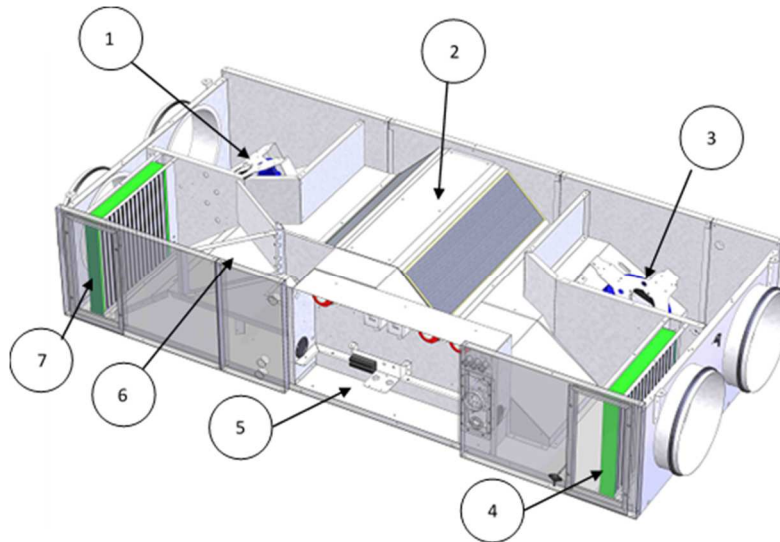


- Clock (HS - 1/1) is not activated (normal speed timer)
- Clock (LS - 1/2) is activated (reduced speed Timer)
- External operation (HS - 1/1) and external stop are not activated.

III.4. COMPOSITION

III.4.a. NEOTIME

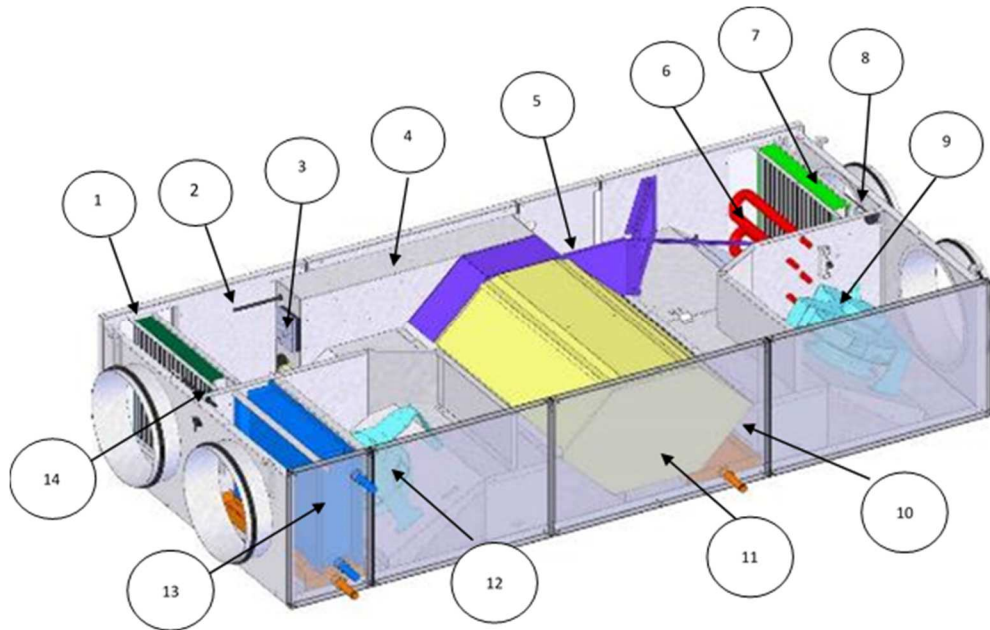
III.4.a.1. SEASON



N°	Détails
1	Extract Air fan (VAR/VR)
2	Plate exchanger + condensate parts
3	Supply air fan (VAS/VS)
4	Extract filter FR
5	Control cabinet
6	Bypass + actuator
7	Supply filter FS + filter pressure switch DEPFS

OPERATING AND COMMISSIONING INSTRUCTIONS

III.4.a.2. ECO-DIVA

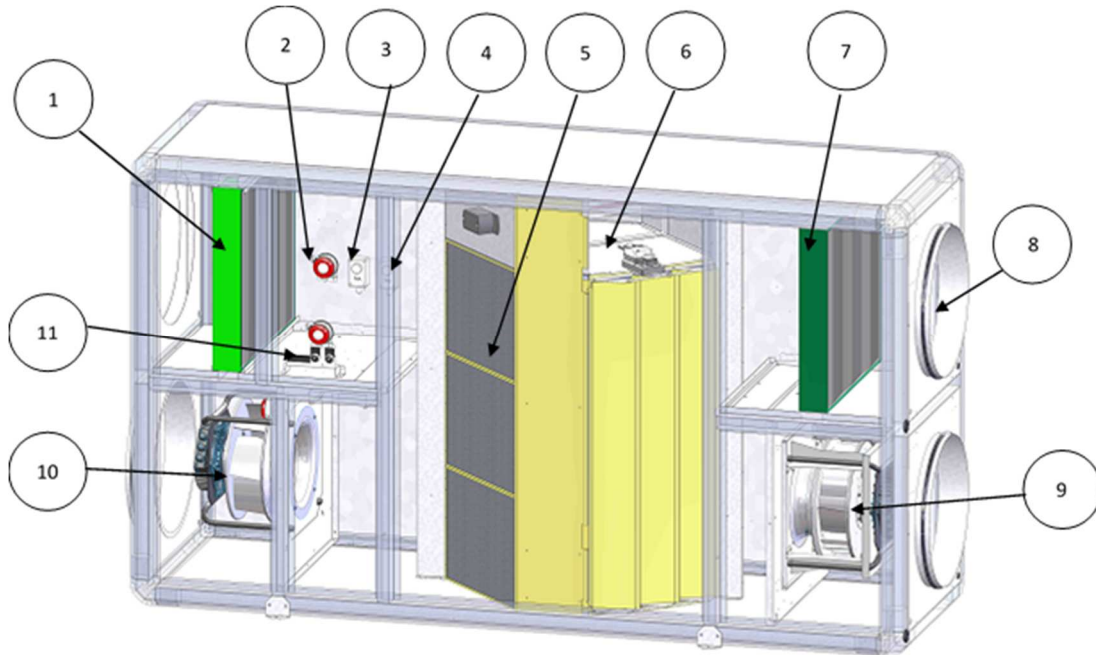


N°	Détails
1	Extract filter FR
2	Extract temperature sensor SRG
3	CO2 trnsmmitter
4	Control cabinet
5	Bypass + Actuator
6	Deicing battery (version SMART et INFINITE) witch deicing temperature sensor SBD and security thermostat THSD
7	Supply filter FS + filter pressure switch DEPFS
8	Outdoor temperature sensor SEG
9	Extract air fan (VAR/VR)
10	Deicing temperature sensor SDG
11	Echangeur + Condensate parts
12	Supply air fan (VAS/VS)
13	Changeover battery with condensate parts (version CO) ou electrical battery (version BE)
14	Supply température sensor SSG

OPERATING AND COMMISSIONING INSTRUCTIONS

III.4.b. CARMA

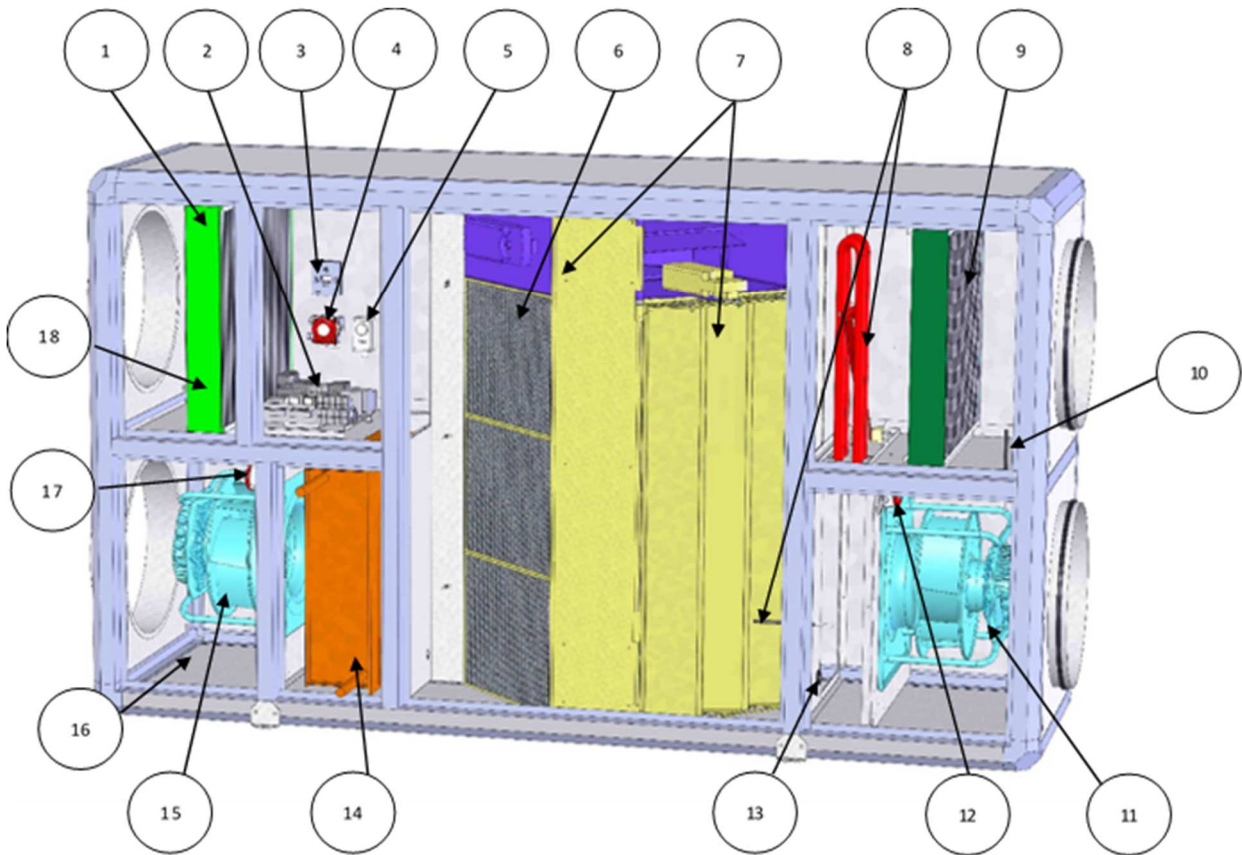
III.4.b.1. SEASON



N°	Détails
1	Extract filter FR
2	Supply pressure switch DEP S
3	TH1 Winter setpoint Thermostat (closing Bypass) (+18°C)
4	TH2 Summer setpoint Thermostat (closing Bypass) (+24°C)
5	Plate exchanger
6	Bypass
7	Supply filter FS + filter pressure switch DEPFS
8	Deicing thermostat (+5°C)
9	Extract air fan (VAR/VR)
10	Supply air fan (VAS/VS)
11	Control cabinet

OPERATING AND COMMISSIONING INSTRUCTIONS

III.4.b.2. ECO DIVA MAC2 QUATTRO



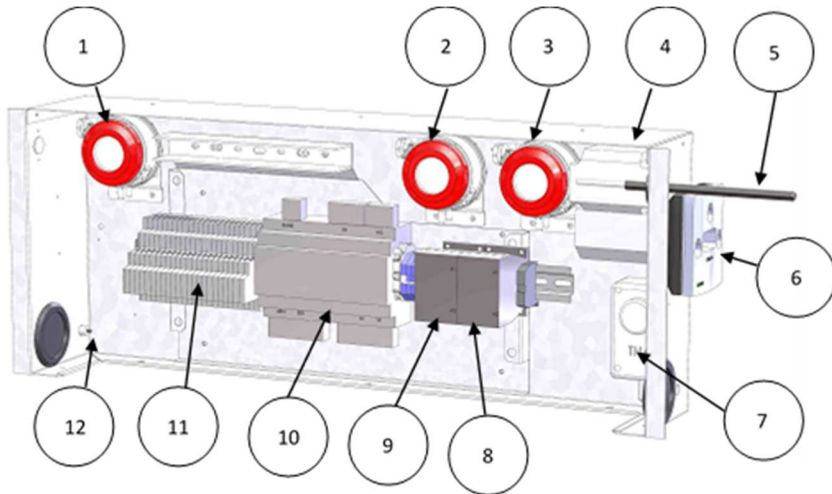
N°	Détails
1	Pressure filter FR
2	Control cabinet
3	CO2 Transmitter
4	Supply pressure switch DEP S (version ECO-DIVA) Supply pressure transmitter TRPR (version LOBBY MAC2 QUATTRO)
5	Deicing thermostat THA (version BC) or overheat security thermostat THS (version BE)
6	Plate exchanger
7	Bypass
8	Deicing battery (version SMART et INFINITE) with deicing temperature sensor SBD and overheat security thermostat THSD
9	Supply filter FS + filter pressure switch DEPFS
10	Outdoor temperature sensor SEG
11	Extract air fan (VAR/VR)
12	Extract pressure switch DEP R (version ECO-DIVA) Extract pressure transmitter (version LOBBY MAC2-QUATTRO)
13	Deicing temperature sensor SDG
14	Hot water coil (version BC) ou electrical coil (version BE)
15	Supply air fan (VAS/VS)
16	Supply temperature sensor SSG
17	Supply pressure transmitter TRPS (version LOBBY)
18	Extract pressure transmitter SRG

OPERATING AND COMMISSIONING INSTRUCTIONS

III.5. ELEMENTS IN THE REGULATION

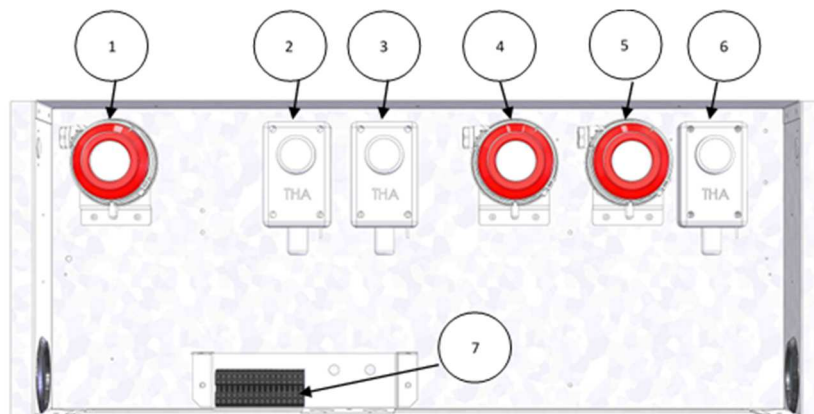
III.5.a. NEOTIME

III.5.a.1. REGULATION ECO/DIVA/LOBBY



N°	Nom	Détails
1	DEPFS	Filter pressure switch
2	DEPS ou TRPS	Supply pressure switch or supply pressure transmitter (version LOBBY)
3	DEPR ou TRPR	Extract pressure switch or extract pressure transmitter (version LOBBY)
4	TRAFO	Transformer 230/24V
5	SRG	Extract température sensor
6	CO2	CO2 transmitter (version DIVA)
7	THA	Deicing thermostat (version CO)
8	K1	Heating Electrical battery contactor
9	KD	Deicing electrical battery contactor
10	REGULATEUR	Controller CORRIGO E283W3
11	BORNIER	Terminal blocks
12	THSD	Overheat security thermostat for deicing battery (version SMART et INFINITE)

III.5.a.2. REGULATION SEASON

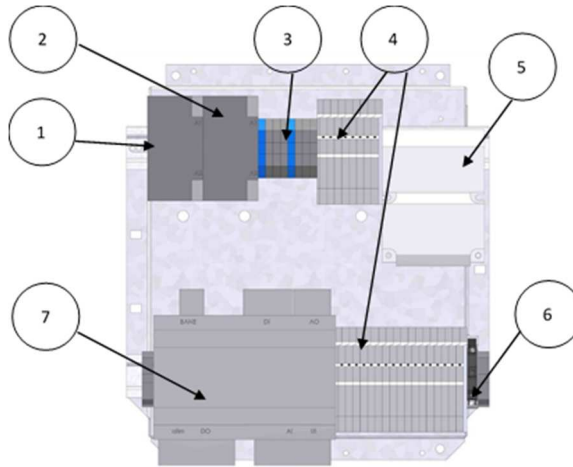


N°	Nom	Détails
1	DEPFS	Filter pressure switch
2	TH1	Winter setpoint Thermostat (closing Bypass) (+18°C)
3	TH2	Summer setpoint Thermostat (closing Bypass) (+24°C)
4	DEPS	Supply pressure switch
5	DEPR	Extract pressure switch
6	TH3	Decing thermostat (+5°C)
7	BORNIER	Terminal blocks

OPERATING AND COMMISSIONING INSTRUCTIONS

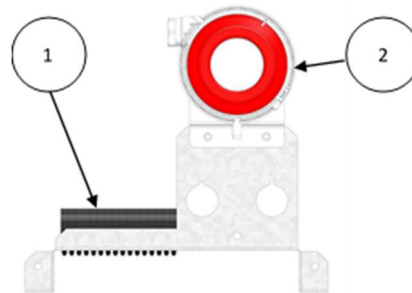
III.5.b. CARMA

III.5.b.1. REGULATION ECO/DIVA/LOBBY/MAC2/QUATTRO



N°	Nom	Détails
1	K1	Heating Electrical battery contactor
2	KD	Deicing electrical battery contactor
3	BORNIER	Fans terminal blocks
4	BORNIER	Terminal blocks
5	TRAFO	Transformer 230/24V
6	BFUS	Fuse terminal blocks
7	REGULATEUR	Controller CORRIGO E283W3

III.5.b.2. REGULATION SEASON



N°	Nom	Détails
1	BORNIER	Terminal blocks
2	DEPR	Extract pressure switch

OPERATING AND COMMISSIONING INSTRUCTIONS

IV. ELECTRIC WIRING

IV.1. POWER SUPPLY

IV.1.a. NEOTIME

Modèle	Puissance				SEASON/FIRST & PREMIUM CO		INFINITE CO & SMART		PREMIUM BE		INFINITE BE	
	moteur électrique (W)	Temp. Utilisation (°C / °C)	Indice de protection Classe	Protection thermique *	Tension alimentation (V / Ph / Hz)	Intensité de protection (A)	Tension alimentation (V / Ph / Hz)	Intensité de protection (A)	Tension alimentation (V / Ph / Hz)	Intensité de protection (A)	Tension alimentation (V / Ph / Hz)	Intensité de protection (A)
600	2x169W	-20/60	IP54/B	PTI	230 / 1 / 50	2,8	230 / 1 / 50	8,2	230 / 1 / 50	8,2	230 / 1 / 50	13,7
900	2x220W	-20/60	IP44/B	PTI	230 / 1 / 50	3,4	230 / 1 / 50	14,3	230 / 1 / 50	11,0	230 / 1 / 50	21,9
1300	2x400W	-20/40	IP44/F	PTI	230 / 1 / 50	8,6	230 / 1 / 50	23,8	230 / 1 / 50	19,5	230 / 1 / 50	34,7
1800	2x400W	-20/40	IP44/F	PTI	230 / 1 / 50	8,6	230 / 1 / 50	24,9	230 / 1 / 50	24,9	400 / 3+N / 50	15,1
2500	2x400W	-20/40	IP44/F	PTI	230 / 1 / 50	8,6	230 / 1 / 50	31,4	230 / 1 / 50	31,4	400 / 3+N / 50	19,5

* PTI : Protection thermique intégrée

IV.1.b. CARMA

Modèle CARMA®	Puissance				FIRST PREMIUM BC & SEASON		INFINITE BC & SMART		PREMIUM BE		INFINITE BE			
	moteur électrique (W)	Temp. Utilisation (°C / °C)	Indice de protection Classe	Protection thermique *	Tension alimentation (V / Ph / Hz)	Intensité de protection (A)	Tension alimentation (V / Ph / Hz)	Intensité de protection (A)	Tension alimentation (V / Ph / Hz)	Modèle	Intensité de protection (A)	Tension alimentation (V / Ph / Hz)	Modèle	Intensité de protection (A)
9008	2x220	-20 / 60	IP44 / B	PTI	230/1/50	3,4	230/1/50	14,3	230/1/50	BE 025	14,3	230/1/50	BE 025	25,2
9010	2x480	-20 / 60	IP54 / B	PTI	230/1/50	4,3	230/1/50	20,6	230/1/50	BE 025	15,2	230/1/50	BE 025	31,5
9016	2x480	-20 / 60	IP54 / B	PTI	230/1/50	4,3	400/3+N/50	11,9	230/1/50	BE 037 400/3+N/50 BE 052	20,6 11,9	400/3+N/50	BE 052	19,5
9023	2x700	-20 / 40	IP54 / B	PTI	230/1/50	6	400/3+N/50	15,7	230/1/50	BE 037 400/3+N/50 BE 067	22,3 15,7	400/3+N/50	BE 067	25,4
9035	2x2500	-20 / 40	IP54 / B	PTI	400/3+N/50	7,7	400/3+N/50	19,6	400/3+N/50	BE 067 BE 137	17,4 27,2	400/3+N/50	BE 067 BE 137	29,3 39,1
9048	2x1950	-20 / 50	IP54 / B	PTI	400/3+N/50	6,3	400/3+N/50	32,3	400/3+N/50	BE 067 BE 137	16 25,8	400/3+N/50	BE 067 BE 137	42 51,8
9070	2x2730	-20 / 60	IP54 / F	PTI	400/3+N/50	8,4	400/3+N/50	44,1	400/3+N/50	BE 105 BE 157	23,6 31,1	400/3+N/50	BE 105 BE 157	29,3 66,9

* PTI : Protection thermique intégrée

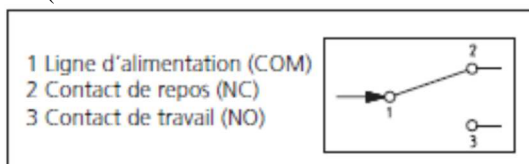
IV.2. CONTROL WIRING (SEASON)

All components were wired in factory (voir chapitre schéma complet)

IV.2.a. Remote alarm

Possibility to connect a remote alarm directly on pressure switch (5A/230VAC max and 4A/24VDC max) :

- DEP S = Supply pressure switch
- DEP R = Extract pressure switch
- DEP FS = Filter pressure switch (For CARMA a NO contact is available on terminal blocks 25-26)

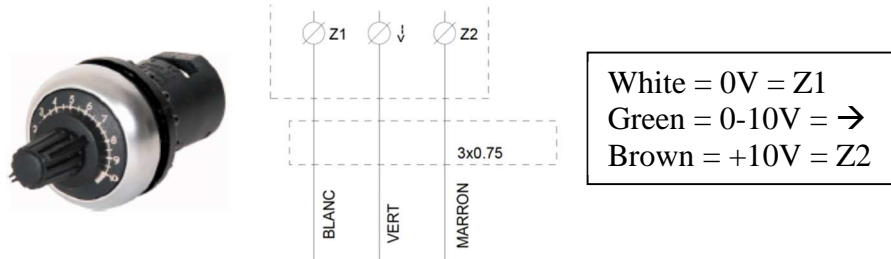


OPERATING AND COMMISSIONING INSTRUCTIONS

IV.2.b. External 0-10V (potentiometer)

You have the possibilities to replace the factory potentiometer by remote potentiometer or external 0-10V. To connect an external components, disconnect wires at the rear of the factory potentiometer and connect it directly on these wires. Pour connecter un élément externe, débrancher les fils à l'arrière des potentiomètres et raccorder vous directement sur ces fils

Actual wiring



IV.2.c. Bypass

Thermostat are factory set :

TH1 = Outside temperature for heat recovery via exchanger (factory setting 18°C)

TH2 = Outside temperature for cool recovery via exchanger (factory setting 24°C)

The bypass is factory wired

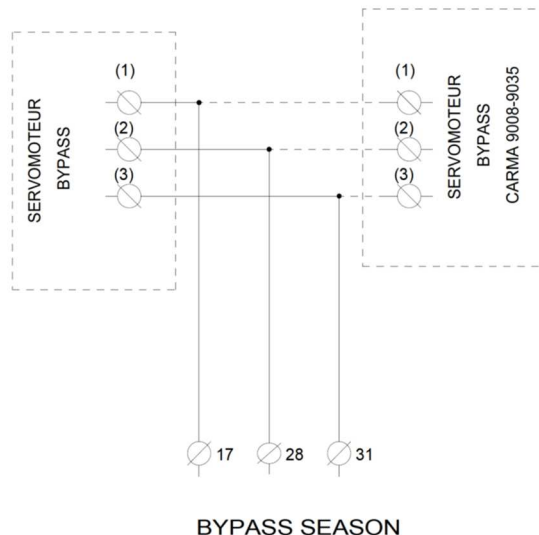
its functioning is automatic automatique thanks to the two thermostat :

Winter : If outside temperature is lower than 18°C (adjustable), the Bypass closes to recover a maximum of calories.

Summer :

COOL RECOVERY : If outside temperature is higher than 24°C (adjustable) the bypass closes to recover a maximum of calories.

FREE COOLING : If outside temperature is between 18°C and 24°C (adjustable), the bypass opens to bring directly fresh air into the building



IV.2.a. Automatic deicing

Deicing is done by opening the Bypass as soon as the deicing temperature (SDG) falls below 5 ° C (thermostat installed at discharge). As soon as the temperature returns above + 5 ° C the bypass closes again.

OPERATING AND COMMISSIONING INSTRUCTIONS

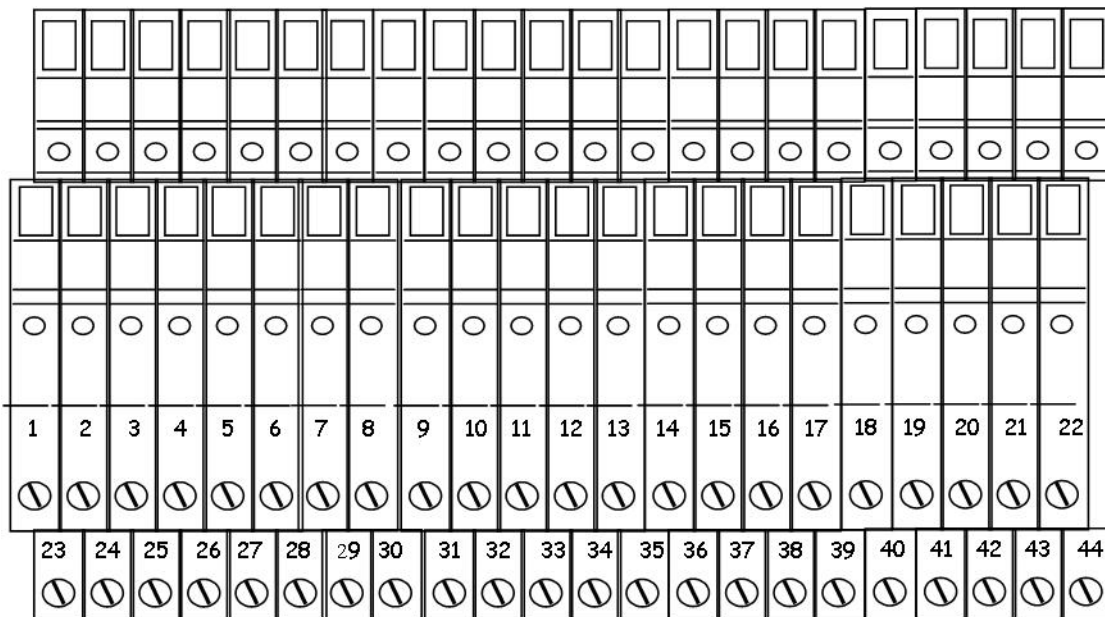
IV.3. CONTROL WIRING (ECO/DIVA/LOBBY/MAC2/QUATTRO)

IV.3.a. Temperature sensor

Temperature sensors are connected on the regulator

- **SSG** : Duct supply temperature sensor on Agnd(30) et AI1(31)
- **SEG** : Duct outdoor temperature sensor on Agnd(30) et AI2(32)
- **SDG** : Duct deicing temperature sensor on Agnd(33) et AI3(34)
- **SRG** : Duct extract temperature sensor on Agnd(33) et AI4(35)
- **SBD** : Duct deicing battery temperature sensor on Agnd(36) and AI4(37) on SMART et INFINITE versions (replaced by a 1030 Ohms resistance on other versions)

IV.3.b. Terminal blocks



Désignation	Bornes	Raccordement
ADP (shunted if not used)	1-2	Connect on fire emergency stop (free voltage NC contact)
DAD (shunted if not used)	3-4	Connect on DAD (smoke detector) default contact (NC)
THA/THS (shunted if not used)	5-6	Connect to NC free voltage contact of THA (PREMIUM BC/CO and INFINITE BC/CO) Or Connect to NC free voltage contact of THS (PREMIUM BE et INFINITE BE)
ED-TOUCH	7-8 + A*-B* (port2)	Connect to remote touch screen display
MF PV	9-10	Connect to NO free voltage contact of reduced Speed extended operation
MF GV	11-12	Connect to NO free voltage contact of normal Speed extended operation
ARR EXT	13-14	Connect to NO free voltage contact of external stop
BC	15-16-17	BC :Connect to 3 ways valve of the hot water battery (cf chapter IV.12)
BE	18 + DO3**	BE : Connect to static contactor of the electric battery (see chapter IV.14)
Heating pump (PREMIUM BC/CO)	18 + DO3**	Connect to hot water circulator (Note : 24V 2AMax to relay) (see chapter IV.12)

OPERATING AND COMMISSIONING INSTRUCTIONS

Cooling pump	19 + DO4**	Connect to cold water circulator (Note : 24V 2A Max to relay)** (see chapter IV.12)
AL	20 + DO5**	24V output available if unit is in default (Note : 24V 2A Max to relay)
DBE	21 + DO6**	Connect to static contactor of the defrost battery (see chapter IV.15)
NC (Night cooling) (LOBBY®)	22 + DO7**	24V output available if unit runs with the optional LOBBY EC for opening dampers during Night Cooling. (pay attention : 24V 2A Max to relay)
TRPS (LOBBY® MAC2® QUATTRO®)	23 Agnd* + UI2*	Connect to supply Pressure Transmitter (see chapter IV.9)
DEPS (ECO® DIVA®)	24 + UI2*	Connect to terminal 1 and 3 of supply pressure switch (see chapter IV.7)
TRPR (LOBBY® MAC2® QUATTRO®)	25 Agnd* + UI3*	Connect to return pressure Transmitter (see chapter IV.8)
DEPR (ECO® DIVA®)	26 + UI3*	Connect to terminal 1 and 3 of return pressure switch (see chapter IV.7)
CO2 (DIVA®)	27 Agnd* UI4*	Connect to CO2 sensor (see chapter IV.10) DIVA/QUATTRO option
BF	28-29-30	BF : Connect to 3 ways valve of the cold water battery(see chapter IV.12)
DEP FS DEP FR	31-32 33-34	Connect to terminal of exhaust filter switch (see chapter IV.6) Connect to terminal 1 and 3 of return filter switch (see chapter IV.6)
RMS	35 + DO1**	Connect to fresh air damper actuator
RMR	36 + DO2**	Connect to extract air damper actuator
BIM	37-38-39	Connect to Bypass Actuator (see chapter IV.4)
0-10V S	40-41	Connect to Supply air fan (cf chapitre annexes)
0-10V R	42-43	Connect to Extract air fan (cf chapitre annexes)

* connected directly to CORRIGO controller

** connected directly to CORRIGO controller -8A max on all DO

IV.4. Electrical wiring and functioning of the plate exchanger

Bypass's actuator of the exchanger is factory mounted

CORRIGO controller drives automatically the bypass thanks to programming and sensor mounted in standard.

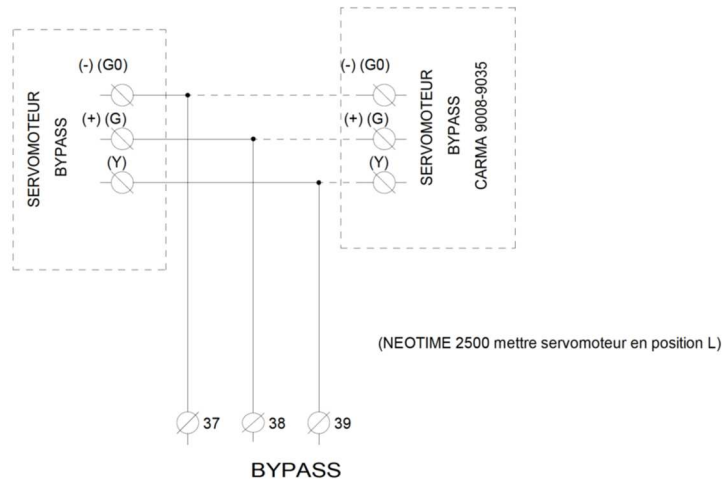
In winter: when heat is needed, bypass is closed to recover maximum of calories. If it is not enough to reach the temperature setpoint, hot battery starts running.

In summer :

COLD RECOVERY : if outside temperature is higher than inside temperature and cold is needed , bypass closes to recover maximum of calories. If it is not enough to reach the setpoint, cold battery starts running.

FREE COOLING : if outside temperature is lower than inside temperature and cold is needed , bypass opens to bring directly outside fresh air. If it is not enough to reach temperature setpoint cold battery starts running.

OPERATING AND COMMISSIONING INSTRUCTIONS



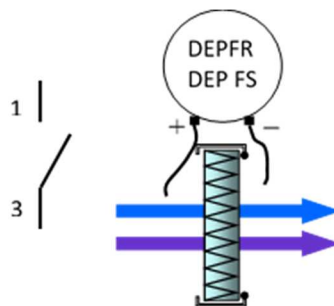
IV.5. Automatic deicing

This non adjustable function is automatically driven thanks to the programming of CORRIGO controller and sensors mounted in standard in our double flow units. Defrost starts with bypass opening when defrost temperature (SDG) is lower to 5°C (sensor installed on exhaust). In case of Bypass is not enough to defrost the exchanger (if outside temperature is lower to 10°C), fresh air fan modulates the airflow in order to maintain a 5°C temperature of the defrost sensor.

For INFINITE BE and INFINITE BC/CO and SMART versions: defrost battery is mounted on fresh air before plate exchanger. It regulates a -5°C temperature in the exchanger. This will avoid any frost risks and maintain Bypass as closed as possible. This maintains a maximum efficiency of the system. In case defrost battery is not enough to defrost plate exchanger, Bypass modulation, and then fan modulation will start as explained above.

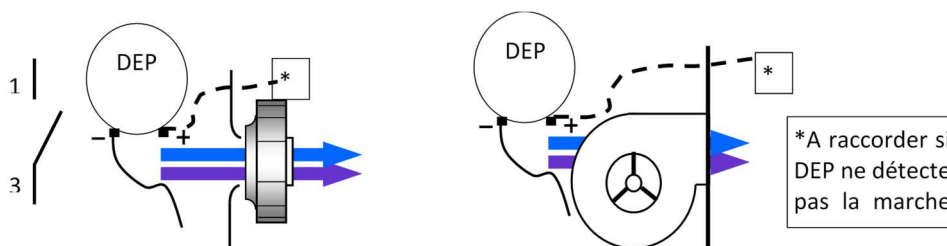
IV.6. Filters pressure switches wiring and connection

Fresh air filter pressure switch is factory connected



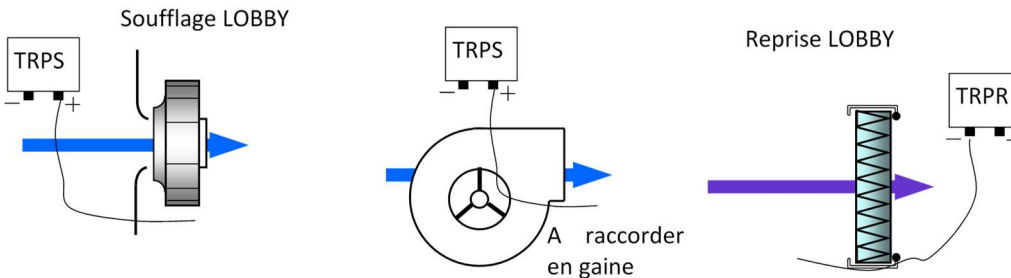
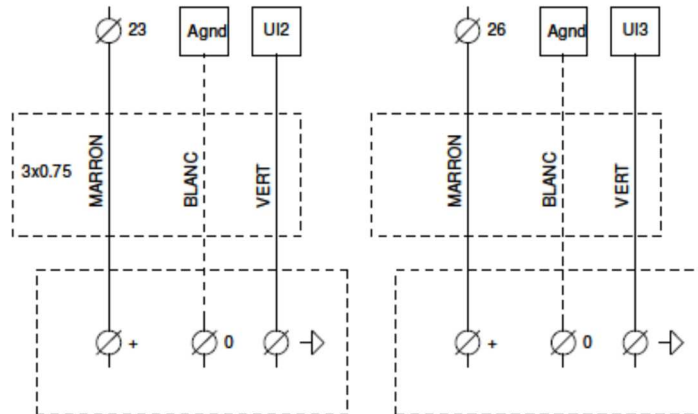
IV.7. Fan switches wiring and connection

Fans switches are factory cabled and connected



OPERATING AND COMMISSIONING INSTRUCTIONS

IV.8. Pressure transmitter LOBBY® MAC2® QUATTRO® wiring and connection

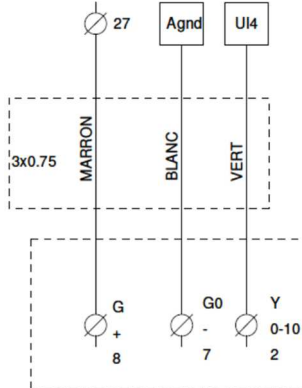


IV.9. Motors wiring

See Annexes chapter

IV.10. CO2 transmitter wiring

CO2 transmitter is factory connected (option DIVA/QUATTRO)



IV.11. Night Cooling

This function is used during summer to cool down buildings during nights with outside cool air. It decreases the cold needs during days. Night Cooling function runs only from 00:00 AM to 7:00 h AM. During Night Cooling, hot and cool outputs are locked on 0V. Exchanger runs only with fresh air. At the end of Night Cooling period heating is blocked to 0V during 60 minutes.

Start conditions: customizable in chapter V.5.b.2

- Outside temperatures are higher to 22°C during the day.
- Clocks are setted in LS or stopped during 00h00 and 07h00.
- Outside temperature is lower than 18°C during Night Cooling period
- Outside temperature is higher to 10°C during Night Cooling period
- Room temperature is higher to 18°C

During Night Cooling period fans are running 85% of their capacity. This speed is adjustable (see chapter V.5.b.2)

OPERATING AND COMMISSIONING INSTRUCTIONS

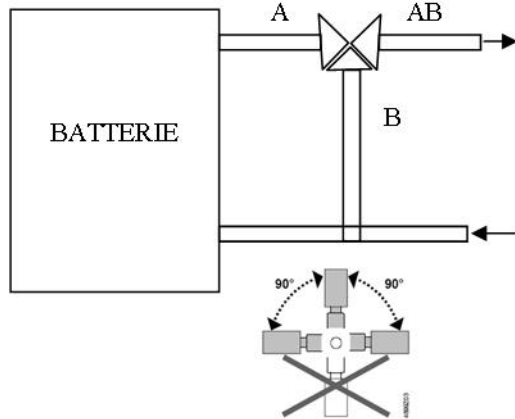
For LOBBY versions, a 24V output (to relay) is available between 22 and DO7 terminals to force the opening of damper's zone during Night Cooling period.

IV.12. Hot water / cool water or changeover water coil

For PREMIUM CO and INFINITE CO units plan to install a siphon for the condensates.

Pay attention to let the doors free of access (ducts, cables)

Battery is mounted in the unit, antifreeze Thermostat is connected. You have to cable the 3 ways valve. If a cold battery is used or changeover battery in duct is used, move the supply sensor after the battery.



3 WAYS VALVE MUST BE CONNECTED WHEN POWER IS OFF

Connect the servomotor of the 3 ways valve as following instructions:

Hot Battery :

Terminal **15** on +24V (G) of the 3 ways valve actuator

Terminal **16** on 0V (G0) of the 3 ways valve actuator

Terminal **17** on 10V (Y) of the 3 ways valve actuator

Connect NC contact (C et 2) of the **THA** (Deicing Thermostat) on **5** and **6**.

Possibility to connect the circulator on the **DO3** terminal of the regulator and the terminal block **18**.

(Note: 24V output to relay)

Cold Battery :

Terminal **28** on +24V (G) of the 3 ways valve actuator

Terminal **29** on 0V (G0) of the 3 ways valve actuator

Terminal **30** on 10V (Y) of the 3 ways valve actuator

Connect NC contact (C and 2) of **THA** (Deicing Thermostat) on **5** and **6**

Possibility to connect the circulator on the **DO4** terminals of the regulator and the terminal block number **19**.

(Note: 24V output to relay)

Changeover battery:

The changeover thermostat must be connected to the water inlet before Bypass.

You must cable 3 ways valve to the changeover thermostat.

Connect them following the instructions below :

Red wire to the changeover thermostat (CO) on 10V (Y) of the valve

Terminal **15** on +24V (G) of the 3 ways valve actuator

Terminal **16** on the 0V (G0) of the 3 ways valve actuator

Terminal **17** connected to the brown wire of the changeover thermostat (Heat signal)

Terminal **30** connected to the black wire of the changeover thermostat (Cold signal)

Connect the NC contact (C and 2) of **THA** (Deicing Thermostat) on **5** and **6**

Possibility to connect the circulator on the **DO3** terminal of the regulator and the terminal block **18** (heat demand) and on the **DO4** terminals of the regulator and the terminal block number **19** (cold demand). (Note: 24V output to relay)

ATTENTION In this case use a relay for each exit and cable in parallel on the ON/OFF of the circulator.

OPERATING AND COMMISSIONING INSTRUCTIONS

IV.13. DX battery (cold or reversible)

For units equipped with direct expansion battery, additional module is equipped with a drain pan. Plan to make a duct of the condensates with a siphon.

At your disposal :

- 24 V output when unit is on cold or heating needs.
- 0-10V hot output and a 0-10V cold output.

Heating needs :

- 24V output: to connect to **DO3 terminals of the controller and 18 of the terminal block**. It allows the start to drive the direct expansion battery module (Attention 24V 2A Max to relay)
- 0-10V output: to connect to **15 and 16 terminals(15=0V et 16 =0/10V)**

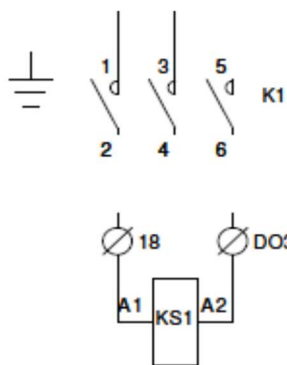
Cold needs:

- 24V output: to connect to **DO4 terminals of the controller and 19 of the terminal block**. It allows the start to drive the direct expansion battery module (Attention 24V 2A Max to relay)
- 0-10V output: to connect to **29 and 30 terminals (29=0V et 30 =0/10V)**

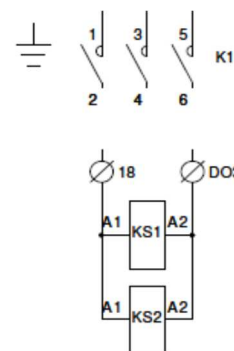
ATTENTION: In case of a 24V output is used, make a relay between each output and cable them in parallel on the M/A of the direct expansion module.

ATTENTION: The command 24V et 0-10V start do not manage any safety or, **anti court cycle ...** of the direct expansion module.

IV.14. Electrical Battery

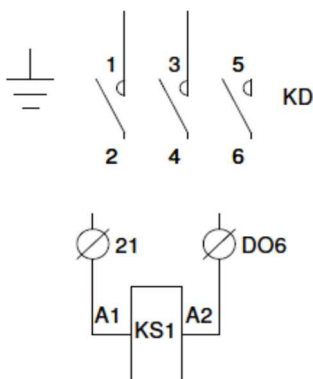


NEOTIME 600-1300
CARMA 9008-9010
CARMA 9016 037
CARMA 9023 037

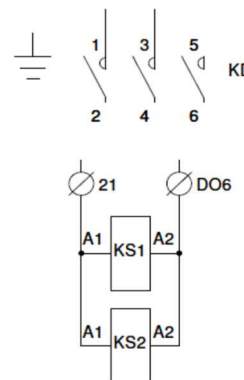


NEOTIME 1800-2500
CARMA 9016 067
CARMA 9023 067
CARMA 9035-9070

IV.15. Deicing battery



NEOTIME 600-1300
CARMA 9008-9010



NEOTIME 1800-2500
CARMA 9016-9070

OPERATING AND COMMISSIONING INSTRUCTIONS

IV.16. Fire function

See configuration chapter V.8

There are 2 ways to drive the fire function:

- Emergency Fireman stop: cable between 1 and 2 terminals (NC free voltage contact). Total stop of the central control. (no display available)
- Fire alarm: this function controls exhaust and return fans with 5 modes available in the parameters of the regulation (the function can be activated on site). "fire alarm" will be on the display.
 1. « **stop** » : complete stop of the unit
 2. « **continuous work** » : Start of the unit in HS, fire function will have priority on all the other alarms.
 3. « **Normal work** » : keeps the unit running with parameters activated on site (Stop/LS/HS)
 4. « **Supply fan only** » : start or keeps in HS the supply fan (extract stopped)
 5. « **Extract fan only** » : starts or keeps in HS the extract fan (supply stopped)

Digital input « external stop » is priority on fire function.



This function is not adapted anymore to the French market and will be in all cases validated by the control office.

Digital input fire alarm will be connected between **DI8 terminal of the controller and 13 of the terminal block (free voltage contact required)**

IV.17. Dehumidification function

See configuration chapter V.8

It is possible to associate the unit to a COMBIBOX CONCEPT® module equipped with a cold battery (water or cold direct expansion module only) followed by a hot battery (water or electric or hot direct expansion module DX heat). In this case controller will manage automatically the heating or cold inputs for the dehumidification and will keep an ideal functioning temperature. During cold needs period, the temperature management will have priority on dehumidification.

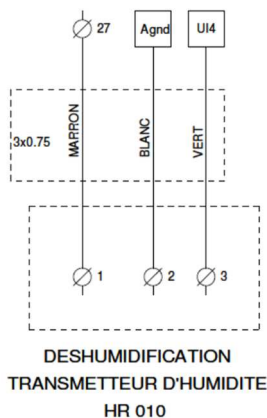


Function non available in DIVA mode

Connect batteries as indicated in chapters IV.12, IV.14

Install the humidity duct sensor in supply or extract air, following the humidity control mode.

Connect the humidity sensor as following instructions :



OPERATING AND COMMISSIONING INSTRUCTIONS

IV.18. MODBUS / WEB / BACNET wiring

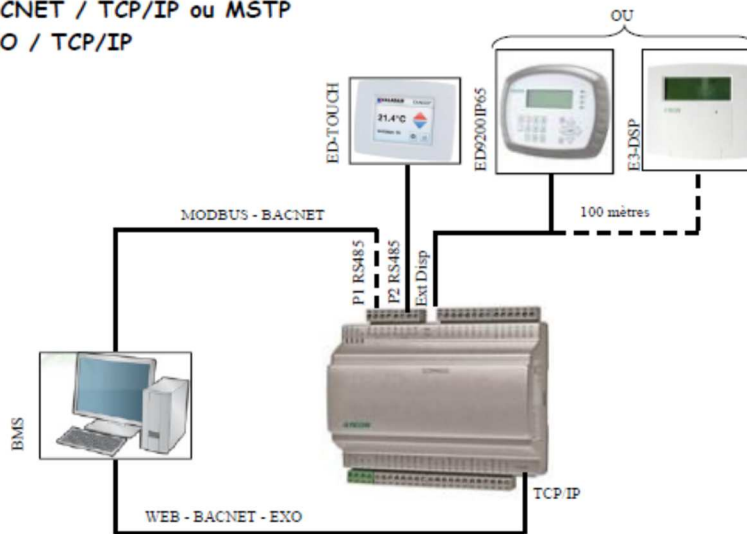
((see parameters in chapters V.8)

MODBUS RS485 and BACNET MSTP: Use armoured cable 2 crossed pairs wire type BELDEN 8723 or similar to connect BMS to controller (to connect to port 1 (BANE) / connect armour to N and don't connect E)

WEB / MODBUS TCP/IP et BACNET IP: to connect to TCP/IP port

BMS : en standard

- MODBUS / RS485 ou TCP/IP
- WEB / TCP/IP
- BACNET / TCP/IP ou MSTP
- EXO / TCP/IP



IV.19. Repeater wiring

(voir paramétrage chapitre V.8)

You need to use a repeater in case of you want to connect:

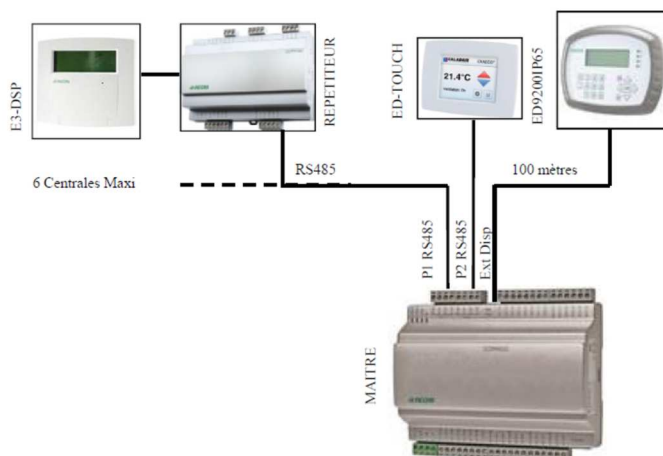
- More than one unit on the same display (maximum 6)
- A remote control at a distance higher than 100m

In this case you can move to 1 kilometer the remote control. Use 2 crossed wire type BELDEN 8723 or similar between repeater and controller. Supply repeater in 230V single mono phase.

Connect on port 1 the wires as following instructions :

- **B** of repetitor on B terminal of the regulation board (armour wire as in drawing under)
- **A** of repetitor on A terminal of regulation board (armour wire as in drawing under)
- **N** of repetitor on N terminal of regulation board (armour wire as in drawing under)

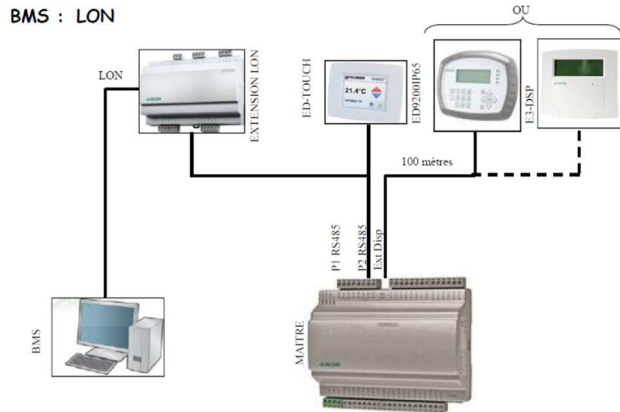
Plan a 230V single phase power supply on the repetitor.



OPERATING AND COMMISSIONING INSTRUCTIONS

IV.20. LON

(see configuration in chapter V.8) Cable port 2 of master on port 1 of LON controller



V. SETTINGS

V.1. Display

There are four lines of twenty characters on the backlight display. The light only starts when a button is pushed. It stops after an inactivity period.

There are 2 LED on the front of the display:

LED of the alarm is a bell symbol.

LED for the writing with a pen symbol.

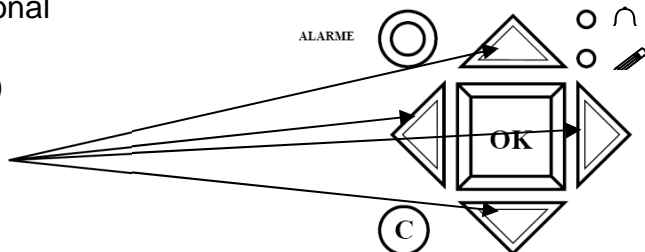
- Quick blinking = you can modify the value

- Slow blinking = you must enter a password to modify the value

- o Directional arrows up, down left and right help to navigate in the menus.
- o Up and Down buttons help to increase or decrease the values of a parameter when you have access to. Right and left buttons help to navigate inside the parameter.
- o OK button help to enter the value and to confirm a choice. C button helps to cancel it.
- o Alarm button (red) allows the access of the defaults list.
- o Left arrow also helps to go out of the alarm menu and go back to the main menu
- o Cursors indicate the possible movements and which arrows to press.

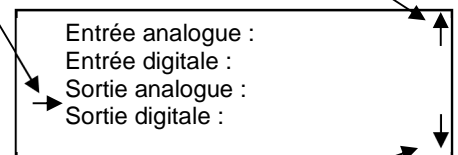


Directional
arrows
MENU)



Cursor

Possibility to up



Possibility to down

OPERATING AND COMMISSIONING INSTRUCTIONS

V.2. Exemple of setting

- Move the cursor to the required menu

In the required menu:

Hour : ex : 10:33	press OK
Date : ex : 08/12/23 (year/month/day)	
Day : ex : Mardi	

Enter the password if necessary

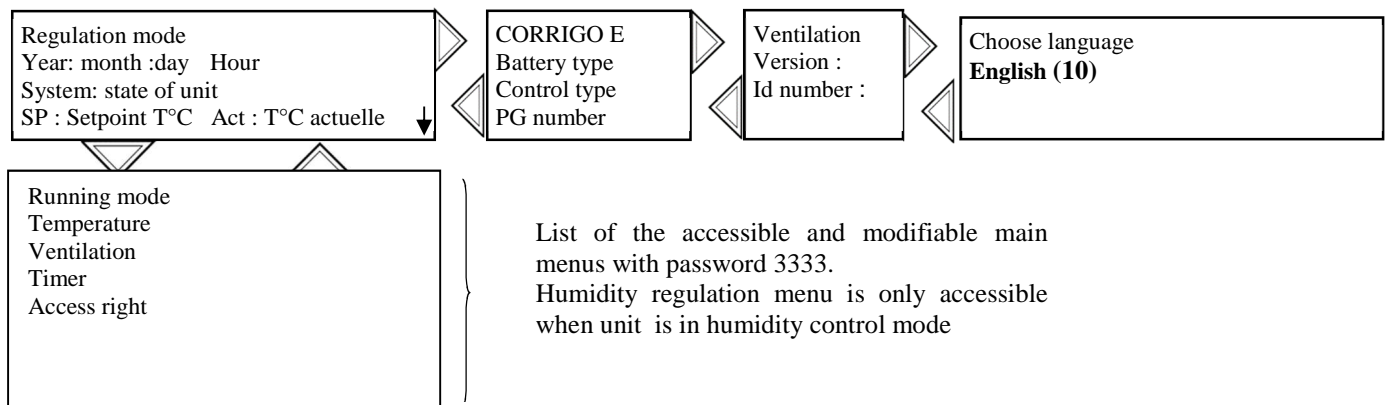
- Enter the required value with arrows or with numerical keyboard
- Press OK to valid and go to next step.

When values are updated press the left arrow to come back to the welcome screen

V.3. Standard settings (opérateur menu)

Words in normal writing = viewing only / **Words in bold** = Modification is possible / **Outlined words in bold**= Modification is possible with password 3333 ... = non accessible or not used

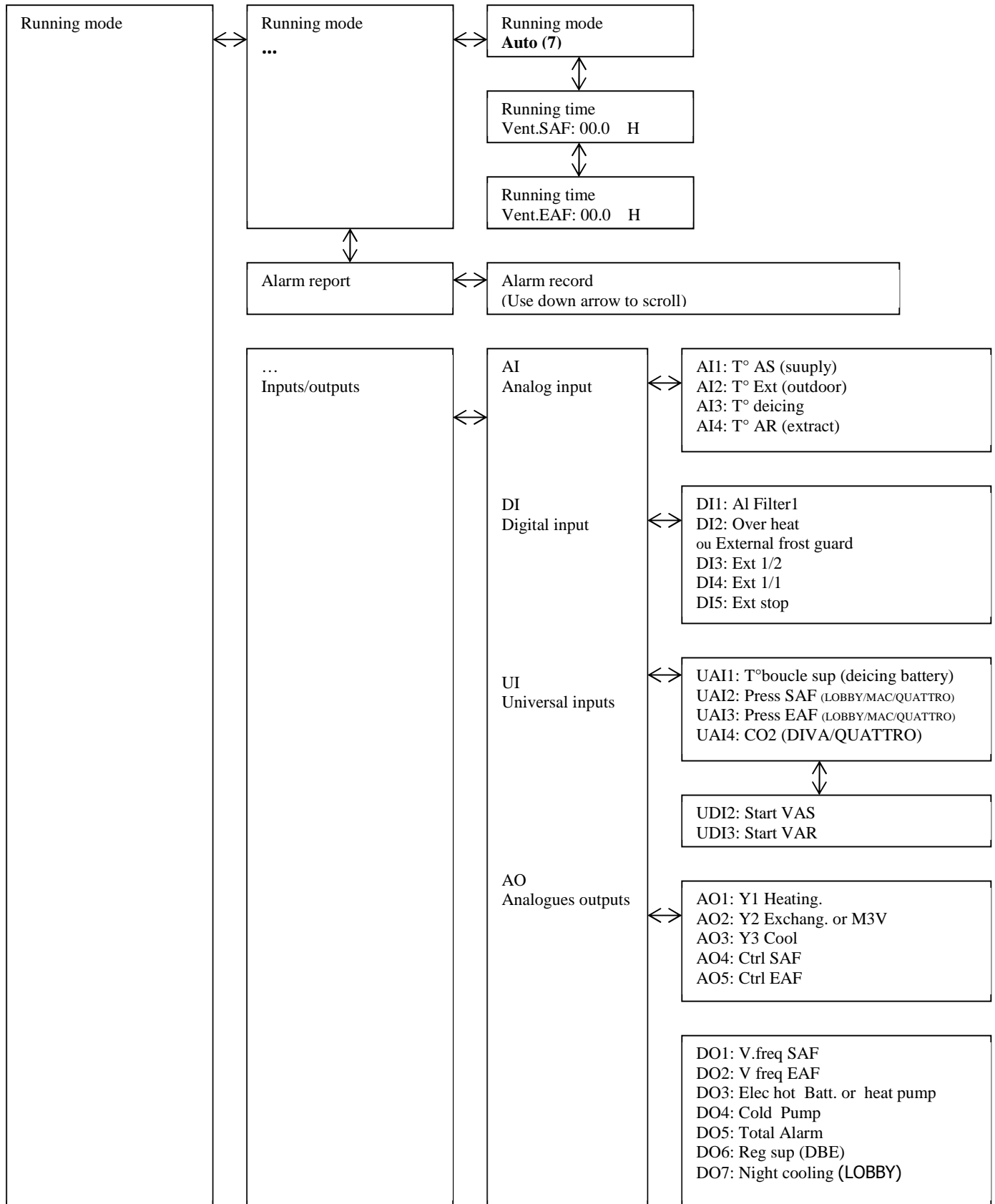
ATTENTION : Do not modify parameters which are not in bold characters, in this case no after sales will be admitted



(10) Language setting (see chapter V.4.e)

OPERATING AND COMMISSIONING INSTRUCTIONS

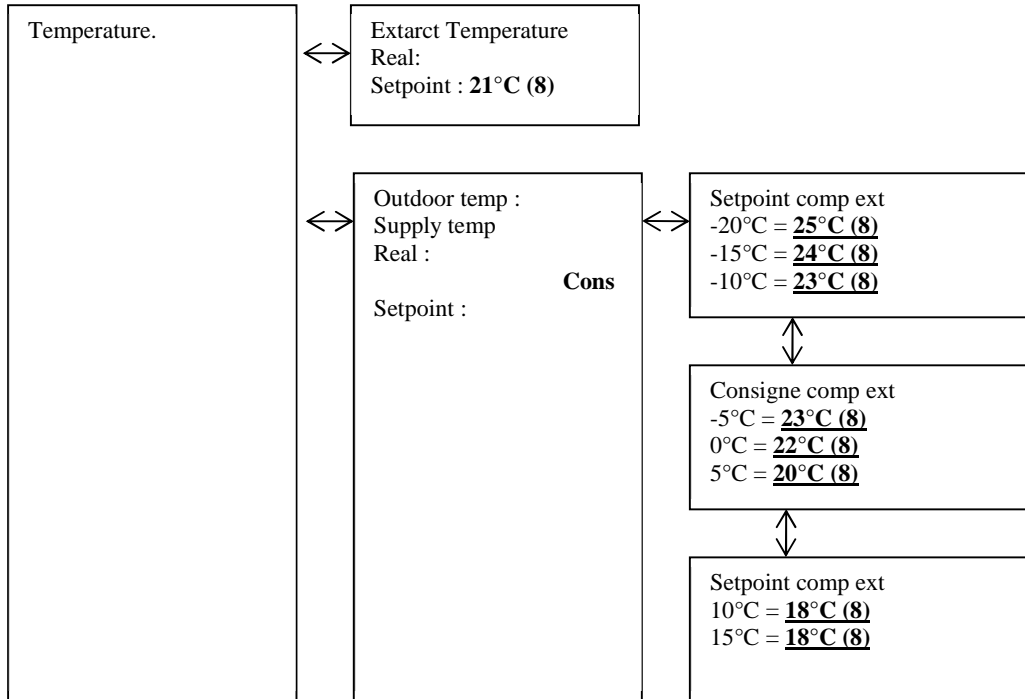
V.3.a. Running mode menu



(7) **Unit Start/Stop (see chapter V.4.d)**

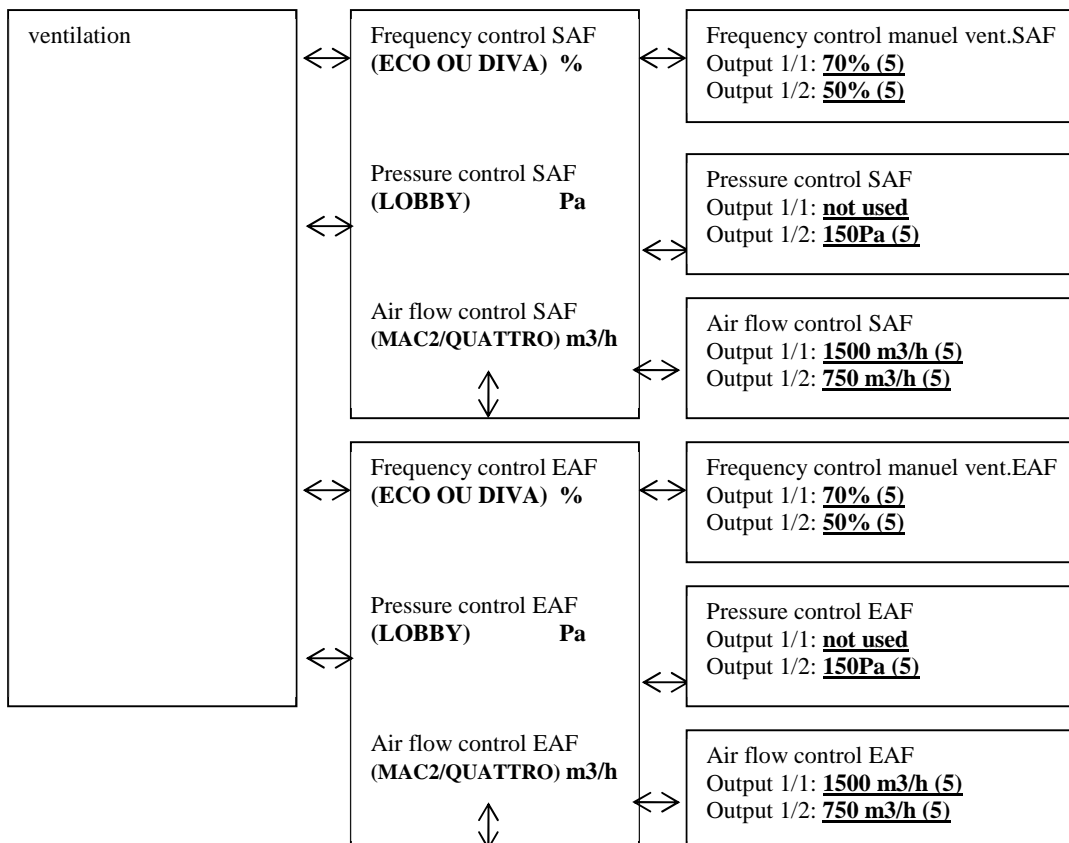
OPERATING AND COMMISSIONING INSTRUCTIONS

V.3.b. Temperature menu



(8) Temperature setpoint setting (see chapter V.4.c)

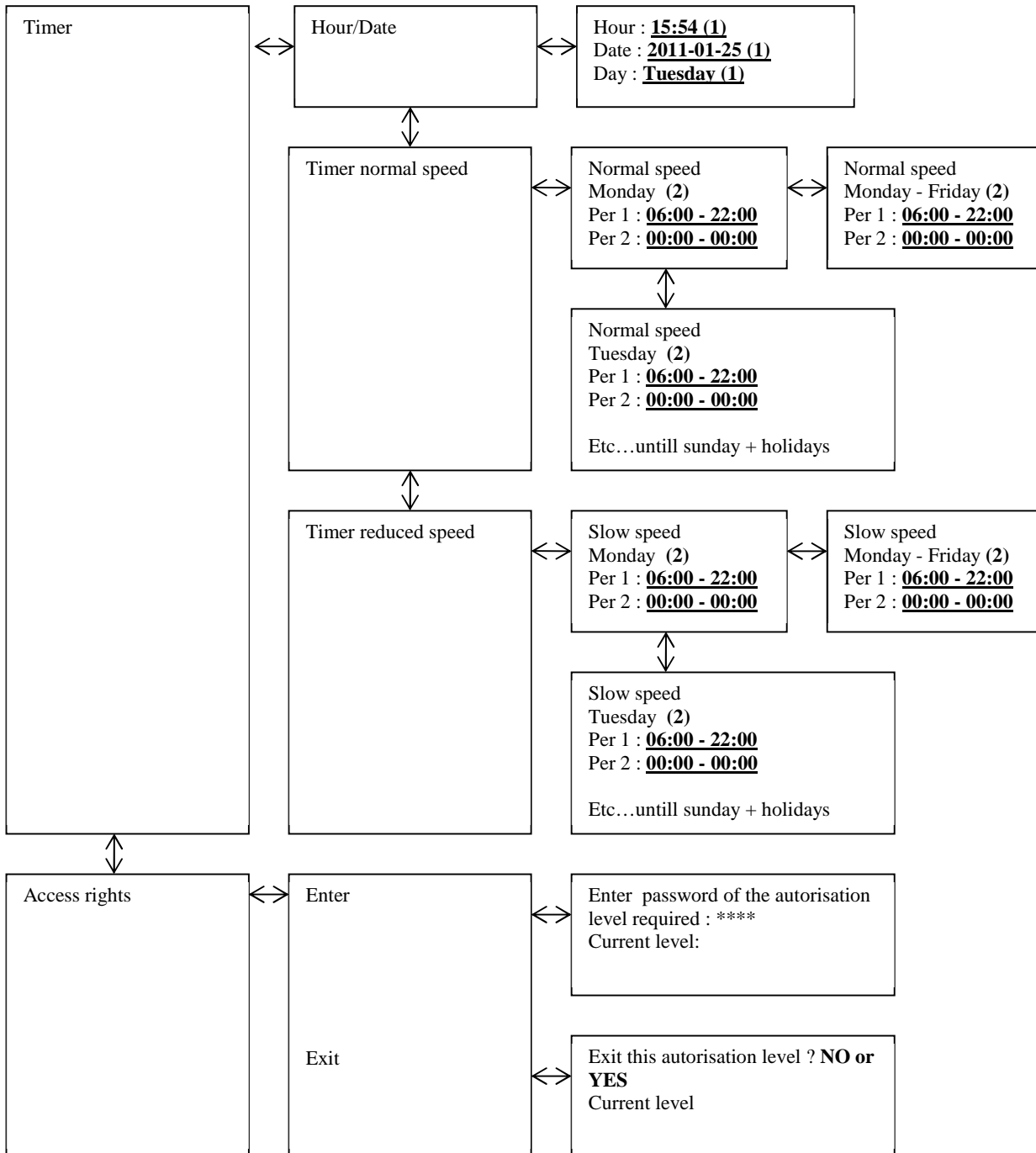
V.3.c. Ventilation menu



(5) Speeds, pressures, airflows (see chapter V.4.b)

OPERATING AND COMMISSIONING INSTRUCTIONS

V.3.d. Timer menu



1. Hour and date setting (see chapter V.4.a)
2. HS program setting (see chapter V.4.a)
3. LS program setting (see chapter V.4.a)
4. Holidays period setting (see chapter V.4.a)

OPERATING AND COMMISSIONING INSTRUCTIONS

V.4. Operator parameters modification (password 3333 required)

V.4.a. Dates and hours clocks setting

V.4.a.1. Date and hour of the CORRIGO controller [(1) chapter V.3.d]

Access : Hour Date setting

Date and hour of the regulator are set by default in the CORRIGO controller. Summer/Winter time is automatically managed.

V.4.a.2. Hour programming of the functioning system [(2) (3) chapter V.3.d]

Access :

- **Timer normal speed** : Time settings / normal speed programm
- **Timer reduced speed** : Time settings / slow speed programm

System is set to work in normal speed (HS-1/1) **07:00 - 22:00** in slow speed (LS-1/2) **22:00 - 06:00** except DIVA / LOBBY / QUATTRO versions which work in slow speed (LS-1/2)

As indicated in arborescence you also have the possibility to modify Monday to Friday periods by pressing the right button when you are on the Monday screen

Nota : if slow speed (LS-1/2) and normal speed (HS-1/1) are activated in the same time window, unit works in high speed
Operation exceptions:



DIVA®/QUATTRO® : For CO2 regulation do not activate any normal speed time window (GV-1/1)

LOBBY: Only slow speed clock (LS-1/2) must be activated

NIGHT COOLING: Only works if unit is in slow speed (LS-1/1) between 00:00 and 07:00.AM (Example: If unit is in (LS-1/2) between 02:00 and 06:00 and in (HS-1/1) the rest of the time. Then NIGHT COOLING is allowed to work only from 02:00 to 06:00 AM)

V.4.a.3. Vacation time [(4) chapter V.3.d] (password 3333 required)

Access : Hour settings / holidays

System is set with no vacation time. If you need to reduce fonctionnement time during vacation time, set the functioning time window as indicated in chapter V.3.4), and set the vacation days.

V.4.b. Speed /pressure modification in LS and HS

V.4.b.1. STANDARD (ECO) / DIVA [(5) chapter V.3.c]

Access : ventilation Regul / Frequency control VAS 1/1 and 1/2 or frequency control VAR 1/1 et 1/2

You can modify the rotation speed of the unit in PV-1/2 (slow speed) and in HS-1/1 (normal speed) for each fan to set the airflows.

- To set the initial airflow (GV-1/1), force the system in normal speed with available terminals « Forced start HS » (bridge between 11 and 12 terminals).
- To set the initial airflow LS, force the system in slow speed with available terminals « Forced start LS » (bridge between 9 and 10 terminals).

V.4.b.2. LOBBY [(5) chapter V.3.c]

Access : ventilation Regul / Pressure control VAS 1/2 or Pressure control VAR 1/2

You can modify the constant pressure of the unit for each fan to set the airflows.

- To set the initial airflows LS, force the le system in normal speed with available terminals « Forced start LS » » (bridge between 9 and 10 terminals).

V.4.b.3. MAC2®/QUATTRO® [(5) chapitre V.3.c]

Access : ventilation Regul / Airflow control VAS 1/1 and 1/2 or Airflow control VAR 1/1 and 1/2

You can modify the rotation speed of the unit in PV-1/2 (slow speed) and in HS-1/1 (normal speed) for each fan to set the airflows.

- To set the initial airflow (GV-1/1), force the system in normal speed with available terminals « Forced start HS » (bridge between 11 and 12 terminals).
- To set the initial airflow LS, force the system in slow speed with available terminals « Forced start LS » (bridge between 9 and 10 terminals).

OPERATING AND COMMISSIONING INSTRUCTIONS

V.4.c. Temperature setpoint modification

[(8) chapter V.3.b]

Access : temperature Regul

Regulation is based on the temperature control of :

- o Supply with external compensation (set in standard). Supply temperature setpoint follows outside temperature in compliance with RT 2012 norm.
- o Extracxt

V.4.d. Forced stop of the unit or forced start LS or HS on the remote control

[(7) chapter V.3.a]

Access : running Mode / running Mode

You can stop (7) (**stop**) unit with CORRIGO controller or do a forced start LS (7) (**manual speed 1/2**) or HS (7) (**manual speed 1/1**). In standard unit works automatically with clocks (7) (**Auto**)



If unit do not work in automatic mode an alarm will start. Manual speed 1/1 and manual speed 1/2 modes must be used only for the commissioning and repair. An other setting will lead to a failure of the unit.

V.4.e. Choice of language

[(10) chapter V.3]

Access: Starting screen / language choice

V.5. Intermediate settings (service level)

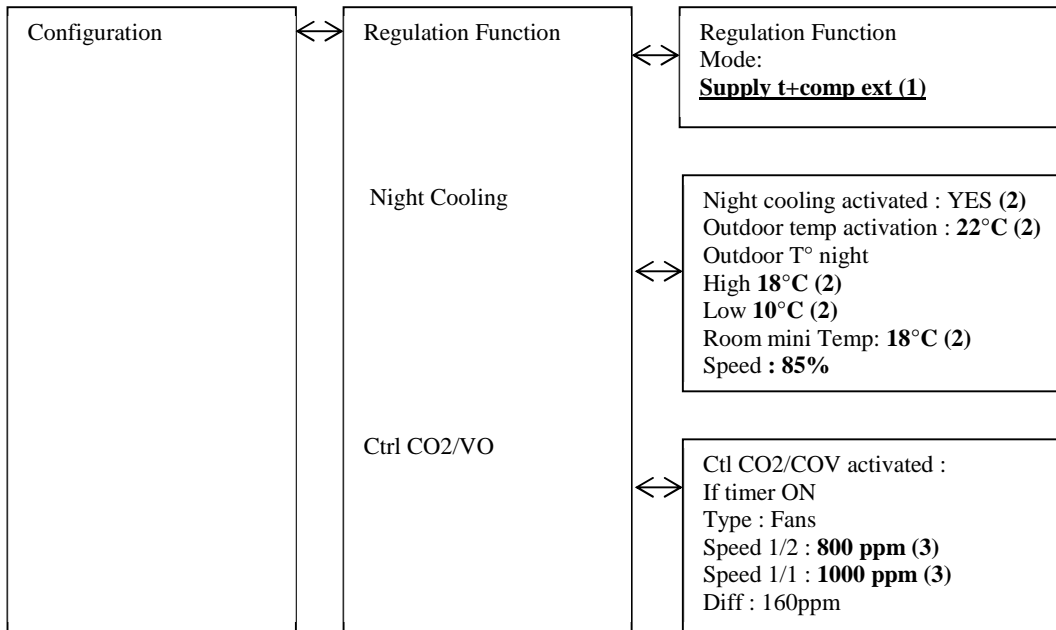
Type of regulation type setting, Night Cooling parameters and CO2 setpoint require an access to the Configuration menu. You need the access right to the « Service » level. Follow the instructions below.



Enter **2222** with directional arrows and validate with OK. Press left arrow twice to reach the access of the menus. In case of mistake press C button twice and start again.

OPERATING AND COMMISSIONING INSTRUCTIONS

V.5.a. Menu configuration en accès service



1. Regulation type choice (see chapter V.5.b.1)
2. Parameters modification Night Cooling (see chapter V.5.b.2)
3. CO2 set point modification (only in DIVA and QUATTRO) (see chapter V.5.b.3)

V.6. Modification of the services parameters (password 2222)

V.6.a. Regulation mode of the unit

[(1) chapter V.5.a]

Access : Configuration / Regulation function.

Regulation type is set by default in the CORRIGO controller in outside compensation exhaust. You can also select return control mode.

(ATTENTION, if you want to regulate following a room temperature, select the regulation mode« Ctrl extract » Any other mode will lead to the failure of the unit)

V.6.b. Overventilation parameters

[(2) chapter V.5.a]

Access : Configuration / Night cooling

Night cooling speed is set in standard in 85%. You can modify it. You can also change the temperature of Night Cooling activation (outside temperature day...) and deactivate it.

V.6.c. CO2 setpoint for DIVA / QUATTRO option

[(3) Chapter V.5.a]

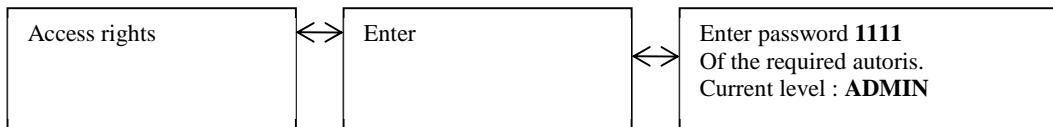
Access: Configuration / Ctrl CO2/COV

CO2 setpoint is set in standard: LS = 800ppm HS = 1000ppm. Unit will increase its speed proportionally to reach its maximum speed when CO2 will be at 1000ppm.

OPERATING AND COMMISSIONING INSTRUCTIONS

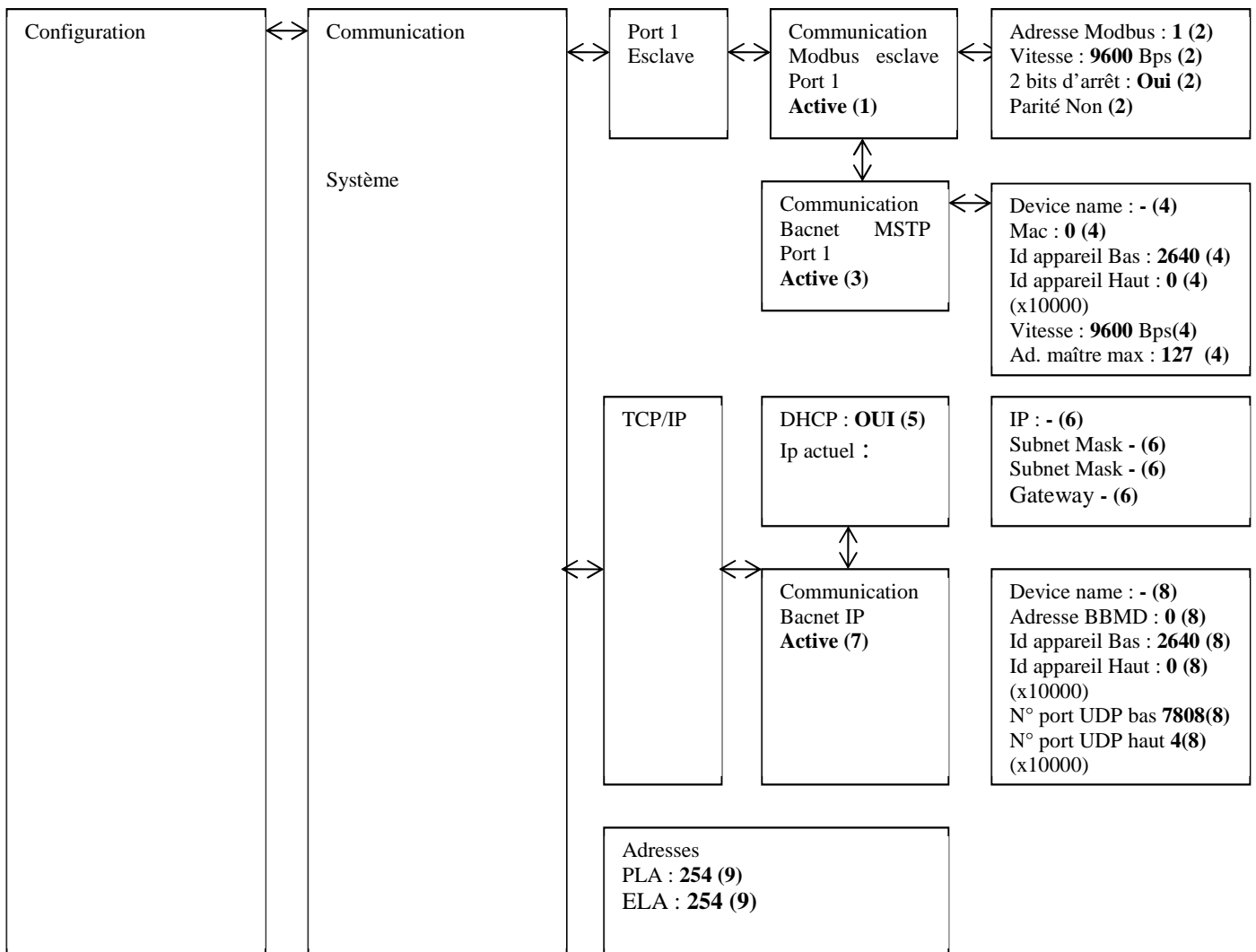
V.7. Administrator settings

Activation of the **communication**, **dehumidification** and **fire function** requires an access to Configuration menu in system level. You have to get the access rights to « Admin » level. Follow the instructions below:



Enter **1111** with directionnal arrows and validate with OK button. Press left arrow twice to reach the menu. In case of mistake press C button twice and start again

V.7.a. Configuration menu with admin level access



- 1 et 2 Activation MODBUS RS485 and settings (see chapter V.8)
- 3 et 4 Activation BACNET MSTP and settings (see chapter V.8)
- 5 et 6 Settings TCP/IP(see chapter V.8)
- 7 et 8 Activation du BACNET IP and settings (see chapter V.8)
- 9 Adressage Repetiteur (voir chapitre V.8)

OPERATING AND COMMISSIONING INSTRUCTIONS

V.8. Modification of the service parameters

V.8.a. MODBUS

You will find the simplified MODBUS at the end of the instructions and commissioning manual.

Access : Configuration / Communication

MODBUS TCP/IP is activate in standard in DHCP. Possibility to know DHCP adress or set IP fixe [(5)(6) chapter V.7], Modbus Port = 502 / Device ID = 255

Le **MODBUS RS 485** must be activate [(1) chapitre V.7]. Possibility to set speed, parity, stop bits... [(2) chapter V.7].

Modbus Type

- 1 = Coil status register (Modus fonction 1, 5 et 15)
- 2 = Input status register (Modus fonction 2)
- 3 = Holding register (Modus fonction 3, 6 et 16)
- 4 = Input resister (Modus fonction 4)

Supported Modbus functions

- Read Coils (1)
- Read discrete input (2)
- Read Holding registers (3)
- Read Input registers (4)
- Write single Coils (5)
- Write single register (6)
- Write multiple Coils (15)
- Write multiple register (16)

EXOL Type

- R = Real (-3.3E38 – 3.3E38)
- I = Integer (-32768 – 32767)
- X = Index (0 – 255)
- L = Logic (0/1)

Transmission mode

Controller is set in RTU mode

A maximum of 47 registers can be read in one message

V.8.b. Repetitors and EXO communication

[(3) chapitre V.7]

Access : Configuration / System

An instruction and commissioning manual is delivered with repetitor. In the case of you have several CORRIGO connected to to the same remote control (up to 6 CORRIGO), you have to modify the address PLA / ELA of each CORRIGO. In this case you will need a different address on each CORRIGO and enter them in the repetitor. Follow the instructions in the commissioning manual for the setting and use.

V.8.c. WEB Communication

You have the possibility to communicate via TCP/IP WEB in language. In this case the device is delivered with Web page and regulator set in DHCP.

Possibility to know DHCP adress or set IP fixe [(5)(6) chapter V.7], or via E-tool software <http://www.regin.se>

OPERATING AND COMMISSIONING INSTRUCTIONS

V.8.d. BACNET IP Communication with BASC type

You will find the simplified BACNET at the end of the instructions and commissioning manual.

Accès : Configuration / Communication

BACNET IP must be activate [(7) chapter V.7]. Possibility to know DHCP adress or set IP fixe [(5)(6) chapter V.7]. Possibility to set ID / N°port... [(8) chapter V.7].

BACNET MSTP must be activate [(3) chapter V.7]. Possibility to set speed, ID, adress... [(4) chapter V.7]. Speed = 9600 / MAC adress = 0 / Device ID = 2640 / Max master = 127

BACnet Type

10XXX = Read and write Binary

20XXX = Read binary

30XXX = Read and write analogue

40XXX = Read analogue

30XXX = Read and write multistate

40XXX = Read multistate

(XXX = MODBUS Address)

AV = Analogue Value

BV = Binary Value

MSV = Multistate value

BMMD Adress : The BBMD address is used for discovering devices taht are attached to different BACnet/IP subnets and separates by an IP router. The address is entered as host:host can be the host's name if DNS ins configures. If DNS is not configured, the host address should be entered in the format xxx.xxx.xxx.xxx followed by the port number (default settings 47808)

MAC : The MAC address of the device. This need to be unique only to the subnet.

Device ID : The ID of a device, used to identify it on the BACnet network. This number cannot be duplicated anywhere on the BACnet network and must therefore be unique. To set an ID value of 34600, the low number would be set to 4600 and the high number to 3

For more information see CORRIGO Pics via <http://www.regin.se>

V.8.e. Communication LON (si CORRIGO avec option LON)

Set the LON function as below:

In Configuration menu/ Communication / Fonction port 2 = Activate the Port 2 function in extension unit.

Go on the right and activate extension unit. 1 en CORRIGO E28 LON

Button for the PIN service is at the back of the regulator.

Communication table is on <http://www.regincontrols.com>

V.8.f. Fire function activation

Setting of the Paramétrage de l'entrée

Access : Configuration / Input Output / DI / DI8

Déclarer l'input DI8 en « Al fire » « NO »

Paramétrage de la fonction

Access : Configuration / Fire function

Choose the required mode when activating the fire function

« Stop » : Complete stop of the unit

«Continuous operation »: Start or keeping of the unit in HS. Fire function will have priority on all others alarms.

«Normal operation»: keeps the unit in the same parameters chosen on site (stop/LS/HS)

« Exhaust fan only »: Start or keep in HS the exhaust fan (return is stopped)

« Return fan only »: Start or keeps in HS the return fan (exhaust stopped)

Alarm setting

Access: Configuration / alarm configuration

Enter alarm number « 10 » go on the right and enter in priority « C alarm C » « Active »

OPERATING AND COMMISSIONING INSTRUCTIONS

V.8.g. Activation of the function dehumidification

Input settings

Access : Configuration / Input Output / UI / UI4
Declare UI4 input in « Ambiance Humidity »

Function setting

Access: Configuration / Ctrl Humidity
Choose « Dehumidification »

Setpoint setting

Access: Humidity Regul
Enter the required setpoint

VI. REPAIR

VI.1. Différent type of defaults

A specific screen appear if you have an alarm (see ED-TOUCH manual). Celui -ci sera de classe A, ou C (voir détail ci-dessous)
Type of default:
C : Default do not stop the ventilation system and automatically disappears when a solution is found.
To solve a default press the alarm button (red), « delete » then « enter » the default with directional arrows and press OK button
Attention : do not « block »

Description	Cause
CORRIGO screen do not light up	- Unit is not powered correctly (LED P/B of CORRIGO switched off) - To light up the screen, press a button (backlit). - Command fuse is disused
Fans do not start	- Clocks are on 0 - No external start order - External stop - Active alarm
Remote control do not run or gives wrong values	Remote control further than 100m Repetitor is not connected correctly

VI.2. List of alarms

n°	View	Description	Type	Tempo	Cause
1	Malfunction supply air fan	(UDI2 must be closed « Fer »if fan runs) Or UAI2 must be higher than 30Pa if fan runs)	A	30s (120s for LOBBY)	<ol style="list-style-type: none"> 1. Pressure switch is wrongly connected (pressure switch must be set in 30Pa). 2. Pressure on the transmitter is lower to 30Pa. (LOBBY®) (contact us) 3. Motor is disused 4. Thermic protection motor is activated 5. Contrôler le raccordement des tubes crystal (chapitre IV.8 et IV.9) 6. Présence d'eau dans le tube crystal 7. 0-10V motor is inverted
2	Malfunction extract air fan	(UDI3 must be closed « Fer »if fan runs) Or UAI3 must be higher than 30Pa if fan runs)	A	30s (120s for LOBBY)	<ol style="list-style-type: none"> 1. Pressure switch is wrongly connected (pressure switch must be set in 30Pa). 2. Pressure on the transmitter is lower to 30Pa. (LOBBY®) (contact us) 3. Motor is disused 4. Thermic protection motor is activated 5. Control the connection of the crystal tubes (chapter

OPERATING AND COMMISSIONING INSTRUCTIONS

					IV.8 and IV.9 6. Water in the crystal tubes 7. 0-10V motor is inverted
6	Filter guard 1	DI1 must be open « Ouv » if there is no default	C	5s	1. Filters are dirty 2. Filters pressure switches are wrongly connected (Pressure switches must be set on 150 Pa for G4 200Pa for F7). 8. Control the connection of the crystal tubes (chapter IV.8)
8	External frost guard	Ext DI3 must be closed « Fer » if there is not default	C	120s	1. THA thermostat is not set on 5°C 2. THA thermostat s disused 3. Circulating pump is disused 4. 3 ways valve 3 is wrongly connected, hydraulically or is disused
15	High supply air temp	Ext AI1 is mounted higher than 50°C	A	30s	1. Exhaust temperature is higher than 50°C 2. Temperature setting is too high 3. Exhaust fan is stopped (vent AS Default) when hot battery is in full capacity.
23	Electric heating is overheated	Ext DI3 must be closed « Fer » if there is no default	A	5s	1. Safety thermostat THS is activated. To reset THS, push on the rearmament on the electric battery 2. Power cut 3. Exhaust fan is stopped (vent AS Default) when electric battery is in full capacity
27	Sensor error outdoor temp	Control the value Ext AI2	A	5s	Outside temperature sensor SEG is disused .Outside temperature sensor SEG is wrongly connected (see chapter IV.3)
29	Rotation sentinel exchanger	Control the value DI6	C	300s	The belt of the exchanger is brocken
31	Supply air fan control error	Difference higher than 50Pa between exhaust setpoint and pressure on Ext UAI1	C	30min	The network of blowing do not correspond to the fan or to the setpoint. Filter is dirty
32	Extract air fan control error	Difference higher than 50Pa between exhaust setpoint and pressure on Ext UAI2	C	30min	Return network do not correspond to the fan or to the setpoint. Filter is dirty
35	Manual	Runs in manual mode	C	5s	Default à titre indicatif (le centrale est passée à l'arrêt en PV ou en GV directement sur l'afficheur (voir (7) chapitre V.3.a)
36 à 44	... in Manual mode	Functions are modified in manual mode	C	5s	In the Auto Manual menu everything must be in Auto.
48	Internal battery error	Error battery intern	A	5s	Intern battery of the CORRIGO is disused Change the battery quickly in order to not loose programm. See chapter VII.2
49	Sensor error supply air temp	Control the Value on Ext AI1	A	5s	Outside temperature sensor SSG is disused Outside temperature sensor SSG is wrongly connected (see chapter V.3.a)
50	Sensor error extract air temp	Contrôler la valeur sur Ext AI3	A	5s	Outside temperature sensor SRG is disused Outside temperature sensor SRG is wrongly connected (see chapter V.3.a)

OPERATING AND COMMISSIONING INSTRUCTIONS

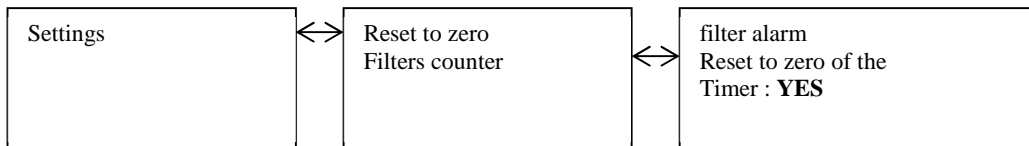
55	Sensor error pressure VAS	Control the value on Ext UAI1	A	5s	0-10V signal is inverted Pressure transmitter on fresh air is in short-circuit
56	Sensor error extract VAR	Control the value on Ext UAI2	A	5s	0-10V signal is inverted Pressure transmitter on intake air is short circuited
59	CO2 sensor error	Control the Value on Ext AI4	A	5s	0-10V signal is inverted CO2 transmitter is in short-circuit
85	... in manual mode	Functions are modified in manual mode	A	5s	In Manuel Auto menu everything must be in Auto.
86	Time for service	Regular visit	C	5s	See chapter VI.3
87	... in manual mode	Functions are modified in manual mode	C	5s	In Manuel Auto menu everything must be in Auto.

VI.3. Acknowledge the default « timer service »

These settings require an access to the setting menu. You need the access rights to “service” level. Follow the instructions below.



Enter the code **2222** with directional arrows then press the OK button. Press the left arrow twice to reach the menus. In case of mistake press C button twice and start again.



An alarm occurs every 6 months to remind the maintenance visit. Enter YES to reset the counter to zero

VII. MAINTENANCE

VII.1. Obligatory maintenance

Outside the unit

Check the ducts, flexible sleeves, anti-vibrating plots; replace them if necessary. Check that all elements connected to the unit do not give any vibration to the unit.

Unit and Regulation

Check connection every year

Filtration

Do not damage the filters

OPERATING AND COMMISSIONING INSTRUCTIONS

Classification	Max pressure drop	Efficiency of the filtration EUROVENT	Reference	Washing* (Water + light detergent)	Aspiration* Exhaust*
Gravimetric	150Pa	EU4	G4	Limited (1 to 4 times)	YES
Opacimetric	200Pa	EU7	F7	NO	

Componants	Periodicity of the cleaning			
	1 MONTH	3 MONTHS	6 MONTHS	12 MONTHS
<i>Filtration</i>	Blowing (for the G4filters)	Cleaning (for the G4filters)	Washing (for the G4filters)	Replacement Of the filters if needed

Rotative exchanger (12 month)

Check belt and change it if necessary

VII.2. Battery replacement

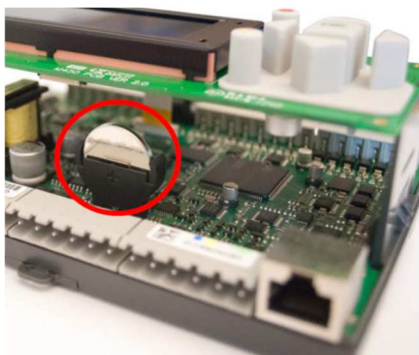
When low battery alarm starts and red LED is lighting, this indicates that the safety battery for the safeguard of the memory and clock is too low. Follow the instructions below to change them. A condenser keeps the safeguard and let the clock running for 10 minutes left after power cut. If the replacement of the battery takes less than 10 minutes, you will not have to reset the program and clock will work normally.

Replacement battety is a CR2032 type



Press the clips on each sides of the box with a little screwdriver to open the the top of the box.

Location of the battery



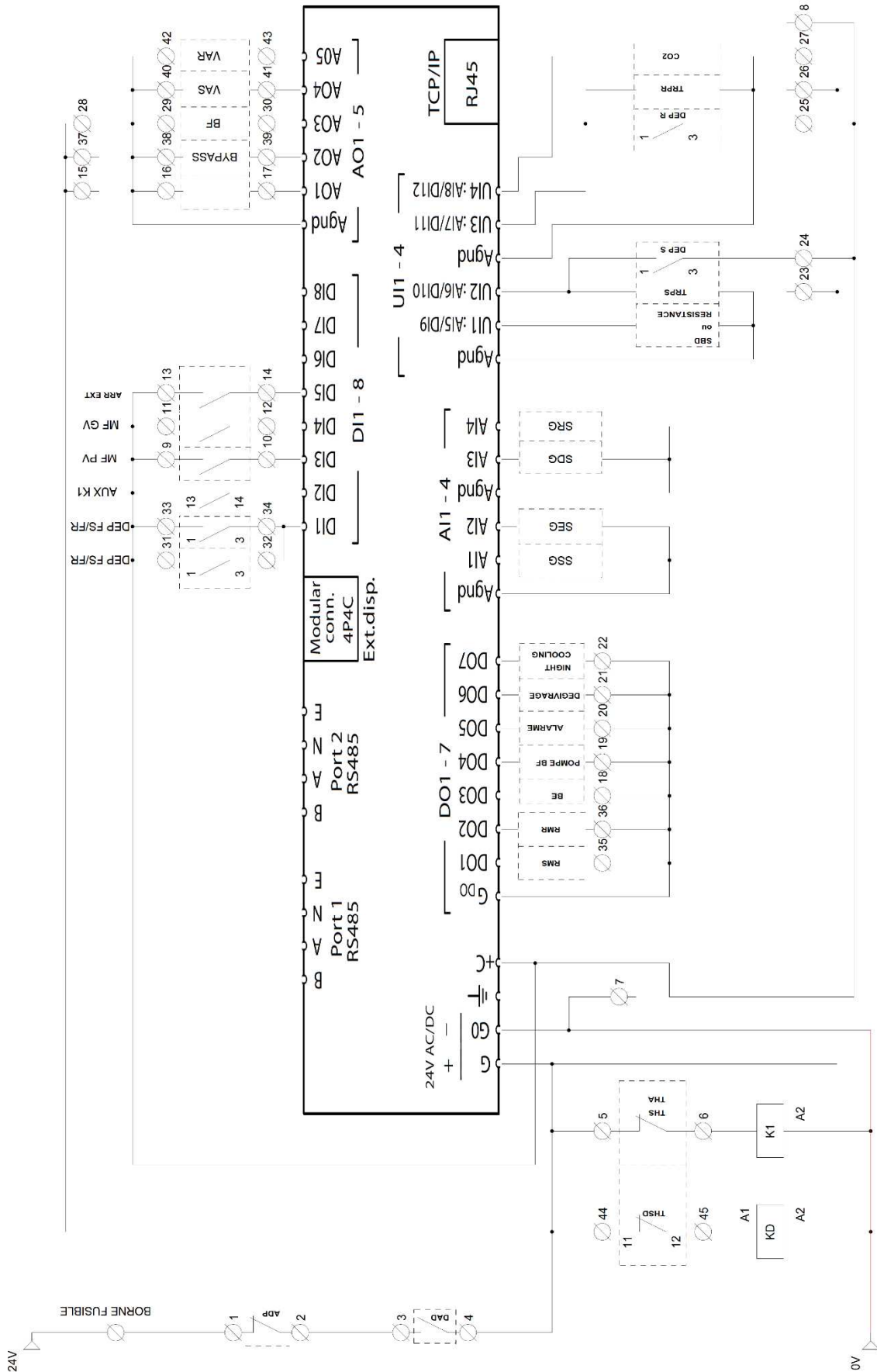
Take the battery and remove it softly .

Press firmly the new battery in the support. Note : Attention to the direction and polarity of the battery.

OPERATING AND COMMISSIONING INSTRUCTIONS

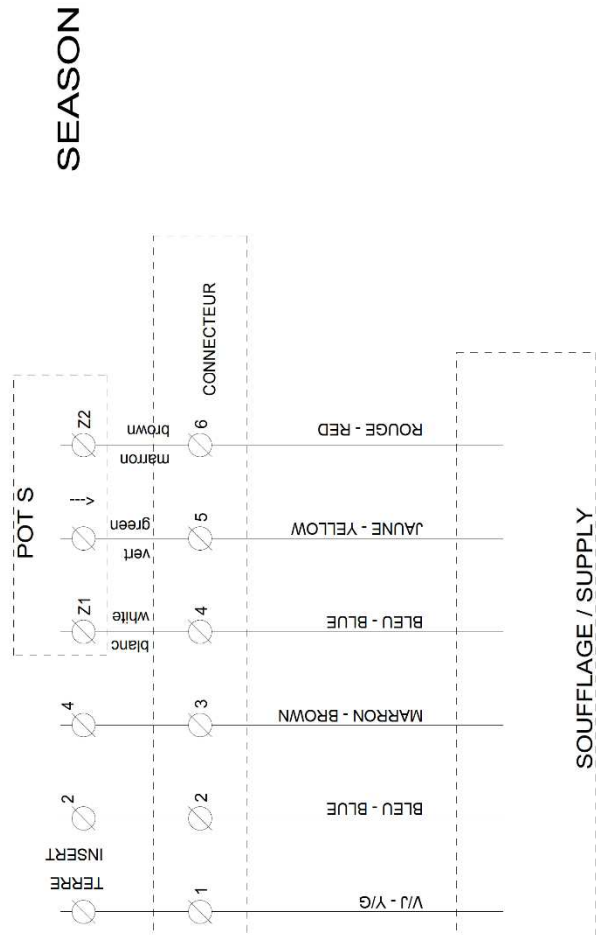
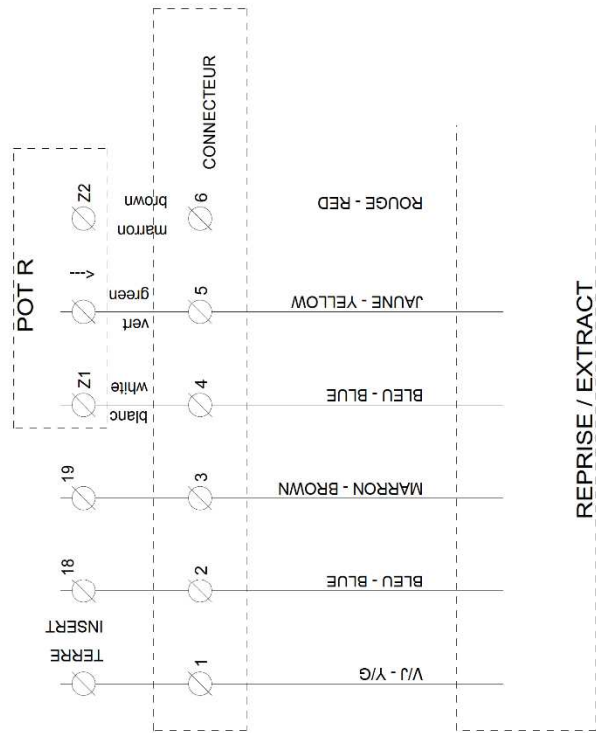
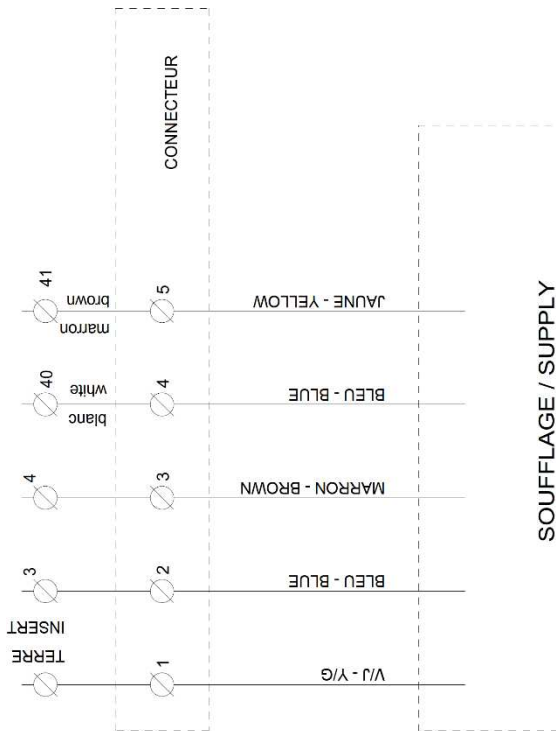
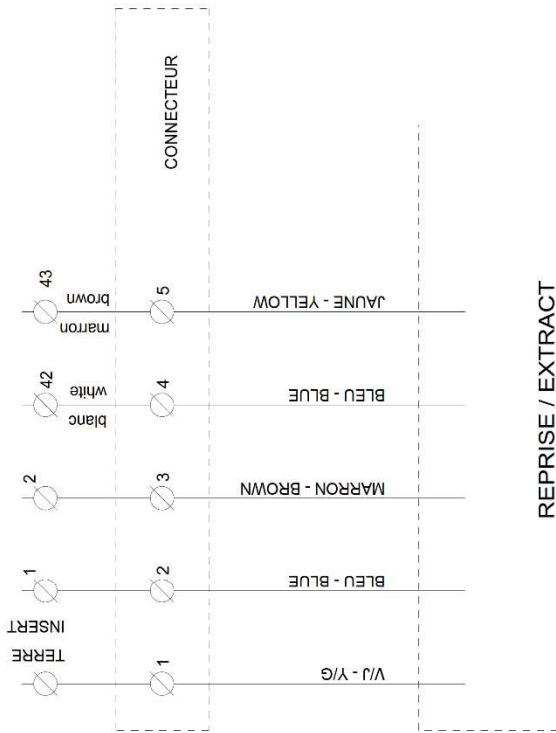
VIII. ANNEXES

VIII.1. Control scheme



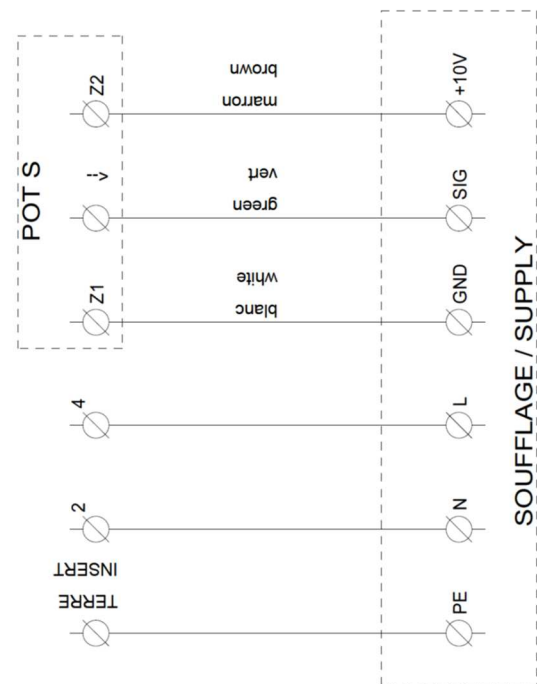
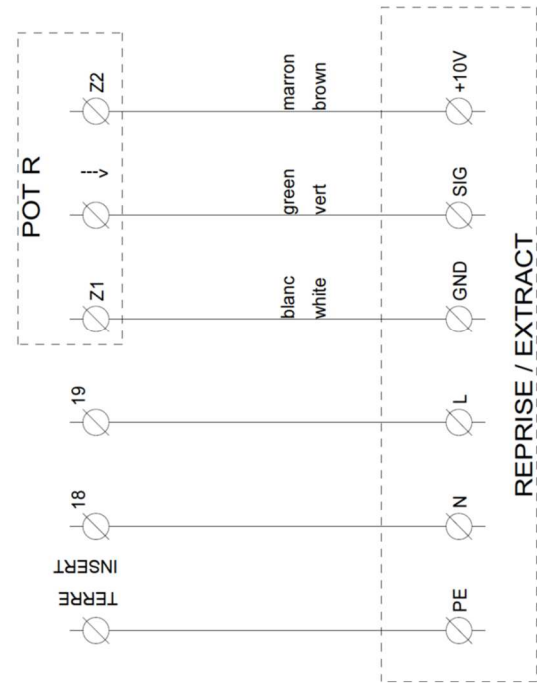
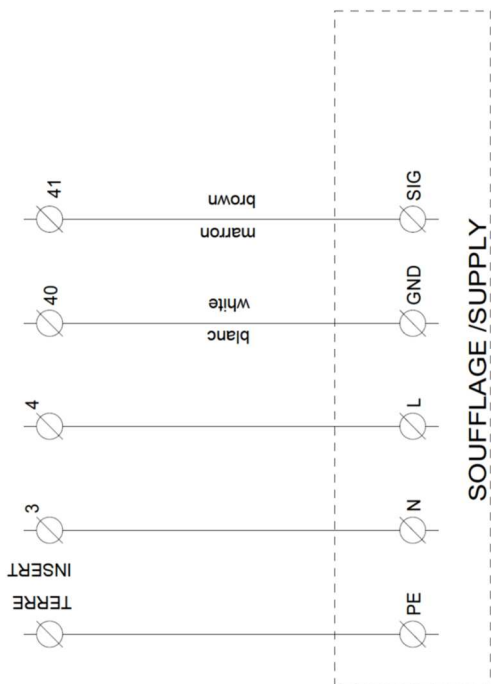
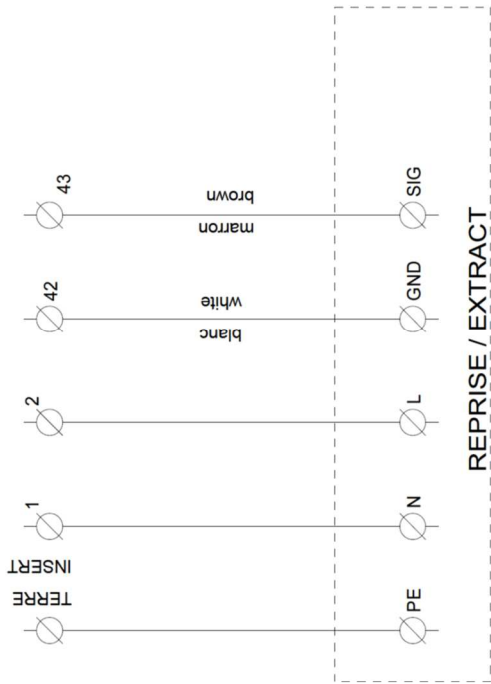
OPERATING AND COMMISSIONING INSTRUCTIONS

VIII.2. Motor wiring NEOTIME 600-900



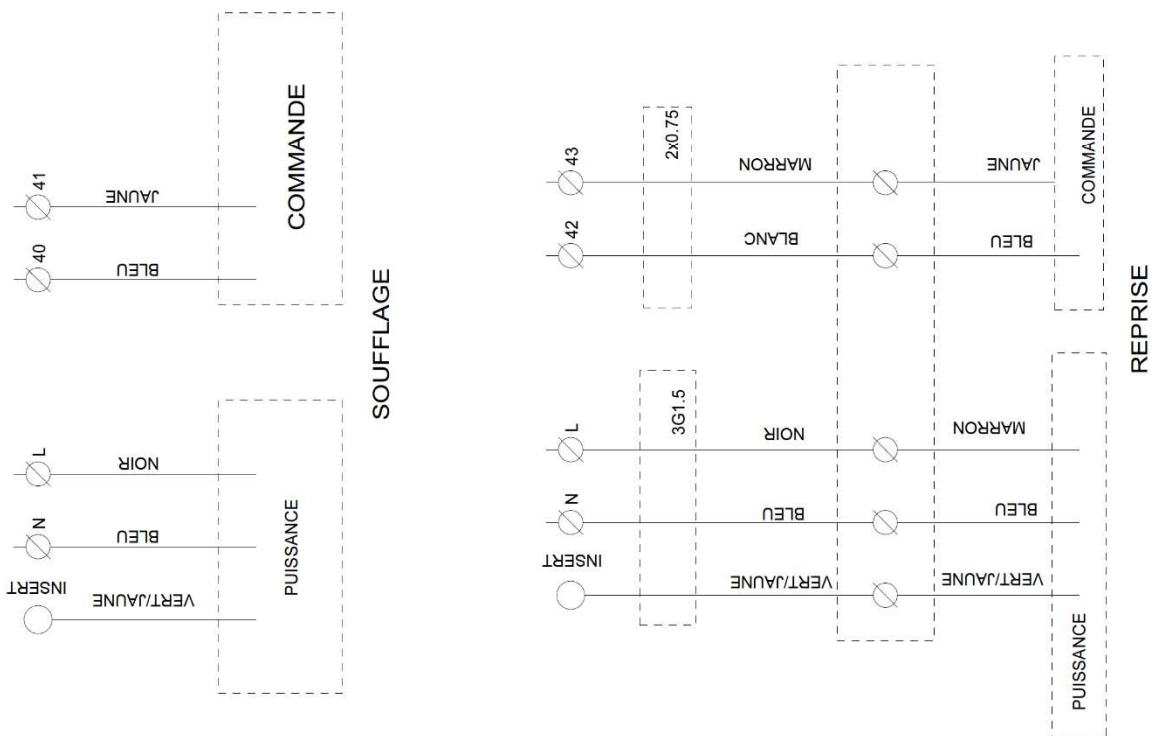
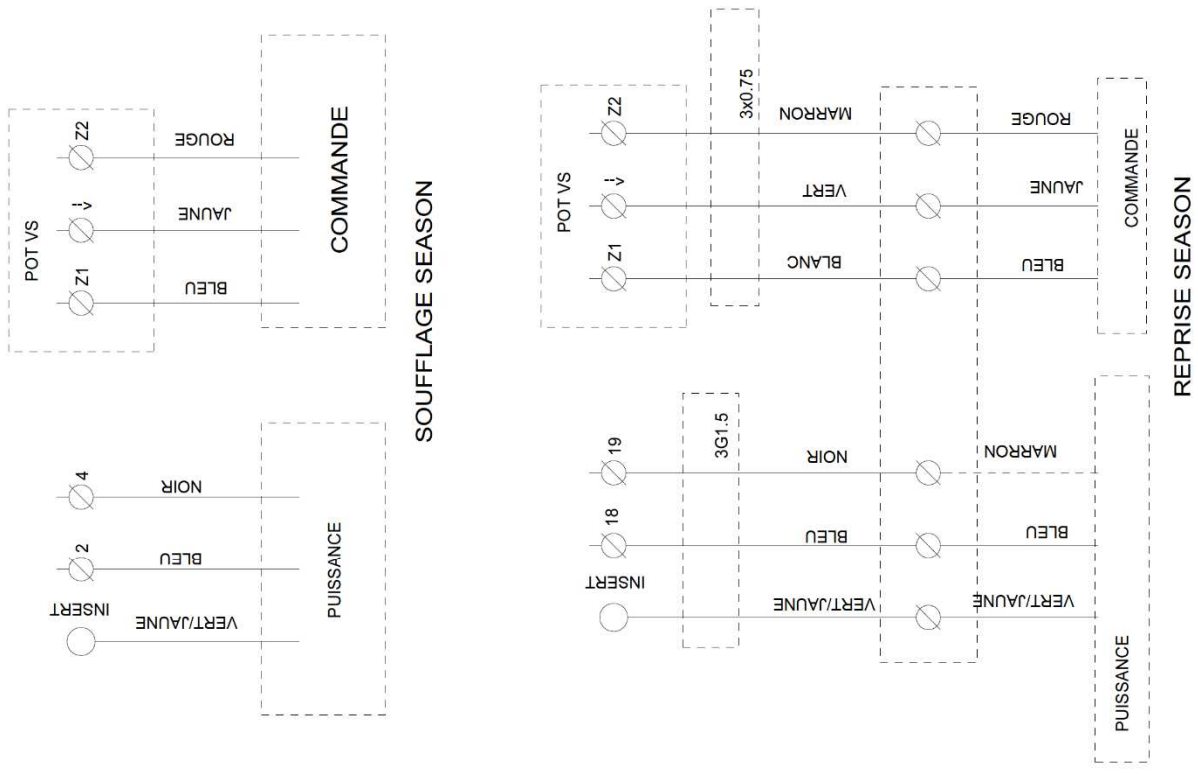
OPERATING AND COMMISSIONING INSTRUCTIONS

VIII.3. Moto wiring NEOTIME 1300-1800-2500



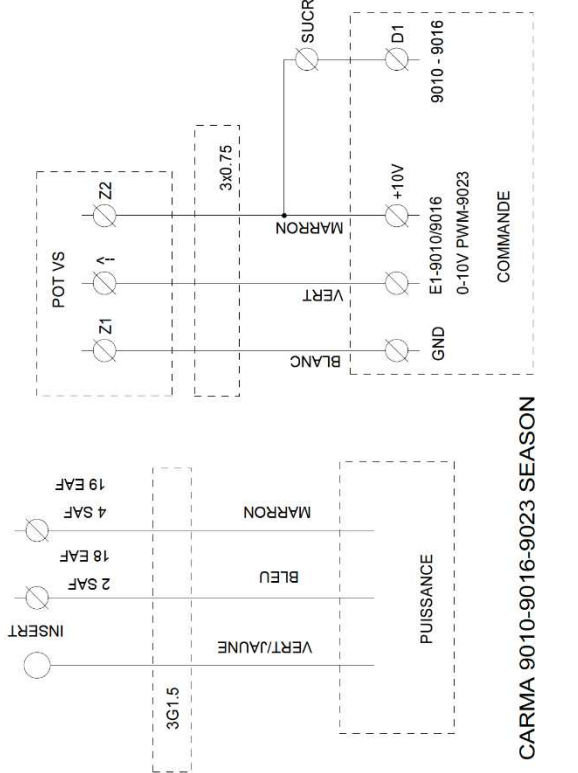
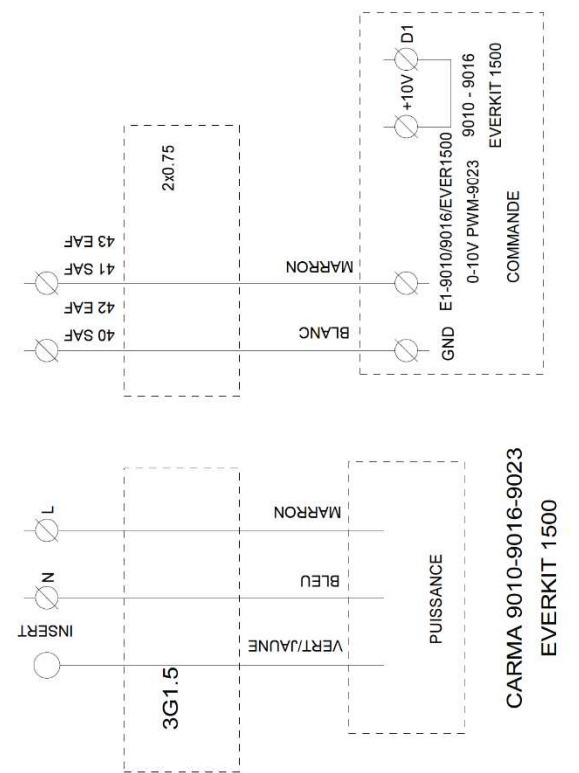
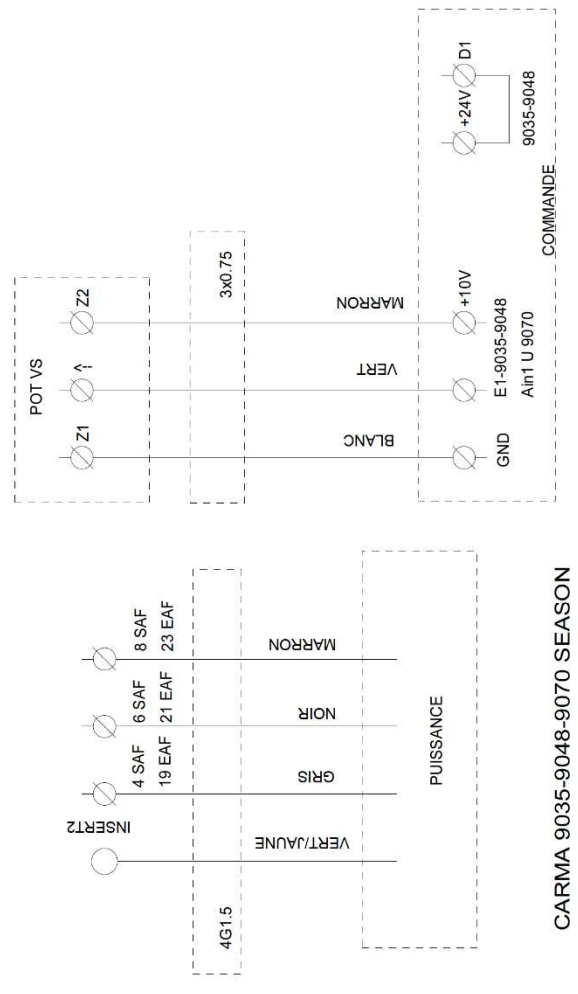
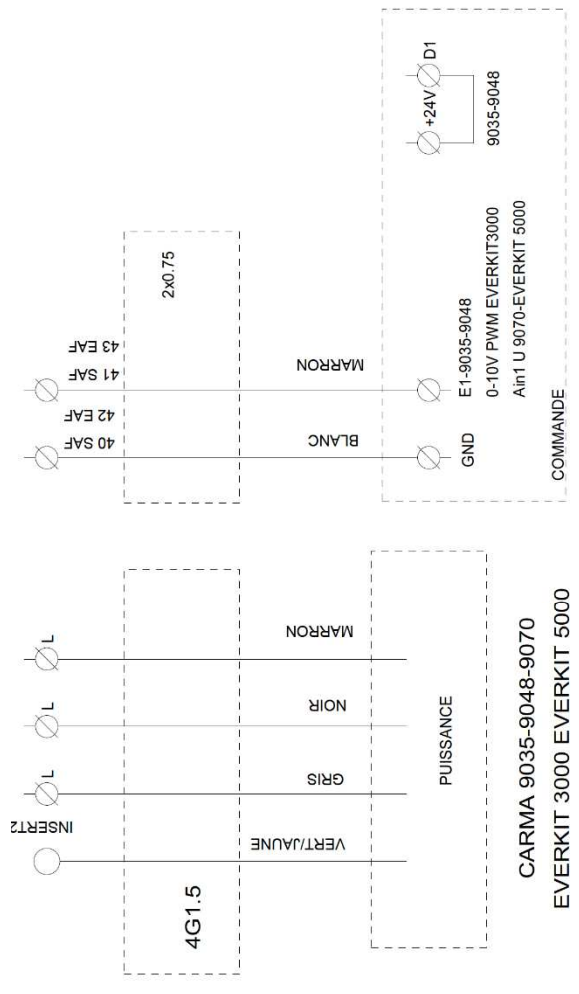
OPERATING AND COMMISSIONING INSTRUCTIONS

VIII.4. Motor wiring CARMA 9008



OPERATING AND COMMISSIONING INSTRUCTIONS

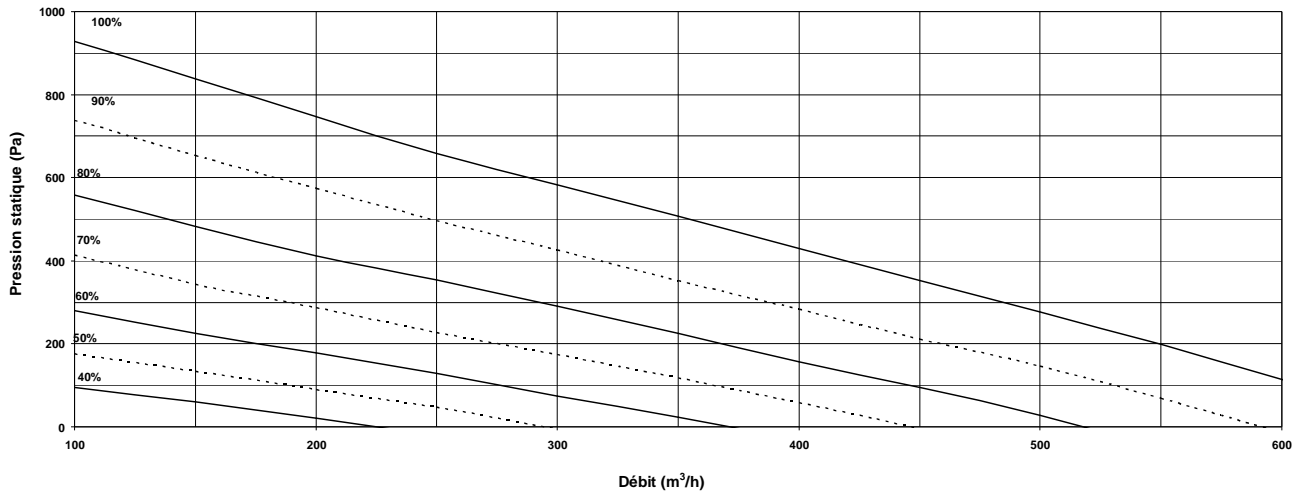
VIII.5. Motor wiring CARMA 9010-9070



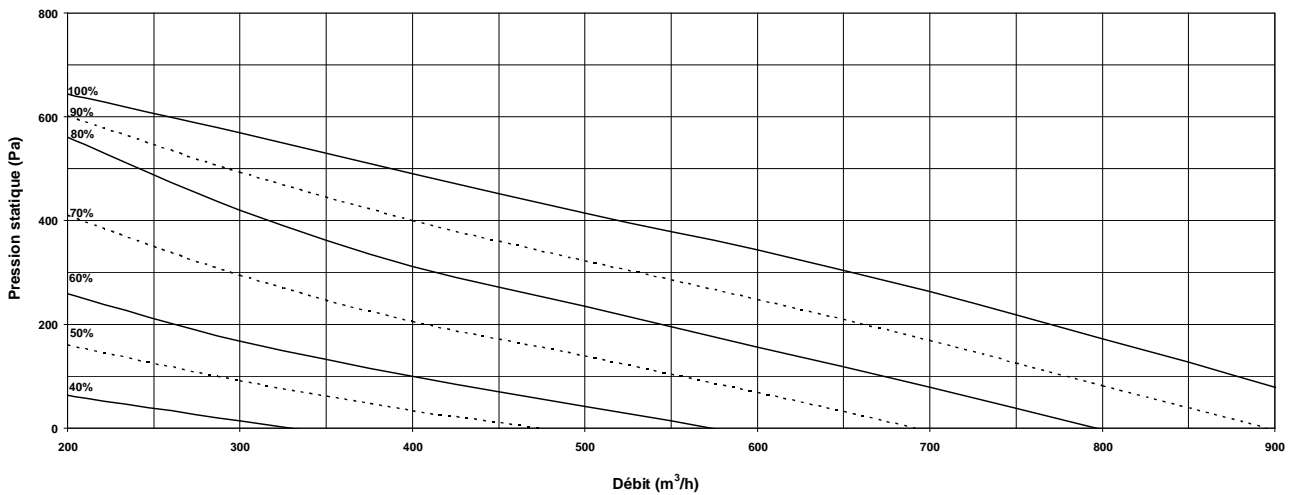
OPERATING AND COMMISSIONING INSTRUCTIONS

VIII.6. Curves NEOTIME

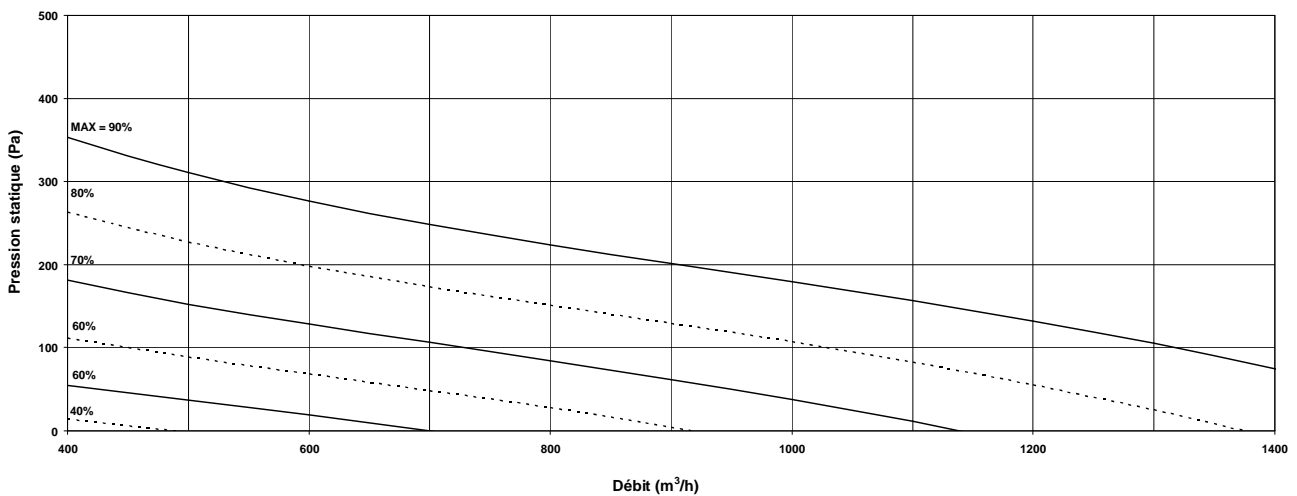
NEOTIME® 600



NEOTIME® 900

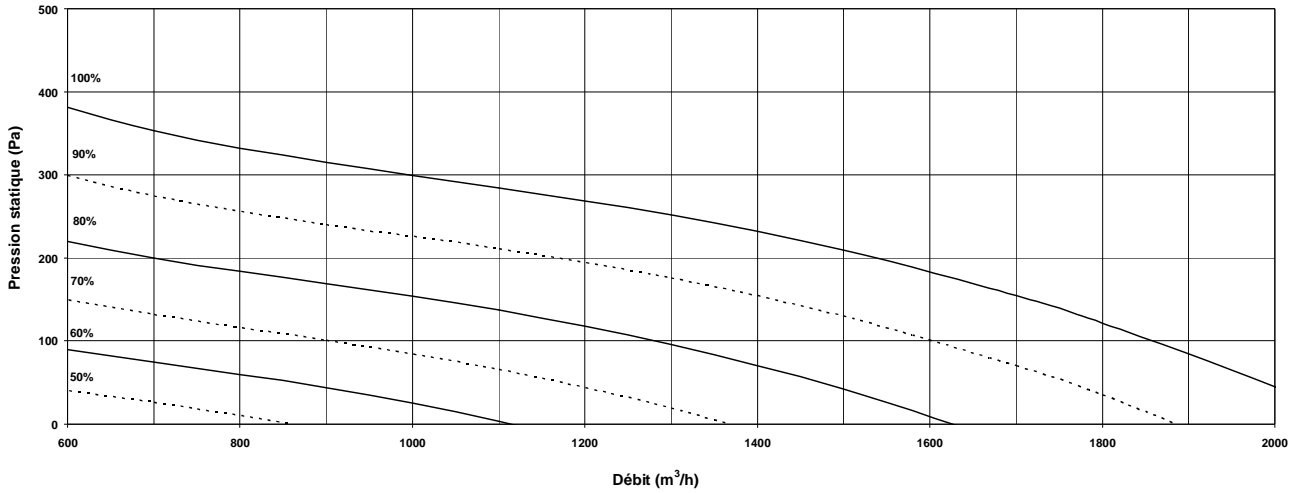


NEOTIME® 1300

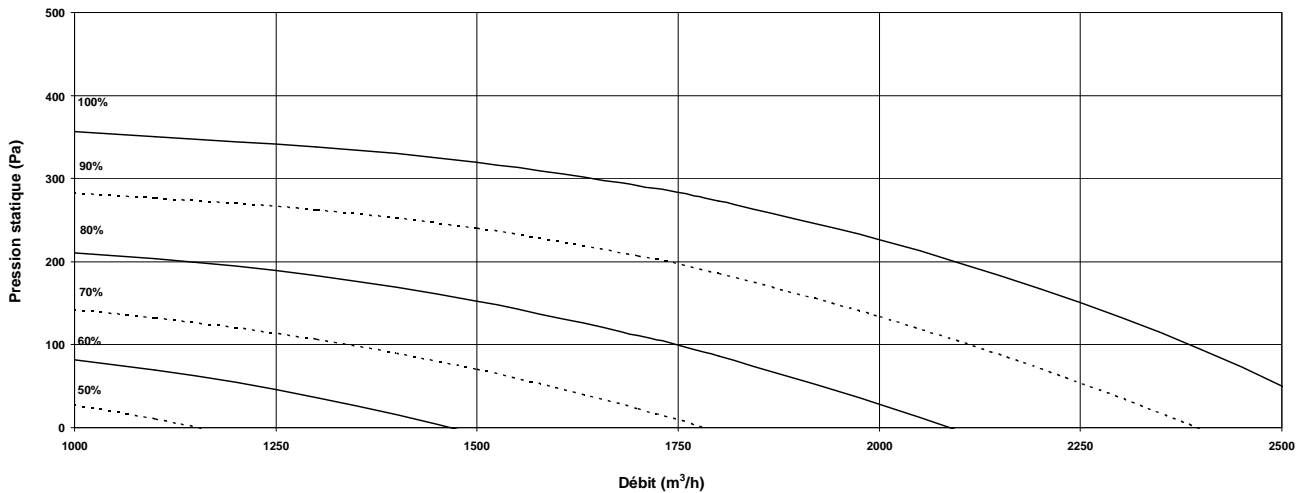


OPERATING AND COMMISSIONING INSTRUCTIONS

NEOTIME® 1800

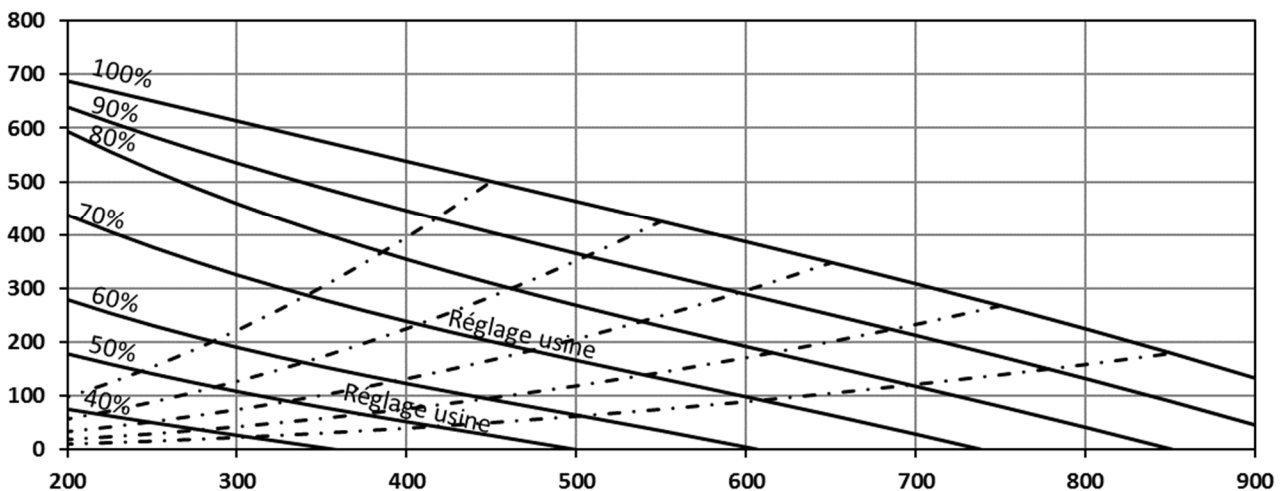


NEOTIME® 2500



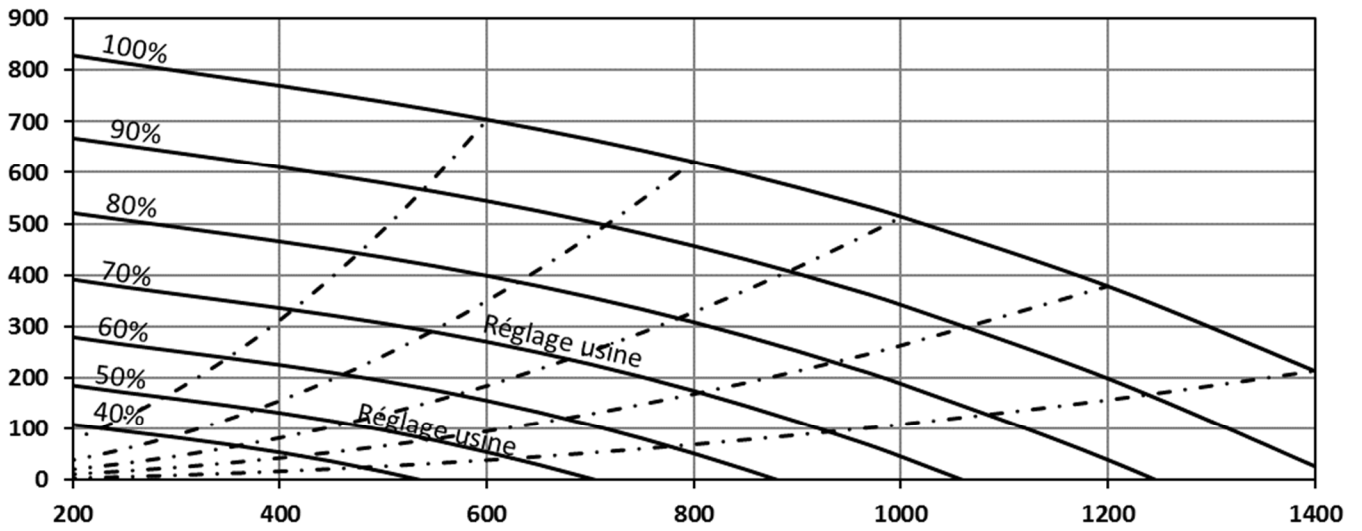
VIII.7. Curves CARMA

CARMA® 9008

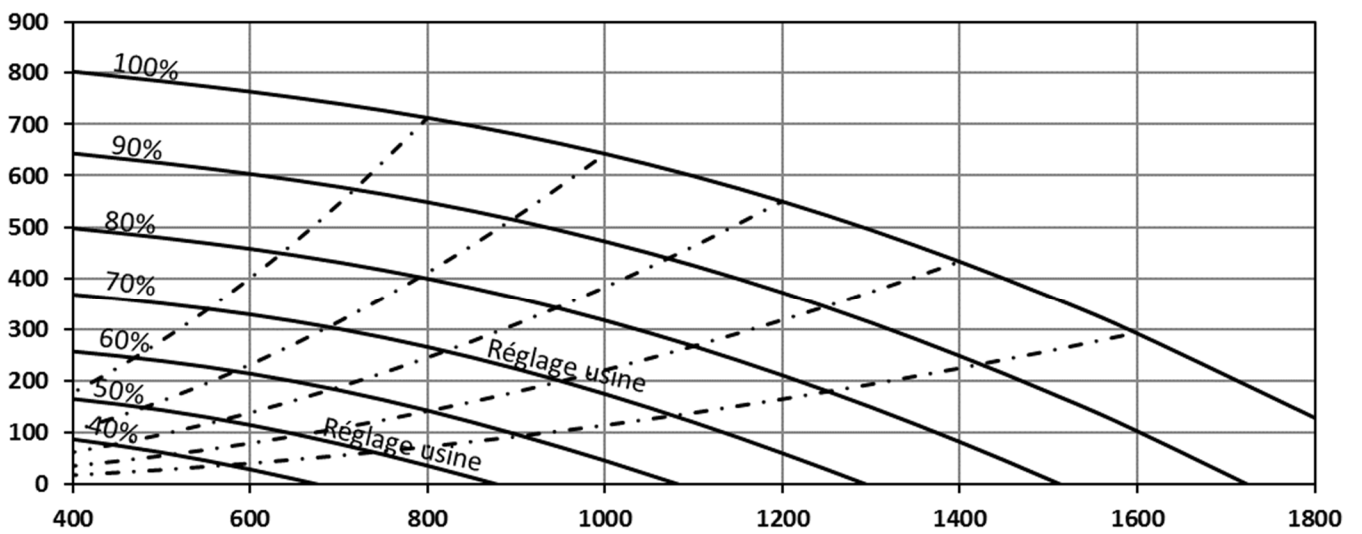


OPERATING AND COMMISSIONING INSTRUCTIONS

CARMA® 9010

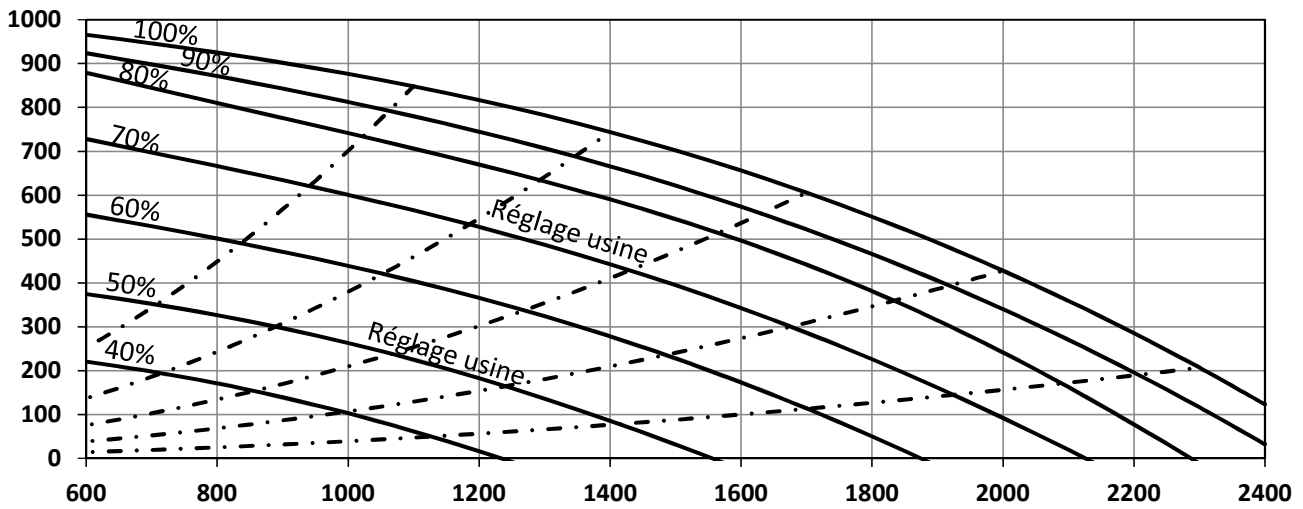


CARMA® 9016

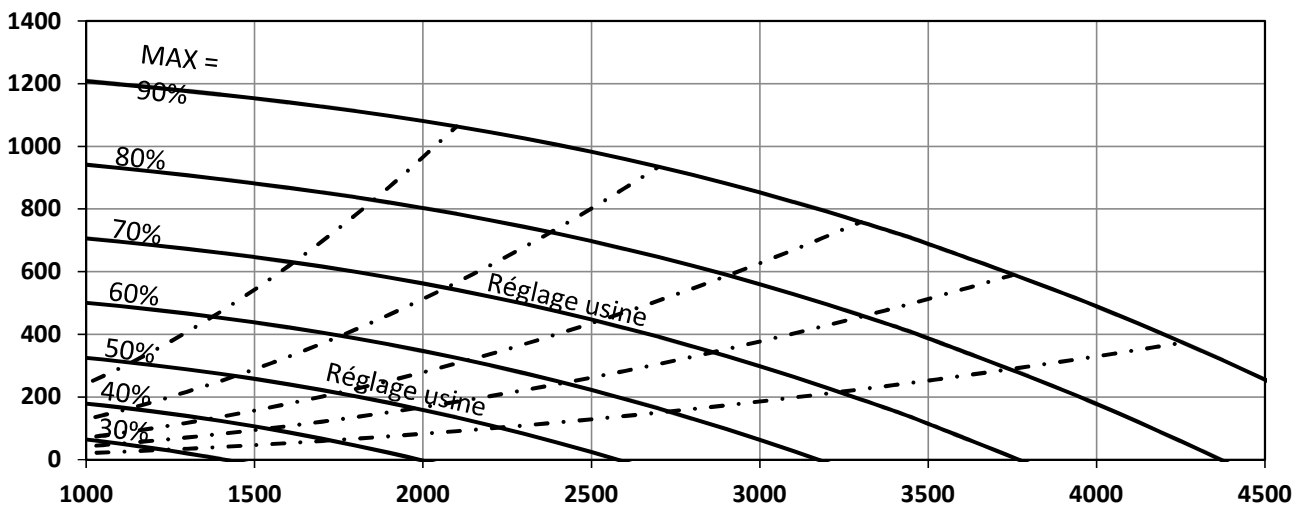


OPERATING AND COMMISSIONING INSTRUCTIONS

CARMA® 9023

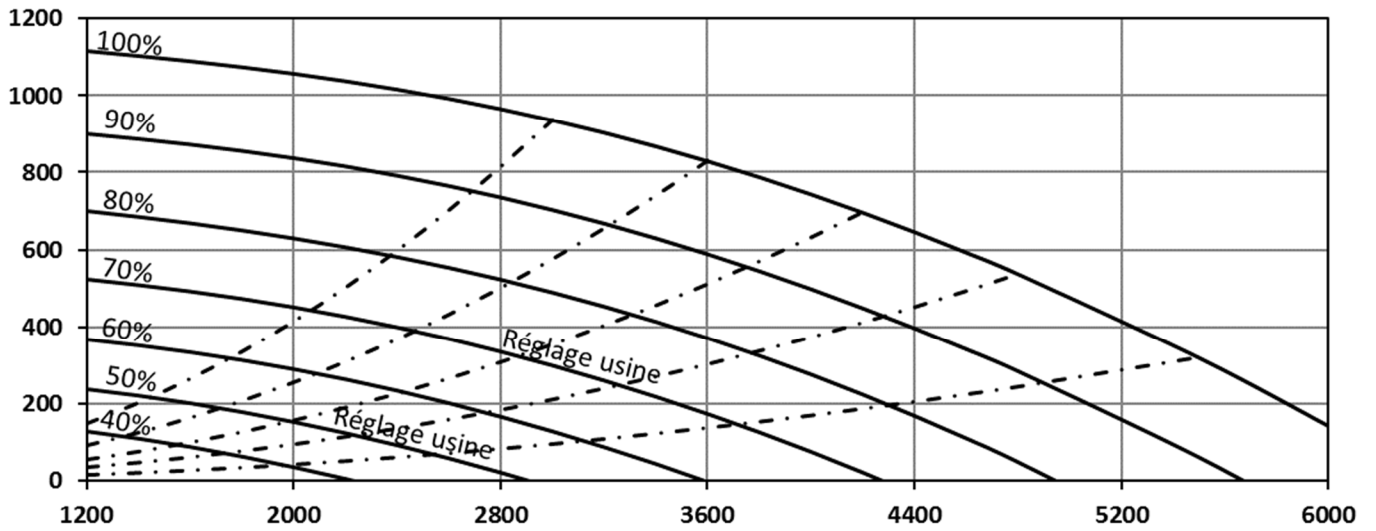


CARMA® 9035

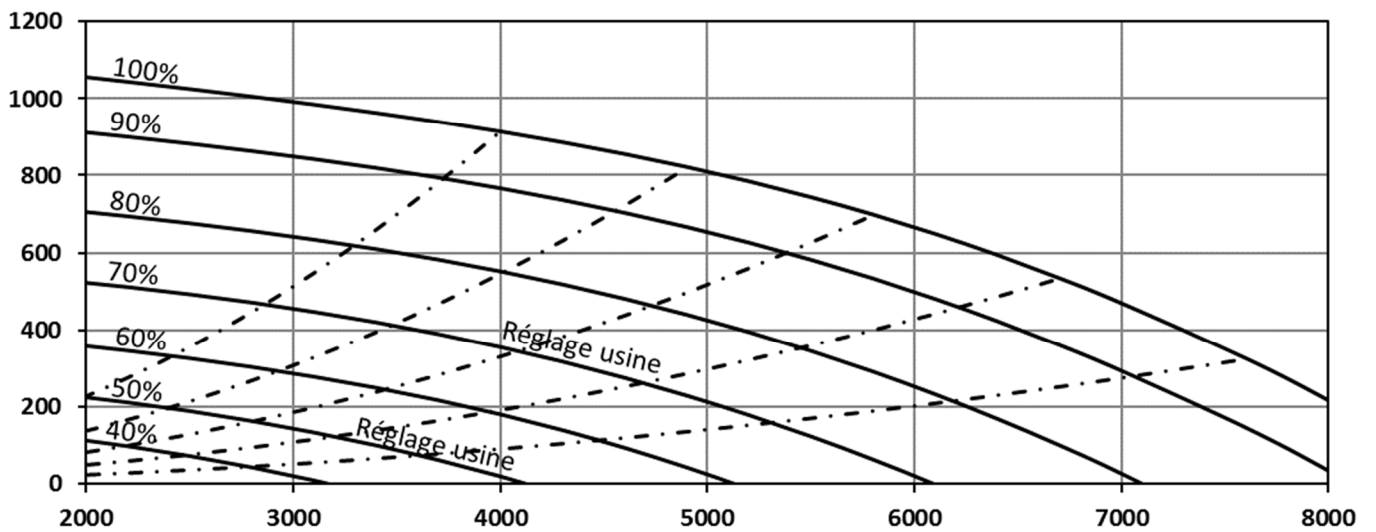


OPERATING AND COMMISSIONING INSTRUCTIONS

CARMA® 9048



CARMA® 9070



OPERATING AND COMMISSIONING INSTRUCTIONS

VIII.8. Table MODBUS et BACNET

INPUT REGISTER

VIII.1. Table MODBUS et BACNET

INPUT REGISTER

Fonction	Description	Exo type	Modbus Adresse	Bacnet Adresse	Défaut value
Unit XXXXX	Modbus : 0= stop 1= start 2= start Slow speed 3= start maxi speed 4= start normal speed 5= In operation 8= CO2 fonctionning 9= Night cooling 11= stopped BACNET : 1= stop 2= start 3= start Slow speed 4= start speed maxi 5= start normal speed 6= In operation 9= CO2 fonctionning 10= Night cooling 12= stopped	X	3	MSV, 40003	
Outdoor Temperature		R	1	AV, 40001	
Operating time of the supply fan		R	4	AV, 40004	
Operating time of the extract fan		R	5	AV, 40005	
Supply air Temperature		R	7	AV, 40007	
Extract Temperature		R	9	AV, 40009	
SAF pressure	LOBBY EC	R	13	AV, 40013	
EAF pressure	LOBBY EC	R	14	AV, 40014	
Supply constant air flow	MAC2®/QUATTRO®	R	15	AV,40015	
Extract constant air flow	MAC2®/QUATTRO®	R	16	AV,40016	
CO2	DIVA® QUATTRO	R	17	AV,40017	
Humidity		R	23	AV,40023	
Analog output	0-10V Heating (water only)	R	54		
Analog output	0-10V Exchanger	R	55		
Analog output	0-10V Cooling	R	56		
Analog output	0-10V SAF	R	57		
Analog output	0-10V EAF	R	58		

OPERATING AND COMMISSIONING INSTRUCTIONS

HOLDING REGISTER

Fonction	Description	Exo type	Modbus Adresse	Bacnet Adresse	Défaut value
Supply setpoint	Set in constant supply	R	1	AV, 30001	18
Supply setpoint	Set in constant supply comp ext for T°C out -20°C	R	10		25
Supply setpoint	Set in constant supply comp ext for T°C out de -15°C	R	11		24
Supply setpoint	Set in constant supply comp ext for T°C out de -10°C	R	12		23
Supply setpoint	Set in constant supply comp ext for T°C out de -5°C	R	13		23
Supply setpoint	Set in constant supply comp ext for T°C out de -0°C	R	14		22
Supply setpoint	Set in constant supply comp ext for T°C out de +5°C	R	15		20
Supply setpoint	Set in constant supply comp ext for T°C out de +10°C	R	16		18
Supply setpoint	Set in constant supply comp ext for T°C out de +15°C	R	17		18
Return setpoint	Set in return control	R	18	AV, 30018	21
speed supply HS setpoint	In % for ECO and DIVA	R	424		70
speed supply LS setpoint	In % for ECO and DIVA	R	425		50
speed return HS setpoint	In % for ECO and DIVA	R	426		70
speed return LS setpoint	In % for ECO and DIVA	R	427		50
pressure soufflage setpoint	In Pa for LOBBY	R	25	AV, 30025	150
pressure reprise setpoint	In Pa for LOBBY	R	27	AV, 30027	150
Airflow supply HS setpoint	In m3/h for MAC2® and QUATTRO®	R	28	AV,30028	xxx
Airflow supply LS setpoint	In m3/h for MAC2® and QUATTRO®	R	29	AV,30029	xxx
Airflow return HS setpoint	In m3/h for MAC2® and QUATTRO®	R	30	AV,30030	xxx
Airflow return LS setpoint	In m3/h for MAC2® and QUATTRO®	R	31	AV,30031	xxx
Forced Functionning mode of the unit	MODBUS 0= Manual stop 1= Manual slow speed 2= Vitesse normale manuelle 3= Auto BACNET 1= manual stop 2= Manual slow speed 3= Normal manual speed 4= Auto	X	368	MSV,30368	xx:xx

OPERATING AND COMMISSIONING INSTRUCTIONS

INPUT STATUT REGISTER

Fonction	Description	Exo type	Modbus Adresse	Bacnet Adresse	Défaut value
Alarm synthesis	If 1 = ALARM	L	30	BV,20030	
SAF default	If 1 = ALARM	L	33	BV,20033	
EAF default	If 1 = ALARM	L	34	BV,20034	
Filter default	If 1 = ALARM	L	38	BV,20038	
Antifreeze default	If 1 = ALARM	L	40	BV,20040	
Fire default	If 1 = ALARM	L	42	BV,20042	
Electric battery overheat	If 1 = ALARM	L	55	BV,20055	
Outdoor temperature default	If 1 = ALARM	L	59	BV,20059	
Battery default	If 1 = ALARM	L	80	BV,20080	
Supply temperature default	If 1 = ALARM	L	90	BV,20090	
Extract temperature Default	If 1 = ALARM	L	91	BV, 20091	

IX. NOTES

