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ENGLISH

1 SAFETY RULES

Before installing and using the product:



- Carefully read the whole of this manual.
- Check that the data indicated on the plate is desired information and is appropriate for the installation, and in particular that the nominal voltage of the pump is compatible with that of the installation.
- The installation and maintenance must be carried out solely and exclusively by authorised personnel, responsible for making the electrical connections in accordance with the current safety regulations.
- The pump must not be used by people with reduced physical, sensory or mental capabilities, or without the due experience or knowledge, except if a person responsible for their safety has explained the instructions and supervised their operation of the pump.
- Do not let children play with the pump.
- The manufacturer accepts no liability for damage caused by improper use of the product and shall not be held responsible for damage caused by maintenance or repairs carried out by unqualified staff and/or with non-original replacement parts.
- The use of unauthorised replacement parts, alterations of the product or improper use shall automatically render the product guarantee null and void.

During normal operation:



- Before removing the cover of the frequency converter for any maintenance work, ensure you disconnect the mains voltage and wait 5 minutes for the electronic circuit board to discharge any residual voltage inside.
- Never disconnect the frequency converter while the motor is rotating. This action can cause irreparable damage to the frequency converter and affect the other electronic systems connected to the same electric grid.
- Although the pump is not operational, the electrical supply must still be cut off to the whole frequency converter for any maintenance work.
- If there are any anomalies in the installation, the frequency converter can be stopped manually using the button STOP for this purpose.

2 TECHNICAL DATA

Nominal values:

Power supply voltage (V)	230 V Single phase
Working frequency (Hz)	20 - 50
Maximum current (A)	18
Protection rating	IP 55

Limits of use:

- Minimum ambient temperature: -10°C
- Maximum ambient temperature: +40°C
- Variation in the supply voltage: +/- 10%

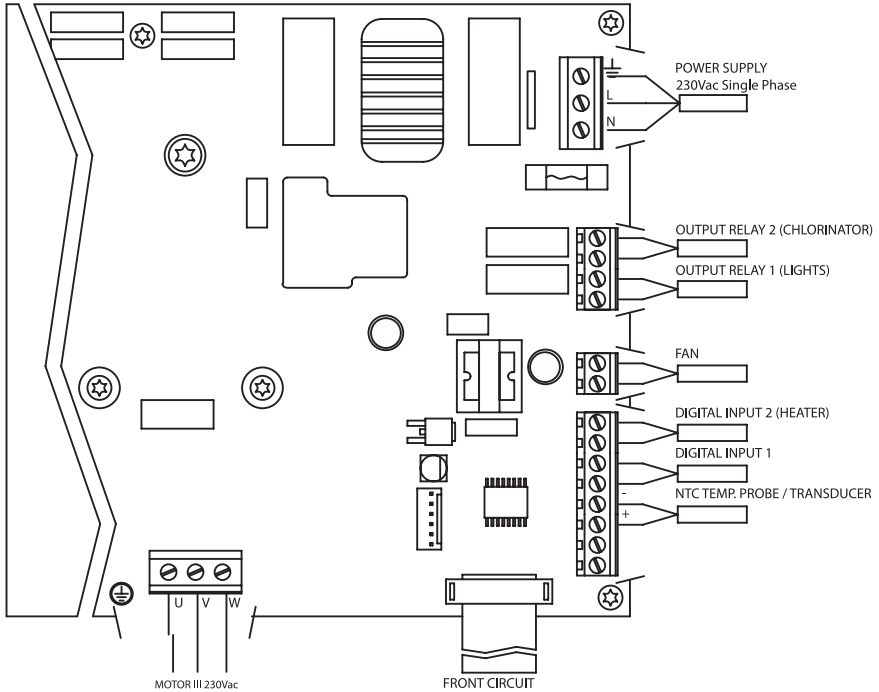
3 INSTALLATION / ASSEMBLY



BEFORE INSTALLING THE PUMP, CAREFULLY READ THE WHOLE OF THIS MANUAL AND CONSULT THE SAFETY RULES VALID IN EACH COUNTRY.

Installation of the pump:

- It must be installed in a well ventilated area, protected from damp and direct exposure to the sun and rain.
- Before making the electrical connections, ensure the cable used to provide power to the pump is not live.
- Carefully verify the electrical data indicated in the specifications plate of the frequency converter before connecting the electric current.
- The electric power cables to the pump must be of the correct size for the nominal consumption of the motor and the length of cable required.
- Also ensure that the grid has electrical protection; a high-sensitivity differential switch (30 mA, class A for domestic applications, Class B for industrial applications) is particularly recommended.
- In addition to the differential switch, it is advisable to install magnetothermal protection and a voltage disconnect switch to control the power supply to the pump.



Signal	Description
Outputs relay 1 and 2	<p>Outputs that acts depending on how they have been programmed. These outputs are potential free and have a maximum load of 5 amperes at 230 Vac.</p> <p>If there are lights (par. 4.1) relay 1 remains directly occupied for this purpose.</p> <p>If there is a chlorinator (par. 3.1) relay 2 remains directly occupied for this purpose.</p>
Fan	<p>When wall-mounted, as there is no cooling from the motor's own fan, the ventilation system of the wall mounting shall be used for this cooling.</p> <p>This output is 24 Vdc and it is activated whenever the frequency converter is giving a voltage output; its maximum load is 9W.</p>
Digital intakes 1 and 2	<p>Any potential free contact that will perform the programmed functions can be connected to these intakes.</p> <p>If there is a heater (par 6.1) digital intake 2 is directly reserved for this purpose.</p> <p>N.B. Do not apply voltage to these intakes.</p>
NTC temperature probe	<p>If there is an NTC temperature probe (par. 9.1) it must be connected here to monitor the water temperature and start up the pump to prevent freezing.</p>



BUTTON	FUNCTION
FILTER	Button for putting the pump into Filter Mode
VACUUM	Button to activate Cleaner Mode
BACK WASH	Button to activate Filter Cleaning Mode
P1	Button to activate Timed Programme 1
P2	Button to activate Timed Programme 2 or manual ignition ** of the lights if there are any.
MANUAL	Switch on the pump in Manual Mode **
STOP	To stop the pump and leave it on standby
F1	Button to activate the text on the screen
F2	Button to activate the text on the screen
▲ ▼	Keys for moving around the menu
POWER	Indicates voltage
RUN	Indicates that the pump is operating
ALARM	Indicates that there is an alarm active, if the LED flashes it indicates that it is necessary to put it into Filter Cleaning Mode.

** Repeatedly pressing the button increases the time set for the action.

6 MAIN SCREEN

This screen will show the status of the pump:

S	A	C	I		P	U	M	P	S		<	e	>	w	i	n	n	e	r		
			8	9	3		r	p	m					8	7		W				
			5	.	0		m	3	/	h				0	.	1		B	a	r	
1	5	:	2	3														M	E	N	U

You can view the revolutions and the power consumption of the motor directly, as well as the working point of the pump, flow and pressure.

From this display if you press the up or down buttons, you will see the water filtered during the day, the total water pumped since the last reset, the energy consumed in kWh and the hours the pump has worked.

7 OPERATION MODE

The pump, like all pumps designed for swimming pool cleaning, has the main objective of keeping the water clean and in optimum condition.

The most notable development is that with the logic of the frequency converter and the high performance motor, this process is achieved with high energy savings.

a) Basic operation:

You can access the three basic functions for operating the pool pump, filtering mode, filter cleaning and automatic swimming pool cleaning through suction.

The normal operating mode of the frequency converter is the filter function, once the volume of the swimming pool and the time intervals for activating the filtering have been indicated, the pump will filter the flow calculated during the time stipulated for that purpose.

It is here where we must take into account that the longer the time the greater the energy savings.

Similarly, the frequency converter will monitor the pressure of the installation, which will be the indicator of changes in it. As the filter becomes soiled, the pressure rises, and when it reaches the cleaning pressure it will show a warning to press the filter cleaning (back wash) button and move the valves for this purpose.

The other basic function for a swimming pool pump is for using automatic pool cleaners; this function is also directly accessible with the vacuum button.

b) Extra functions:

The power of the frequency converter controller provides access to other functions that complement the swimming pool as a whole, some of them directly from the keys P1 and P2, others by means of internal parameters and others by external signals connected to the frequency converter.

These functions can be timed, or according to a schedule or an external mechanical command.

There are also parameters that directly manage the use of lights, chlorinators or heaters, reserving the relay outputs and digital intakes for such uses.

The programming of these functions is in the section on the parameter menus further on.

The first time you apply voltage to your unit, you will see parameter 1.1 that belongs to menu 1 General Setup, which at the same time is the start-up wizard.

You will also see this screen after restoring the factory settings.

In this menu, enter the basic parameters of the installation prior to programming the time intervals that you wish to have the pump filtering.

1	.	1	L	A	N	G	U	A	G	E					
			E	n	g	l	i	s	h						
												N	e	x	t

Select the desired language and press the F2 key (next) and with the (▼) key, move to parameter 1.2 to continue with the setup wizard.

1	.	2	S	E	T	T	I	M	E									
			0	1	/	0	1	/	0	1	-	1	0	:	2	0		
															N	e	x	t

In this parameter enter the date and time. The frequency converter will be governed by this for scheduling the start and stop times. Continue with the button (▼) to change the parameter, go to the parameters, first to 1.3 and then to 1.4, where you will select the units to use for programming.

1	.	3	V	O	L	U	M	E	U	N	I	T	S					
			m	3														
															N	e	x	t

1	.	4	P	R	E	S	S	U	R	E	U	N	I	T	S			
			B	a	r													
															N	e	x	t

With the down arrow move to menu 1.5 and indicate the amount water in the swimming pool. This data is important as the pump will use it along with the time periods to calculate the flow necessary:

1	.	5	P	O	O	L	V	O	L	U	M	E						
							5	0	m	3								
															N	e	x	t

The flow of the pump is decided knowing the water contained in the swimming pool and adding the time of all the time periods programmed.

9 SETUP MENU (DIAGRAM)

1 GENERAL SETUP

- 1.1 LANGUAGE
- 1.2 SETTIME
- 1.3 VOLUME UNITS
- 1.4 PRESSURE UNITS
- 1.5 SWIMMING POOL VOLUME
- 1.6 FILTER FLOW
- 1.7 MAXIMUM PRESSURE OF FILTER

2 FILTRATION

- 2.01 DAILY RECIRCULATION
- 2.02 NUMBER OF CYCLES PER DAY
- 2.03 STARTTIME CYCLE 1
- 2.04 ENDTIME CYCLE 1
- 2.05 STARTTIME CYCLE 2
- 2.06 ENDTIME CYCLE 2
- 2.07 STARTTIME CYCLE 3
- 2.08 ENDTIME CYCLE 3
- 2.09 STARTTIME CYCLE 4
- 2.10 ENDTIME CYCLE 4
- 2.11 SKIMMING DURATION
- 2.12 SKIMMING INTERVAL
- 2.13 SKIMMING FLOW

3 SALT CHLORINATOR

- 3.1 PRESENCE OF CHLORINATOR

4 LIGHTS

- 4.01 PRESENCE OF LIGHTS
- 4.02 LIGHTS ON, MONDAY
- 4.03 LIGHTS START, MONDAY
- 4.04 LIGHTS END, MONDAY
- 4.05 LIGHTS ON, TUESDAY
- 4.06 LIGHTS START, TUESDAY
- 4.07 LIGHTS END, TUESDAY
- 4.08 LIGHTS ON, WEDNESDAY
- 4.09 LIGHTS START, WEDNESDAY
- 4.10 LIGHTS END, WEDNESDAY
- 4.11 LIGHTS ON, THURSDAY
- 4.12 LIGHTS START, THURSDAY
- 4.13 LIGHTS END, THURSDAY
- 4.14 LIGHTS ON, FRIDAY
- 4.15 LIGHTS START, FRIDAY
- 4.16 LIGHTS END, FRIDAY
- 4.17 LIGHTS ON, SATURDAY
- 4.18 LIGHTS START, SATURDAY
- 4.19 LIGHTS END, SATURDAY
- 4.20 LIGHTS ON, SUNDAY
- 4.21 LIGHTS START, SUNDAY
- 4.22 LIGHTS END, SUNDAY

5 FILTER WASH

- 5.1 WASH FLOW
- 5.2 WASH DURATION
- 5.3 RINSE DURATION
- 5.4 DIRTY FILTER WARNING PRESSURE

6 HEATING SYSTEM

- 6.1 HEATING SYSTEM
- 6.2 MINIMUM FLOW FOR HEATING

7 POOL CLEANER INTAKE

- 7.1 POOL CLEANER FLOW
- 7.2 POOL CLEANER DURATION

9 SETUP MENU (DIAGRAM)

8 PROGRAMMES

8.01 RENAME P1	8.21 END SCHED. PROG 1
8.02 FLOW P1	8.22 OUTPUT STATUS SCHED. PROG 1
8.03 DURATION P1	8.23 SCHEDULE PROGRAMME 2
8.04 OUTPUT STATUS P1	8.24 RENAME SCHED. PROG 2
8.05 RENAME P2	8.25 FLOW SCHED. PROG 2
8.06 FLOW P2	8.26 START SCHED. PROG 2
8.07 DURATION P2	8.27 END SCHED. PROG 2
8.08 OUTPUT STATUS P2	8.28 OUTPUT STATUS SCHED. PROG 2
8.09 RENAME IN1	8.29 SCHEDULE PROGRAMME 3
8.10 FLOW IN1	8.30 RENAME SCHED. PROG 3
8.11 DURATION IN1	8.31 FLOW SCHED. PROG 3
8.12 OUTPUT STATUS P1	8.32 START SCHED. PROG 3
8.13 RENAME IN2	8.33 END SCHED. PROG 3
8.14 FLOW IN2	8.34 OUTPUT STATUS SCHED. PROG 3
8.15 DURATION IN2	8.35 SCHEDULE PROGRAMME 4
8.16 OUTPUT STATUS P2	8.36 RENAME SCHED. PROG 4
8.17 SCHEDULE PROGRAMME 1	8.37 FLOW SCHED. PROG 4
8.18 RENAME SCHED. PROG 1	8.38 START SCHED. PROG 4
8.19 FLOW SCHED. PROG 1	8.39 END SCHED. PROG 4
8.20 START SCHED. PROG 1	8.40 OUTPUT STATUS SCHED. PROG 4

9 ANTIFREEZE

9.1 PRESENCE OF TEMPERATURE PROBE
9.2 ANTIFREEZE FLOW

10 INPUTS OUTPUTS

10.1 EMERGENCY STOP INTAKE 1	10.3 OUTPUT 1
10.2 EMERGENCY STOP INTAKE 2	10.4 OUTPUT 2

11 DISPLAY

11.1 WATER FILTERED TODAY	11.3 ENERGY METER
11.2 TOTAL WATER PUMPED	11.4 HOURS OF WORK

12 ALARM LOG

13 RESET

13.1 RESET METERS	13.3 FACTORY SETTINGS
13.2 RESET ALARM LOG	

10 SETUP MENU

1 GENERAL SETUP

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
1.1	Language		ENG.	--	--	To define the language used to interact with the frequency converter
1.2	Set time					To adjust the date and time of the frequency converter
1.3	Volume units	m ³	m ³	m ³	Us Gal	Shows on the screen the units with which you wish to work for volume
1.4	Pressure units	bar	bar	bar	PSI	Shows on the screen the working pressure calculated in the desired units
1.5	Swimming pool volume	m ³	50	15	500	Shows on the screen the capacity of the swimming pool in the desired units
1.6	Filter flow	m ³ /h	15	5	30	Maximum filter flow
1.7	Maximum filter pressure	Bar	2,5	2	5	Maximum filter pressure

2 FILTRATION

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
2.1	Daily recirculations		1	0,2	4	The number of times the swimming pool water must be recirculated (Par 1.5) per day
2.2	Number of cycles per day		1	1	4	The amount of time periods you wish to activate filter mode
2.3	Start time cycle 1		23:00			Start time of filter cycle 1
2.4	End time cycle 1		7:00			End time of filter cycle 1
2.5	Start time cycle 2		23:00			Start time of filter cycle 2
2.6	End time cycle 2		7:00			End time of filter cycle 2
2.7	Start time cycle 3		23:00			Start time of filter cycle 3
2.8	End time cycle 3		7:00			End time of filter cycle 3
2.9	Start time cycle 4		23:00			Start time of filter cycle 4
2.10	End time cycle 4		7:00			End time of filter cycle 4
2.11	Skimming duration	min	2	1	5	
2.12	Skimming interval	h	3	1	24	
2.13	Skimming flow	m ³ /h	15	5	Par 1.6	

3 SALT CHLORINATOR

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
3.1	Presence of chlorinator		NO	NO	YES	If there is a chlorinator, enable and reserve output relay 2 to activate the chlorinator.

10 SETUP MENU

4 LIGHTS

Par	Descripción	Ud	VALORES			Notas
			Default	Min.	Max.	
4.1	Presence of lights		NO	NO	YES	If there are lights, enable and reserve output relay 1 to activate the lights switchboard.
4.2	Lights on, monday		OFF	OFF	ON	To enable the lights to be switched on and off on Mondays
4.3	Lights start, monday		0:00			Time lights will be switched on on Mondays
4.4	Lights end, monday		0:00			Time lights will be switched off on Mondays
4.5	Lights on, tuesday		OFF	OFF	ON	To enable the lights to be switched on and off on Tuesdays
4.6	Lights start, tuesday		0:00			Time lights will be switched on on Tuesdays
4.7	Lights end, tuesday		0:00			Time lights will be switched off on Tuesdays
4.8	Lights on, wednesday		OFF	OFF	ON	To enable the lights to be switched on and off on Wednesdays
4.9	Lights start, wednesday		0:00			Time lights will be switched on on Wednesdays
4.10	Lights end, wednesday		0:00			Time lights will be switched off on Wednesdays
4.11	Lights on, thursday		OFF	OFF	ON	To enable the lights to be switched on and off on Thursdays
4.12	Lights start, thursday		0:00			Time lights will be switched on on Thursdays
4.13	Lights end, thursday		0:00			Time lights will be switched off on Thursdays
4.14	Lights on, friday		OFF	OFF	ON	To enable the lights to be switched on and off on Fridays
4.15	Lights start, friday		0:00			Time lights will be switched on on Fridays
4.16	Lights end, friday		0:00			Time lights will be switched off on Fridays
4.17	Lights on, saturday		OFF	OFF	ON	To enable the lights to be switched on and off on Saturdays
4.18	Lights start, saturday		0:00			Time lights will be switched on on Saturdays
4.19	Lights end, saturday		0:00			Time lights will be switched off on Saturdays
4.20	Lights on, sunday		OFF	OFF	ON	To enable the lights to be switched on and off on Sundays
4.21	Lights start, sunday		0:00			Time lights will be switched on on Sundays
4.22	Lights end, sunday		0:00			Time lights will be switched off on Sundays

10 SETUP MENU

5 FILTER WASH

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
5.1	Wash flow	m ³ /h	22,5	5	30	Flow when the button BACK WASH is pressed to initiate filter wash and rinse
5.2	Wash duration	min	5	1	60	Time spent washing the filter
5.3	Rinse duration	min	1	0	60	Time spent rinsing the filter
5.4	Dirty filter warning pressure	bar	1,5	1	Par 1.7	Pressure limit at which the warning to clean the filter will be triggered

6 HEATING SYSTEM

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
6.1	Heating system		NO	NO	YES	If there is a swimming pool water heater, enable and reserve intake 2 to start the pump.
6.2	Minimum flow for heating	m ³ /h	15	5	Par 1.6	Pump operating flow when it receives the signal from the water heater

7 POOL CLEANER

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
7.1	Pool cleaner flow	m ³ /h	25	Par 1.6	30	Pump operating flow when the VACUUM button is pressed
7.2	Pool cleaner duration	min	60	1	600	Time during which pool cleaner mode will function

8 PROGRAMMES

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
8.1	Rename P1		P1			To enter the name you wish to appear when P1 is pressed
8.2	Flow P1	m ³ /h	15	5	30	Flow at which the pump will operate when P1 is pressed
8.3	Duration P1	min	1	0	120	Duration of the programme P1
8.4	Output status P1		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme
8.5	Rename P2		P2			To enter the name you wish to appear when P2 is pressed
8.6	Flow P2	m ³ /h	15	5	30	Flow at which the pump will operate when P2 is pressed
8.7	Duration P2	min	1	0	120	Duration of the programme P2
8.8	Output status P2		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme

8 PROGRAMMES						
Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
8.9	Rename IN1		IN1			To enter the name you wish to appear when IN1 is pressed
8.10	Flow IN1	m ³ /h	15	5	30	Flow at which the pump will operate when intake IN1 is activated
8.11	Duration IN1	min	1	0	120	Duration of the programme IN1
8.12	Output status P1		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme
8.13	Rename IN2		IN2			To enter the name you wish to appear when IN2 is pressed
8.14	Flow IN2	m ³ /h	15	5	30	Flow at which the pump will operate when intake IN2 is activated
8.15	Duration IN2	min	1	0	120	Duration of the programme IN2
8.16	Output status P2		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme
8.17	Schedule programme 1		OFF	M	M-Su	To determine the days of the week that the time periods of TP1 will function
8.18	Rename sched. Prog 1		TP1			To enter the name you wish to appear when the hourly programming is activated
8.19	Flow sched. Prog 1	m ³ /h	15	5	30	Flow at which the pump will function during the time period programmed in TP1
8.20	Start sched. Prog 1	min	0:00			Start time of schedule programme 1
8.21	End sched. Prog 1		0:00			End time of schedule programme 1
8.22	Output status sched. Prog 1		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme
8.23	Schedule programme 2		OFF	M	M-Su	To determine the days of the week that the time periods of TP2 will function
8.24	Rename sched. Prog 2		TP2			To enter the name you wish to appear when the hourly programming is activated
8.25	Flow sched. Prog 2	m ³ /h	15	5	30	Flow at which the pump will function during the time period programmed in TP2
8.26	Start sched. Prog 2	min	0:00			Start time of schedule programme 2
8.27	End sched. Prog 2		0:00			End time of schedule programme 2
8.28	Output status sched. Prog 2		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme
8.29	Schedule programme 3		OFF	M	M-Su	To determine the days of the week that the time periods of TP3 will function

10 SETUP MENU

8 PROGRAMMES

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
8.30	Rename sched. Prog 3		TP3			To enter the name you wish to appear when the hourly programming is activated
8.31	Flow sched. Prog 3	m ³ /h	15	5	30	Flow at which the pump will function during the time period programmed in TP3
8.32	Start sched. Prog 3	min	0:00			Start time of schedule programme 3
8.33	End sched. Prog 3		0:00			End time of schedule programme 3
8.34	Output status sched. Prog 3		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme
8.35	Schedule programme 4		OFF	L	M-Su	To determine the days of the week that the time periods of TP4 will function
8.36	Rename sched. Prog 4		TP4			To enter the name you wish to appear when the hourly programming is activated
8.37	Flow sched. Prog 4	m ³ /h	15	5	30	Flow at which the pump will function during the time period programmed in TP4
8.38	Start sched. Prog 4	min	0:00			Start time of schedule programme 4
8.39	End sched. Prog 4		0:00			End time of schedule programme 4
8.40	Output status sched. Prog 4		OFF	OFF / OUTPUT 1 / OUTPUT 2		Output that you will activate when you enter the programme

9 ANTIFREEZE

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
9.1	Presence of temperature probe		NO	NO	YES	If there is an NTC temperature probe connected to the 24V output
9.2	Antifreeze flow	m ³ /h	5	5	Par 1.6	Flow at which the water will recirculate when the low temperature signal is received to prevent freezing

10 SETUP MENU

10 INPUTS OUTPUTS

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
10.1	Digital Input 1	NOT USED		NOT USED / EMERGENCY STOP / FLOW SLAVE / SPEED SLAVE		To connect an external stop or for an external signal to control the flow rate or pump speed through the 4-20 mA input
10.2	Digital Input 2	NOT USED		NOT USED / EMERGENCY STOP / FLOW SLAVE / SPEED SLAVE		To connect an external stop or for an external signal to control the flow rate or pump speed through the 4-20 mA input, if the input is not previously occupied.
10.3	Output 1	OFF		OFF / ALARM / ON		To send pump status signals if it is not previously occupied
10.4	Output 2	OFF		OFF / ALARM / ON		To send pump status signals if it is not previously occupied

11 DISPLAY

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
11.1	Water filtered today	m ³				The water that has moved during the day in modes that allow filtration
11.2	Total water pumped	m ³				The total of the water that has moved since the last time the meter was reset
11.3	Energy meters	kWh				The energy consumed since the last meter reset
11.4	Hours of work	h				The hours that the pump has worked since the last meter reset
11.5	Software version					Version of the unit software

12 ALARM LOG

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
12.1	Last alarm triggered					Records from newest to oldest of the alarms triggered

13 RESET

Par.	Description	Units	VALUES			Notes
			Default	Min.	Max.	
13.1	Reset meters		NO	NO	YES	To reset the meters of menu 11
13.2	Reset alarm log		NO	NO	YES	To reset the alarm log of menu 12
13.3	Factory settings		NO	NO	YES	Restores the default values

11 ALARMS

MESSAGE	REASONS	SOLUTION(S)
ALARM F01 OVERCURRENT	Indicates excessive consumption in the motor.	Check that the pump rotates freely with no obstructions.
	The motor is communicated or has burnt out.	Disconnect the motor from the frequency converter and check that the message disappears. If this is not the case, contact your nearest technical service.
ALARM F02 SHORT CIRCUIT	Not all wires have been connected.	Check that all the cables of the motor are correctly connected to the motor itself and also to the frequency converter. Also supervise the correct wiring of the frequency converter's power supply.
	Internal fault in the frequency converter.	Contact your nearest technical service.
ALARM F03 EXCESS TEMPERATURE OF THE MODULE	The power module has reached a very high temperature, compromising its reliability.	Ensure the ambient temperature does not exceed the extremes set out in this manual. Ensure the frequency converter is properly ventilated; in this case check that the pump has a fan and that the fan cover has been installed.
ALARM F04 INPUT VOLTAGE	The frequency converter is not receiving electric current, or is outside of the upper and lower limits.	The electrical supply to the frequency converter has been interrupted. The electrical connection cable from the mains electricity to the frequency converter has been disconnected.
	The motor is communicated/disconnected.	Check that the cables to the motor are properly connected, as the frequency converter is not detecting the motor, or it is burnt out.
ALARM F06 MOTOR FAULT	Loss of synchronism	There may also be a loss of synchronism of the motor during operation due to a significant, quick change in the pumping conditions.
ALARM F07 LOW WATER LEVEL	The frequency converter detects that the pump is working without water in the body of the pump.	Ensure the pump aspirates the fluid correctly.
ALARM F08 WITHOUT FLOW / MAX. PRESSURE	The frequency converter detects that the filter is very dirty or there is a valve closed on impulsion.	Check the filter does not need cleaning and that the impulsion valves allow recirculation.
	There is no communication between the control panel (cover), and the power plate (radiator).	Check that the flat cable that communicates both electronic circuits are well connected and tightened.
ALARM X13 INTERNAL ERROR	Internal fault in the frequency converter.	There may be one-off read error of the firmware. We recommend cutting the power to the frequency converter for a few minutes. If, when the power is reconnected to the frequency converter, the message remains, contact your nearest technical service.

12 WARRANTY

THE GUARANTEE OF THE FREQUENCY CONVERTER IS 24 MONTHS FROM THE DATE OF PURCHASE: THE USE OF NON-ORIGINAL SPARE PARTS, ALTERATIONS OR IMPROPER USE SHALL RENDER THE PRODUCT WARRANTY VOID.

13 DISPOSAL AND ENVIRONMENTAL ASPECTS

To dispose of the parts that comprise the frequency converter, you must abide by the current regulations and laws of the country where the product is used. In any case, do not dispose of polluting parts into the environment.

14 DECLARATION OF CONFORMITY

Bombas Saci, S.A., CL/Can Cabanyes 50-58, Pol. Ind. Circuit de Catalunya, 08403, Granollers (Spain) declares, under its full responsibility, that the product to which this manual refers complies with the following European Directives and national action provisions:

- Directive 2004/108/CE about electromagnetic compatibility (EMC)
- Directive 2006/95/CE about low voltage
- Directive 2002/96/CE and 2003/108/CE about hazardous substances (RAEE)
- Directive 2002/95/CE about hazardous substances (ROHS)
- Basic EC regulation EN 55011 (EMC)
- Basic EC regulation EN 61000-6-2 (EMC)
- Basic EC regulation EN 61000-6-1 (EMC)
- Basic EC regulation EN 62477-1 (Safety)

Managing Director



David Ferré Ferrer