MADE IN ITALY

ENGLISH



WELL

RANGE 0,37÷11 kW
0,50÷15 Hp

Installation ad use manual

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WELL

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Introduction

1.1 PRESENTATION

This manual provides the essential information for the proper installation, use and maintenance of the WELL electrical control panel.
It is important that the user reads this manual before installing the device. Improper use may cause machine failure and lead to the forfeiture of the warranty coverage.
Always specify the exact model identification code and construction number if technical information or spare parts have to be requested from the sales department.

The instructions and warnings given below refer to the standard execution; for instructions, situations and events not covered by this manual or by the sales documentation, please contact the customer service.

WELL control panel must be installed in sheltered, well-ventilated, non-hazardous environments and used with maximum of +40°C and minimum temperatures of -5°C (relative humidity 50% at 40°C non-condensing).

1.2 DESCRIPTION

WELL is an electronic control panel for direct start-up of 1 single or three phase pump with under and over current protection, minimum or maximum level.

Atlantic Power Control S.r.l. shall not be liable for damage caused or suffered by the panel, resulting from its improper use.

TECHNICAL FEATURES

Parameter setting on display:
min-max motor current absorption (A); dry running protection with min amperage; pump start delay; filling and emptying; clean water and waste water (self-holding).

OUTPUT ALARMS AND PROTECTIONS

Acoustic alarm mode; light alarm mode; alarm output 12Vdc; alarm output 230V - 400V; min-max water level; min-max motor current.

1.3 HANDLING

The control panel must be handled with care, falls and shocks can damage it internally, even without any visible external signs.

PRELIMINARY INSPECTION

After removing the external packaging, visually inspect that the control panel has not been damaged during shipping.
If the control panel is damaged, inform dealer as soon as possible, but no later than 5 days after delivery.

STORED

In the event that the control panel arrives at its destination, but for any reason is not installed and starter immediately, provide for its storage. Therefore, keep the outer packaging and that of the various loose accessories intact, and protect it from the weather and from any knocks or falls.

2.1 SAFETY INFORMATION



RISK OF ELECTRIC SHOCK
Failure to follow the instructions in this manual, carries a risk of electric shock.



RISK FOR PEOPLE AND PROPERTY
Failure to follow the prescriptions in this manual, carries a risk of damage to persons and/or property.



WARNING
Failure to observe the prescriptions in this manual, cause damage to the pump, the unit or the system.

2.2 CAUTION



ATTENTION: PUMP
- Make sure the pump is fully primed before you start it.
- Make sure the pump is running with the correct rotation.
- The electric pump or the motor can start up automatically.



ATTENTION: ELECTRICAL CONNECTION
- The control panel must be connected by a qualified electrician in compliance with the electrical regulations in force.
- The electric pump or the motor and the panel must be connected to an efficient grounding system in compliance with the electrical regulations locally in force.
- Ground the unit before carrying out any other operation.



ATTENTION: SERVICE
As a general rule, always disconnect the power supply before proceeding to carry out any operation on the electrical or mechanical components of the unit or system.

LINE OF SUPPLY CURRENT

Connect the unit at ground before carrying out any other operation.
The voltage input corresponds to the data written on the panel and on the pump:
- (400V ± 10% 50/60Hz for WELL -400/...)
- (230V ± 10% 50/60Hz for WELL -230)

Make sure that the power-supply-cable can bear the nominal current and connect it to the terminals of the general switch of the control panel. If the cables are exposed, they must be appropriately protected. The line must be protected with an Earth leackage and magnetic switch measured in accordance with the regulations locally in force.

LINE OF MOTOR POWER SUPPLY

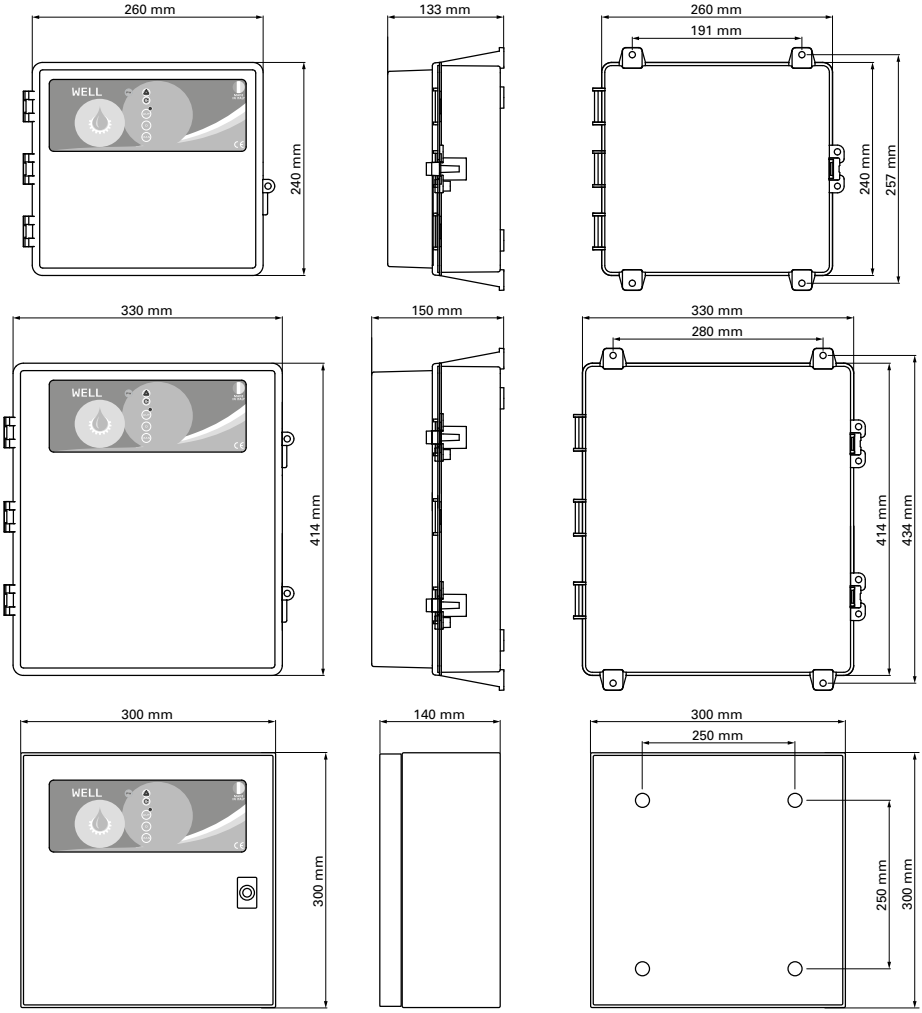
The voltage input corresponds to the data written on the motor:
- (400V±10% 50/60Hz three-phase)
- (230V±10% 50/60Hz single-phase)

Doing some starting make sure that the motor respects the right direction of rotation usually indicated by an arrow printed on the motor.

3.1 ASSEMBLING

Fix the control panel to a stable support with suitable screws or screw anchors using the holes in the four corners of the box.
When tightening the cables in the relevant terminals, use the right size tool to avoid damaging the clamping screws or their seats; if using an electric screwdriver, dose the tightening friction appropriately to avoid damaging the threads or screws.

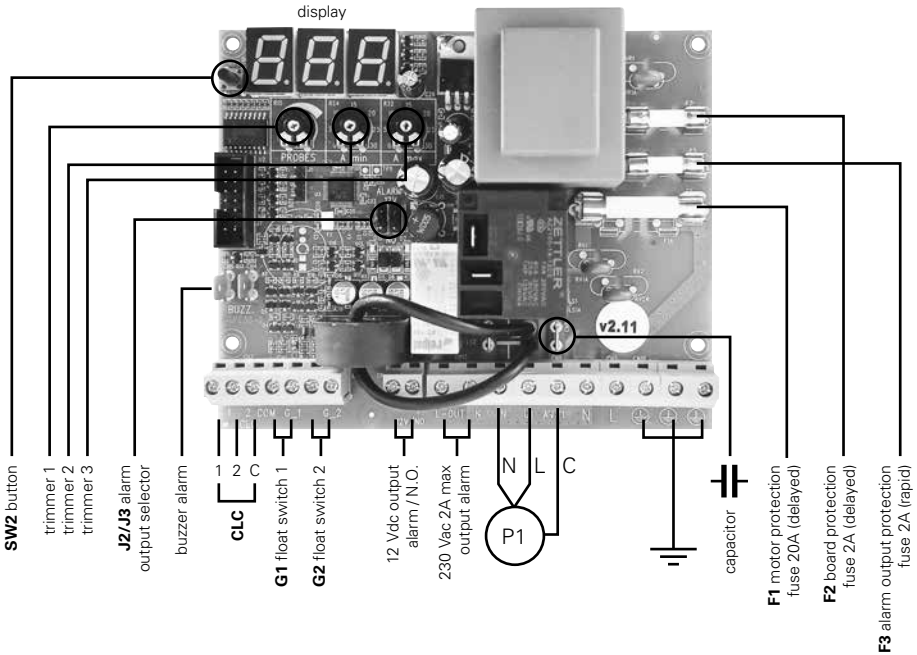
After fixing, remove every plastic or metallic impurities (ex. pieces of copper or plastic shavings) inside the box before suppling power.



3.2 ELECTRICAL CONNECTIONS

WELL 230

ELECTRONIC BOARD



POWER SUPPLY



Alarm output selector (J2/J3)



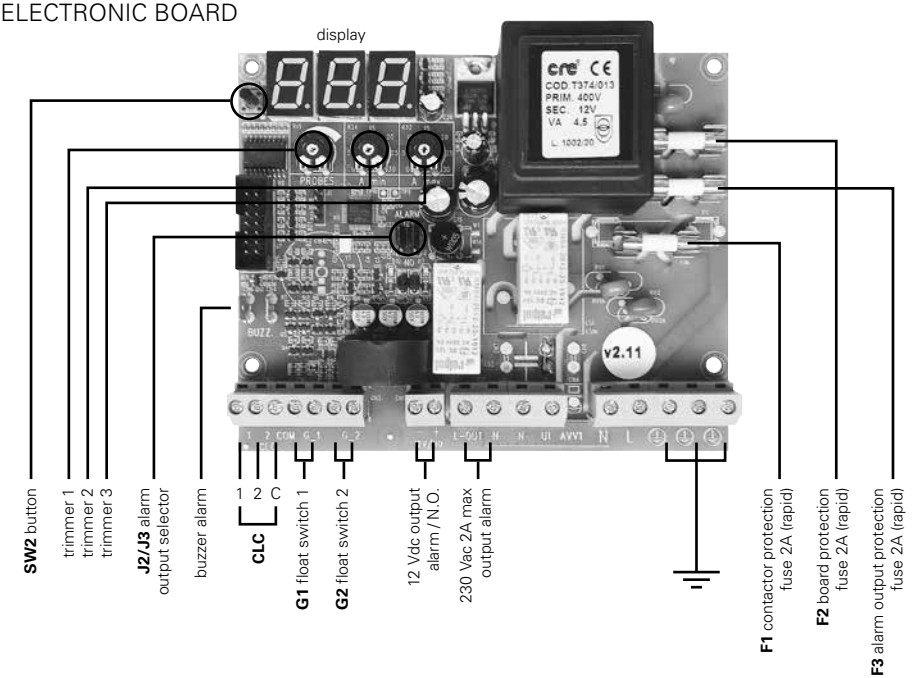
12 Vdc output



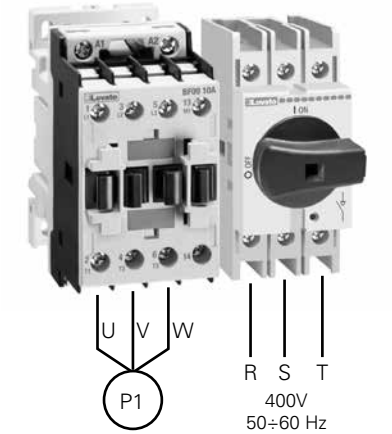
N.O. free contact

WELL 400

ELECTRONIC BOARD



POWER SUPPLY



Alarm output selector (J2/J3)



12 Vdc output



N.O. free contact

3.3 INITIAL VIEWS

CONTROL PANEL TURN ON



After making all the electrical connections, switch on the control panel.

The displays will show the installed software version for a few seconds (Example: 2.00)

CURRENT ABSORPTION DETECT



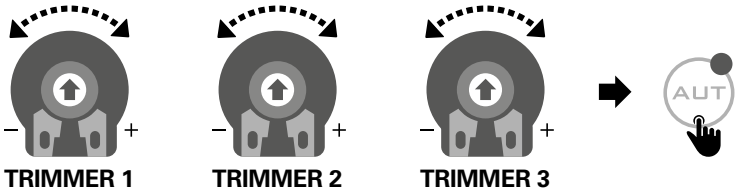
A few moments later the control panel proceeds to detect the current absorption, showing the value on the display.

In case the output is disabled the current absorption displayed will be 0A.

IMPORTANT!
The WELL control panel is not intended as a reading instrument, therefore the value of the current absorption detected and shown on the display may differ from the actual value by ±10%. For an accurate verification of the current absorption, use a suitable reading instrument.
The current consumption reading is for protection purposes only.

3.4 ADJUSTMENTS AND SETTINGS

PARAMETERS SETTING AND CONTROL PANEL OPERATIVITY



To set the minimum and maximum absorbed current parameters and the CLC input level probes sensitivity, it is possible to act at any time on the relative trimmers even with the panel not powered (see "TRIMMER SETTING").

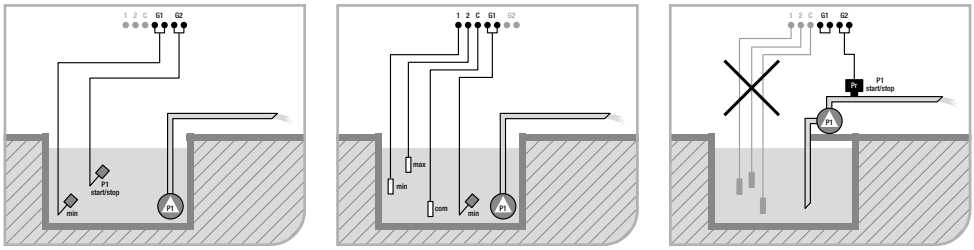
At the end of this phase, by pressing the "AUT" button the control panel becomes operative, in emptying logic, with floats for clean water, level probes or pressure switch.

All other parameters remain the default ones (see table below).

PRESET PARAMETERS	
MINIMUM CURRENT: 0A*	**MINIMUM LEVEL WITH CLC:** OFF
MAXIMUM CURRENT: 30A*	**START DELAY - 4 SEC.:** ON
WATER TYPE: ON (clean water)	**START DELAY - HOURS:** 0h
OPERATION: ON (emptying)	

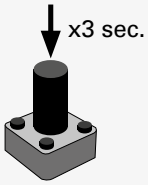
* value set by default, may vary if you have acted on the relative trimmers.

APPLICATION EXAMPLES WITH DEFAULT PARAMETERS

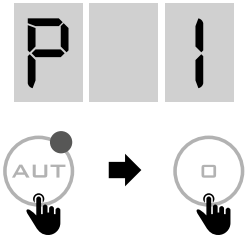


3.5 PROGRAMS SETTING

ACCESS TO PROGRAMS



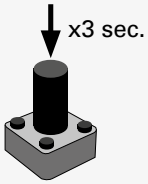
SW2 BUTTON
To access the programs it is necessary to **press (for 3 seconds) the SW2 button** on the left side of the electronic board **with the panel on**.



PROGRAMS SETTING
To select the program to be set, scroll through the sequence with the "AUT" button. To access the program and set the various parameters, press the "CONFIRM" button.

MINIMUM CURRENT
MAXIMUM CURRENT
WATER TYPE
OPERATION
MINIMUM LEVEL WITH CLC
START DELAY - 4 SEC
START DELAY - HOURS

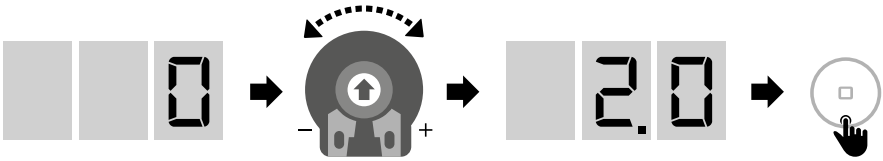
CONFIRM CHANGES AND EXIT



SW2 BUTTON
Once the setting of the various parameters has been confirmed, to exit the programs, it is necessary to **press again (for 3 seconds) the SW2 button** on the left side of the electronic board.

PROGRAM	DESCRIPTION
P 1	**MINIMUM CURRENT** (default: 0A) Setting of the threshold value of the minimum absorbed current, below which the panel intervenes stopping the motor and activating the alarms.

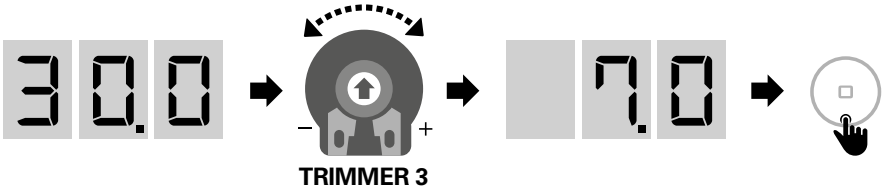
CHANGE MINIMUM CURRENT



The parameter can always be modified by acting on trimmer 2. The display of the set value is only possible within the program.

PROGRAM	DESCRIPTION
P 2	**MAXIMUM CURRENT** (default: 30A) Setting of the threshold value of the maximum absorbed current, below which the panel intervenes stopping the motor and activating the alarms.

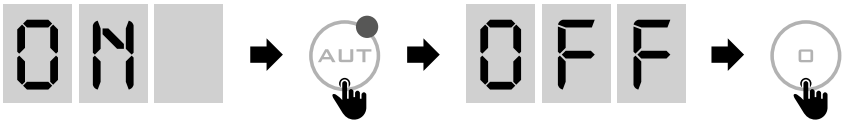
CHANGE MAXIMUM CURRENT



The parameter can always be modified using trimmer 3. The display of the set value is possible only within the program.

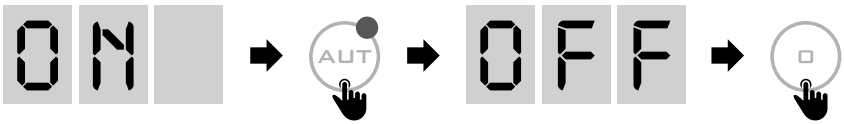
PROGRAM	DESCRIPTION
P 3	**WATER TYPE** (default: clear water) Selection and setting of the type of water with which the panel is used. ON: clean water (no self-holding) OFF: waste water (self-holding)

CHANGE WATER TYPE



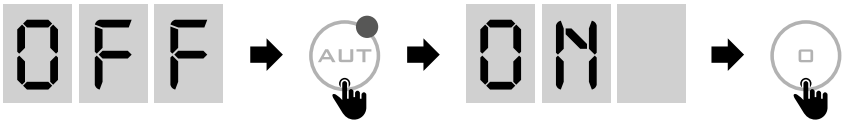
PROGRAM	DESCRIPTION
P 4	**OPERATION** (default: emptying) Selection and setting of the type of function with which the panel is used. ON: emptying OFF: filling

CHANGE OPERATION



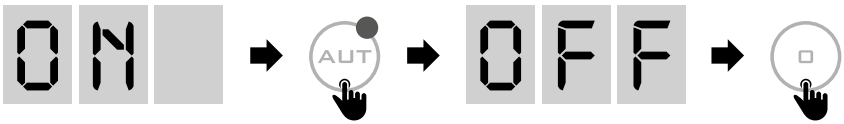
PROGRAM	DESCRIPTION
P 5	**MINIMUM LEVEL WITH CLC** (default: disabled) Selecting and setting the minimum level function panel with CLC. ON: active OFF: disable

CHANGE MINIMUM LEVEL WITH CLC



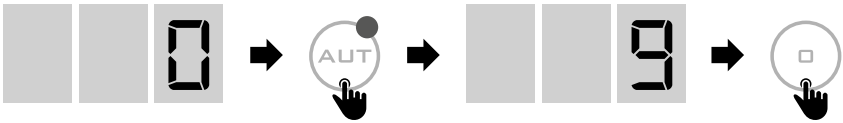
PROGRAM	DESCRIPTION
P 6	**START DELAY - 4 SEC.** (default: actived) Selection and setting of delayed pump start mode. ON: active OFF: disable

CHANGE START DELAY



PROGRAM	DESCRIPTION
P 7	**START DELAY - HOURS** (default: 0) Selection and setting of the delayed start mode of the pump (upon consent of floats or start pressure switch). It is possible to select a value from 0 to 9 hours.

CHANGE START DELAY

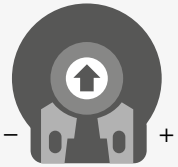
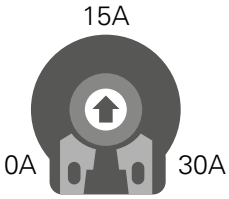
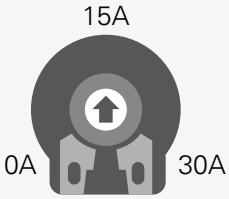


If the start commands (floats or pressure switch) do not change within the set time, the timer will be reset. Otherwise, the timer will reset and restart when the start commands send and maintain the consent to start the pump.

3.6 TRIMMER SETTINGS

If you want to modify the threshold value of the minimum and maximum motors absorbed current (P1 and P2 programs) or the CLC input level probes sensitivity, you must act on the trimmers as shown below:

PROTECTION DELAY
The pump protection switching delay has been set at **5 sec**.

TRIMMER SETTING	
	**TRIMMER 1: PROBE SENSITIVITY CHANGE** Sensitivity regulation of the CLC probes. It is possible to modify the sensitivity of the probes by **interrupting the power supply to the control panel** and acting on trimmer 1 (clockwise to increase and anticlockwise to decrease sensitivity). **The parameter is not shown on the display.**
	**TRIMMER 2: MINIMUM CURRENT CHANGE** Regulation of the threshold value of the minimum absorbed current. It is possible to modify the minimum current absorption threshold (valid also for dry running protection), by acting on trimmer 2 (clockwise to increase and counterclockwise to decrease the threshold). **It is recommended to set the value at least 25-30% below the nominal absorption value of the motor.** If the detected current is below the set threshold the panel will block the motor activating the alarm outputs. **The threshold value of the minimum current must be lower than the value of the maximum current set (P2 program).**
	**TRIMMER 3: MAXIMUM CURRENT CHANGE** Regulation of the threshold value of the maximum absorbed current. It is possible to modify the threshold of the maximum current absorption, acting on trimmer 3 (clockwise to increase and counterclockwise to decrease the threshold). **It is recommended to set the value at least 25-30% above the nominal absorption value of the motor.** If the detected current is above the set threshold the panel will block the motor activating the alarm outputs. **The threshold value of the maximum current must be greater than the value of the minimum current set (P1 program).**

Setting the parameters for minimum and maximum current consumption, can be done with or without display. However, for more accurate setting, display of the parameters is recommended.

4.1 KEYPAD AND LIGHTS INDICATIONS



CONTROL PANEL	
PW	**PW** blue light indicating power network presence and powered panel.
⚠	**ALARM** red light to indicate a general alarm and pump stop. (min and max Amp, min or max level).
↻	**START** green light to indicate pump start; fixed on to indicate pump running.
AUT	**AUT / ARROW UP** button for activating automatic mode of the panel (the green led on indicates that automatic operation is active); during setup it scrolls the program items and changes the settings of programs P3, P4, P5, P6 and P7.
□	**0 / CONFIRM** button to stop the pump and reset the relative alarms, turn off the audible alarm; in the setup phase the button has the CONFIRM function.
MAN	**MAN** manual mode activation button on the panel; holding it down causes the motor to run in by-pass overriding all protections; when the button is released the pump stops immediately (unstable function).

4.2 ALARMS

LED SIGNALING	DEACTIVATION
All alarms are displayed on the control panel (red led flashing) and activate the following outputs: • Relais output 220V or 400V • Relais output 12Vdc • Buzzer output 12Vdc • N.O. contact output	If the panel is in alarm and you want to **silence** it, press **once the "0" button** on the control panel. In this way only the voltage will be removed from the "buzzer" fastons. **x2 times** If the panel is in silent alarm and you want to **reset** it, press the **"0" button a second time**. If the fault occurs again, the alarm cycle will start again.

ALL ALARMS STOP THE MOTOR

ALARM		RESTART MODE
G1	floating alarm minimum/maximum level	• Automatic reset when the initial condition reappears
CLC	minimum level probes alarm (if activated)	
A	amperometric alarm min and max absorption	• After the engine stop, the panel attempts a repeated restart every 30 minutes (only if the input signals give consent).

DISPLAY ALARMS

To view the type of alarm, turn off the ignition, open the door and turn it on again.

The display will show the alarm code present (see table below).

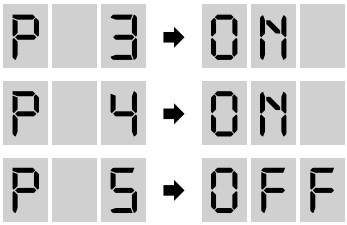
CODE	ALARM
AL 1	MIN LEVEL
AL 2	MAX LEVEL

CODE	ALARM
AL 3	MIN CURRENT
AL 4	MAX CURRENT

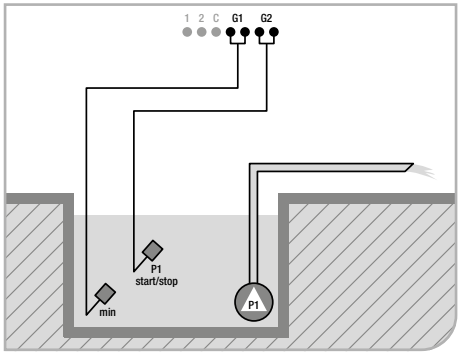
IMPORTANT!
If after having cleared the alarm, the same occurs again, an intervention on the cause is required.

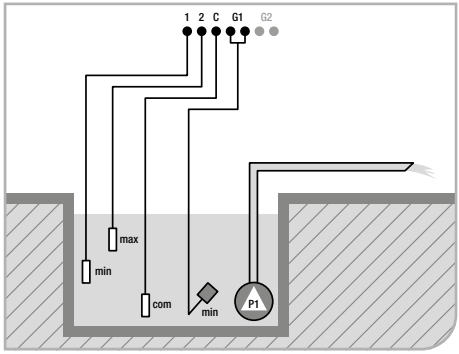
4.3 TYPICAL INSTALLATIONS

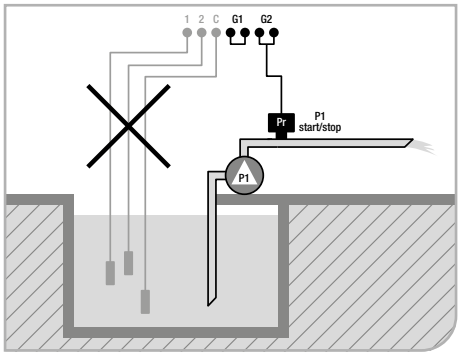
Example 1



G1 optional, if not used it must be jumpered.
G1 and G2 contacts must be N.O.







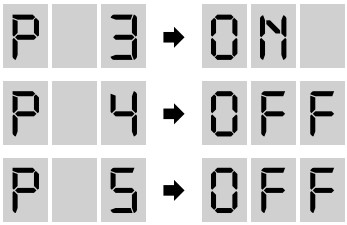
P	pump
Pr	pressure switch

1/2/C	input for level probes
	level probes

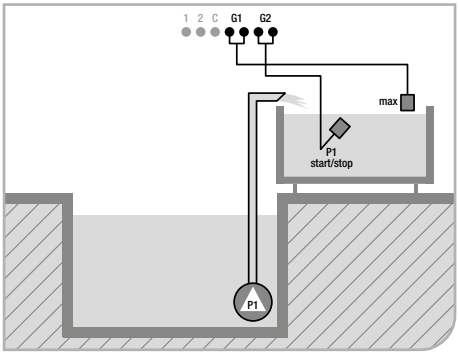
	float switch for clear water
	float switch for waste water

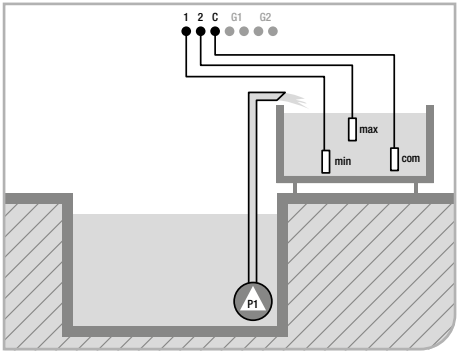
General use

Example 2

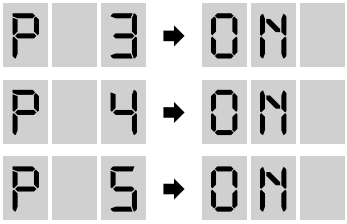


G1 optional, if not used it remains open.
G1 and G2 contacts must be N.O.

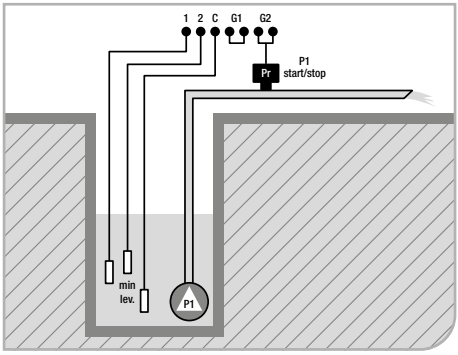




Example 3

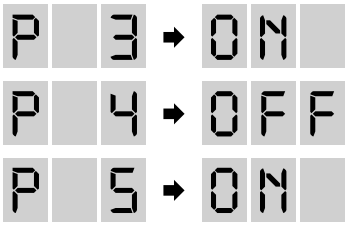


G1 optional, if not used it must be jumpered.
G2 contact must be N.O.

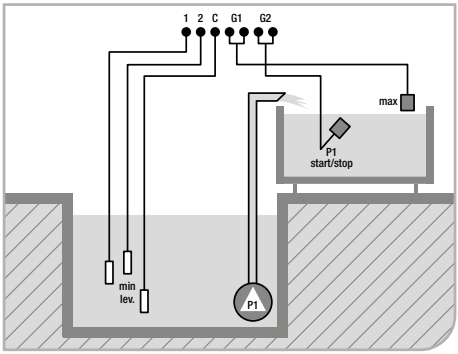


P	pump
Pr	pressure switch
1/2/C	input for level probes
	level probes
	float switch for clear water
	float switch for waste water

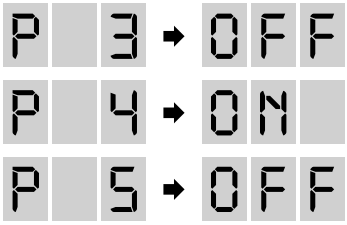
Example 4



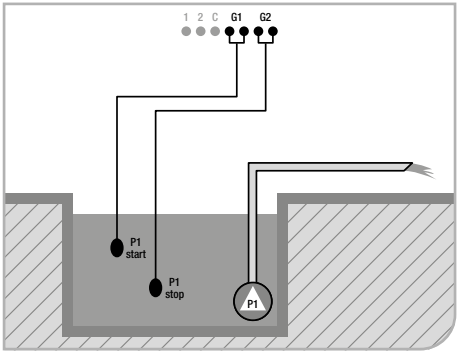
G1 optional, if not used it remains open.
G1 and G2 contacts must be N.O.



Example 5



G1 and G2 contacts must be N.O.



P	pump
Pr	pressure switch

1/2/C	input for level probes
▯	level probes

■	float switch for clear water
●	float switch for waste water

5.1 PUMP STOP

MODE	BUTTON	STOP
MANUAL		In "MANUAL" mode operation by releasing the "MAN" button.
AUTOMATIC		In "AUTOMATIC" mode when there is no consent from the control inputs or by pressing the "0" button.
OFF		Turning the main switch interlocking door in "OFF" position.

5.2 SERVICE

The control panel does not require any routine maintenance if their working limits are observed. Any maintenance operations must be performed by qualified and experienced personnel, in compliance with the safety regulations in force.



DANGER!
Make sure the control panel is disconnected from the power supply before any maintenance work.

5.3 SPARE PARTS

Always specify the exact model identification code and construction number if technical information or spare parts have to be requested from the sales and customer service.

Use only original spare parts to replace any defective components.The use of unsuitable spare parts can lead to malfunctions and danger to persons and property.

5.4 WASTE DISPOSAL

After the control panel has been installed and started, the customer must provide for the appropriate elimination/disposal of the waste materials according to the legislation locally in force. If the control panel or parts of it must betaken out of service and dismantled, follow local regulations regarding sorted waste disposal. Refer to the appropriate recycling centres.



CAUTION!
Contamination of the environment with hazardous substances such as battery acid, fuel, oil, plastic, copper, etc., may cause serious damage to the environment and endanger people's health.

6.1 CERTIFICATE OF CONFORMITY

The Manufacturer:

Atlantic Power Control S.r.l.s

Via E. Fermi, 10 - 35020 Polverara (PD) - ITALY

DECLARES UNDER IS OWN RESPONSIBILITY THAT THE FOLLOWINGS CONTROL PANELS:

WELL -230 e WELL -400

ARE IN CONFORMITY WITH COMMUNITY DIRECTIVES REGARDING:

- European directive 2014/35/UE
- Electromagnetic compatibility directive 2014/30/UE

AND AS APPLICABLE TO HARMONIZED STANDARDS:

- EN 61439-1
- EN 61439-2
- EN 60204-1
- EN 55014-1
- EN 55014-2
- EN 61000-3-2
- EN 61000-3-3

- BS EN 61439-1
- BS EN 61439-2
- BS EN 60204-1
- BS EN 55014-1
- BS EN 55014-2
- BS EN 61000-3-2
- BS EN 61000-3-3

CERTIFICATIONS

ISO **9001**

Moreover Mr. Giuseppe Franchin, as the legal representative of the company, is the person authorized to compile the technical documentation file.

Polverara - Italy, 10/01/2018



Technical Manager
(Giuseppe Franchin)

Notes

EN 07/25



CERTIFIED
9001:2015