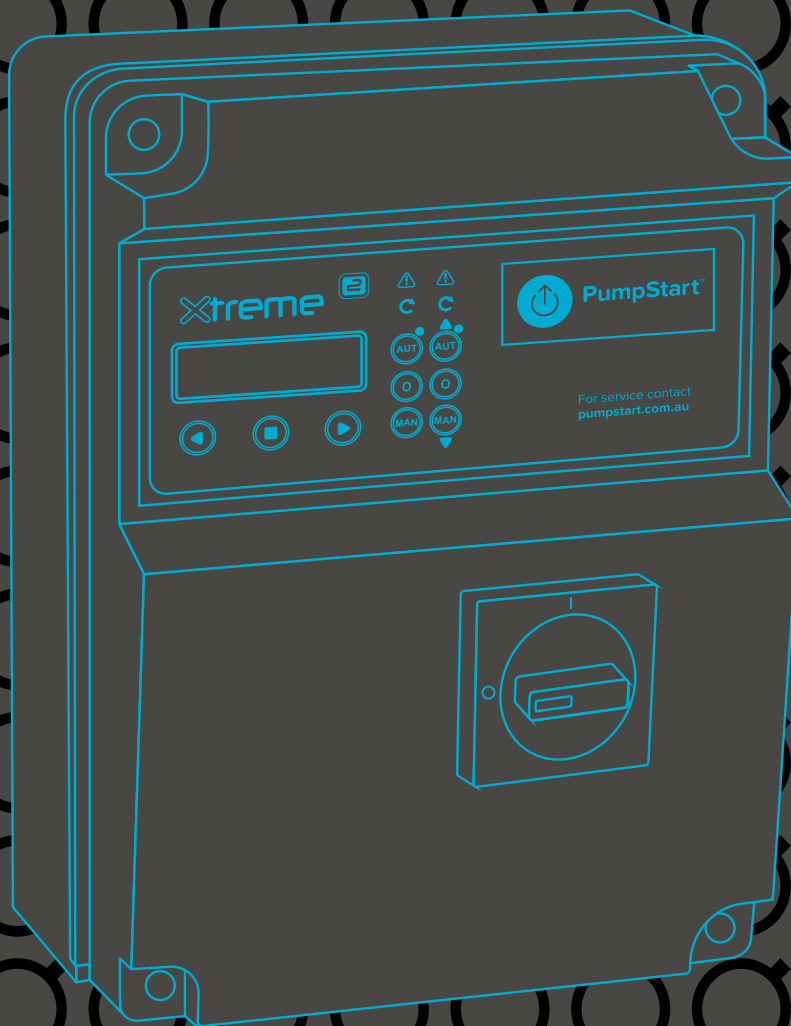


**Owner's Operation
Manual**



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1. SAFETY

The following symbols, accompanied by the words "Danger", "Warning" indicate the potential hazard resulting from failure to observe the associated warning, as specified below.



**DANGER
RISK OF
ELECTRIC
SHOCK**

Failure to observe this warning may result in electric shock



DANGER

Failure to observe this warning may cause personal injury and/or damage to property



WARNING

Failure to observe this warning may cause damage to the pump, the unit or the system

CAUTION

Make sure the pumps are fully primed before you start them.

CAUTION

Ensure the correct rotation of the pumps.

CAUTION

The control panel must be connected by a qualified electrician in compliance with the electrical regulations in force.

CAUTION

The electrical pump or the motor and the panel must be connected to an efficient in compliance with grounding system in compliance with the electrical regulations in force.

CAUTION

Ground the unit before carrying out any other operation.

CAUTION

The electric pump or the motor can start up automatically.

CAUTION

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. If you must work inside the electrical panel it is also necessary to disconnect the internal battery (installed simultaneously with GSM module).

2. OVERVIEW

The purpose of this manual is to provide the necessary information for the proper installation, use and maintenance of XTREME². The user should read this manual before operating the unit. Improper use may cause damage to the machine and lead to the forfeiture of the warranty coverage. Always specify the model identification code and the construction number when requesting technical information or spare parts from our Sales and Service department. The instruction and warnings given below concern the standard version; refer to the sale contract documentation for modifications and special version characteristics. For instructions, situations and events not considered in this manual or in the sale documents, please contact our customer service.

Our units must be installed in sheltered, well-ventilated, non-hazardous environments and must be used at a maximum temperature of +40°C and minimum of -5°C (relative humidity 50% at 40°C not condensed).

3. HANDLING



The panel must be handled with care, as falls and knocks can cause damage without any visible external signs.

If for any reason the unit is not installed and starter immediately after it has reached its destination it must be stored properly. The external packaging and the separately packed accessories must remain intact, and the whole must be protected from the weather, especially from freezing temperatures, and from any knocks or falls.

PRELIMINARY INSPECTION: after you have removed the external packaging, visually inspect the control panel to make sure it has suffered no damage during shipping. If any damage is visible, inform our dealer as soon as possible, no later than five days from the delivery date.

4. GENERAL DESCRIPTION



XTREME² is an electronic panel for direct start-up of 2 single or three phase pumps with dry running protection via $\cos\phi$ and minimum current, remote management with gsm and app.

GLOBAL WATER shall not be liable for any damage caused or suffered by the unit as a result of its unauthorised or improper use.

GENERAL FEATURES

- multi language
- password
- mains supply return delay
- motor self-test
- protections delay
- 50-60Hz frequency
- various start-up alternations
- simultaneous motor operation
- motor exclusion
- start delay
- settings via GSM-APP.

GENERAL SETTINGS

- self-learning of motor data
- min-max current (A)
- min $\cos\phi$
- start delay setting
- stop delay setting
- max continuous operation
- max start-ups per hour
- max start-ups per minute
- max klixon trips
- service request.

DISPLAY VIEWS

- voltage (V)
- frequency (Hz)
- motor absorption(A)
- motors $\cos\phi$
- pulse counter
- running hours
- presence of GSM
- pressure (bar)
- water level (mt)
- last alarms
- service request

ALARMS, ALARMS OUTPUT AND PROTECTIONS

- acoustic alarm mode
- luminous alarm mode
- alarms via relay
- 12V alarm output
- alarm delay
- alarm activation distinction

- min-max water level
- min-max voltage
- phase error
- frequency error
- min-max motor current
- min motors $\cos\phi$
- motors klixon trip
- max klixon trips
- water in oil chamber
- max start-ups per hour
- max start-ups per minute
- max continuous operation

DEFAULT OPERATING MODES

CLEAN

min level probe or float switch input
pressure switch or float switch inputs
emptying-filling mode;
4-20mA sensor if present: > level-pressure views on display, > pressure-level alarm setting on display.

DARK

float switch inputs (normal or multi-contact types)
max level float switch input
self-holding
emptying-filling mode
4-20mA sensor if present: > level-pressure views on display, > pressure-level alarm setting on display.

DIGIT

min level probe or float switch input
4-20mA pressure-level probe input
motor start-up pressure-level setting
motor stop pressure-level setting.

MULTITANK

control of pumps on different systems
setting of control program for each pump
> pump 1 - possible logic modes: CLEAN, DARK, DIGIT
> pump 2 - possible logic modes: CLEAN, DARK
4-20mA sensor if present: > pressure-level alarm setting on display; > level-pressure views on display
min level probe or float switch input
4-20mA pressure-level probe input
motor start-up pressure-level setting
motor stop pressure-level setting.

PAUSE/WORK

program allows managing the operation of the pumps only with two defined timing, independent of the inputs, the pause (downtime pump) and work (pump start-up time).

5. INSTALLATION



Fix the control panel for a stable support with screws and screw anchor using the holes arranged in the box (fig. 1) or the fixing bracket if present.

To fix the cables in their terminals use a tool of the proper size to avoid the damaging of the screws or of their seat. If use an electric screwdriver and pay attention not to spoil the thread or the screws.

After the fixing, remove every plastic or metallic surplus (eg. Pieces of copper off the cables or plastic shavings of the box) inside the box before supplying power.

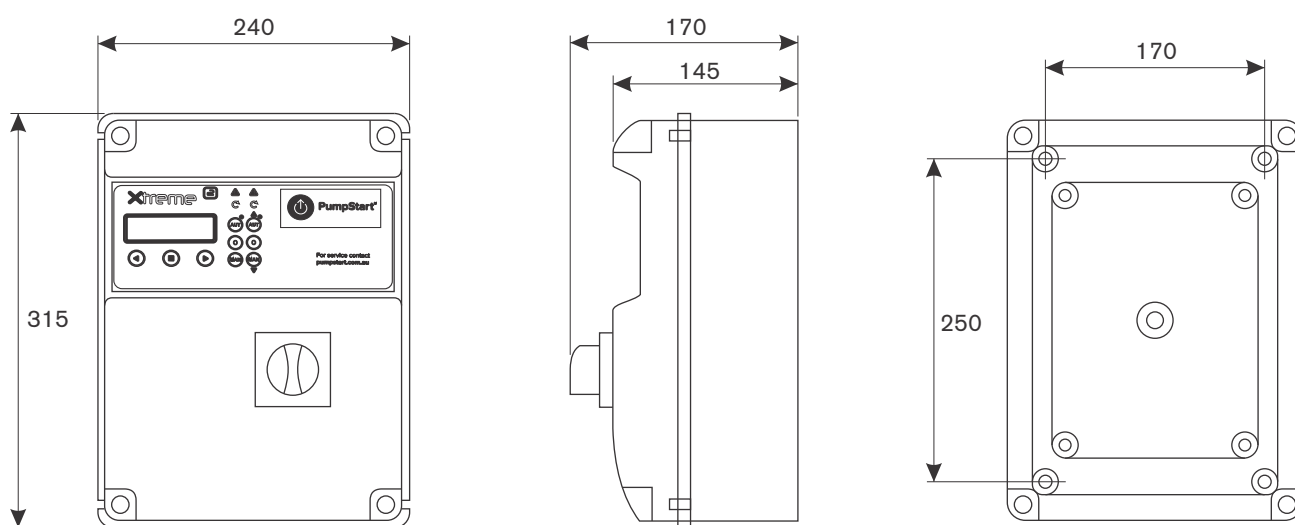


Figure 1

ATTENTION:

The display/sinoptic located on the cover of the control panel is connected through one or more cables (even cable type flat) to electronic control unit installed on the bottom of the control panel.

Pay utmost attention and care by opening the electric panel.

Once opened the control panel, support the cover so as not to damage / tear the connection cables.

NOTE:

Do not install the control panel close to objects in contact with flammable liquids, water or gas.

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 pumps:

(400V \pm 10% 50/60Hz for PSCDX.3)

(230V \pm 10% 50/60Hz for PSCDX.1).

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 a differential circuit breaker switch measured in accordance with the regulations locally in force.

LINE OF MOTOR POWER SUPPLY

Connect the unit at ground before carrying out any other operation.

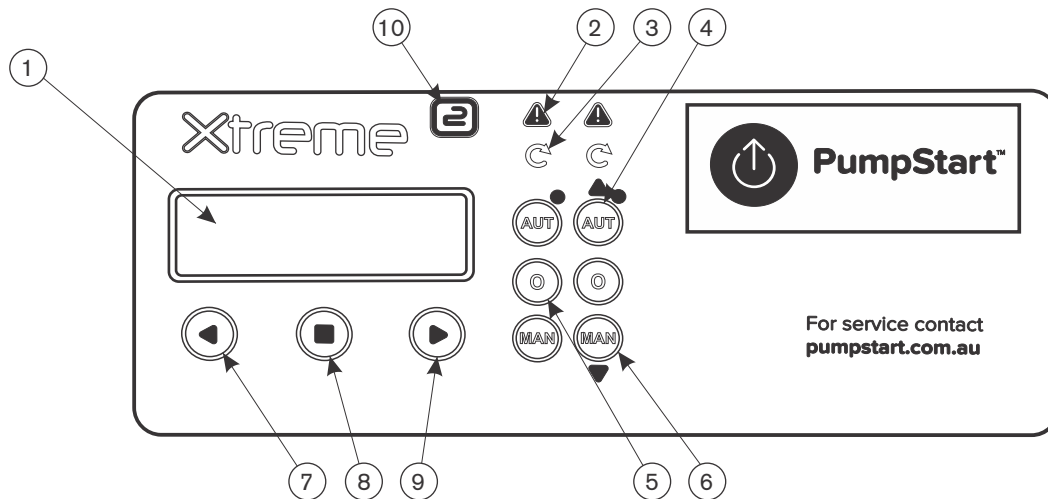
The voltage input corresponds to the data written on the motors:

(400V \pm 10% 50/60Hz three-phase)

(230V \pm 10% 50/60Hz single-phase).

When starting make sure that the motors run in the right direction of rotation, usually indicated by an arrow printed on the motors.

6. LIGHT INDICATIONS AND BUTTONS

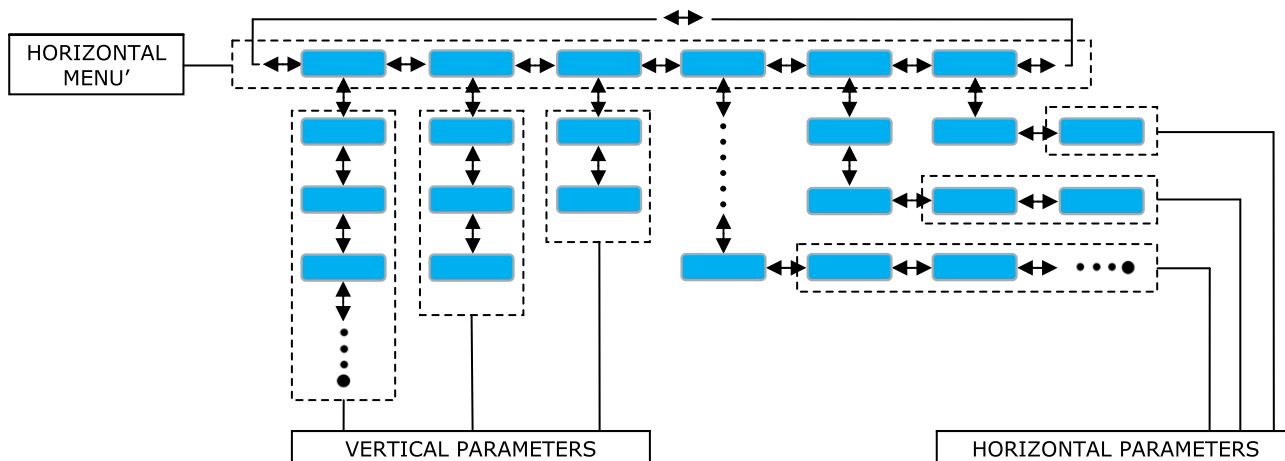


- ① DISPLAY backlit blue to display the parameters of the system
- ② ALARM red led to indicate an alarm is active; when the red led is on it indicates the presence of an alarm and that made the pump stopped
- ③ START green led to indicate the pump is currently working. the flashing led indicates it's waiting for the start timer to expire
- ④ AUT+UP button with dual functionality:
 - button to activate the auto functional mode; when the green led is on it indicates the auto functional mode is active
 - button to move upward in the program menu selection
- ⑤ 0 button to stop the pumps and reset related alarms
- ⑥ MAN+DOWN button with dual functionality:
 - button to activate the manual mode of operation;
 - button to move downward in the program menu selection
- ⑦ ◀ button to move toward left in the program menu selection
- ⑧ ■ ENTER button to activate/save the menu setting; change display of the menu parameter settings
- ⑨ ▶ button to move toward right in the program menu selection
- ⑩ ON blue led to indicate the voltage is on and the panel is turned on by mains supply

7. DISPLAYS

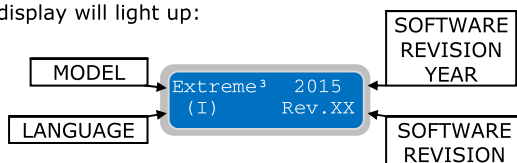


The overall menu settings are composed of a series of horizontal menus that allows access to sets of horizontal and vertical parameters. As in the following flowchart example:

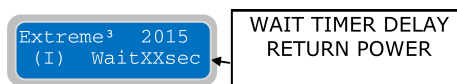


NOTE: on the next page shows the complete flow chart programming

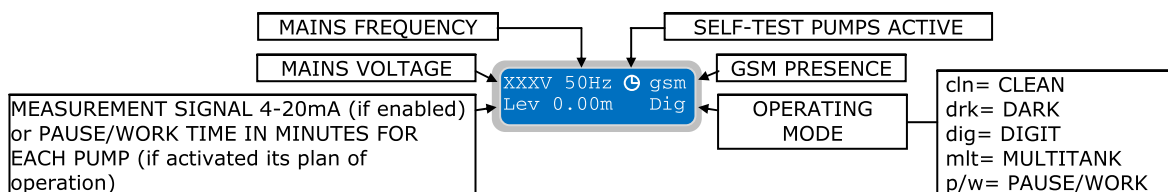
When the panel is turned on the display will light up:



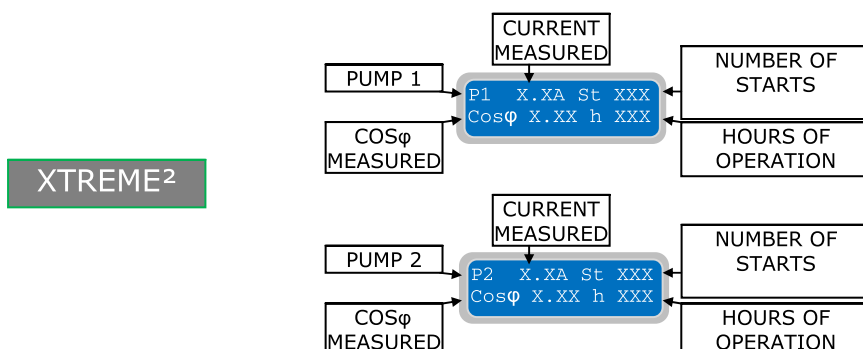
Subsequently the start-up routine will execute:

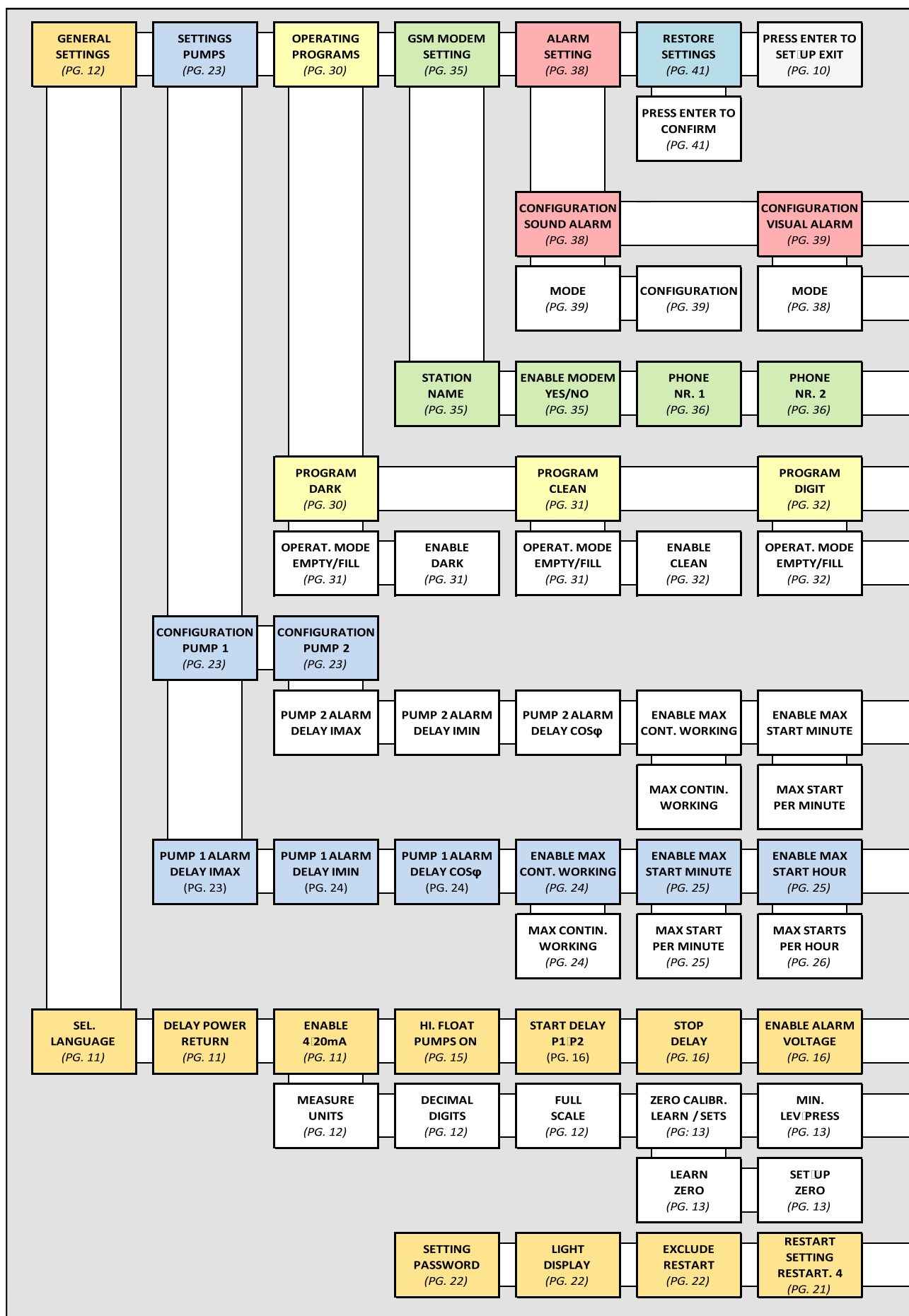


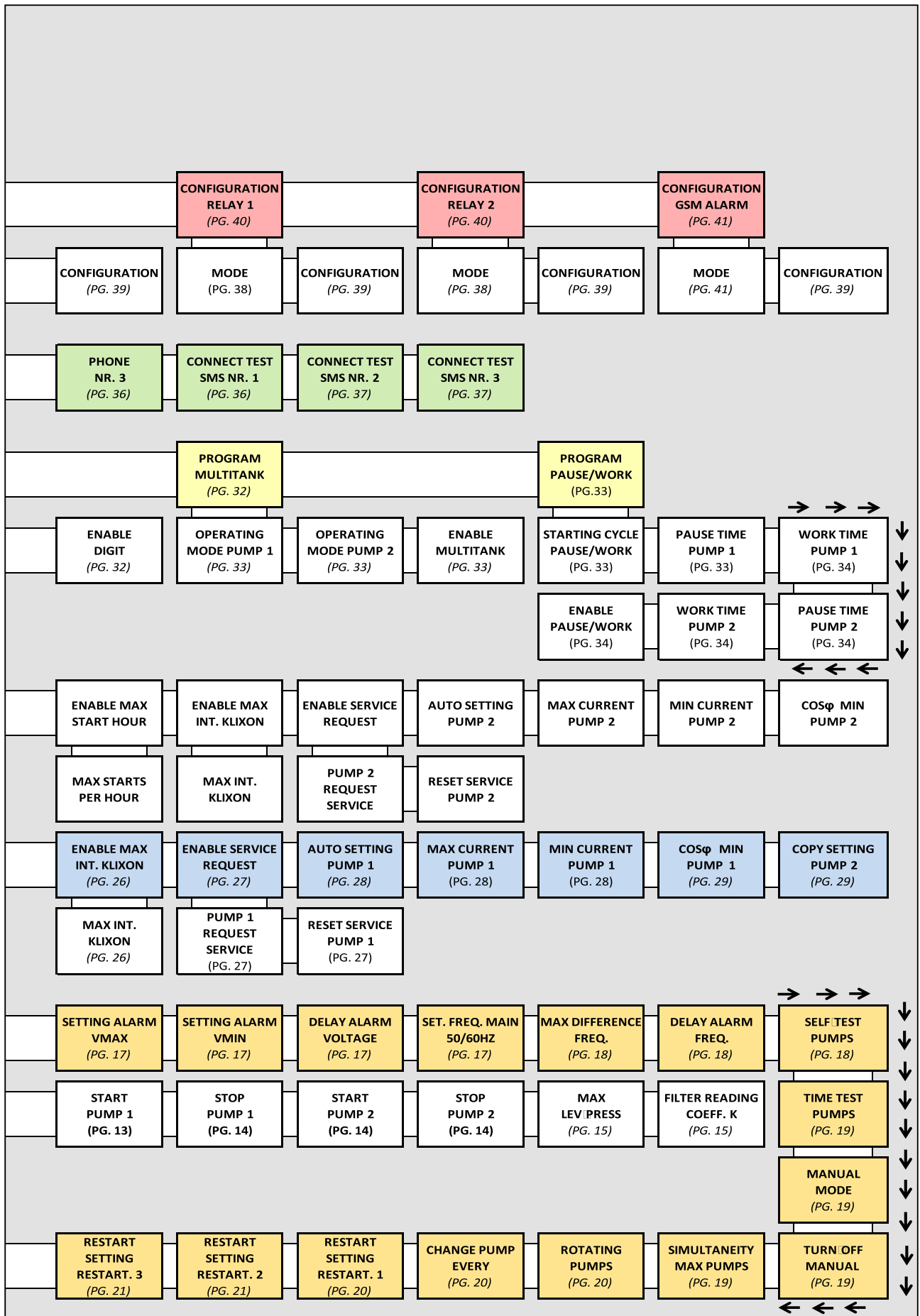
At the end of the start-up routine the display will show following default main display:





The main default display shows the current working parameters. By pressing the button  is possible to move to different screens and show the working parameter of the individual pumps

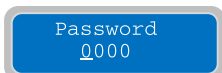








8. GENERAL OPERATION





To modify the parameter settings of operation the user will need to enter the programming mode, then you must simultaneously press the two buttons  and  until the display shows the following password screen:




To continue the correct password is required (the default password is 0000) and press the button .


To enter a new password you need to change the parameter "Password Setting" and press the button .

NOTE: When you enter the programming mode the pumps stop.

To navigate the menus horizontally using the buttons,   between the vertical parameters keys  .

To exit the programming menu you need to display the following horizontal menu and press .



To quickly return to the main horizontal menu, just press  button repeatedly.

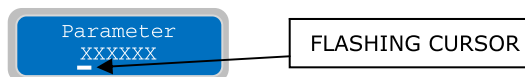
NOTE: The exit from the programming menu without saving happens automatically if you do not press any button for 1 minute.



9. PARAMETER SETTING

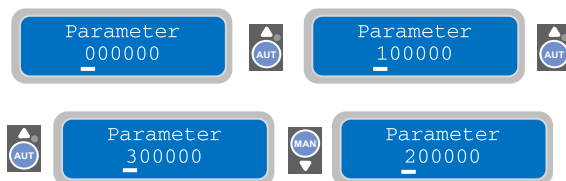
To modify a parameter the user needs to enter "programming mode" (explained in details in the next section) and then select the desired parameter to be modified:





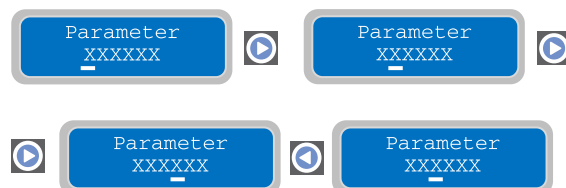
Pressing the  button will select the digit for modification with a flashing cursor:




Buttons  and  will increase or decrease the value of the parameter;



Buttons  and  will move the cursor to the appropriate digits to allow their settings to be changed (the flashing cursor moves to the digit):






Once the specific parameter is set to the desired value it can be saved by pressing the  button. Once the parameter is saved, the display will show briefly the message "save" as confirmation that the setting has been saved.

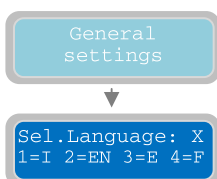


10. GENERAL SETTINGS




Once entered in the programming mode the first horizontal menu will be:

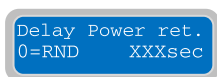


Pressing  and  navigate the horizontal menus. With the button  displays the corresponding vertical parameter:




The parameter "Select Language" will set the language selection for the alarm messages to be displayed (the "X" indicates the position of the parameter to modify):
1=Italian; 2=English; 3=Spanish; 4=French.
Factory default selection: 1-Italian.

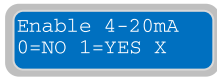
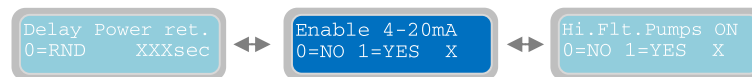
To move to the next horizontal parameter press the button  (as indicated in the flow-chart attached to this manual as an example, the menu structure of the horizontal parameter is circular; therefore, by pressing the buttons  or the button  to display the following parameter; to facilitate the descriptions of the parameters settings the manual will show the navigation inside the various menus:



The parameter "Delay after Power Return" will set the timer delay to wait before reactivating the control panel after a power-cut.
The "X" indicates the digit of the parameter to modify:
The settable range value is from 0 to 999 seconds.
0: setting the value to "0" (0=RND, random) will set the timer delay to a random value automatically (the timer value will be between 1 and 999 seconds) by the control panel at every restart after every power-cut (this function is useful in a station with several control panels XTREME and it's not desired the simultaneous reactivation of several control panels).
Default setting: 3 seconds.

Note: the delay timer to reactivate of the control panel is displayed as a countdown timer to the restart after power-cut. During the countdown the operating functions are inhibited. Therefore, it's not possible to operate the display/settings also it is not possible to use for programming mode, nor manual operation.

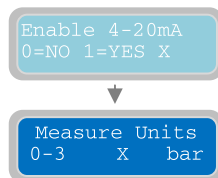
To move to the next horizontal parameter press the button  :




The parameter "Enable 4-20mA" will allow to activate/deactivate the use of the reading device with signal 4-20mA (for example, pressure transducer, piezoresistive sensor, ultrasounds sensor, etc...). The activation of input 4-20mA allows the use of working in operating mode "DIGIT". It is possible to utilize the 4-20mA device even as simple monitor of levels and usage of relative alarms.
The "X" indicates the position of the parameter to modify:
0=NO: input 4-20mA DISABLE.
1=YES: input 4-20mA ENABLE.
Factory default setting: 0 (DISABLE).

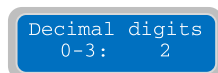
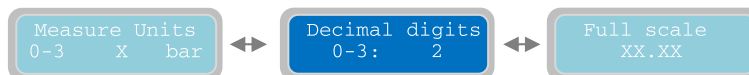
10. GENERAL SETTINGS (continued)

Pressing the button  will gain access to the set of parameters related to the reading of the input of 4-20mA device:




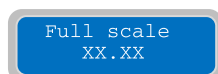
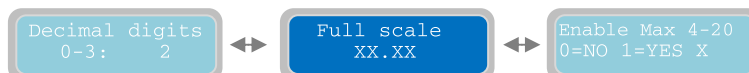
In the parameter "Measure Units" is possible to select the unit of measurement used in the display of the signal 4-20 mA.
Depending on the sensor type used you can choose from:
(The "X" indicates the digit of the parameter to modify)
0=bar used for the pressure transducers in the pressurization system,
1=m (meter) used for piezoresistive sensors of level of liquid recovery systems,
2=ltm (liters per minute) used for flow meters in small water systems,
3=m³/h (cubic meters per hour) used for flow measurement in large water systems,
Default setting: 0 (bar).

To move to the next horizontal parameter press the button  :




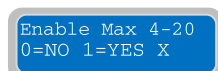
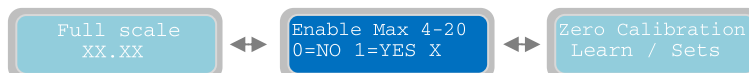
In parameter "Decimal digits" you can specify the number of decimal places and then the decimal point position in the measure of analogue 4-20mA sensor. This option is useful to be able to interface the board with sensors with different values of full scale.
The "X" indicates the position of the modifiable parameter:
0=NO DECIMAL (the measure will have as maximum 9999),
1=1 DECIMAL (the measure will have as maximum limit 999.9),
2=2 DECIMAL (the measure will have as maximum 99.99),
3=3 DECIMAL (the measure will have as maximum 9.999),
default setting: 2.

To move to the next horizontal parameter press the button  :




The parameter "Full Scale" is used to indicate the full scale of the sensor device 4-20 mA being used (bar or meter depending on the mode selected in the previous parameter).
(The "X" indicates the digit of the parameter to modify).
The range of the value is from 00.00 to 99.99 (bar or meter).
Factory default setting: 16.00.

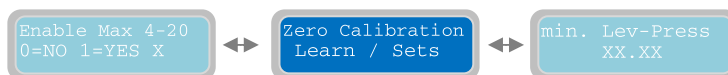
To move to the next horizontal parameter press the button  :



The parameter "Enable Max 4-20" is used to start all the pumps connected, once the maximum level is reached (the actual value of such maximum level of the sensor 4-20 mA is to be set in the following parameters). In the case of "bar" as the selected unit of measurement, the maximum level set is to be intended as maximum pressure.
The "X" indicates the digit of the parameter to modify:
0=NO: DISABLE the start of all pumps once the maximum level is reached.
1=YES: ENABLE the start of all pumps once the maximum level is reached.
Factory default setting: 0 (DISABLE).

To move to the next horizontal parameter press the button  :

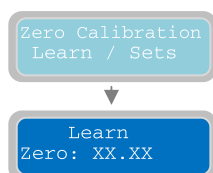
10. GENERAL SETTINGS (continued)





Zero Calibration
Learn / Sets

The parameter "Zero Calibration Learn/Sets" is used to choose whether to have an auto setting or manual setting of the RELATIVE zero of the 4-20mA sensor being used. Therefore, it's possible to set the "zero" not at the actual zero level ("0" meters of level or "0" bar of pressure), but at a different level (for example, 2 meters of level or 1 bar of pressure) to always maintain a gauge.

To proceed with the setting of the calibration for relative zero press the button  :




The parameter "Learn Zero" will set the value automatically for the relative zero setting. Pressing the button  will set the value automatically as the relative zero of level/pressure at the moment the button is pressed.

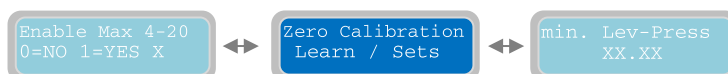
To manually set the "relative zero" press the button  :




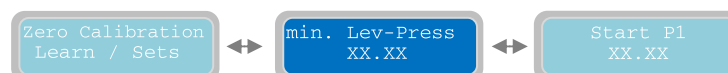
Set-up
Zero: XX.XX

The parameter "Set-up Zero" will set the value of the relative zero manually. The "X" indicates the digit of the parameter to modify. The range of value is from 00.00 to 99.99 (bar or meters depending on the choice made previously).
Factory default setting: 00.00.

Pressing the button  it is possible to continue to program all the parameters relative to the 4-20mA device.




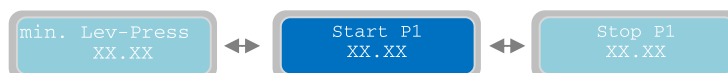
To move to the next horizontal parameter press the button  :



min. Lev-Press
XX.XX

The parameter "Min lev-press" will set the level/pressure (in meter or bar depending on the mode previously selected) for which to trigger an alarm. The alarm of minimum level/pressure will stop the pumps and will show in the visual display and, depending on the settings of associated menu, it can activate one or more output relays. (The "X" indicates the digit of the parameter to modify).
The range of value is from 00.00 to 99.99.
Factory default setting: 0.50


To move to the next horizontal parameter press the button  :



10. GENERAL SETTINGS (continued)

Start P1
XX.XX

The parameter "Start P1" will set the level/pressure (in meter or bar depending on the mode previously selected for which to start the Pump 1.
This parameter is usable only in the DIGIT and MULTITANK programming mode, in all other programming modes this parameter is inhibited.
(The "X" indicates the digit of the parameter to modify).
The range of value is from 00.00 to 99.99.
Factory default setting: 1.00

To move to the next horizontal parameter press the button  :


Start P1
XX.XX

Stop P1
XX.XX

Start P2
XX.XX

Stop P1
XX.XX

The parameter "Stop P1" will set the level/pressure (in meter or bar depending on the mode previously selected for which to stop the Pump 1.
This parameter is usable only in the DIGIT and MULTITANK programming mode, in all other programming modes this parameter is inhibited.
(The "X" indicates the digit of the parameter to modify).
The range of value is from 00.00 to 99.99.
Factory default setting: 2.00

To move to the next horizontal parameter press the button  :


Stop P1
XX.XX

Start P2
XX.XX

Stop P2
XX.XX

Start P2
XX.XX

Similarly to the previous parameter, the parameter "Start P2" will set the level/pressure (in meter or bar depending on the mode previously selected for which to start the Pump 2.
This parameter is usable only in the DIGIT programming mode, in all other programming modes this parameter is inhibited.
(The "X" indicates the digit of the parameter to modify).
The range of value is from 00.00 to 99.99.
Factory default setting: 1.00

To move to the next horizontal parameter press the button  :


Start P2
XX.XX

Stop P2
XX.XX

Max Lev-press
XX.XX

Stop P2
XX.XX

Similarly to the previous parameter, the parameter "Stop P2" will set the level/pressure (in meter or bar depending on the mode previously selected for which to stop the Pump 2.
This parameter is usable only in the DIGIT programming mode, in all other programming modes this parameter is inhibited.
(The "X" indicates the digit of the parameter to modify).
The range of value is from 00.00 to 99.99.
Factory default setting: 2.00

To move to the next horizontal parameter press the button  :

Start P2
XX.XX

Max Lev-press
XX.XX

Filter reading
Coeff. K= XXX

10. GENERAL SETTINGS (continued)


Max Lev-press
XX.XX

The parameter "Max Lev-Press" will set the level/pressure (in meter or bar depending on the mode previously selected) for which to trigger an alarm. At the activation of the maximum level/pressure alarm it is possible to start all pumps by setting the parameter "Enable Max 4-20mA" (please refer to the section "Enable Max 4-20mA"). In addition to the displayed alarm, depending on the settings of the associated menu, it is possible to activate one or more output relays.

(The "X" indicates the digit of the parameter to modify).

The range of value is from 00.00 to 99.99.

Factory default setting: 10.00

To move to the next horizontal parameter press the button  :

Max Lev-press
XX.XX

Filter reading
Coeff. K: XXX

0=bar 1=mt
Value X


Filter reading
Coeff. K: XXX

In parameter "Filter reading" you can increase / decrease the delay of the reading of 4-20 mA signal: setting a low value reading signal will be faster, with a higher value will become slower. Increase this coefficient is particularly useful in cases in which the reading signal (pressure / Level) of the sensor becomes unstable maybe because of rapid changes in pressure / Level.

(The "X" indicates the digit of the parameter to modify).

The range of value is from 0 to 200.


Factory default setting: 50.

At this point the set of parameters associated to the input reading are complete. By pressing the button  it is possible to return to the previous vertical parameter "Enable 4-20mA":

Delay Power Ret
0=RND XXXsec

Enable 4-20mA
0=NO 1=YES X

Hi.Flt.Pumps ON
0=NO 1=YES X

To move to the next horizontal parameter press the button  :

Enable 4-20mA
0=NO 1=YES X

Hi.Flt.Pumps ON
0=NO 1=YES X

Start Delay
P1-P2-P3 XXsec

Hi.Flt.Pumps ON
0=NO 1=YES X


In parameter " Hi.Flt.Pumps ON " you can decide the functionality of the alarm float. The alarm float (or more generally a consensus alarm, that is a dry contact closure at which the alarm is activated) must be physically connected to the XTREME framework (see section "Electric connections").

The "X" indicates the digit of the parameter to modify:

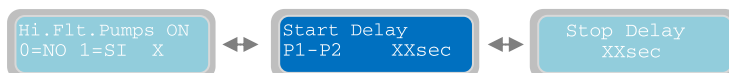
1=YES: the activation of the alarm float you will have the alarm signal and depending on the operating mode selected (see parameters menu "mode of operation") on emptying the start of all pumps available (respecting the parameter "contemporary maximum pump ") while on filling the stop of the pumps.

0=NO: the activation of the alarm float switch will cause only trigger the alarm signal.

Factory default setting: 0.


To move to the next horizontal parameter press the button  :

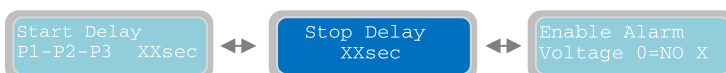
10. GENERAL SETTINGS (continued)



Start Delay
P1-P2 XXsec


The parameter "Start Delay P1-P2" will set a time delay on the re-start of the pumps after the starting condition is met; for example, the activation of a start flow switch /pressure switch (for operating modes Dark, Clean, Multitank) or once we have reached the level of activation for signal 4-20 mA (for operating mode DIGIT). The start of the pumps will be delayed accordingly by this set time value (start delay parameter).
The "X" indicates the digit of the parameter to modify.
The range of time delay start is from 4 to 99 seconds.
Factory default setting: 4 seconds.

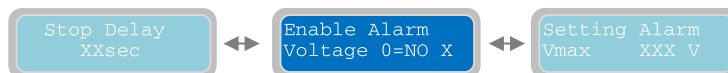
To move to the next horizontal parameter press the button  :



Stop Delay
XXsec


The parameter "Stop Delay" will set a time delay on the stopping of the pumps after the stopping condition is met; for example, the opening of a stop flow switch /pressure switch (for operating modes Dark, Clean, Multitank). Therefore, once the trigger is set for the stopping condition the pumps will continue to work for the amount of time set in this parameter. The Stop Delay setting will be the same for all the pumps installed. If during the Stop Delay time a condition for a "minimum level/pressure" is met then all the pumps will stop (for operating mode CLEAN).
The "X" indicates the digit of the parameter to modify.
The range of time delay start is from 0 to 99 seconds.
Factory default setting: 1 sec

To move to the next horizontal parameter press the button  :

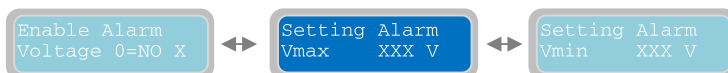


Enable Alarm
Voltage 0=NO X

With the parameter "Enable Alarm Voltage" it is possible to activate/deactivate the alarm relative to the Mains Power Voltage of the control panel XTREME (Vmax e Vmin).
This alarm will:
- Stop all pumps from working
- Display the alarm
- It can activate the output relay alarm (depending on the setting of the associated menu)
The "X" indicates the digit of the parameter to modify.
0=NO: by setting "0" the Voltage alarm is disabled
1=YES: by setting "1" the Voltage alarm is enabled.
Factory default setting: 1

To move to the next horizontal parameter press the button  :

10. GENERAL SETTINGS (continued)




Setting Alarm
Vmax XXX V

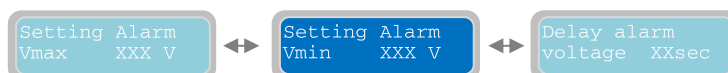
The parameter "Setting Alarm Vmax" will set a voltage threshold over which, if enabled, will trigger the alarm.

The "X" indicates the digit of the parameter to modify.

The range of value is from 400 to 460V for XTREME-T and from 230 to 260V for XTREME-M.

Factory default setting: 440V (XTREME-T); 253V (XTREME-M).

To move to the next horizontal parameter press the button  :




Setting Alarm
Vmin XXX V

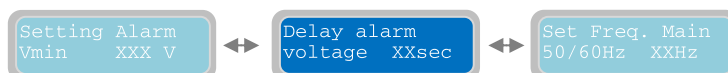
The parameter "Setting Alarm Vmin" will set a voltage threshold under which, if enabled, will trigger the alarm.

The "X" indicates the digit of the parameter to modify.

The range of value is from 340 to 400V for XTREME-T and from 200 to 230V for XTREME-M.

Factory default setting: 360V (XTREME-T); 207V (XTREME-M)

To move to the next horizontal parameter press the button  :



Delay alarm
voltage XXsec


The parameter "Delay Alarm Voltage" will set a delay time on the activation of the voltage's alarm (if previously enabled); the trigger condition (over/under voltage) must persist for the length of time set in this parameter in order to trigger the alarm.

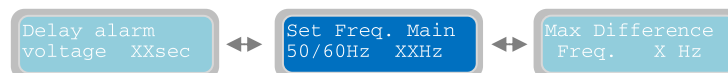
For example, if the Delay Alarm is set to 10 seconds and the trigger condition persists continuously for 10 seconds it will activate the alarm; if the trigger condition persists for less than 10 seconds the alarm will not activate.

The "X" indicates the digit of the parameter to modify.

The range of value is from 0 to 99 seconds.

Factory default setting: 5 sec

To move to the next horizontal parameter press the button  :




Set Freq. Main
50/60Hz XXHz

The parameter "Set Frequency Main 50/60 Hz" will set Mains Frequency of the control panel XTREME.

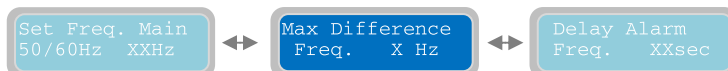
The "X" indicates the digit of the parameter to modify.

The range of value is from 50 to 60 Hz.

Factory default setting: 50Hz.

To move to the next horizontal parameter press the button  :

10. GENERAL SETTINGS (continued)



Max Difference
Freq. X Hz


The menu "Max Difference Frequency" will set the value (in Hz) of maximum deviation tolerable from the nominal value of frequency that has been set. The value being set is for both positive and negative deviation; for example, with nominal frequency being set at 50Hz, a deviation of max frequency set to 2Hz will set the tolerable limits between 52Hz (50+2=52) and 48Hz (50-2=48).

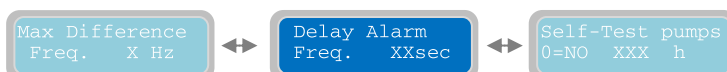
The "X" indicates the digit of the parameter to modify.

The range of value is from 1 to 5Hz.

Factory default setting: 2 Hz.

Note: it is not possible to disable the alarm related to the frequency; it's always enable.

To move to the next horizontal parameter press the button  :



Delay Alarm
Freq. XXsec


The parameter "Delay Alarm frequency" will set a time delay for the activation of the Frequency alarm (if previously enabled); the trigger condition (over/under frequency) must persist for the length of time set in this parameter in order to have the alarm signal.

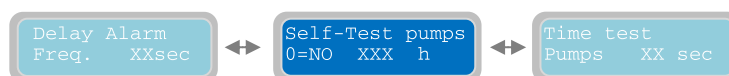
For example, if the Delay Alarm is set to 10 seconds and the trigger condition persists continuously for 10 seconds it will activate the alarm; if the trigger condition persists for less than 10 seconds the alarm will not activate.

The "X" indicates the digit of the parameter to modify.

The range of value is from 0 to 99 seconds.



Factory default setting: 2 sec


To move to the next horizontal parameter press the button  :



Self-Test pumps
0=NO XXX h

In parameter "Self-Test pumps" is possible to set the time interval with which the control panel XTREME will perform the periodic self-test operation of the pumps (used to prevent pumps from locking up after long periods of inactivity caused by the conditions installation).

On the screen appears the symbol  indicating the activation of the self-test, or the symbol  until the self-test is in progress. The count begins from the moment the Self is activated then this parameter to change the time once activated it is necessary enter programming mode and


press 2 times the button  on this screen. In case of power failure or warehousing the remaining time it is stored.

The "X" indicates the digit of the parameter to modify

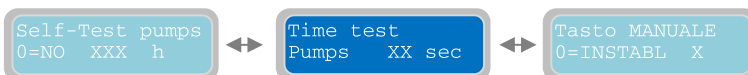
The range of value is from 0 to 999 hours.

0=NO: setting "0" the self-test pumps is disabled.

Factory default setting: 0

To move to the next horizontal parameter press the button  :

10. GENERAL SETTINGS (continued)



Time test
Pumps XX sec

The parameter "Time Test Pumps" will set the duration of the self-test. In the situation where the self-test is triggered on "minimum level open" (for the operating mode Dark, Clean, Multitank) or trigger on the level of deactivation from signal 4-20 mA (for operating mode DIGIT), the self-test will last at maximum 3 seconds regardless of the value set in this parameter.


The "X" indicates the digit of the parameter to modify

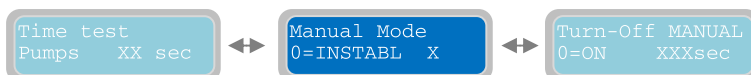
The range of value is from 0 to 99 seconds.

Factory default setting: 5 seconds.

Note: the self-test will be executed with the following logic:

-start pump 1; operation for the time being set; stop pump 1; start pump 2; operation for the time being set; stop pump 2.

To move to the next horizontal parameter press the button  :



Manual Mode
0=INSTABL X

The parameter "MANUAL Mode" will set the operating mode of the buttons "MAN" for the manual operation of the pumps.


The "X" indicates the setting of the parameter to modify

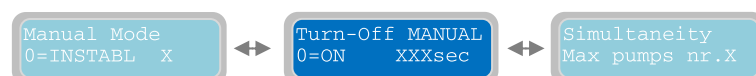
0=UNSTABL: setting "0" the MAN button should be pressed, this indicated "Operator Presence": the pumps will work while the button MAN is being pushed; when the button is released the pumps will stop.

Setting "1" the operation of the pumps will continue for a programmable time (next parameter "Turn-off MANUAL") even after the release of the MAN button. When the timer elapses the pumps will stop.

Factory default setting: 0.

Note: when using the mode "Operator Presence" the operation of the pumps will bypass the protections that have been set (it is therefore necessary to verify that the manual operation will not damage the pumps). On the other hand, the operation mode "Turn-Off MANUAL" is subject to the protection settings.

To move to the next horizontal parameter press the button  :



Turn-Off MANUAL
0=ON XXXsec

The parameter "Turn-off MANUAL" will set the operating time of the pumps after the button MAN has been pressed (only if the "MANUAL Mode" has been set to "1").


Shutdown requires pressing the button 0.

The "X" indicates the setting of the parameter to modify.

The range of value is from 0 to 999 seconds.

Factory default setting: 5 seconds.

Note: if it is set to "0" the operating mode will be "at continuous/infinite time" (the "Turn-Off MANUAL" operating mode is subject to the protection settings).

To move to the next horizontal parameter press the button  :



Simultaneity
Max pumps nr.X


The parameter "Simultaneity Max pumps" will set the number of pumps can be used simultaneously. For example, setting the value to "1" it will have a maximum of 1 pump even if the conditions for both pumps are active.

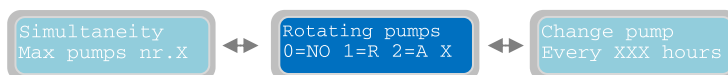
The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 2.

Factory default setting: 2 (XTREME²).

10. GENERAL SETTINGS (continued)

To move to the next horizontal parameter press the button  :



Rotating pumps
0=NO 1=R 2=A X

With the parameter "Rotating pumps" is possible to activate/select the mode in which the pumps will alternately start.

- 0=NO: setting "0" there will be no rotation of starting pumps. The pumps will start and stop depending on their own settings of activation and deactivation.

Note: the condition for starting pump2 will also start pump 1.

- 1=R: setting "1" the rotation is activated with the following logic:

At every activation of the first starting condition the pumps will start in a cyclic order; at every activation of the second condition will result in the start of the second pump. The stopping of the pumps will be by in reverse order, firstly stopping the pump that started last, and then stopping the pump that started first.

- 2=A: setting "2" the rotation will happen based on the number of starts of each pump (displayed under the operating parameter "St XXX") to balance the number of starts between the pumps. The stopping of the pumps will order the pump with the least number of starts (in order to have it re-start next and increase the number of restarts to try to balance it).

- Setting "3" the rotation of the pumps will be based on the number of working hours of each pump (displayed under the operating parameter "h XXX") in order to balance the load and number of working hours between the pumps. The stopping of the pumps will be in order of the most working hours.

- Setting "4" will activate the timer rotation: the rotation between pumps will be based on the programmable timer described in the next parameter ("Change Pump every XXX hour").

- Setting "5" the rotation will have the following logic:

At every activation of the first starting condition will result in a cyclic order of the pumps; at every activation of the second condition will result in the start of the second pump. The stopping of the pumps will be in sequence in which the pumps started. Firstly stopping the pump which started first and then stopping the pump that started last.


The "X" indicates the setting of the parameter to modify.

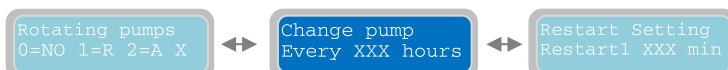
The range of value is from 1 to 5.

Factory default setting: 1.

NOTE: in the case the pump intended to start doesn't activate (whatever the reason), the other pump will be activated automatically (in the case is set to the parameter "Simultaneity Max pumps" to 2).

NOTE: If there is a need to manage the pumps separately is recommended to switch the program operating to MULTITANK

To move to the next horizontal parameter press the button  :




Change Pump
every XXX hours

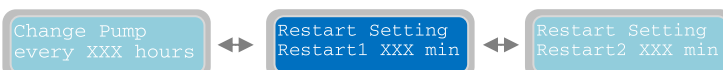
The parameter "Change pump every XXX hours" is related to the type of timer rotation that is enabled via the previous parameter. It is possible to set the timer to how many hours it will swap the starting priority: pump 1/pump 2; pump 2/pump 1.

The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 999 hours.

Factory default setting: 24h.

To move to the next horizontal parameter press the button  :



10. GENERAL SETTINGS (continued)

Restart Setting
Restart1 XXX min


The parameter "Restart Setting, Restart 1" related to the Dry Running alarm (the alarm of Dry Running is always enabled and it will trigger when it measures an operating $\cos\phi$ smaller than the minimum $\cos\phi$ being set (parameter " $\cos\phi$ min pump" under the horizontal parameter "Pump parameters") or a pump current consumption smaller than the value of the minimum current (parameter "Min Current pump" set in the horizontal menu "Pump parameters"). It is possible to set the delay timer for the automatic restart after the alarm for dry running condition. The delay time value being set is valid for all the pumps installed.

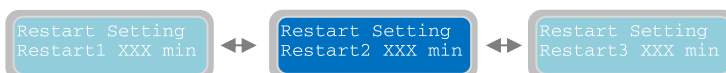
The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 999 minutes.

Factory default setting: 5 minutes.

Note: every time there is a dry running condition alarm there will be a corresponding alarm output (one or more alarms based on the current setting refer to menu "Alarm settings").

To move to the next horizontal parameter press the button  :




Restart Setting
Restart2 XXX min

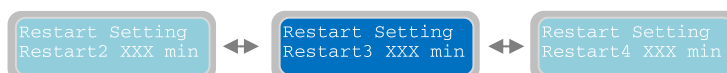
The parameter "Restart Setting, Restart 2", as previous parameter, is related to the Dry Running alarm. It is possible to set the timer delay for the automatic restart after the first timer delay alarm for Dry Running condition. If the alarm for Dry condition is still detected after the first restart of the pump the pump will be restarted again after restart timer 2. The time delay value being set is valid for all the pumps installed.

The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 999 minutes and it's independent from restart time 1.

Factory default setting: 30 minutes.

To move to the next horizontal parameter press the button  :




Restart Setting
Restart3 XXX min

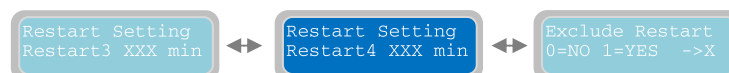
The parameter "Restart Setting, Restart 3", as previous 2 parameters, is related to the dry running alarm. It is possible to set the timer delay for the automatic restart after the third Dry running alarm. If the alarm for Dry condition is still detected after the first and second restart of the pump the pump will be restarted again using the time setting of restart setting, "Restart 3". The delay time value being set is valid for all the pumps installed.

The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 999 minutes and it's independent from restart time 2.

Factory default setting: 60 minutes.

To move to the next horizontal parameter press the button  :



Restart Setting
Restart4 XXX min


The parameter "Restart Setting, Restart 4", as previous 3 parameters, is related to the dry running alarm. It is possible to set the timer delay for the automatic restart after the 4th dry running alarm. If the alarm for Dry condition is still detected after the first three restarts of the pump the pump will be restarted again using the time setting restart setting, restart 4. The delay time value being set is valid for all the pumps installed.

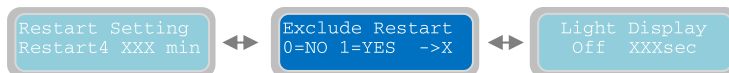
The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 999 minutes and it's independent from restart time 3.

Factory default setting: 90 minutes.


10. GENERAL SETTINGS (continued)

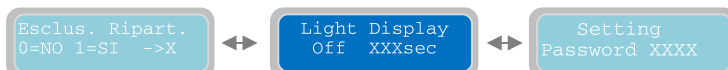
To move to the next horizontal parameter press the button  :



Esclus. Ripart.
0=NO 1=SI ->X




The parameter "Exclude Restart" will set the command for the control panel to continue to make restarts after the 4th one or to stop restarting.
0=NO: setting "0" the control panel will continue to restart the pumps with the 4th timer delay setting (i.e. restart the pumps at intervals equal to the parameter set in the "Restart Setting, Restart 4") infinitely.
1=YES setting "1" after the 4th restart of the pump, if the alarm for dry condition is still active the control panel will stop the operation of the pump (or pumps) and it will wait for the "operator manual reset" (manual operation to control the conditions of the system).
The "X" indicates the setting of the parameter to modify.
Factory default setting: 0.

To move to the next horizontal parameter press the button  :



Light Display
Off XXXsec


The parameter "Light Display Off" will set the amount of time of inactivity before the display will turn off automatically (power saving mode) from the last button pressing. If the display is momentarily off in power saving mode, it will go back on after pressing any button.

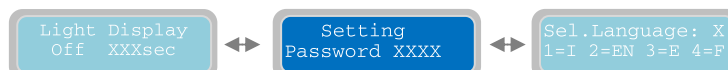
Note: pressing of buttons , ,  will not have any effect on the operation of program settings of XTREME²; however, pressing other buttons could modify the operations of the pumps.

The "X" indicates the setting of the parameter to modify.
The range of value is from 5 to 250 seconds.

Factory default setting: 60 seconds.

Note: It is not possible to keep the display always On (maximum 250 seconds after last button pressing).

To move to the next horizontal parameter press the button  :




Setting
Password XXXX

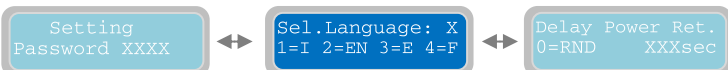
The parameter "Setting Password" allows the user to set/modify the password to access the programming menu.

The "X" indicates the setting of the parameter to modify.

It's possible to set a password of 4 digits.

Factory default password is "0000".


To return to the first horizontal parameter press the button  :



At this point the horizontal menu "General Settings" has been programmed and it is possible to proceed to next menu.


To go back to the horizontal menus press the button  and the "General Settings" menu will be displayed again

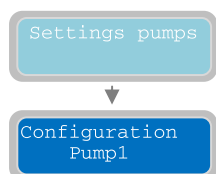


Press the button  again to move to the next horizontal menu "Settings Pumps":



11. SETTING PUMPS



Press the button  to display the underneath vertical parameter:




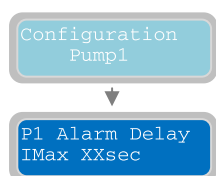
With the vertical parameter "Configuration pump 1" is possible to set all the parameters relative to pump 1.

Press the button  again to proceed to the settings relative to Pump 1; otherwise, pressing the button  will move to the next horizontal parameter for the settings of Pump 2:




Following will be described in order of all the settings of Pump 1 (the same independent setting descriptions of Pump 1 are available for Pump 2).

From the menu "Configuration Pump 1", pressing the button  will display the following vertical parameter:



The parameter "P1 Alarm Delay I max" will set the time delay for the activation of the alarm for maximum current consumption (overcurrent): the threshold must be crossed (overcurrent) for the amount of time specified for the alarm to trigger and to stop the pump.
For example, if the alarm time delay is set to 10 seconds then the threshold is crossed continuously for 10 seconds for the alarm to activate; if the threshold is crossed for less than 10 seconds alarm will not activate.
The "X" indicates the setting of the parameter to modify.
The range of value is from 5 to 15 seconds.
Factory default setting: 5 seconds.

To move to the next horizontal parameter press the button  :



11. SETTING PUMPS (continued)

P1 Alarm Delay
IMin XXsec


The parameter "P1 Alarm Delay I min" will set the time delay for the activation of the alarm for minimum current consumption (undercurrent): the threshold must be crossed (undercurrent) for the amount of time specified for the alarm to trigger and to stop the pump.

For example, if the alarm time delay is set to 10 seconds and the threshold is crossed continuously for 10 seconds for the alarm to activate; if the threshold is crossed for less than 10 the alarm will not activate.

The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 120 seconds.

Factory default setting: 3 seconds.

To move to the next horizontal parameter press the button  :

P1 Alarm Delay
IMin XXsec

P1 Alarm Delay
Cosφ XXsec

Enable Max Cont.
Working 0=NO X

P1 Alarm Delay
Cosφ XXsec


The parameter "P1 Alarm Delay Cosφ" will set the time delay for the activation of the alarm for minimum Cosφ (the lowering of the Cosφ value is an indication that the pump is not sucking water and it's working in dry condition): the threshold must be crossed (dry running condition) for the amount of time specified for the alarm to trigger and to stop the pump.

For example, if the alarm time delay is set to 10 seconds and the threshold is crossed continuously for 10 seconds for the alarm to activate; if the threshold is crossed for less than 10 seconds the alarm will not activate.

The "X" indicates the setting of the parameter to modify.

The range of value is from 1 to 120 seconds.

Factory default setting: 3 seconds.


To move to the next horizontal parameter press the button  :

P1 Alarm Delay
Cosφ XXsec

Enable Max Cont.
Working 0=NO X

Enable Max Start
Minute 0=NO X

Enable Max Cont.
Working 0=NO X


The parameter "Enable Max Continuous working operation" will enable/disable the alarm for the maximum continuous operation of the pump. When enabled and the pump is continuously working for a period of time over the value set then the alarm will be activated and the pump will be stopped. The functional operation of the pump will be inhibited until the reset of the alarm (pressing the button  of the pump in "status of alarm").

The "X" indicates the setting of the parameter to modify.

0=NO: setting "0" will disable the alarm for max continuous working condition of the pump.


1=YES: setting "1" will enable the alarm for max continuous working condition of the pump.

Factory default setting: 0 (disable).

To set the maximum time of continuous operation of the pump is necessary to pass to the parameter "Max Continuous working" by pressing  :

Enable Max Cont.
Working 0=NO X


Max Continuous
working XXXXmin

The parameter "Max Continuous working" will set maximum time of continuous working operation of the pump. If the pump works continuously for a period of time longer than the set value then the pump will be stopped and the alarm will trigger. The functional operation of the pump will be inhibited until the reset of the alarm (pressing the button  of the pump in status of alarm).

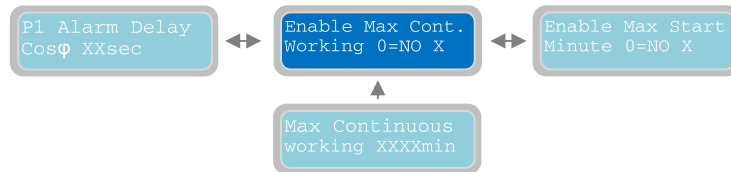
The "X" indicates the setting of the parameter to modify.


The range of value is from 1 to 9999 minutes.

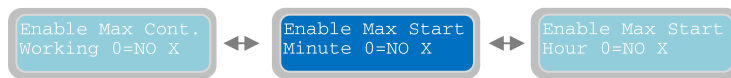
Factory default setting: 1440 minutes (24hours).

To continue programming the parameters of the pump press the button  to go back to the parameter "Enable Max Cont. working":

11. SETTING PUMPS (continued)




To move to the next horizontal parameter press the button  :



Enable Max Start
Minute 0=NO X


The parameter "Enable Max Start Minute" will enable/disable the alarm for the maximum number of starts per minute of the pump. When enabled and the pump executes a number of starts per minute higher than the set value "Max Starts per Minute" the alarm will activate and the pump will stop. The functional operation of the pump will be inhibited until the reset of the alarm. The reset of the alarm will happen automatically at the end of the minute. The "X" indicates the setting of the parameter to modify.
0=NO: setting "0" will disable the alarm for max number of starts per minute of the pump.
1=YES: setting "1" will enable the alarm for max number of starts per minute of the pump.
Factory default setting: 1.

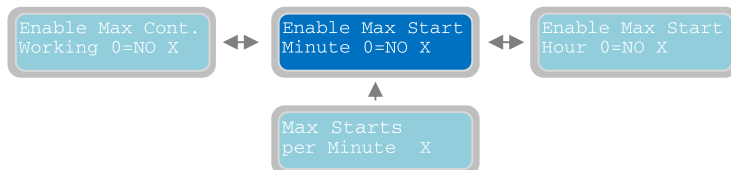
Press the button  to move to the menu for setting the maximum number of starts per minute ("Max Starts per Minute"):


Enable Max Start
Minute 0=NO X

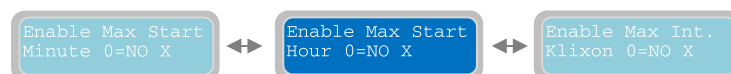
Max Starts
per Minute X

The parameter "Max Starts per Minute" will set the pump's maximum number of starts per minute. If the pump executes a number of starts per minute higher than the set value it will be stopped and an alarm will activate. The functional operation of the pump will be inhibited until the reset of the alarm. The reset of the alarm will happen automatically at the end of the minute. The "X" indicates the setting of the parameter to modify.
The range of value is from 1 to 9.
Factory default setting: 9.

To continue programming the parameters of the pump press the button  to go back to the parameter "Enable Max Start Minute":



To move to the next horizontal parameter press the button  :

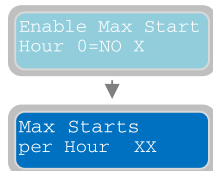


Enable Max Start
Hour 0=NO X


The parameter "Enable Max Start Hour" will enable/disable the alarm for the maximum number of starts per hour of the pump. When enabled and the pump executes a number of starts per minute higher than the set value "Max Starts per Hour" the alarm will activate and the pump will stop. The functional operation of the pump will be inhibited until the reset of the alarm. The reset of the alarm will happen automatically at the end of the Hour. The "X" indicates the setting of the parameter to modify.
0=NO: setting "0" will disable the alarm for max number of starts per hour of the pump.
1=YES: setting "1" will enable the alarm for max number of starts per hour of the pump.
Factory default setting: 0 (disable).

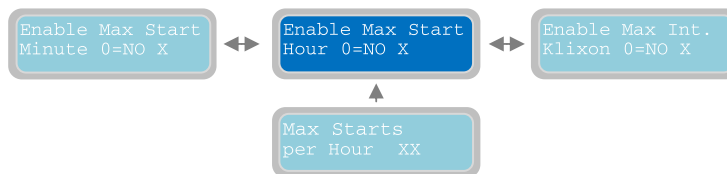
11. SETTING PUMPS (continued)


Press the button  to move to the menu for setting the maximum number of starts per hour ("Max Starts per Hour"):

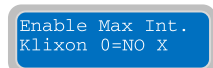
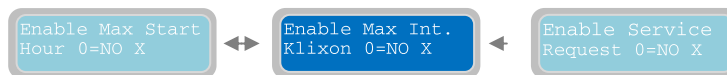


The parameter "Max Starts per Hour" will set the pump's maximum number of starts per hour. If the pump executes a number of starts per hour higher than the set value it will be stopped and an alarm will activate. The functional operation of the pump will be inhibited until the reset of the alarm. The reset of the alarm will happen automatically at the end of the hour. The "X" indicates the setting of the parameter to modify. The range of value is from 1 to 99. Factory default setting: 6.


To continue programming the parameters of the pump press the button  to go back to the parameter "Enable Max Start Hour":

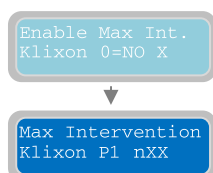


To move to the next horizontal parameter press the button  :




The parameter "Enable Max Interventions Klixon" will enable/disable the alarm for the maximum number of Klixon events for the pump. When enabled and the number of Klixon events on the pump is higher than the set value in the parameter "Max Intervention Klixon" the alarm will be activated and the pump will stop. The functional operation of the pump will be inhibited until the reset of the alarm. The Klixon is a thermal protection circuit breaker (available only on some types of pumps) inserted in the motor to prevent overheating (typically due to an excessive number of starts within a short period of time or due to a defective cooling system of the motor). Typically it is a bimetallic circuit breaker that provides a contact normally closed that would open in case of overheating. The re-closing of the contact (and reactivation of Klixon) is automatic once the temperature has dropped, below the value determined not to be harmful to the system. The "X" indicates the setting of the parameter to modify. 0=NO: setting "0" will disable the alarm for the maximum number of Klixon events 1=YES: setting "1" will enable the alarm for the maximum number of Klixon events Factory default setting: 0 (disable).

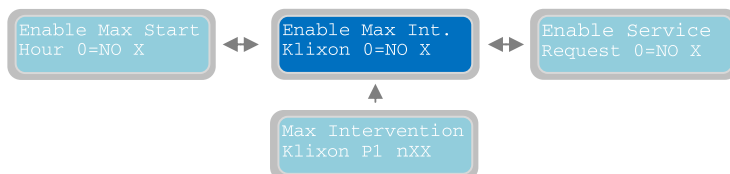
Press the button  to move to the menu for setting the maximum number of interventions Klixon ("Max Intervention Klixon P1"):




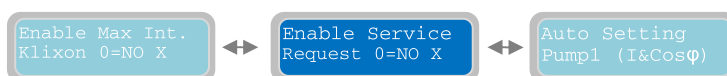
The parameter "Max interventions Klixon P1" will set the max number of Klixon events that the pump can handle. If the number of Klixon events is higher than the set value the pump will be stopped and therefore the alarm will activate (XTREME will sum the Klixon events independently from the frequency of starts over time; the alarm will happen even if the number of events is reached over a long period of time). The functional operation of the pump will be inhibited until the reset of the alarm. The "X" indicates the setting of the parameter to modify. The range of value is from 1 to 10. Factory default setting: 10.

To continue programming the parameters of the pump press the button  to go back to the parameter "Enable Max Int. Klixon":

11. SETTING PUMPS (continued)




To move to the next horizontal parameter press the button  :



Enable Service
Request 0=NO X


The parameter "Enable Service Request" will enable/disable the alarm for the service maintenance of the pump. When it is enabled the pump will work and the pump works for a number of hours higher than the set value in the parameter "P1 Request Service" there will be an alarm for maintenance/substitution of the pump. The pump will not be stopped and it will continue to work normally. The alarm will be displayed and it will be possible to activate one or more alarm outputs (based on the setting in the menu "Alarms Setting").
The "X" indicates the setting of the parameter to modify.
0=NO: setting "0" will disable the alarm for service request.
1=YES: setting "1" will enable the alarm for service request.
Factory default setting: 0 (disable).

Press the button  to move to the menu for setting the maximum number of working hours ("P1 Request Service"):

Enable Service
Request 0=NO X

P1 Request
Service XXXXh


The parameter "P1 Request Service" will set the maximum number of working hours for the pump before the service request alarm is activated. The alarm will be displayed and it will be possible to activate one or more alarm output (based on the setting in the menu "Alarms Setting").
The "X" indicates the setting of the parameter to modify.
The range of value is from 1 to 9999 hours.
Factory default setting: 1000h.

Press the button  to move to the next horizontal parameter "Reset Service P1":



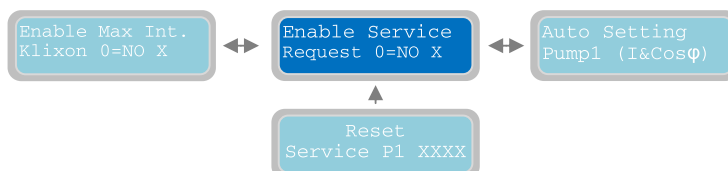
Reset
Service P1 XXXX


The parameter "Reset Service P1" will show the number of hours until the for maintenance service request alarm will be activated.

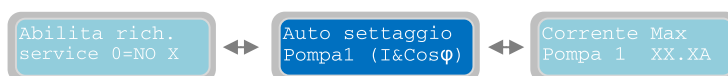
Press the button  to update the time remaining for the next service with the pump's duration of work already executed (the value will be displayed on the parameters "h XXX"). At this point the next service request will happen after "time set on the parameter P1 service request" + "work time on the operating parameter". If there is no "Reset Service P1" and the time it is simply set via "P1 Request Service", the maintenance service request alarm will activate considering the number of work hours already executed. For example, if the pump has already worked for 200h and the "P1 Request Service" was set to 1000h and there was no reset of P1. Then, the service request alarm will activate once the 1000h of work are reached, meaning in 800h (1000-200=800h). If the reset of service P1 is done, the service request alarm will at 1200h of work hours (200+1000=1200h). To figure out the time remaining for the service request it is necessary to verify the number of hours indicated on the parameter "Reset Service P1" and subtract the number of hours displayed on the operating parameter "h XXX".

Press the button  to go back to the horizontal parameter "Enable Service Request":


11. SETTING PUMPS (continued)



To move to the next horizontal parameter press the button  :



Auto Setting
Pump1 (I&Cosφ)

The parameter "Auto Setting pump 1" is to set the control panel automatically for the main electrical parameters of the pump. When pressing the button  the pump will start and will work for 10 seconds; in this period of time the control panel XTREME will read the electrical parameters of the pump (current, Cosφ). After the 10 seconds the values read will be automatically saved.


WARNING: the auto setting of the pump is executed independently from the conditions of the system (pump flow closed, consents of operation whether active or not, etc ...).

To avoid damage to the pump and the electrical parameters erroneous readings, before making the auto setting make sure that the working conditions of the pump are the best ones.

Note: based on the measurements of current and cosφ during the auto setting XTREME will set the following parameters automatically:

- "I Min" is set as 60% of the current measured during the auto setting.
- "I max" is set as 120% of the current measured during the auto setting.
- "Cosφ Min" is set as 80% of the cosφ measured during the auto setting.

If the Auto Setting of the parameters of the pump is not desired, it is possible to set manually the values with the following parameters.

To move to the next horizontal parameter press the button  :




Max Current
Pump 1 XX.XA

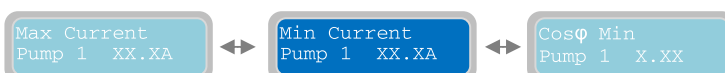
The parameter "Max Current Pump 1" will set the maximum value of current consumption allowed (overcurrent). Beyond the set value (for the duration specified in the parameter "P1 Delay Alarm I_{max}") the pump will stop and will display an alarm (Maximum current) and it will be possible to activate one or more alarm output (based on the setting in the menu "Alarms Setting").

The "X" indicates the setting of the parameter to modify.

The range of value is from 00.1 to 99.9 A.

Factory default setting: 00.0 A.

To move to the next horizontal parameter press the button  :



Min Current
Pump 1 XX.XA


The parameter "Min Current Pump 1" will set the minimum value of current consumption allowed (undercurrent). Below the set value (for the duration specified in the parameter "P1 Delay Alarm I_{min}") the pump will stop and will display an alarm (Minimum current) and it will be possible to activate one or more alarm output (based on the settings in the menu "Alarms Setting").

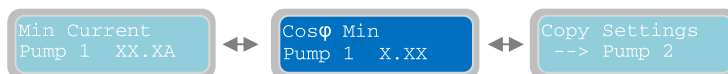
The "X" indicates the setting of the parameter to modify.

The range of value is from 00.1 to 99.9 A.


Factory default setting: 00.0 A.

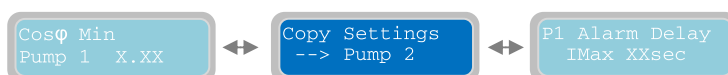
11. SETTING PUMPS (continued)


To move to the next horizontal parameter press the button  :



The parameter "Cosφ Min pump 1" will set the minimum allowed value of cosφ while the pump is operating (the lowering of the Cosφ value is an indication that the pump is not sucking water and it is working in dry condition. If the cosφ value is lower than the value set (for the duration specified in the parameter "P1 Delay Alarm Cosφ") the pump will stop, and will display an alarm (Dry running condition) and it will be possible to activate one or more outputs alarm (based on the settings in the menu "Alarms Setting").
The "X" indicates the setting of the parameter to modify.
The range of value is from 0.20 to 0.99.
Factory default setting: 0.20.


To move to the next horizontal parameter press the button  :




With the parameter "Copy Settings --> Pump 2" is possible to copy and set automatically all the parameters for pump 1 to pump 2 at once without manually setting all the parameters individually (useful function in case 2 identical pumps are used on the same system). Press the button  to copy and save the parameters. The display will show briefly the message "save" as confirmation that the setting has been saved. All parameters set in the menu "Configuration Pump 1" will be copied in the menu "Configuration pump 2". The following parameters will be copied and set automatically:

- P2 Alarm Delay I_{max}
- P2 Alarm Delay I_{min}
- P2 Alarm Delay Cosφ
- Max Continuous Working
- Max Starts per minute
- Max Starts per hour
- Max intervention Klaxon P2
- P2 Service Request
- Max Current pump 2
- Min Current pump 2
- Min Cosφ pump 2


At this point we have finished the program settings of Pump 1 parameters.

Pressing the button  will return to the vertical menu "Configuration Pump 1":




Press the button  to move to the next menu "Configuration Pump 2": **the parameters settings are the same as described for Pump 1.**

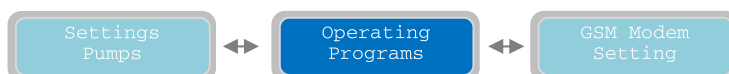
At this point the horizontal menu "Settings Pumps" has been fully programmed and you can proceed to the next menu.

To go back to the horizontal menu "Settings Pumps" press the button .



Press again the button  to move to the next horizontal menu "Operating Programs":

12. OPERATING PROGRAMS





Press the button  to display the vertical parameter:



In this part of the of control panel setting it's possible to choose the program operating mode for the pumps. Four program operating modes are available:

- Program DARK
- Program CLEAN
- Program DIGIT
- Program MULTITANK
- Program PAUSE/WORK

The first operating mode is the program DARK (to select a different program mode just press the buttons  and  to move in the horizontal menu of programs).

Program
DARK

Inside the menu "Program DARK" is possible to activate/deactivate the operating mode "Dark" for the pumps (this operating mode will apply to all the pumps connected). The program Dark is particularly suitable for systems managing waste water (this program mode can also be used for clean water system). Especially suitable for a system using float switches, the program Dark can be used also with generic dry contacts. The main characteristic of operation of the program Dark is that the pumps start is controlled via a start float switch and its operation will continue even after the "start switch" deactivation. The stopping of the pump is controlled by the activation of its stop float switch.

Program
CLEAN

Inside the menu "Program CLEAN" is possible to activate/deactivate the operating mode "Clean" for the pumps (this operating mode will apply to all the pumps connected). The program Clean is particularly suitable for systems managing clean water (this program mode can also be used for waste water system). Especially suitable for system using either pressure switches or float switches, the program Clean can be used also with generic dry contacts. With the program Clean the starting and stopping of the pumps are controlled via the start float switch; it is possible to connect to a minimum level float switch as additional protection against dry running operation.

Program
DIGIT

Inside the menu "Program DIGIT" is possible to activate/deactivate the operating mode "DIGIT" for the pumps (this operating mode will apply to all the pumps connected). The program DIGIT allows the starting and stopping of the pumps based on a signal coming from 4-20 mA device (for example, level piezoresistive sensor, electronic pressure transducer,...). It is possible to control the starting and stopping of the pumps based on some levels/pressures programmable by the operator.

Programma
MULTITANK

Inside the menu "Program MULTITANK" is possible to activate/deactivate the operating mode "Program MULTITANK". The program MULTITANK recognises the type of operating mode among the connected pumps as following:
PUMP 1: DARK, CLEAN, DIGIT.
PUMP 2: DARK, CLEAN.
(The program mode DIGIT is only available for the pump 1).
The program MULTITANK is especially suitable for systems with pumps controlling different tanks and/or controlling different type of pumps with a single control panel.


12. OPERATING PROGRAMS (continued)

Program
PAUSE/WORK

Inside the menu "Program PAUSE/WORK" is possible to activate/deactivate the operating mode "PAUSE/WORK". The program PAUSE/WORK allows managing the operation of the pumps only with two timing, independent of the inputs, defined for each pump, the pause (downtime pump) and work (pump start-up time), modified in the following pages with units measuring in minutes.

The program PAUSE / WORK is particularly suitable in systems with pumps inserted in different tanks and / or which work with predetermined intervals.

NOTE: regardless of the program operating mode selected, it is always possible to connect to a 4-20mA device to display the level/pressure and to alarm for minimum/maximum level/pressure. In addition, with the program operating mode DIGIT it is also possible to set the actual levels/pressure values to control the pumps

To proceed and set all the parameters of the operating mode DARK press the button  :

Program
DARK

Operating mode
Empty/Fill X


The parameter "Operating mode Empty/Fill" will set the mode of the program "Dark" to "empty" or "fill". With "Empty" the start/stop float switches of the pumps are inside the tank in which the pump is installed. With "Fill" the start/stop float switches are in a different tank from which the pumps are installed.

The "X" indicates the setting of the parameter to modify.

0=EMPTY

1=FILL

Factory default setting: 0 (Empty).


To move to the next horizontal parameter press the button  :

Operating mode
Empty/Fill X

Enable
DARK

Enable
DARK


The parameter "Enable DARK" will enable/disable the program operating mode Dark. Once enabled the mode Dark it will apply to all the installed pumps.

To enable the operating mode Dark press the button  to save its setting. The display will show briefly the message "save" as confirmation that the setting has been saved. In the main display the word "drk" will show to indicate the selected program operating mode.

The setting of all the parameters for the program operating mode Dark is complete.

Refer to section "INSTALLATION EXAMPLES" for directions of the connections and the applications of the mode DARK.

Similarly to the previous program operating mode, it is possible to select "Program CLEAN" and set all its parameters.

To proceed and set all the parameters of the operating mode Clean press the button  :

Program
CLEAN

Operating mode
Empty/Fill X


The parameter "Operating mode Empty/Fill" will set the mode of the program "Clean" to "empty" or "fill". Typically with "Empty" the start/stop float or pressure switches of the pumps are inside the tank in which the pump is installed. With "Fill" the start/stop float or pressure switches are in a different tank from which the pumps are installed.

The "X" indicates the setting of the parameter to modify.

0=EMPTY

1=FILL

Factory default setting: 0 (Empty).

To move to the next horizontal parameter press the button  :


Operating mode
Empty/Fill X

Enable
CLEAN

12. OPERATING PROGRAMS (continued)

Enable
CLEAN


The parameter "Enable CLEAN" will enable/disable the program operating mode Clean. Once enabled the mode CLEAN it will apply to all the installed pumps.

To enable the operating mode Clean press the button  to save its setting. The display will show briefly the message "save" as confirmation that the setting has been saved. In the main display the word "cln" will show to indicate the selected program operating mode. Factory default setting: CLEAN enable.

The setting of all the parameters for the program CLEAN operating mode is complete.

Refer to section "INSTALLATION EXAMPLES" for directions of the connections and the applications of the mode CLEAN.

Similarly of the previous program operating mode, it is possible to select "Program DIGIT" and set all its parameters.

To proceed and set all the parameters of the operating mode DIGIT press the button  :

Program
DIGIT

Operating mode
Empty/Fill X


The parameter "Operating mode Empty/Fill" will set the mode of the program "Digit" to "empty" or "fill". Typically with "Empty" the 4-20 mA devices are inside the tank in which the pump is installed. Typically, with "Fill" the 4-20 mA devices are in a different tank from which the pumps are installed.

The "X" indicates the setting of the parameter to modify.

0=EMPTY

1=FILL

Factory default setting: 0 (Empty).


To move to the next horizontal parameter press the button  :

Operating mode
Empty/Fill X

Enable
DIGIT

Enable
DIGIT

The parameter "Enable DIGIT" will enable/disable the program operating mode DIGIT. Once enable the mode DIGIT it will apply to all the installed pumps.

To enable the operating mode DIGIT press the button  to save its setting. The display will show briefly the message "save" as confirmation that the setting has been saved. In the main display the word "Dig" will show to indicate the selected program operating mode.

NOTE: the setting of the alarm level/pressure and commands of the pumps of operating mode DIGIT are under the submenu "Enable 4-20 mA" of the menu "General Settings". The setting of the level/pressure needs to be consistent with the logical of operating mode selection (empty or fill).

The setting of all the parameters for the program operating mode DIGIT is complete.

Refer to section "INSTALLATION EXAMPLES" for directions of the connections and the applications of the mode DIGIT.

Similarly of the previous program operating mode, it is possible to select "Program MULTITANK" and set all its parameters.

To proceed and set all the parameters of the operating mode MULTITANK press the button  :

Program
MULTITANK

Operation Mode
Pump 1 1-6 X

With the parameter "Operation Mode Pump 1" it is possible to select one of the following modes for pump 1:

1=Operating mode CLEAN - EMPTY

2=Operating mode CLEAN - FILL

3=Operating mode DARK - EMPTY

4=Operating mode DARK - FILL

5=Operating mode DIGIT - EMPTY


6=Operating mode DIGIT - FILL

The "X" indicates the setting of the parameter to modify.

Factory default setting: 1 (CLEAN - EMPTY).

12. OPERATING PROGRAMS (continued)

NOTE: the setting of the alarm level/pressure and commands of the pumps of operating mode MULTITANK are under the submenu "Enable 4-20 mA" of the menu "General Settings". In addition, it is necessary to set the parameters "Stop P1" and "Start P1".

To move to the next horizontal parameter press the button  :




Operation Mode
Pump 2 1-4 X

With the parameter "Operation Mode Pump 2" it is possible to select one of the following modes for pump 1:

- 1=Operating mode CLEAN - EMPTY
 - 2=Operating mode CLEAN - FILL
 - 3=Operating mode DARK - EMPTY
 - 4=Operating mode DARK - FILL
- The "X" indicates the setting of the parameter to modify.
Factory default setting: 1 (CLEAN - EMPTY).


NOTE: for pump 2 the operating mode DIGIT is not available.

To move to the next horizontal parameter press the button  :



Enable
MULTITANK


The parameter "Enable MULTITANK" will enable/disable the operating mode MULTITANK. The mode MULTITANK recognises the operating settings of the pumps installed.

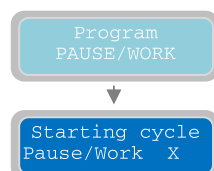
To enable the operating mode MULTITANK press the button  to save its setting. The display will show briefly the message "save" as confirmation that the setting has been saved. In the main display the word "mlt" will show to indicate the selected program operating mode.

The setting of all the parameters for the program operating mode MULTITANK is complete.

Refer to section "INSTALLATION EXAMPLES" for directions of the connections and the applications of the mode MULTITANK.


Similarly of the previous program operating mode, it is possible to select "Program PAUSE/WORK" and set all its parameters.

To proceed and set all the parameters of the operating mode PAUSE/WORK press the button  :



With the parameter "Starting cycle Pause/Work" is possible to select if the operating program "PAUSE/WORK" must start the operating cycle from the pause time or work time.

- The "X" indicates the setting of the parameter to modify.
- 0=PAUSE
 - 1=WORK
- Factory default setting: 0.


To move to the next horizontal parameter press the button  :



12. OPERATING PROGRAMS (continued)

Pause Time
P1 XXXmin


With the parameter "Pause Time P1" is possible to set the duration of the pause time in the operation of the pump P1.
The "X" indicates the setting of the parameter to modify.
The range of value is from 1 to 999 minutes.
Factory default setting: 200.

To move to the next horizontal parameter press the button  :

Pause Time P1 XXXmin ↔ Work Time P1 XXXmin

Work Time
P1 XXXmin


With the parameter "Work Time P1" is possible to set the duration of working time in the operation of the pump P1.
The "X" indicates the setting of the parameter to modify.
The range of value is from 1 to 999 minutes.
Factory default setting: 100.

To move to the next horizontal parameter press the button  :

Work Time P1 XXXmin ↔ Pause Time P2 XXXmin

Pause Time
P2 XXXmin


With the parameter "Pause Time P2" is possible to set the duration of the pause time in the operation of the pump P2.
The "X" indicates the setting of the parameter to modify.
The range of value is from 1 to 999 minutes.
Factory default setting: 200.

To move to the next horizontal parameter press the button  :

Pause Time P2 XXXmin ↔ Work Time P2 XXXmin


Work Time
P2 XXXmin

With the parameter "Work Time P2" is possible to set the duration of working time in the operation of the pump P2.
The "X" indicates the setting of the parameter to modify.
The range of value is from 1 to 999 minutes.
Factory default setting: 100.




To move to the next horizontal parameter press the button  :

Work Time P2 XXXmin ↔ Enable PAUSE/WORK

Enable
PAUSE/WORK

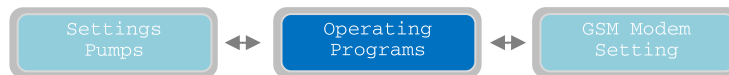
With the parameter "Enable PAUSE/WORK" is possible to activate/deactivate the operating program PAUSE/WORK. Once activated, the program operation PAUSE/WORK will be active for all the pumps installed.
To activate the operating program PAUSE/WORK or simply restart the cycle just press the button  to save the setting. The display will briefly display "save" to indicate has been saved. In the basic screen of the display will show "p/w" to indicate the operating program selected.


12. OPERATING PROGRAMS (continued)

NOTE: a) By pressing the button  the corresponding timer starts, by pressing  stops
b) Holding down the button  for 2 sec recharges the corresponding timer of the current state
c) If you change the operating logic or press the enter button on the page 'Enable PAUSE/WORK' reloads all timers and the status of starting
d) If you change only pause or work times of a pump are reloaded timers restarting the pump from the current state
e) Each time the panel is turned on, is recharged the time of the status interrupted.

At this point the horizontal menu "Operation Programs" has been fully programmed and you can proceed to the next menu.


To go back to the horizontal menu "Operation Programs" press the button .

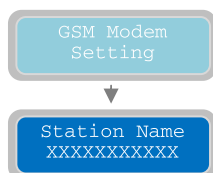


Press the button  to move to the next horizontal menu "GSM Modem Setting"

13. GSM MODE SETTING






Press the button  to visualize the underneath vertical parameter:

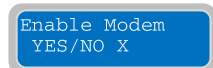
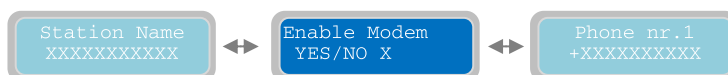


With the vertical parameter "Station Name" is possible to give a name the control panel/system. The name will show in the SMS reply every time there will be a GSM connection test (see following parameters).
Factory default setting: "Test gsm ok".


NOTE: Before configuring the GSM modem wait almost 1 minute after turning on the panel in order to successfully complete its startup routine. To proceed must be present inside the SIM.

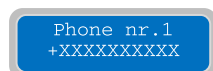
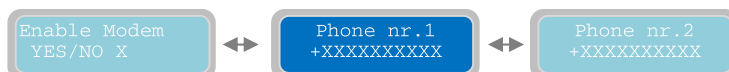
By pressing buttons  and  is possible to select uppercase, lowercase and numbers.

To move to the next horizontal parameter press the button  :




The parameter "Enable Mode" will enable/disable the modem GSM functionality. The "X" indicates the setting of the parameter to modify.
0=MODEM DISABLE
1=MODEM ENABLE
Factory default setting: 0 (Enable).
Once the modem is enabled the main display will show "gsm" on the top right corner to indicate the modem is present and enabled. In case the modem is enabled but it's not physically present inside the control panel then the display "gsm" will not appear in the main display.

To move to the next horizontal parameter press the button  :

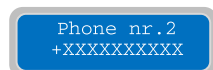


The parameter "Phone nr.1" will set the first (3 in total) phone number to send the SMS messages for the status and alarms as well as the phone number allowed to remotely control the various parameter settings. The number needs to be entered with international prefix (for example, +44.....) without any spaces.
Note: there is no priority among the 3 phone numbers; they are independent from each other.
Factory default setting: +0000000000.

To move to the next horizontal parameter press the button  :




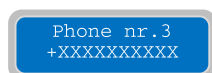
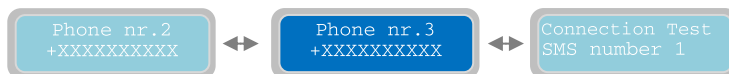
NOTE: If an invalid number is entered the procedure of sending SMS messages will be aborted also for the successive numbers. Correct or disable the number and then turn off and on the panel.




The parameter "Phone nr.2" will set the second (3 in total) phone number to send the SMS messages for the status and alarms as well as the phone number allowed to remotely control the various parameter settings. The number needs to be entered with international prefix (for example, +44.....) without any spaces.
Factory default setting: +0000000000.

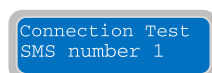
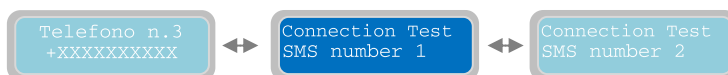
13. GSM MODE SETTING (continued)


To move to the next horizontal parameter press the button  :




The parameter "Phone nr.3" will set the third and last phone number which to send the SMS messages for the status and alarms as well as the phone number allowed to remotely control the various parameter settings. The number needs to be entered with international prefix (for example, +44.....) without any spaces.
Factory default setting: +0000000000.

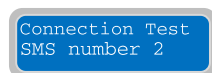
To move to the next horizontal parameter press the button  :





The parameter "Connection Test SMS number 1" will verify that the communication between the modem GSM and the "Phone nr.1" is working. To verify it, press the button  which will send an SMS message immediately from the modem GSM. The text of the message is described in setting "Station Name".

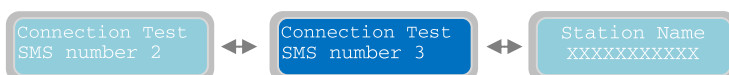
NOTE: when the setting to enable/disable the modem GSM is changed (change of parameter "Enable Modem") it is necessary to exit the programming and re-enter prior to test the connections.


To move to the next horizontal parameter press the button  :



Similarly to the previous parameter, "Connection Test SMS number 2" will verify that the communication between the modem GSM and the "Phone nr.2" is working. To verify it, press the button  which will send an SMS message immediately from the modem GSM. The text of the message is described in setting "Station Name".

To move to the next horizontal parameter press the button  :




The parameter "Connection Test SMS number 3" will verify that the communication between the modem GSM and the "Phone nr.3" is working. To verify it, press the button  which will send an SMS message immediately from the modem GSM. The text of the message is described in setting "Station Name".

NOTE: the GSM card has an LED to verify the network operator presence (see chapter "GSM" on page 40).

At this point the horizontal menu "GSM Modem Setting" has been fully programmed and it's possible to proceed to the next menu.

To go back to the horizontal menu press the button , we are back to horizontal menu "GSM Modem Setting":

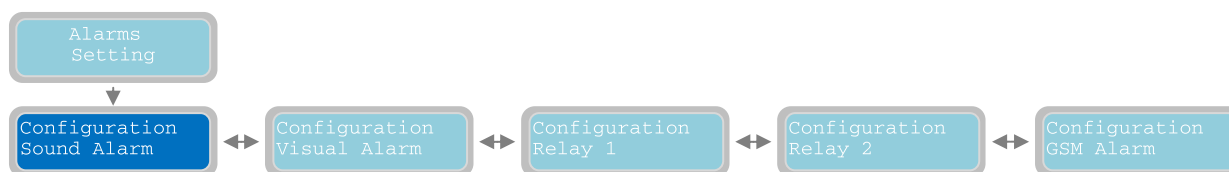


Press again the button  to move to next horizontal menu "Alarms Setting"

14. ALARM SETTING





Press the button  to display the vertical parameter:




In this part of the programming it is possible to select the operating mode for the alarm outputs available:

- Sound Alarm
- Visual Alarm
- Relay 1
- Relay 2
- GSM Alarm

The first alarm output on the list is the Sound Alarm (to move to a different alarm output just press the buttons  and  to navigate on the horizontal menu).

Configuration
Sound Alarm

The vertical parameter "Configuration Sound Alarm" will set the operating mode of the audio alarm output on the control panel. It is an output voltage 12 Vcc, max 30 mA) with faston connector (see page 40). This is set-up to be connected to a buzzer alarm but it could be used for any other device with the following electrical characteristics: 12 Vcc, 30 mA max.

Press the button  to configure the Sound Alarm:

Configuration
Sound Alarm

 Mode
0=NO 1=Y 2=P X

The parameter "Mode" will select the operating mode of the sound alarm output. The "X" indicates the setting of the parameter to modify.

0=NO (Off)


1=YES in the presence of an alarm (among the selected in the next parameter) the alarm output is on and the connected device will activate.

In the absence of an alarm the output is off and the connected device is turned off.

2=PULSED: in the presence of an alarm (among the selected in the next parameter) the alarm output is on with intermittent pulses and the connected device will activate intermittently.

In the absence of an alarm the output is off and the connected device is turned off

Factory default setting: 1

To move to the next horizontal parameter press the button  :



Configuration
XXXXXXXXXXXXXX

The parameter "Configuration" sound alarm output is possible to set which alarms will activate the output (with mode described in the previous parameter). The "X" indicates the setting of the parameter to modify.

Factory default setting: 100111111100110.

14. ALARM SETTING (continued)

It is possible to activate the sound alarm output (and also all the other alarm outputs described later) for 15 types of alarms. One or more alarms can be activated as desired. To activate an alarm set the value from "0" to "1" in the following table

ALARM ON		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ALARM OFF		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	V Min, V Max																	
2	Phase Seq., Min Hz, Max Hz																	
3	4-20 mA device malfunction																	
4	Min level																	
5	Max level																	
6	Pump 1 alarms																	
7	Pump 2 alarms																	
8	Pump 3 alarms																	
9	I Min, cos φ Min																	
10	I max																	
11	Service																	
12	Max start per minute, Max start per hour																	
13	Max Klixon interventions																	
14	Detection of water in oil chamber																	
15	Max continuous working																	
16	(only whit GSM modem) Absence/Return mains																	
17	(only whit GSM modem) Black-out Max level																	
18	(only whit GSM modem) Low battery																	

NOTE: the alarms in gray are automatically sent only if is mounted GSM modem.

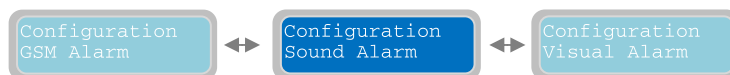
There is no need any configuration and it's not possible to disable these features.


For example, the mask "100110000000000" will activate the following alarms: V Min, V Max, Min Level e Max Level.

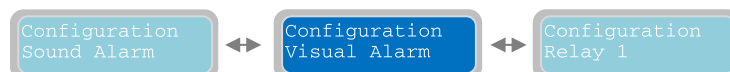
The XTREME² always shows to display each alarm detected, but it will activate the alarm output only if it's configured properly.

N.B.: The alarms "I Min, cos φ Min", "I max", "Service Request", "Max Starts per Minute/Hour", "Intervention Klixon", "Water in Oil Chamber" e "Max Continuous Operation", TO BE ACTIVATED, MUST BE ASSOCIATED TO AT LEAST ONE PUMP; THERE MUST BE ACTIVE AT LEAST ONE OF THE "ALARMS PUMP".

To go back to the horizontal menu press the button . Back to the horizontal menu "Configuration Sound Alarm":



Press the button  to move to the configuration of the next alarm output :



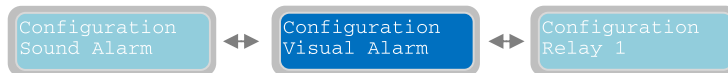
Configuration
Visual Alarm

The vertical parameter "Configuration Sound Alarm" will set the operating mode of the visual alarm output on GSM card (therefore, GSM option must be present). It is an output voltage 12 Vcc, max 30 mA) with faston connector (see page 41). This is set-up to be connected to a flashing alarm but it could be used for any other device with the following electrical characteristics: 12 Vcc, 30 mA max.
Factory default setting: 100111111100110.

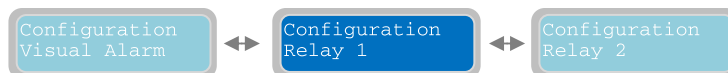
14. ALARM SETTING (continued)

NOTE: for the setting of the Visual alarm output please refer the description of the Sound alarm output.

To go back to the horizontal menu press the button . Back to the horizontal menu "Configuration Visual Alarm":



Press the button  to move to the configuration of the next alarm output :



Configuration
Relay 1

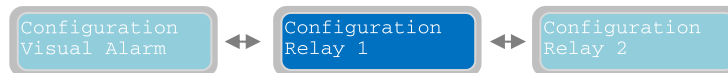
The vertical parameter "Configuration Relay 1" will set the operating mode of the Q1 alarm output on the control panel. It is an output relay with changeover contact (voltage free) with screw terminals connectors (see page 40) (electric contacts characteristics: 250Vac, 5A in AC1). The following contacts will be present in the terminals:

- COM: common
- N.C.: contact normally closed
- N.A.: contact normally open

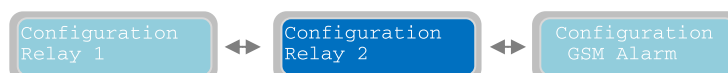
The output can be used to send the status of alarm to a device with dry contacts or to drive via relay contacts a device to be activated with a separate power supply.

NOTE: to set the relay 1 alarm output please refer to the sound alarm output configuration setting section.

To go back to the horizontal menu press the button . Back to the horizontal menu "Configuration Relay 1":



Press the button  to move to the configuration of the next alarm output :



Configuration
Relay 2

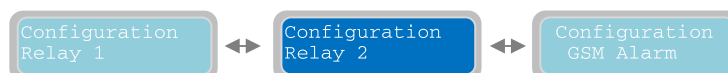
The vertical parameter "Configuration Relay 2" will set the operating mode of the Q1 alarm output on the control panel. It is an output relay with changeover contact (voltage free) with screw terminals connectors (see page 40) (electric contacts characteristics: 250Vac, 5A in AC1). The following contacts will be present in the terminals:


- COM: common
- N.C.: contact normally closed
- N.A.: contact normally open

The output can be used to send the status of alarm to a device with dry contacts or to drive via relay contacts a device to be activated with a separate power supply.

NOTE: to set the relay 2 alarm output please refer to the sound alarm output configuration setting section.

To go back to the horizontal menu press the button . Back to the horizontal menu "Configuration Relay 2":




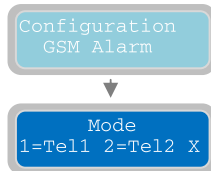
Press the button  to move to the configuration of the next alarm output:

14. ALARM SETTING (continued)




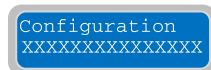
The vertical parameter "Configuration GSM Alarm" it is possible to define which alarms will be send to the phone numbers specified in the menu "Setting GSM Modem".

Press the button  to configure the GSM Alarm:



The parameter "Mode" of the GSM Alarm will set the mode to send the SMS messages of alarm. Every GSM Modem installed in the XTREME can manage up to a maximum of 3 phone numbers; This "Mode" parameter will set which phone numbers to send the SMS Alarms. The "X" indicates the setting of the parameter to modify.
 0=NOT IN USE (no SMS alarm will be sent)
 1=Send SMS only to "Phone nr.1"
 2=Send SMS only to "Phone nr.2"
 3=Send SMS to "Phone nr.1" and "Phone nr.1"
 4=Send SMS only to "Phone nr.3"
 5=Send SMS to "Phone nr.1" and "Phone nr.3"
 6=Send SMS to "Phone nr.2" and "Phone nr.3"
 7=Send SMS to "Phone nr.1", "Phone nr.2", and "Phone nr.3".
 Factory default setting: 0.

To move to the next horizontal parameter press the button  :




With the parameter "Configuration" GSM Model alarm output is possible to set which alarms will trigger the sending of the SMS messages (with the Mode previously described) The "X" indicates the setting of the parameter to modify. Factory default setting: 0000000000000000.

NOTE: to set the GSM alarm output please refer to the sound alarm output configuration setting section

To go back to the horizontal menus press the button  and the "Alarms Setting" menu will be displayed again

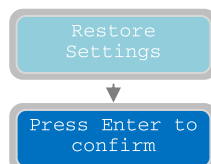



Press again the button  to move to next horizontal menu "Restore Settings"

15. RESTORE SETTINGS



Press the button  to display the vertical parameter:



On the "Enter to confirm" can be performed restore all the programming parameters to the default status that is the initial factory settings. To confirm, simply press the button  to which will correspond an instant restart of the software. This option is particularly useful if it is desired to change the parameters of the system without having to control all of.

16. ALARM LIST

ALARM		CAUSE	REMEDY
Max Continuous Working Pump X	R	The pump indicated has reached the continuous operation time set by parameter: 'Max Continuous Working' (p. 24)	Check the system or the function of the inputs
Max Starts per Minute Pump X	R	The pump indicated has reached the number of starts in a minute set with parameter: 'Max Starts per Minute' (p. 24)	Check the system or the function of the inputs
Max Starts per Hour Pump X	R	The pump indicated has reached the number of starts per hour set with parameter: 'Max Starts per Hour' (p. 24)	Check the system or the function of the inputs
Water in the Oil Chamber Pump X	R	The contact of the sensor inside the pump indicated detects the presence of water in the oil chamber	Check pump
Operation Klixon Pump X	A	The klixon contact of the pump indicated is open	Check pump or jumper the input if not used
Dry Running Pump X	R	The pump indicated has absorbed the minimum current value set by parameter: 'Min Current PX' (p. 28) for the time set with the parameter: 'PX Alarm Delay Imin' (p. 23) or reached the minimum value of $\cos\phi$ set by parameter: 'Cos ϕ Min PX' (p. 28) for the time set with the parameter: 'PX Alarm Delay cos ϕ ' (p. 23)	Check the fluid level in the pump suction or repeat the autoset parameters
Overcurrent Pump X	R	The pump indicated has absorbed the maximum current set with the parameter: 'Max Current PX' (p. 27) for the time set with the parameter: 'PX Alarm Delay Imax' (p. 23)	Check the pump and repeat the self parameter setting
Power Failure Alarm	A	Alarm on APP sent only with GSM module present and active	Check connections or cable connections of power to the panel
Abnormal Frequency (Hz)	A	The supply frequency has exceeded the limits set by the parameter: 'Max Difference Freq.' (P. 17) for the time set with the parameter: 'Delay Alarm Freq.' (P. 17)	Verify and monitor the power frequency to the panel
Wrong Phase Sequence Alarm	R	Incorrect phase sequence of the supply voltage (This alarm only XTREME-T)	Check the connections or cables or reverse two phases of power to the panel
Phase Loss Alarm	R	Absence of a phase of the supply voltage (This alarm only XTREME-T)	Check connections or cable connections of power to the panel
Maximum Voltage Vmax Alarm	R	The supply voltage has exceeded the maximum value set by parameter: 'Setting Alarm Vmax' (p. 16) for the time set with the parameter: 'Delay Alarm Voltage' (p. 16)	Verify and monitor the supply voltage of the panel
Minimum Voltage Vmin Alarm	R	The supply voltage was above the minimum set by parameter: 'Setting Alarm Vmin' (p. 16) for the time set with the parameter: 'Delay Alarm Voltage' (p. 16)	Verify and monitor the supply voltage of the panel
Max Lev-Press Alarm	A	The alarm input at the highest level/pressure is closed	Check the installation or operation of alarm devices
Min Lev-Press Alarm	A	The alarm input of a minimum level/pressure is opened	Check the installation or operation of alarm devices
4÷20mA Sensor Disconnected	R	The sensor input is not connected	Check sensor or the polarity of the cable connection
Anomaly to the 4÷20mA Sensor	R	The measurement sensor never varies	Check sensor or the polarity of the cable connection
Pump X Disconnected	R	The pump indicated does not absorb current though there is a request to start	Check connections or cable connections power the pumps
Service Request Pump X	R	The pump indicated has exceeded the number of working hours required for the maintenance set with the parameter: 'PX Request Service' (p. 26)	Service the pump

X = variable that the system replaces with the number of the pump.

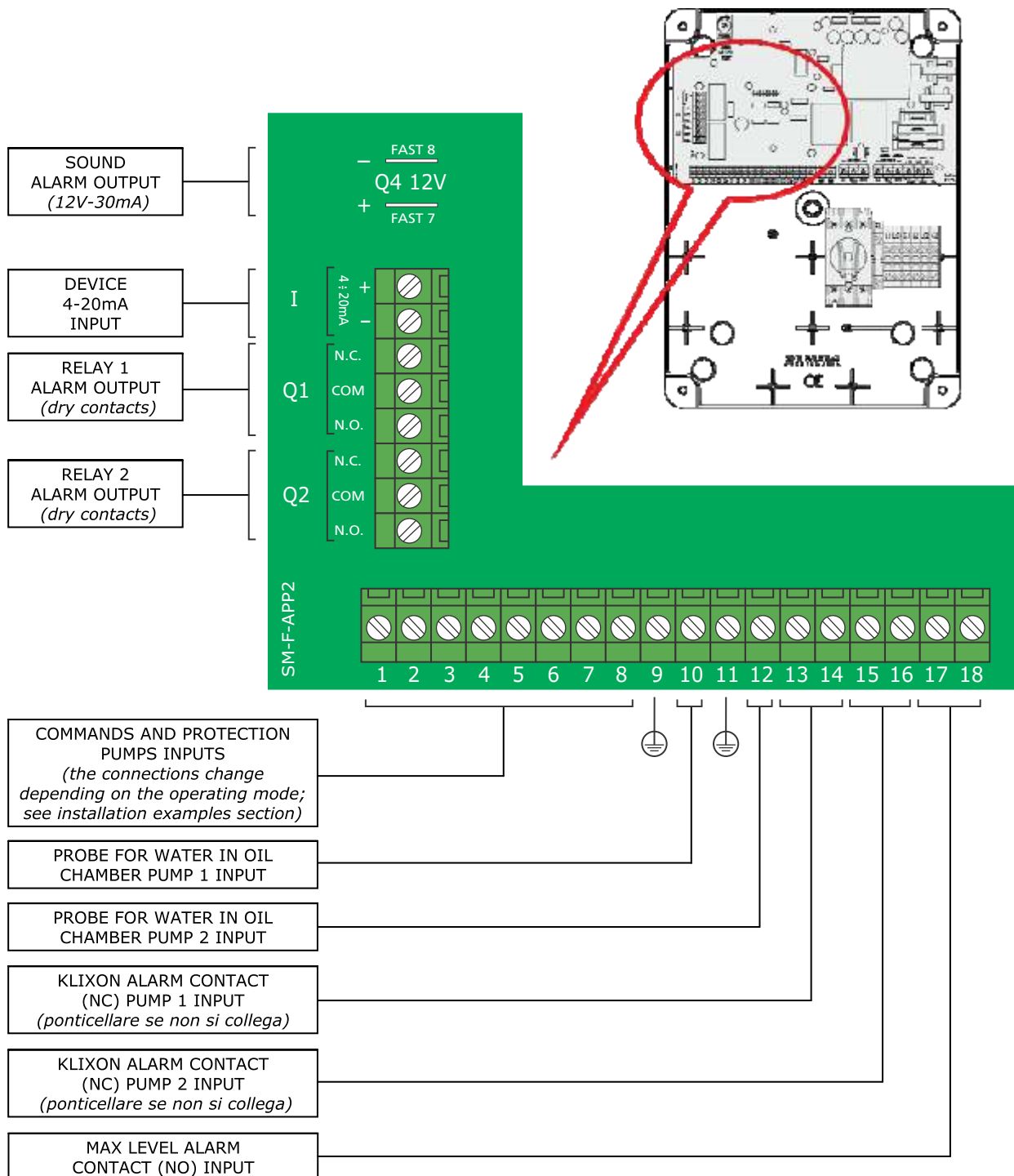
R = RETENTIVE (requires a manual reset even if the cause of the alarm disappears)

A = AUTORESET (reset the alarm if it disappears the cause)

17. ELECTRIC CONNECTIONS



Connection of the control signals and protection on the main board

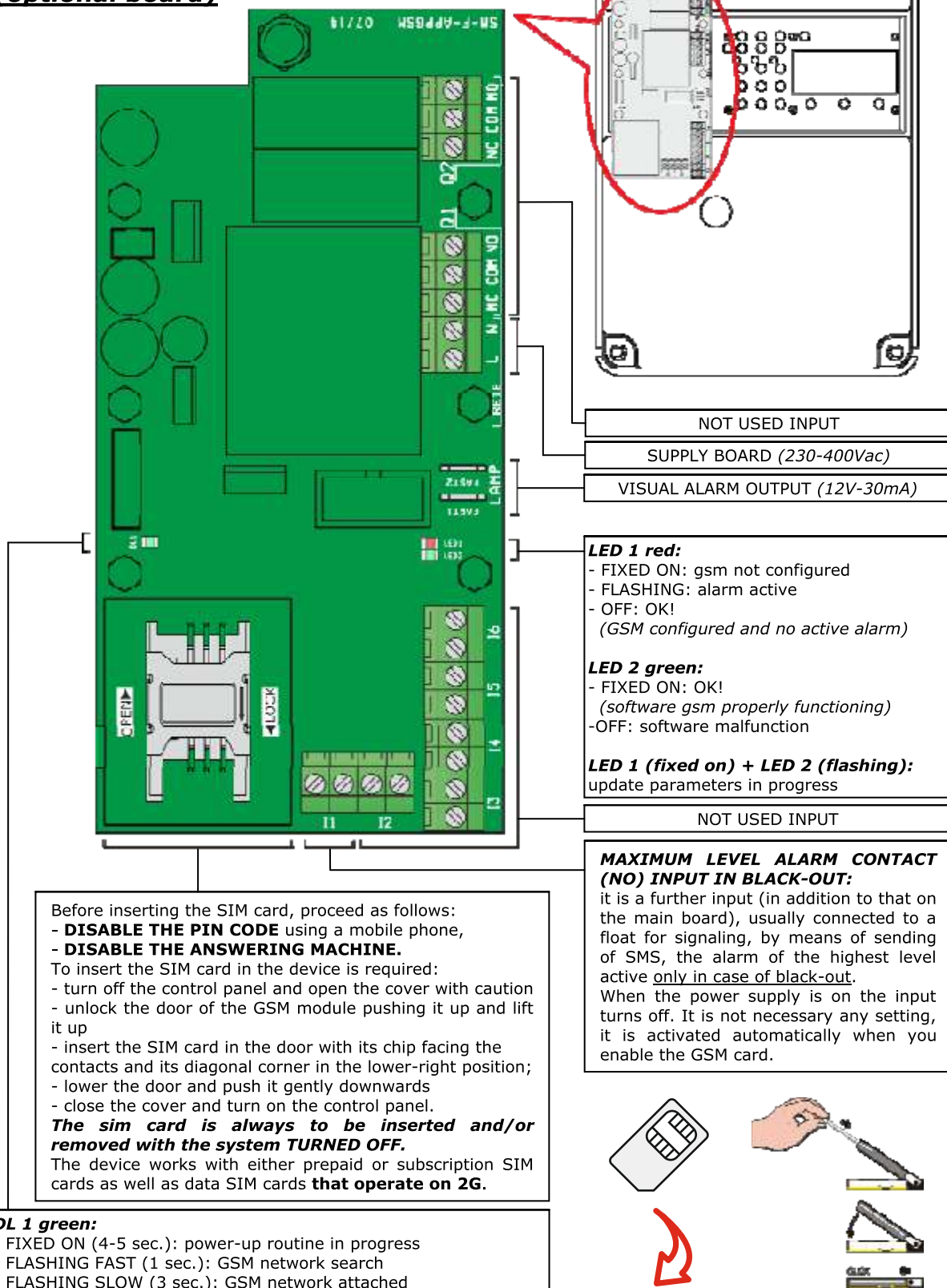


NOTE: For proper operation of the water in the oil chamber detections probes (if installed), make sure that the earth (PE) of the pumps is equipotential to the earth (PE) of the control panel.

17. ELECTRIC CONNECTIONS (continued)



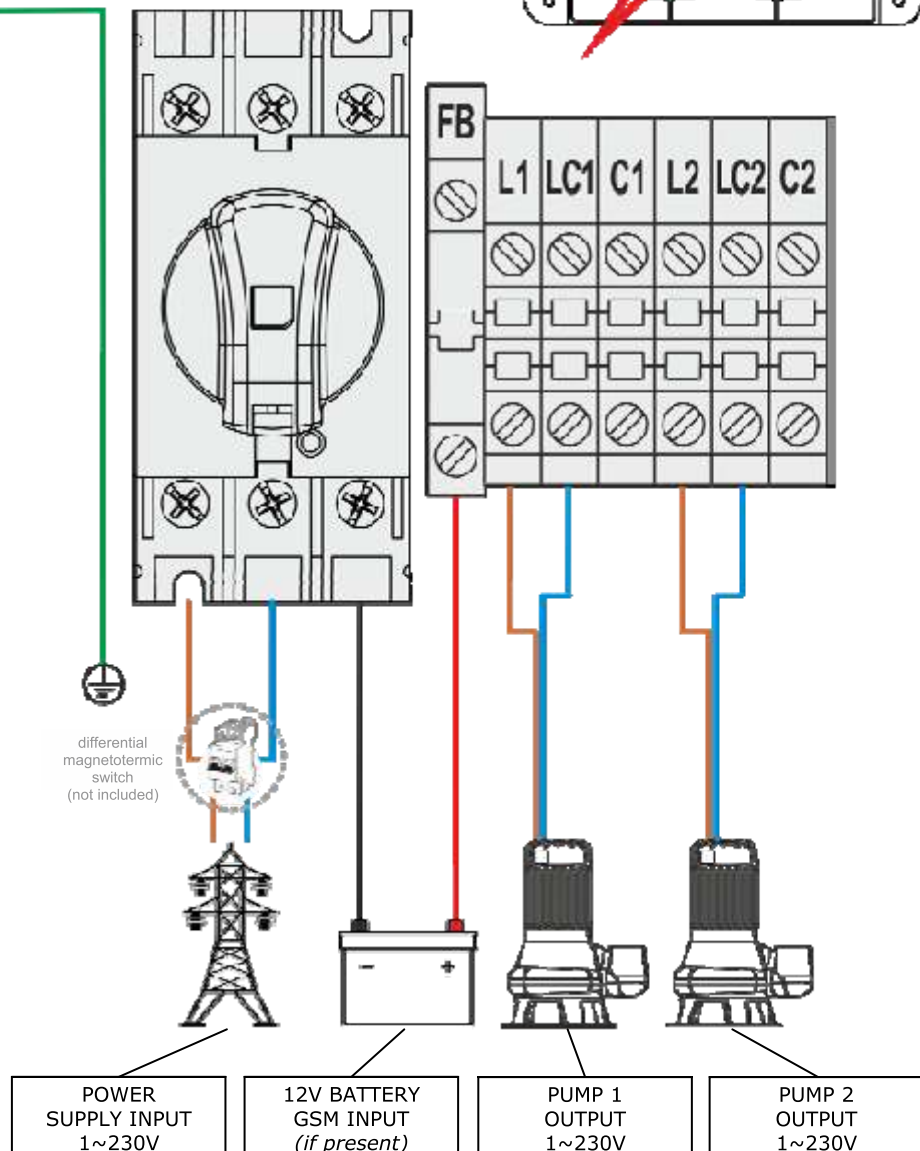
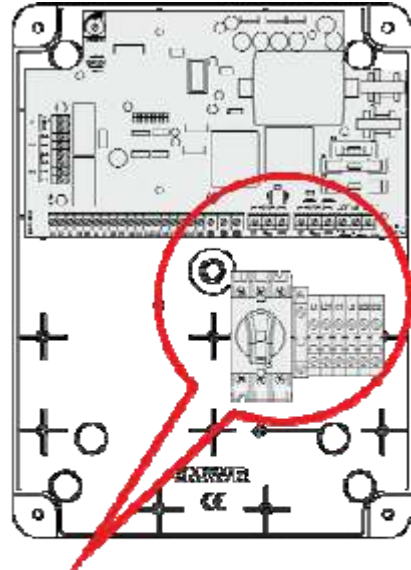
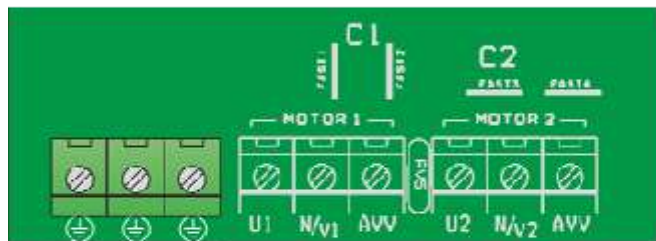
Connection of the alarm and protection signals on the GSM board
Quad-Band GSM 850/900 / 1800/1900 MHz - which operates in 2G
(optional board)



17. ELECTRIC CONNECTIONS (continued)



Connection of the power supply and single-phase pumps with internal capacitor (embedded)

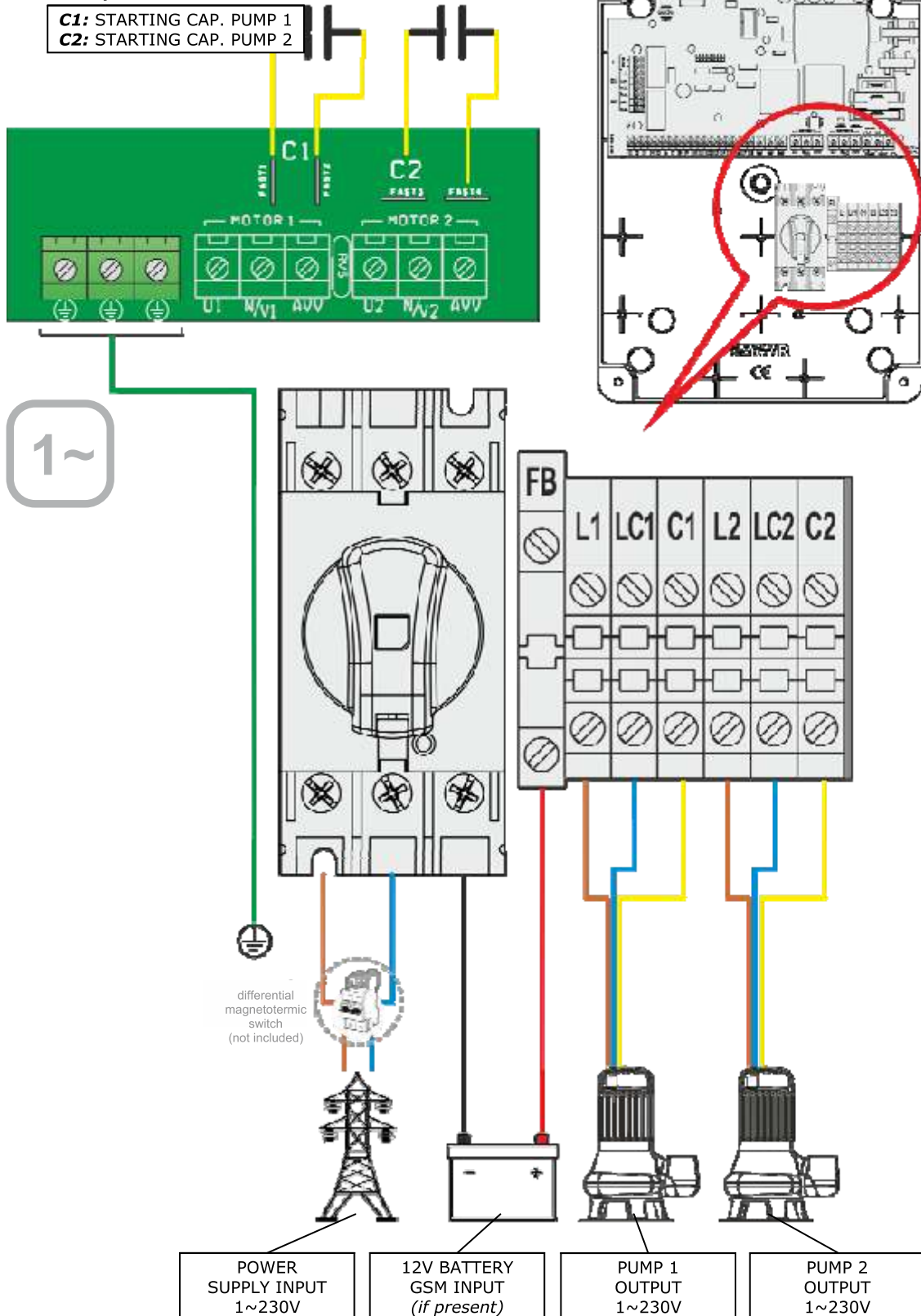


17. ELECTRIC CONNECTIONS (continued)



Connection of the power supply and single-phase pumps with external capacitor

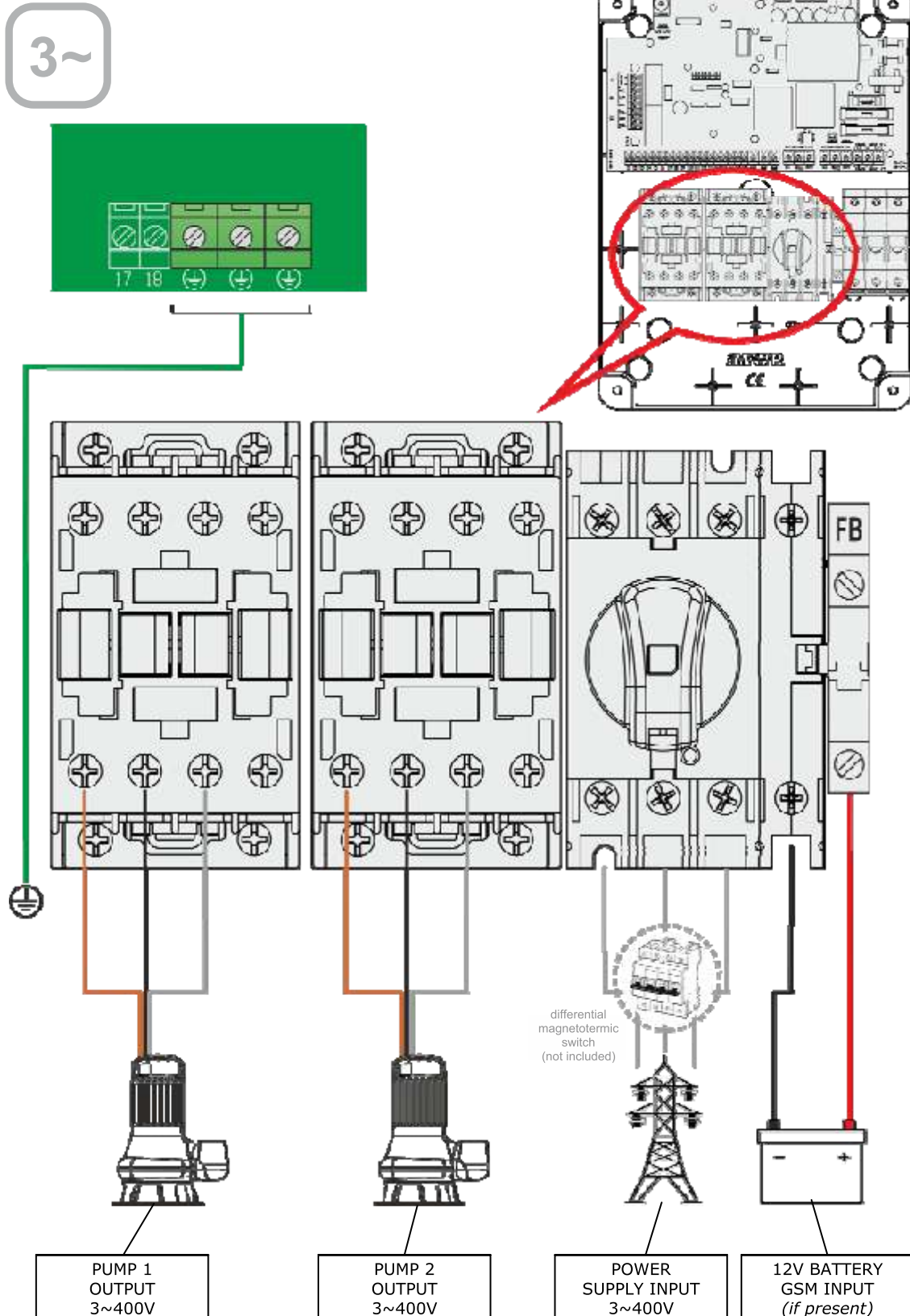
C1: STARTING CAP. PUMP 1
C2: STARTING CAP. PUMP 2



17. ELECTRIC CONNECTIONS (continued)

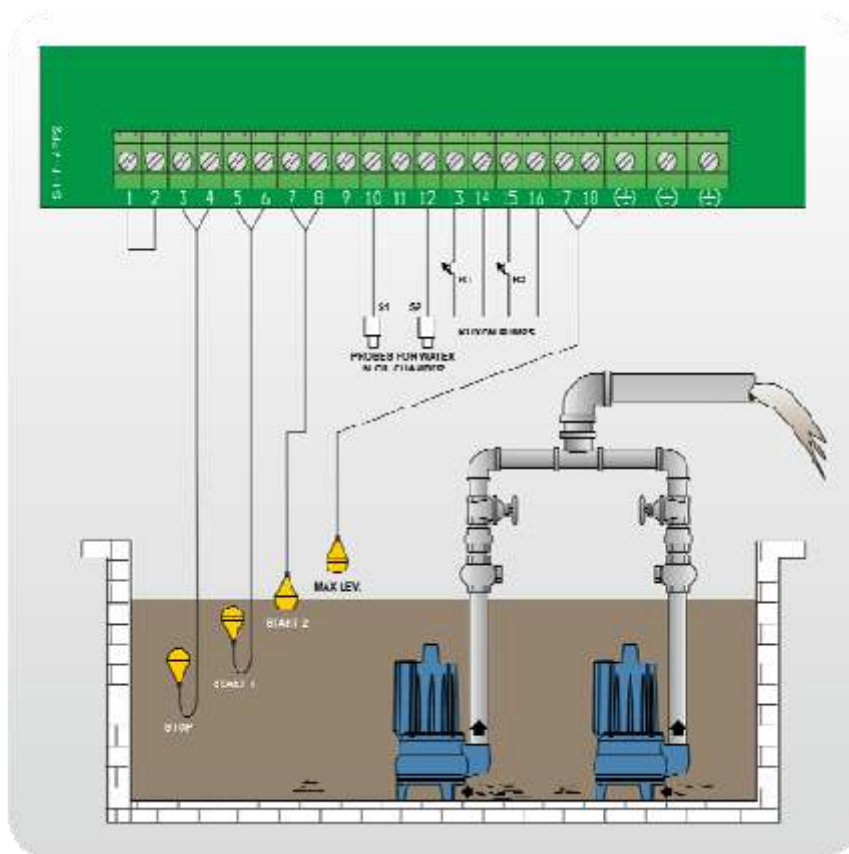


Connection of the power supply and three-phase pumps

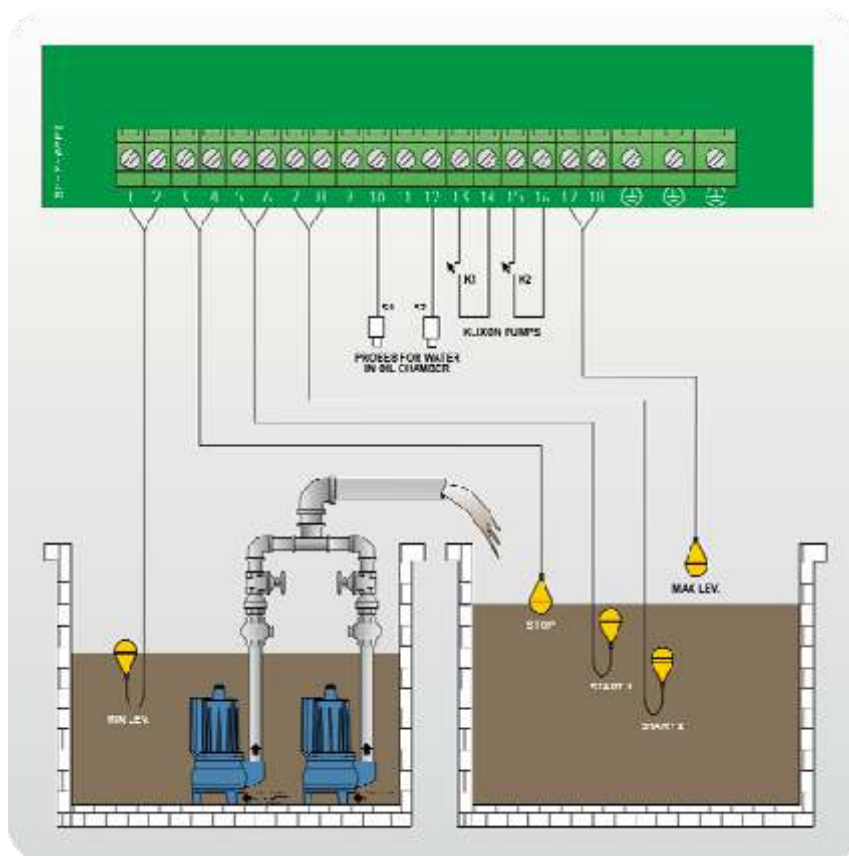


18. APPLICATION EXAMPLES

DARK [empty]



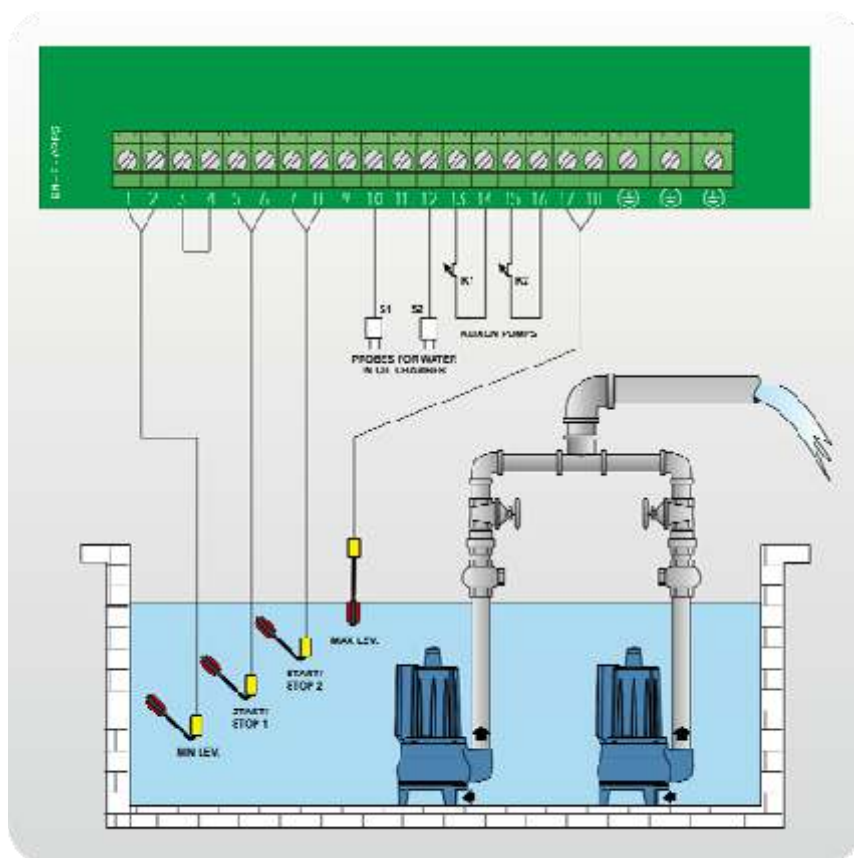
DARK [fill]



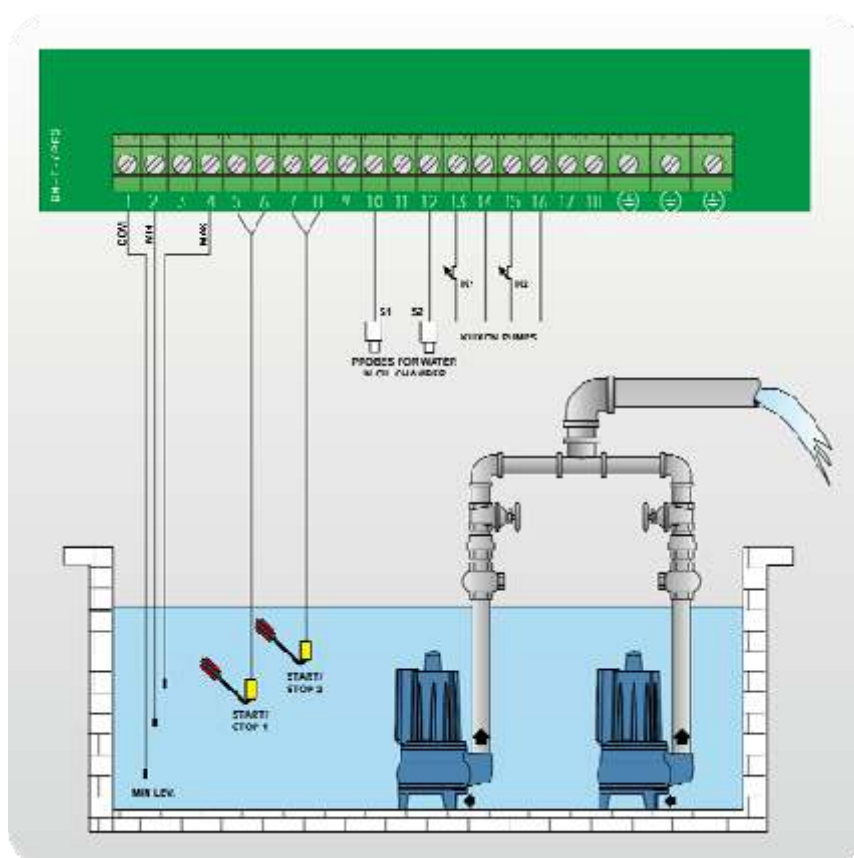
18. APPLICATION EXAMPLES (continued)



CLEAN [empty]



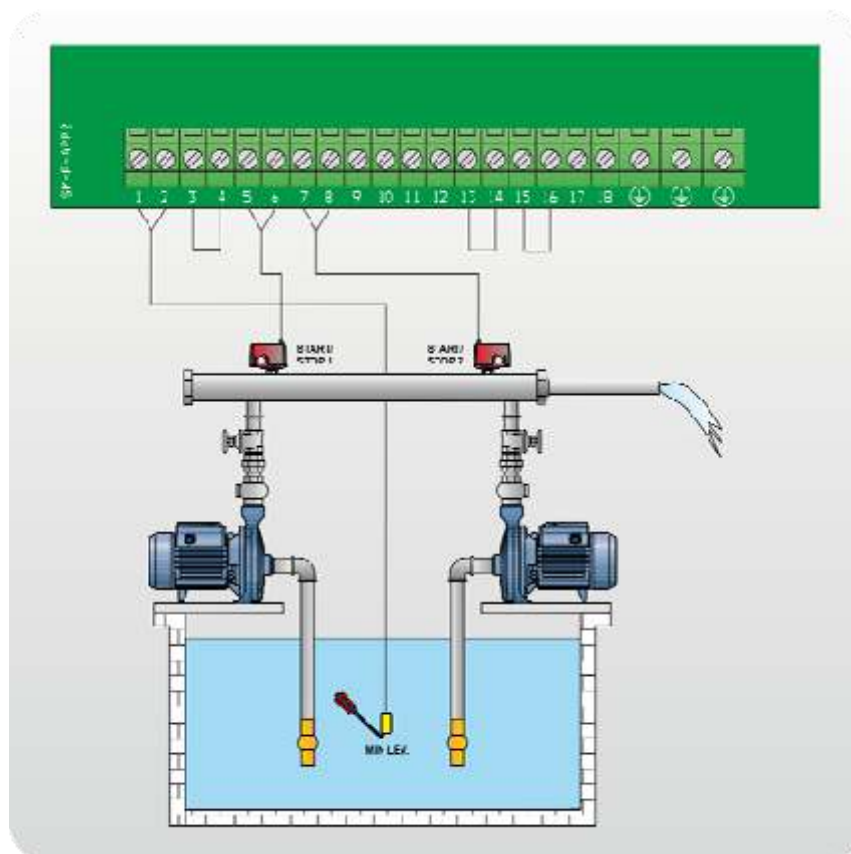
CLEAN [empty]



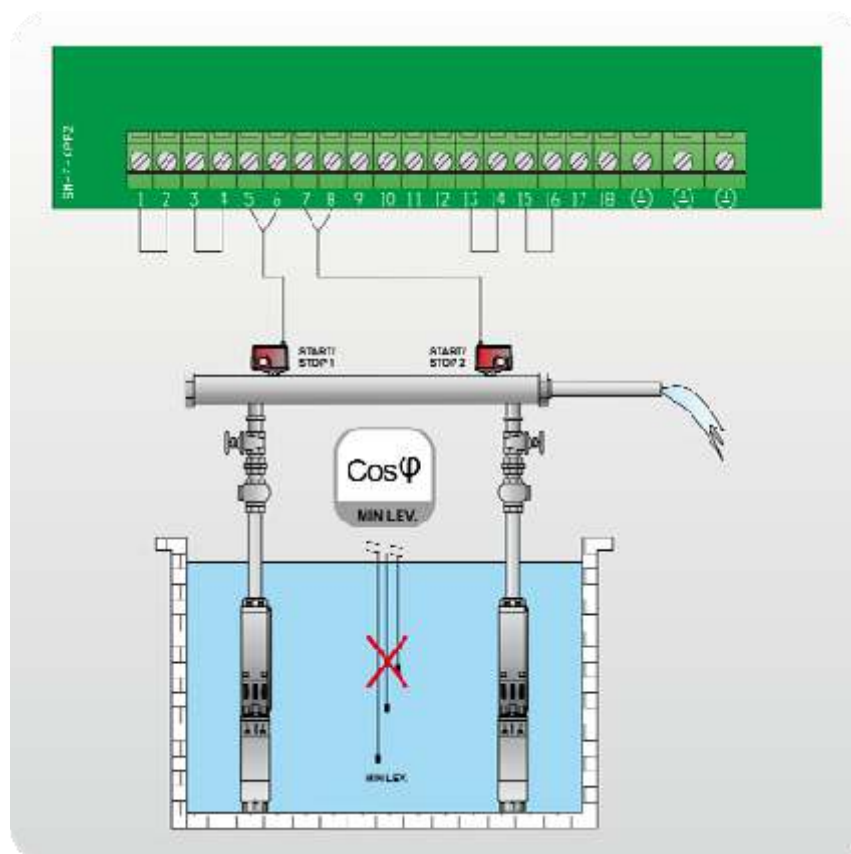
18. APPLICATION EXAMPLES (continued)



CLEAN [empty]



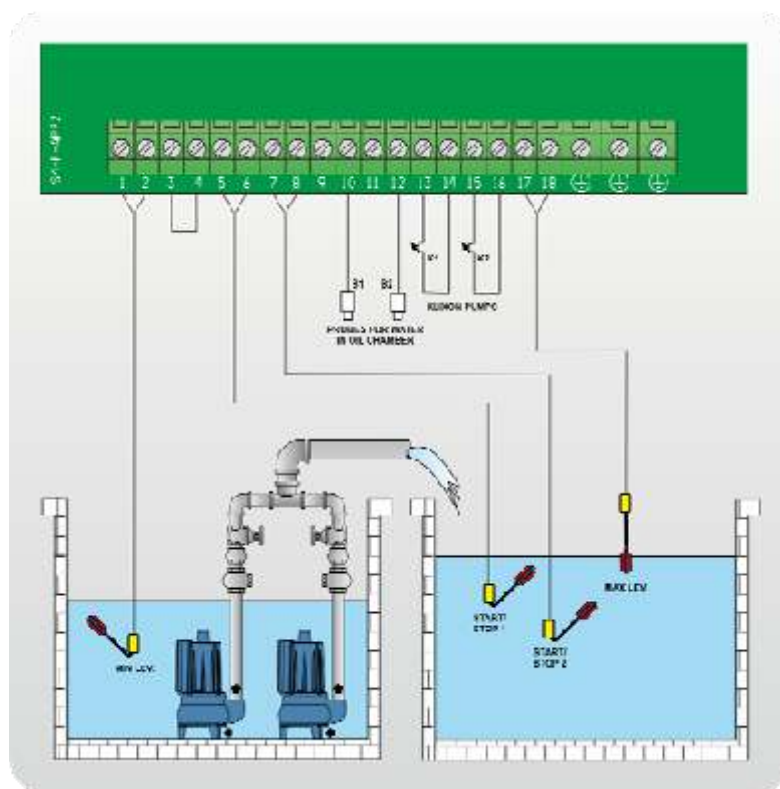
CLEAN [empty]



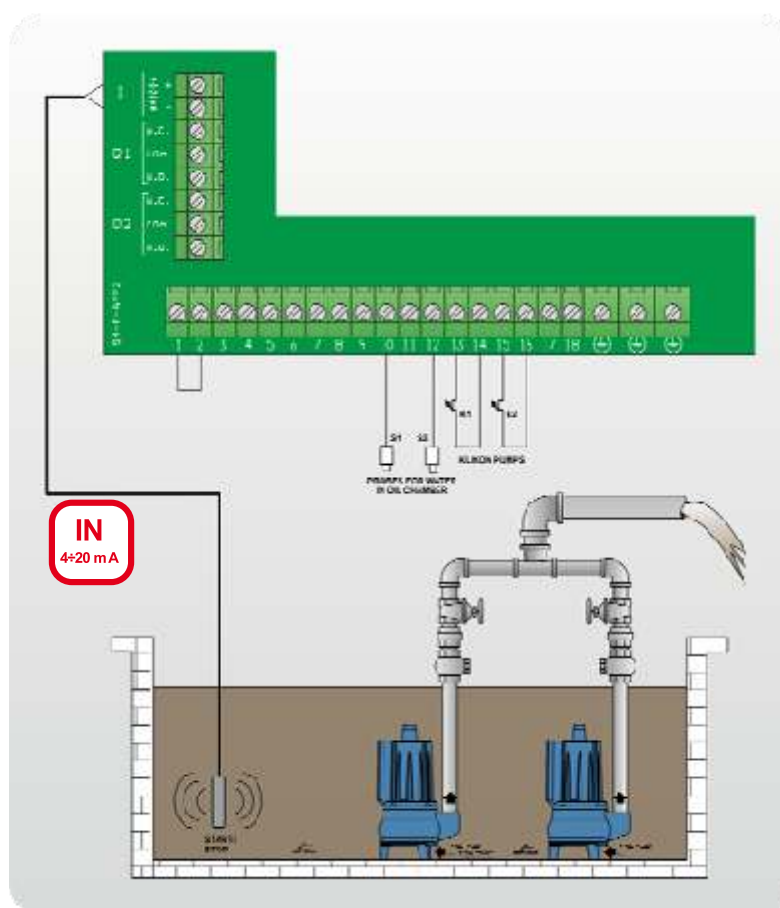
18. APPLICATION EXAMPLES (continued)



CLEAN [fill]



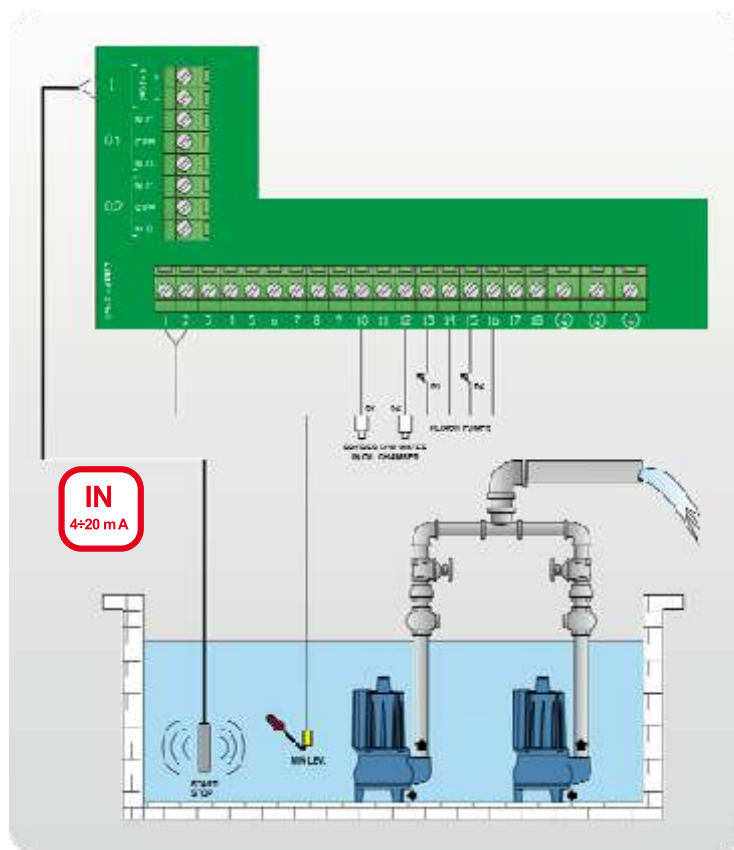
DIGIT [empty]



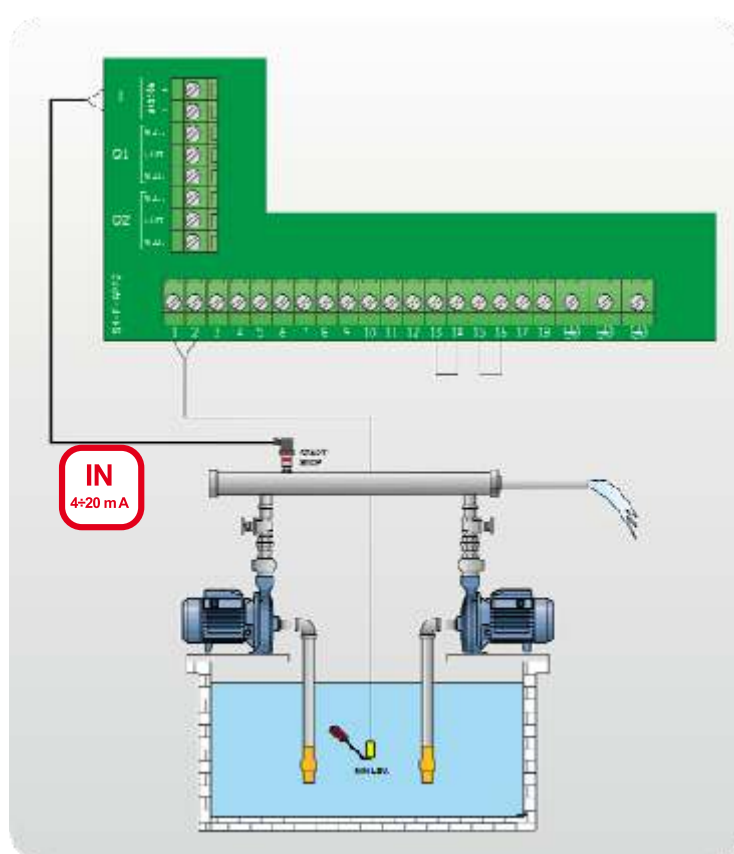
18. APPLICATION EXAMPLES (continued)



DIGIT [empty]



DIGIT [fill]



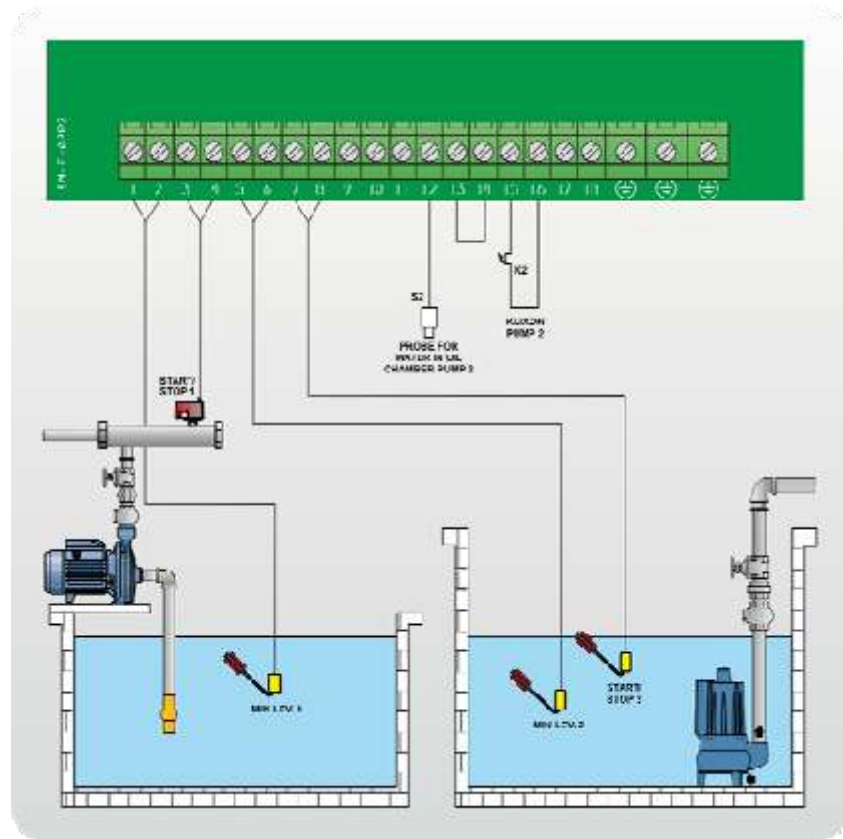
18. APPLICATION EXAMPLES (continued)



MULTITANK

PUMP 1 - CLEAN [empty]

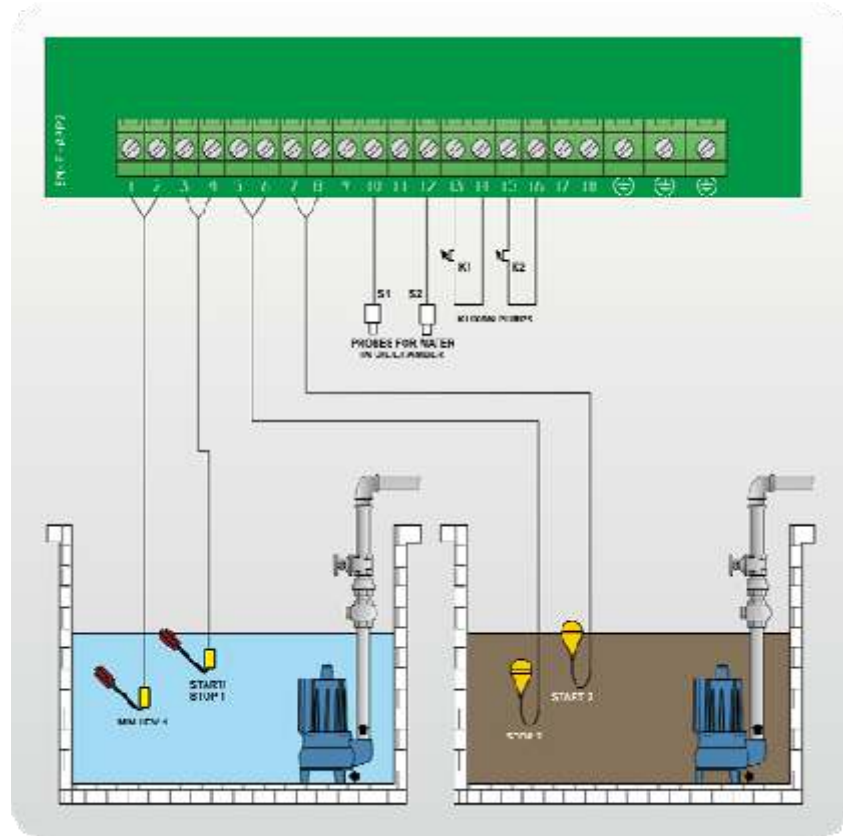
PUMP 2 - CLEAN [empty]



MULTITANK

PUMP 1 - CLEAN [empty]

PUMP 2 - DARK [empty]



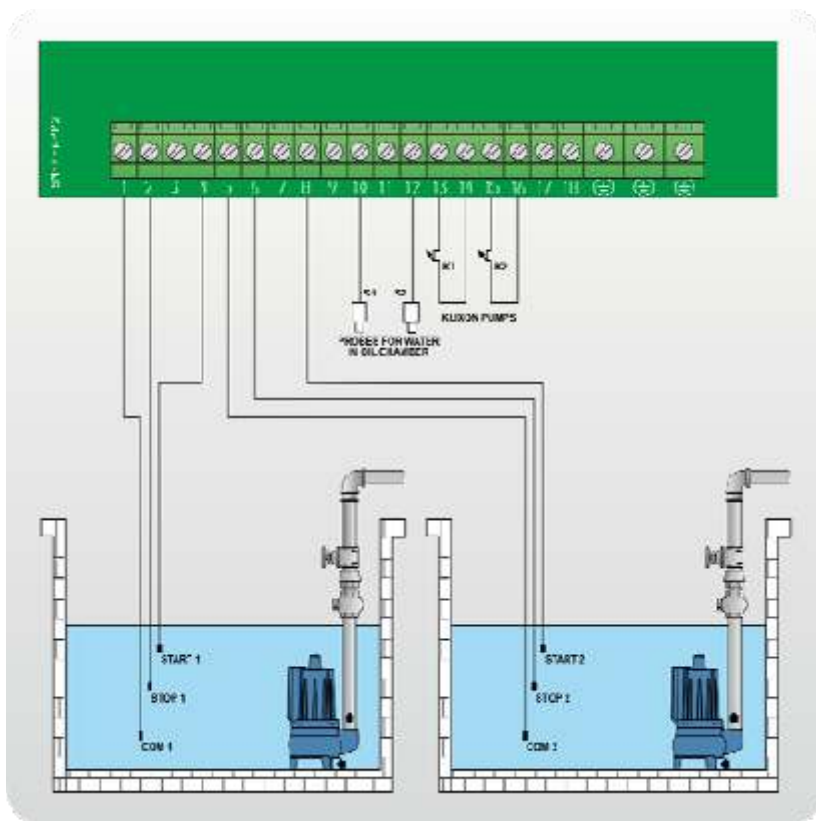
18. APPLICATION EXAMPLES (continued)



MULTITANK

PUMP 1 - DARK [empty]

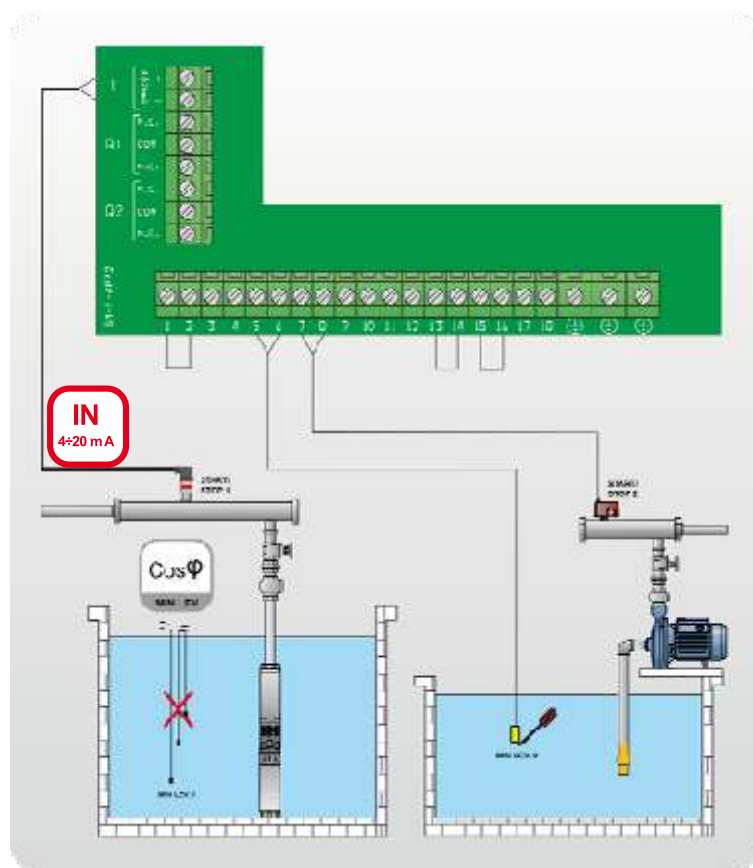
PUMP 2 - DARK [empty]



MULTITANK

PUMP 1 - DIGIT [empty]

PUMP 2 - CLEAN [empty]



19. STOP THE PUMPS



Motor stop may occur in the following ways:

- In "manual" by releasing the MANUAL button (after the time set in parameter "Turn-Off MANUAL");
- In "automatic" mode when there is no consensus from the control inputs or by pressing "0" button;
- In "automatic" mode by pressing the "STOP" button from Remote-App (if active);
- Turning the main interlock switch to "0" position.

20. MAINTENANCE



XTREME² does not require any routine maintenance provided that 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 that the control panel is disconnected from the power supply before performing any maintenance operations.

21. 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 be taken 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.

22. SPARE PARTS



Always state the exact model identification number and construction number when requesting technical information or spare parts from our sales and service centre.

Use only original spare parts when replacing any faulty components.

The use of unsuitable spare parts can cause malfunctions, personal injury and damage to property.

