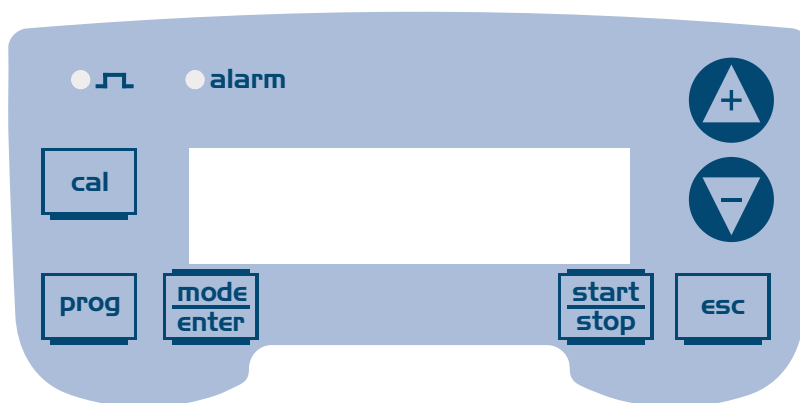


## Control Panel – TEKNA TPT

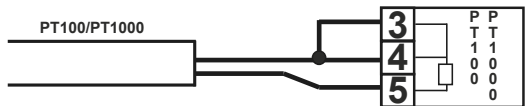


|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Access to the programming menu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|    | When pressed during the pump operation phase, it cyclically displays the programmed values on the display; When pressed at the same time as the   keys, it increases or lowers a value dependent on the selected operating mode. During programming it carries out an “enter” function, meaning that it confirms entry to the various menu levels and modifications within the same. |
|    | Starts and stops the pump. In the event of a level alarm (alarm function only), flow alarm and active memory alarm, it deactivates the signal on the display.                                                                                                                                                                                                                                                                                                                                                                                           |
|  | Used to “exit” the various menu levels. Before definitively exiting the programming phase, you will be asked if you wish to save any changes.                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | Access to the pump calibration menu. If in Off mode, the calibration menu is not activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|  | Used to run upwards through the menu or increase the numerical values to be changed. Can be used to start dosage in Batch mode                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  | Used to run downwards through the menu, or decrease the numerical values to be changed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  | Flashing green LED during dosage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|  | Red LED that lights up in various alarm situations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

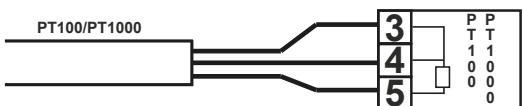
| Electrical connections |  |  |
|------------------------|--|--|
|                        |  |  |

## DIAGRAMS AND CONNECTIONS

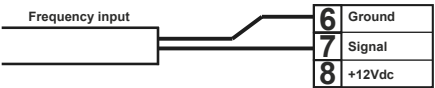
PT100/PT1000 2-wire connection diagram



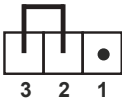
PT100/PT1000 3-wire connection diagram



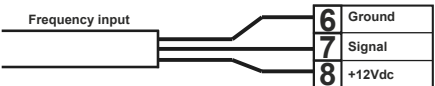
Dry contact frequency input connection diagram.



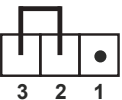
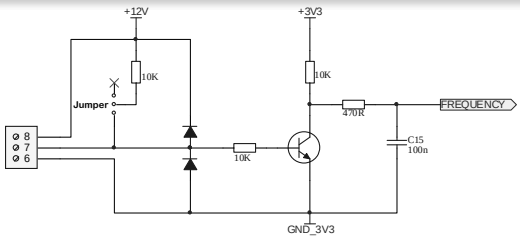
Jumper position



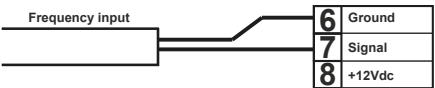
Hall sensor frequency input connection diagram.



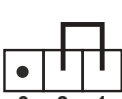
Jumper position



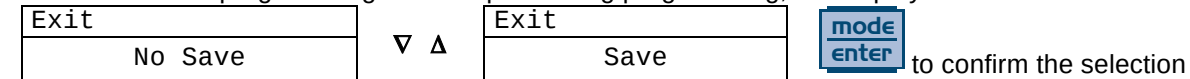
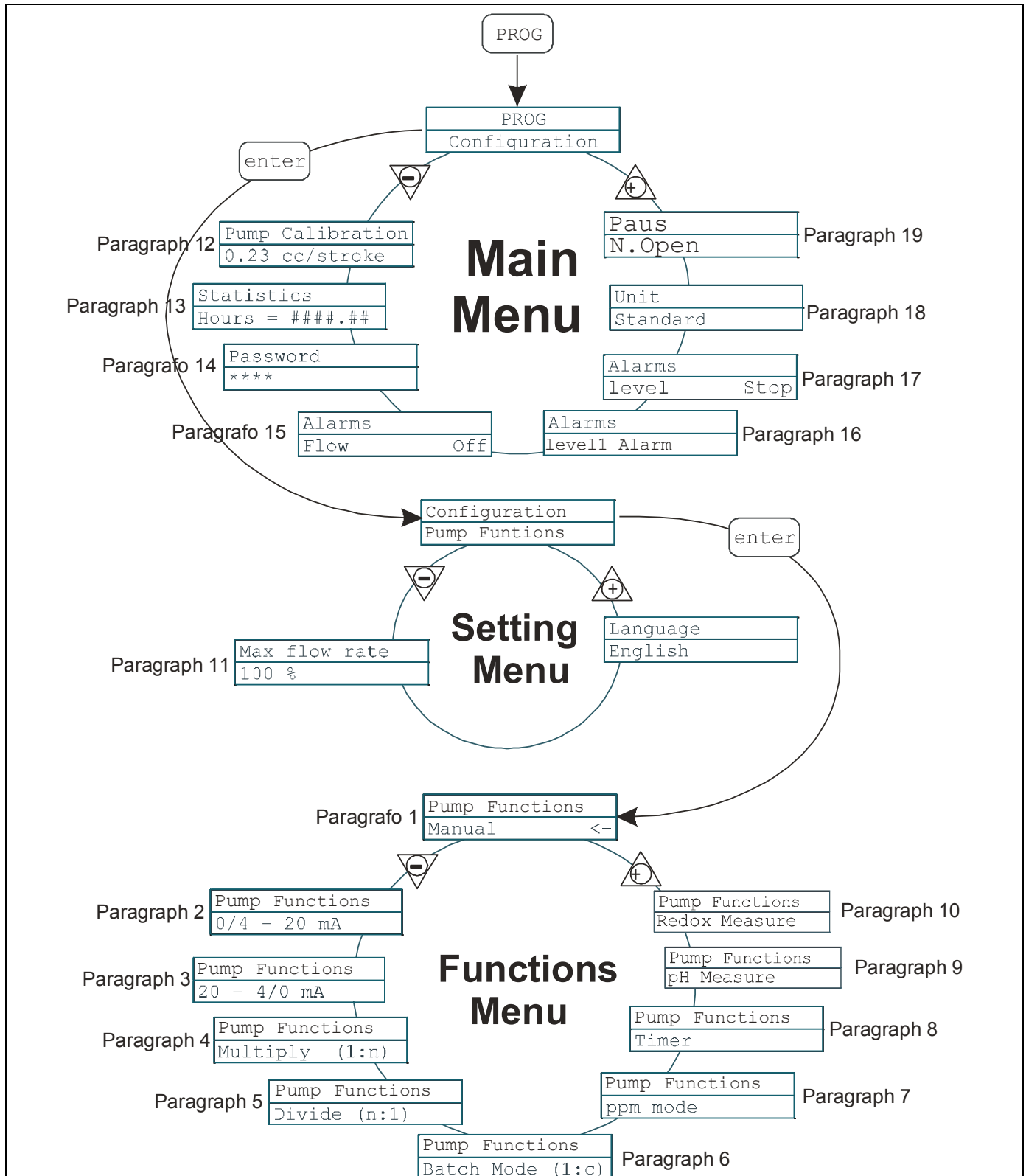
Voltage signal (0-5 V) frequency input connection diagram.



Jumper position



You can access the programming menu by pressing the  key for over three seconds. The   keys can be used to run through the menu items, with the  key being used to access changes. The pump is programmed in constant mode in the factory. The pump automatically returns to the operating mode after 1 minute of no activity. Any data entered in these circumstances will not be saved. The  key can be used to exit the various programming levels. Upon exiting programming, the display will show:



## Setting the Language

| Programming | Operation                                                                                                                                                                                                                             |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>Makes it possible to select the language. The pump is set in English in the factory.</p> <p>Changes can be made by pressing the  key, then using the  keys to set the new value. Press  to confirm and return to the main menu</p> |

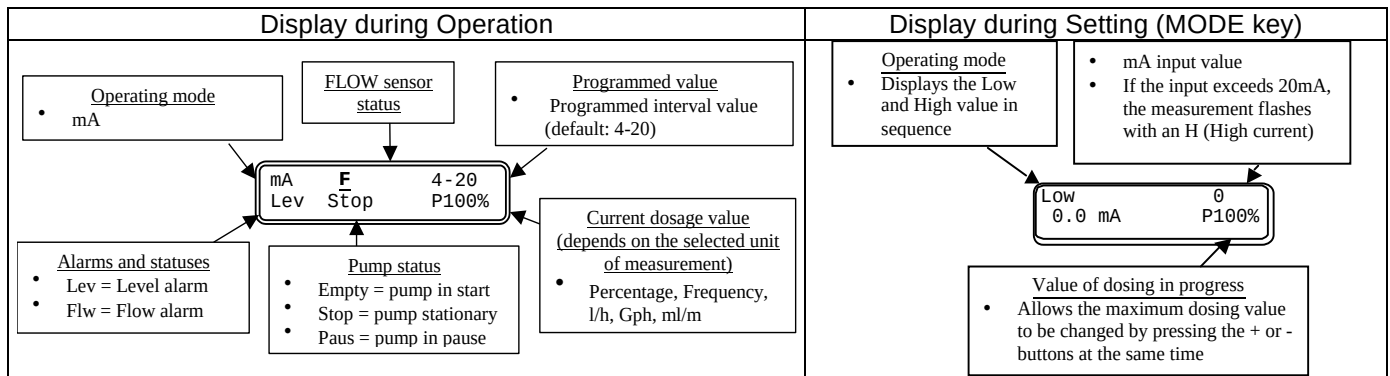
## Paragraph 1 – Manual Dosage

| Programming | Operation                                                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>The pump operates in constant mode. The flow can be manually regulated by pressing the   keys at the same time to increase the flow, or the   keys to decrease it.</p> |

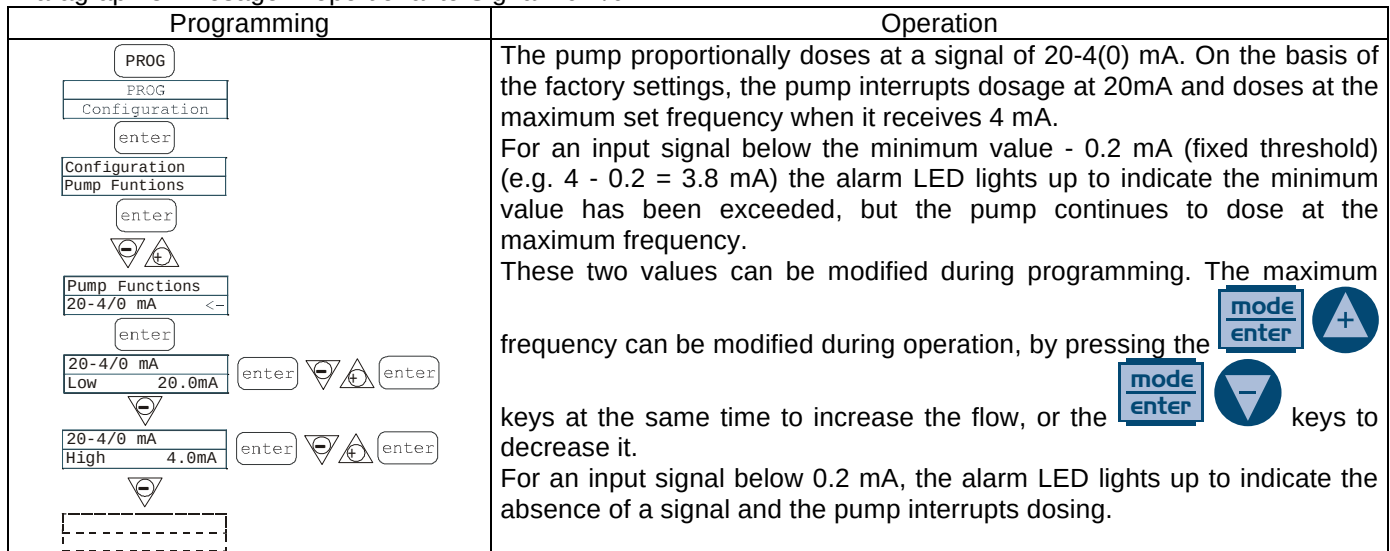
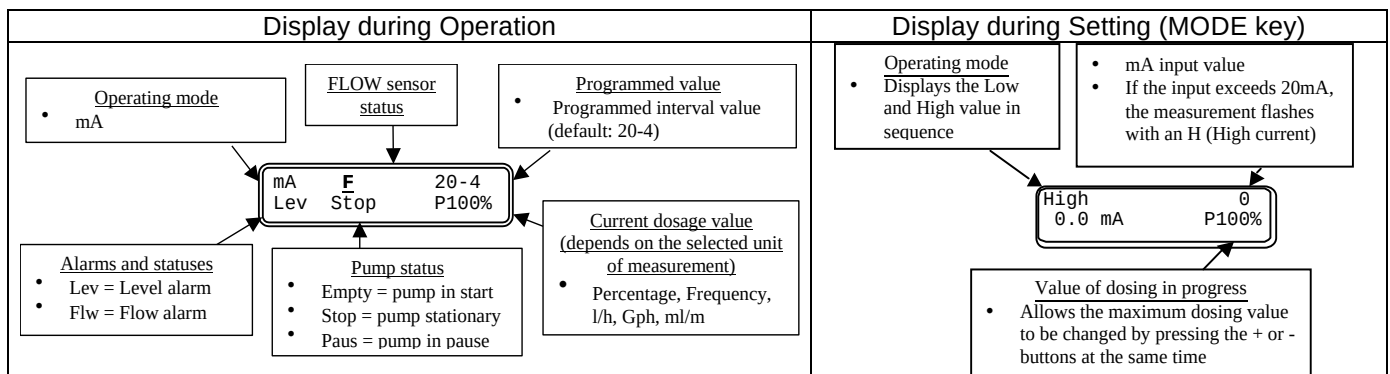
| Display during Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Display during Setting (MODE key)                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Operating mode</b></p> <ul style="list-style-type: none"> <li>Man = Manuel</li> </ul> <p><b>Alarms and statuses</b></p> <ul style="list-style-type: none"> <li>Liv = Level alarm</li> <li>Fls = Debit alarm</li> </ul> <p><b>FLOW sensor status</b></p> <p>MAN F Stop P100%</p> <p><b>Current dosage value</b><br/>(depends on the selected unit of measurement)</p> <ul style="list-style-type: none"> <li>Percentage, Frequency, l/h, Gph, ml/m</li> </ul> <p><b>Pump status</b></p> <ul style="list-style-type: none"> <li>Empty = pump in start</li> <li>Stop = pump stationary</li> <li>Paus = pump in pause</li> </ul> | <p><b>Operating mode</b></p> <ul style="list-style-type: none"> <li>Displays the corresponding frequency value</li> </ul> <p>F320s/m P100%</p> <p><b>Current dosage value</b></p> <ul style="list-style-type: none"> <li>The maximum flow can be modified by pressing the + or – keys at the same time</li> </ul> |

## Paragraph 2 - Dosage Proportional to Signal 0/4-20

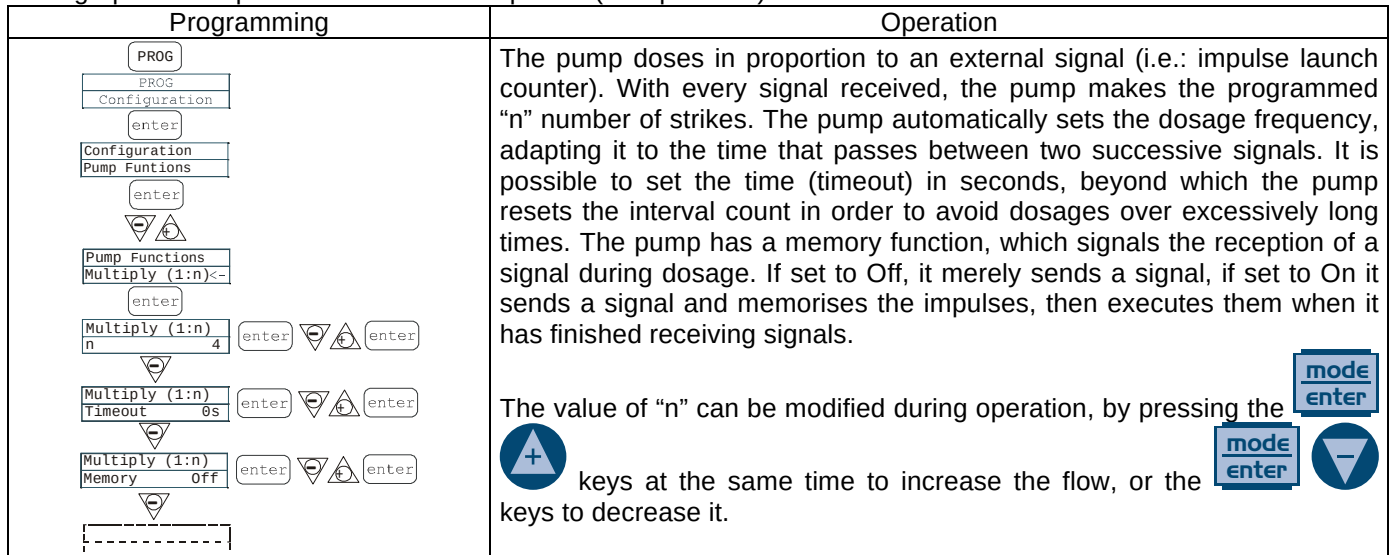
| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>The pump proportionally doses at a signal of (0)4-20 mA. On the basis of the factory settings, the pump interrupts dosage at 4mA and doses at the maximum set frequency when it receives 20 mA. These two values can be modified during programming. The maximum frequency can be modified during operation, by pressing the   keys at the same time to increase the flow, or the   keys to decrease it.</p> <p>For an input signal below 0.2 mA, the alarm LED lights up to indicate the absence of a signal.</p> |

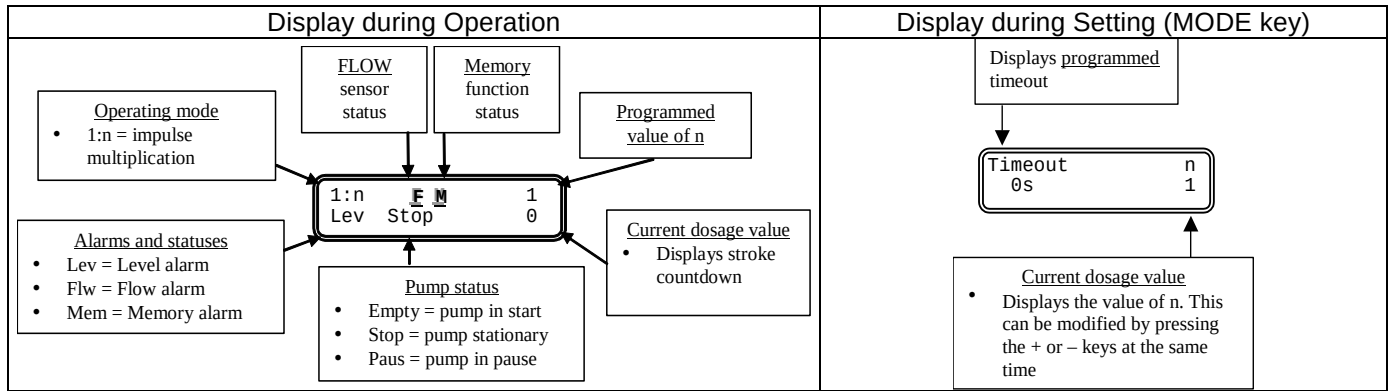


### Paragraph 3 - Dosage Proportional to Signal 20-4/0 mA

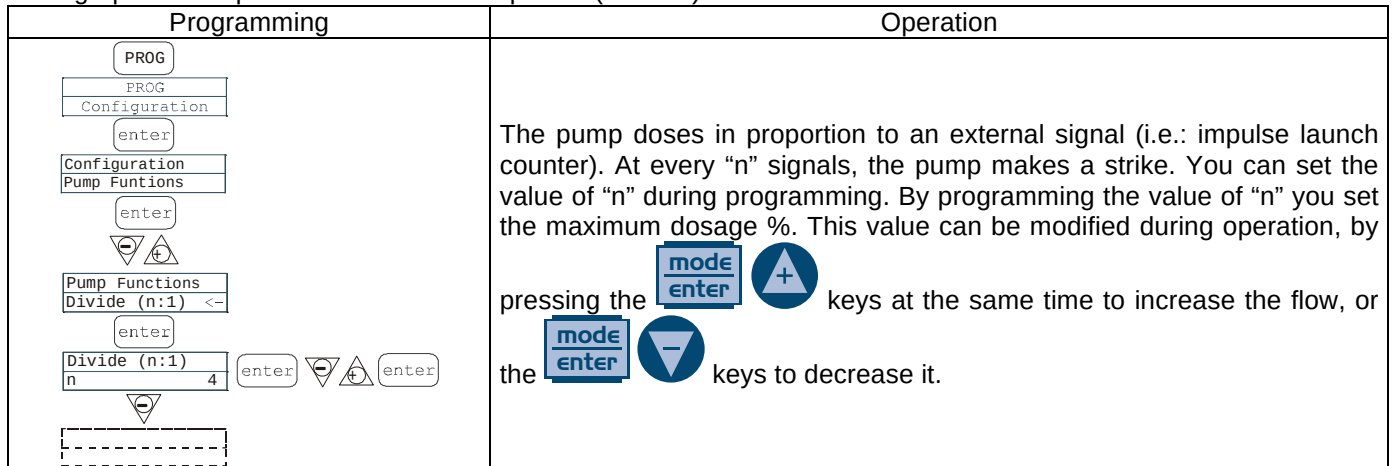
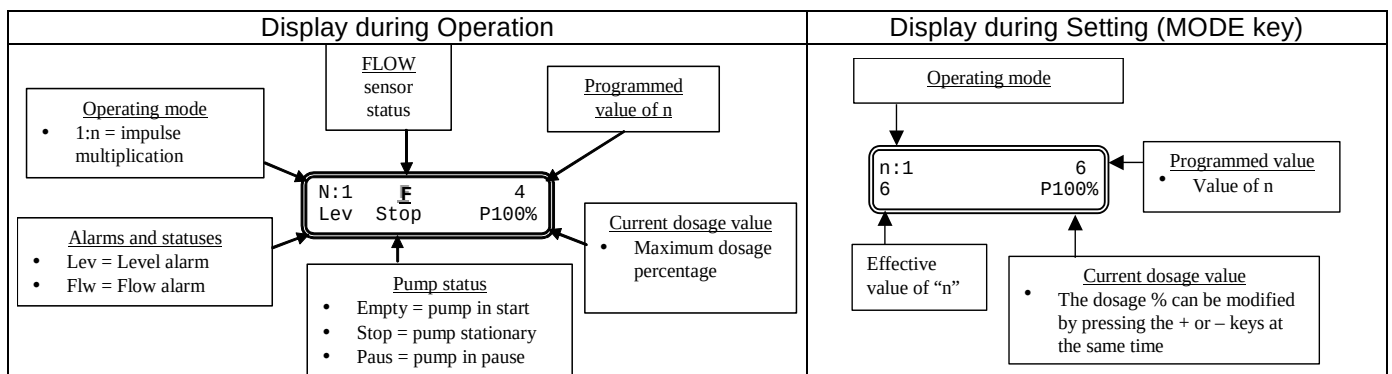


### Paragraph 4 – Proportional to External Impulses (multiplication)

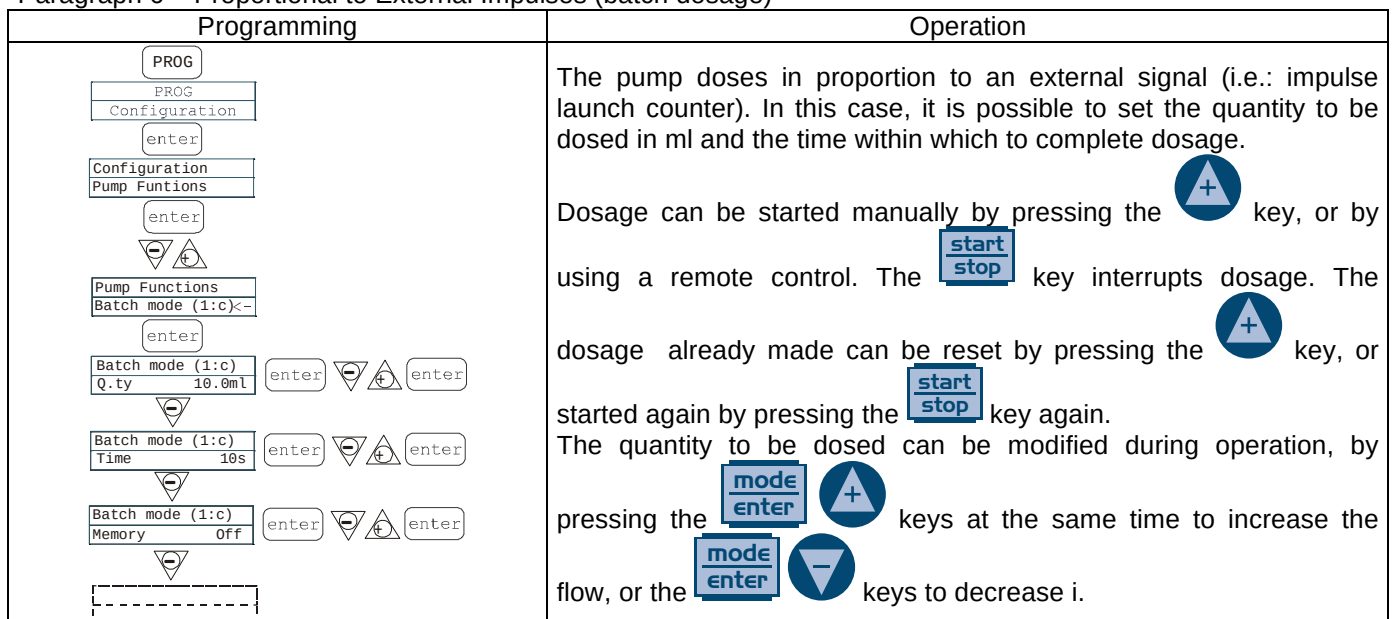


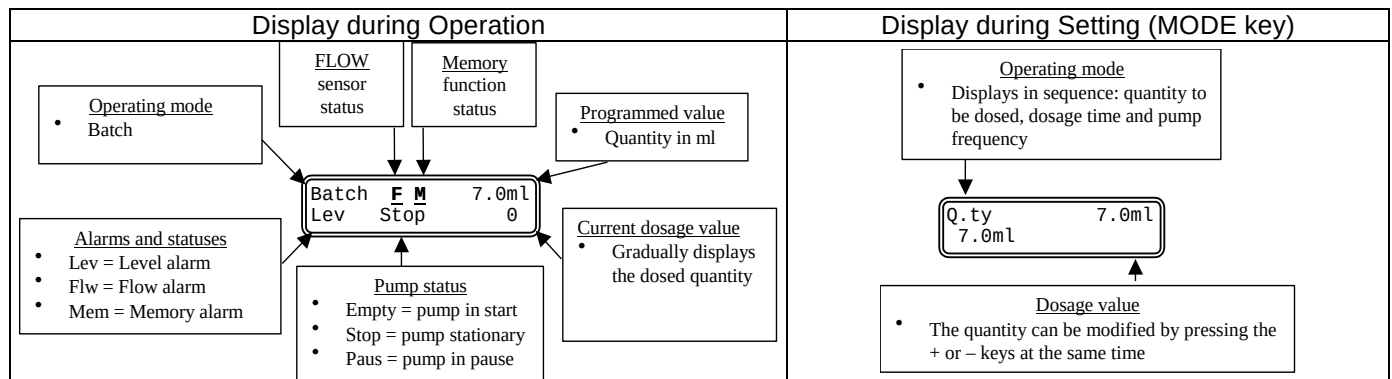


#### Paragraph 5 – Proportional to External Impulses (division)

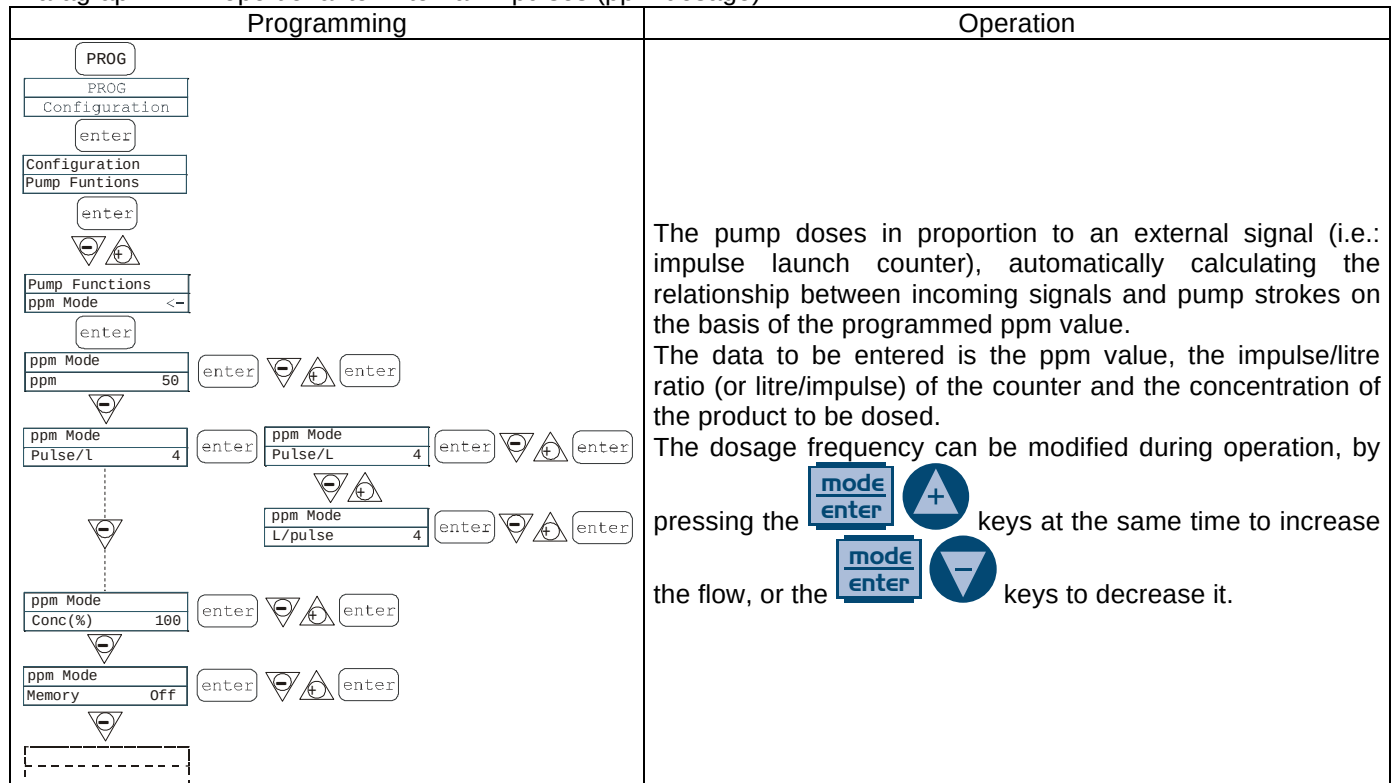
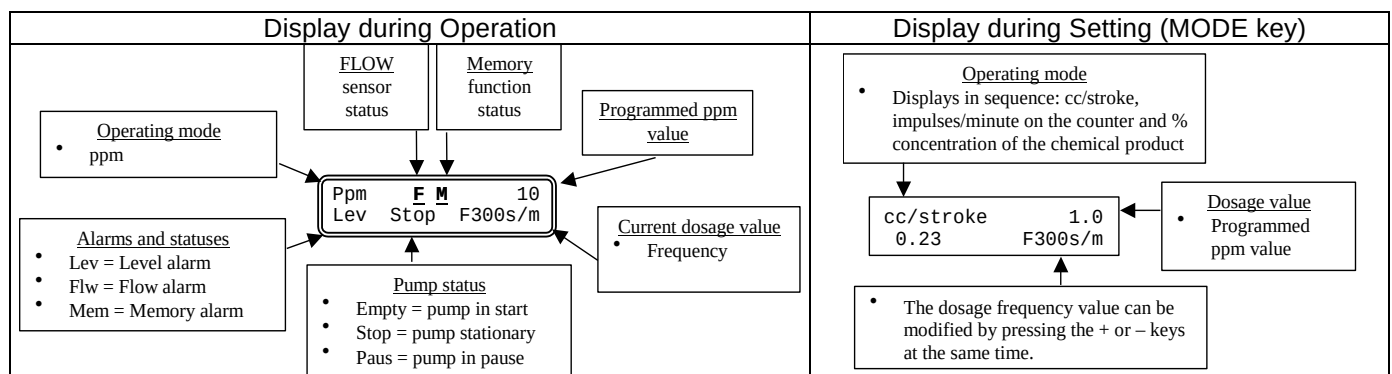


#### Paragraph 6 – Proportional to External Impulses (batch dosage)

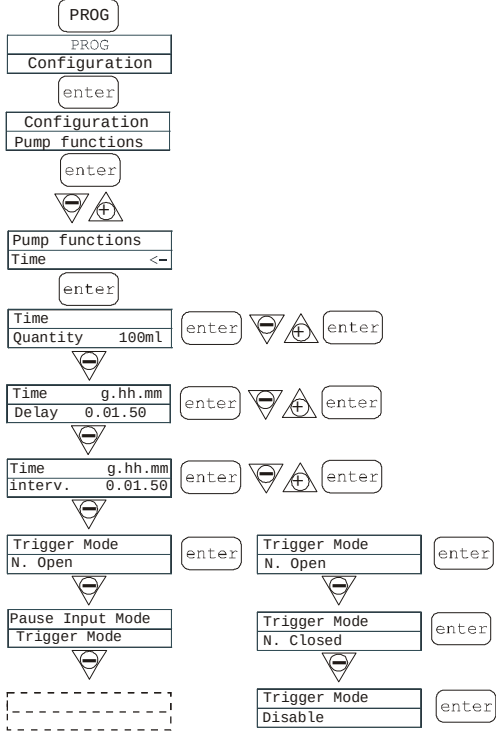
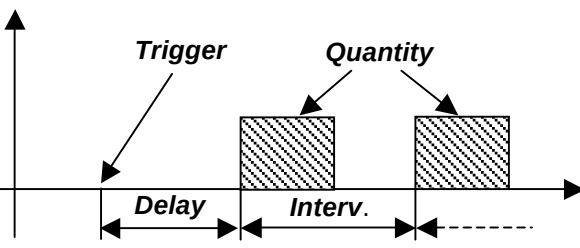
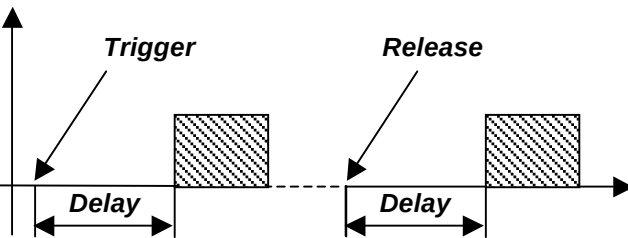


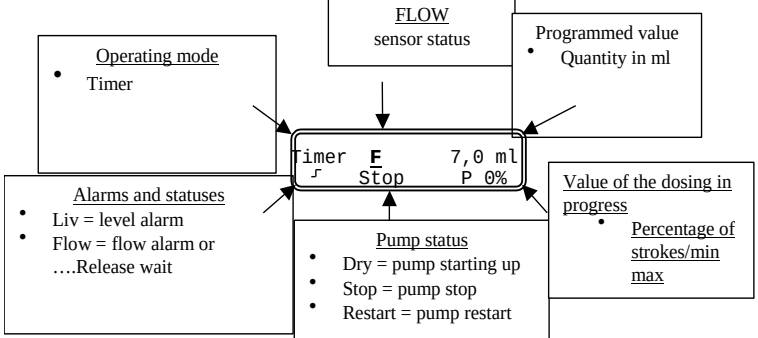
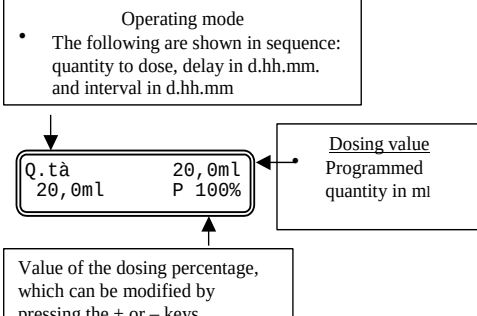


## Paragraph 7 – Proportional to External Impulses (ppm dosage)



## Paragraph 8 – Timed Dosage (Frequency signal input “TRIGGER” activated)

| Programming                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <pre> graph TD     PROG[PROG] --&gt; Config[Configuration]     Config --&gt; Pump[Pump functions]     Pump --&gt; Time[Time]     Time --&gt; Quantity[Quantity 100ml]     Quantity --&gt; Delay[Delay 0.01.50]     Delay --&gt; Interval[Interval 0.01.50]     Interval --&gt; TriggerMode[Trigger Mode]     TriggerMode --&gt; TriggerModeList[Trigger Mode N. Open, N. Closed, Disable]     TriggerModeList --&gt; Confirm[enter]     </pre> | <p>After receipt of the <b>TRIGGER</b> signal set, the pump doses a quantity that can be programmed in ml. It is possible to set a delay time before the dosing (<b>Delay</b>) and the interval between subsequent dosings (<b>Interv.</b>) as illustrated in the diagram:</p>  <p>By setting for example an <b>Interval</b> time = 0, a system is obtained in which the programmed quantity is dosed after each <b>TRIGGER</b> signal (with any delay that has been set):</p>  <p>It is possible to start the dosing by pressing the + key, which, in practice, simulates the <b>Trigger</b> signal.</p> <p>The <b>Trigger</b> signal can be set to <b>N. Open</b> (it is activated when the input passes from the open to the closed mode) or to <b>N. Closed</b> (it is activated when the input passes from the closed to the open mode). The <b>Trigger</b> signal is locked during dosing (its receipt is neither stored nor managed).</p> <p>The <b>Pause (Remote input)</b> input cannot be programmed and its activation stops the dosing, while its further deactivation makes the system wait again for the <b>Trigger</b> signal for a new dosing.</p> <p>The dosage frequency can be modified while the pump is operating, by pressing the  keys at the same time to increase the frequency, or the  keys to decrease it.</p> |

| Display during Operation                                                            | Display during Setting (MODE key)                                                    |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

## Paragraph 8 – Timed Dosage (Frequency signal input “TRIGGER” not activated)

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>The pump doses a programmed quantity in ml. It is possible to set a pump delay time (<b>Delay</b>) when the pump is started and an interval between two successive dosings (<b>Interval</b>), as illustrated in the diagram:</p> <p>The <b>Delay</b> and <b>Interval</b> times are in dd.hh.mm (days, hours, minutes)</p> <p>The <b>Pause</b> input can be programmed in three different modes:</p> <ol style="list-style-type: none"> <li>1. <b>FreezeTime</b>: when the pause is activated, the system cuts out the current time count and restarts it when the pause is deactivated.</li> <li>2. <b>Pause Dosing</b>: with the pause activated, the system continues to count time and stops the dosing.</li> <li>3. <b>Restart Timer</b>: when the pause is activated, the system stops the dosing and when the pause is deactivated the count starts again from the beginning.</li> </ol> <p>The dosage frequency can be modified while the pump is operating, by pressing the   keys at the same time to increase the frequency, or the   keys to decrease it.</p> |

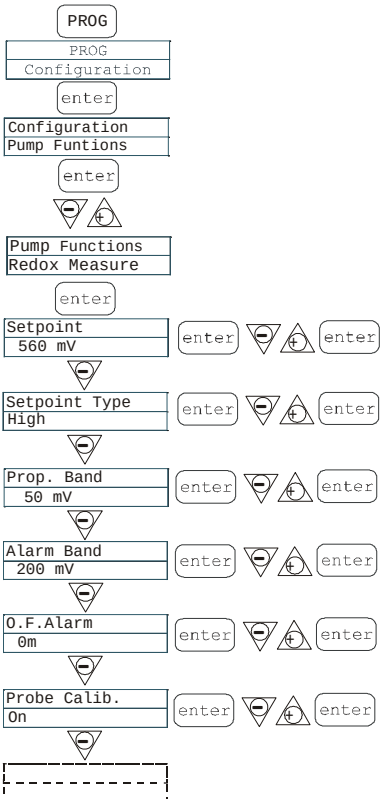
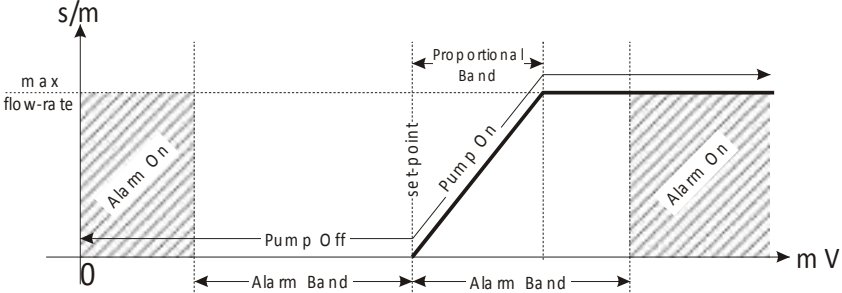
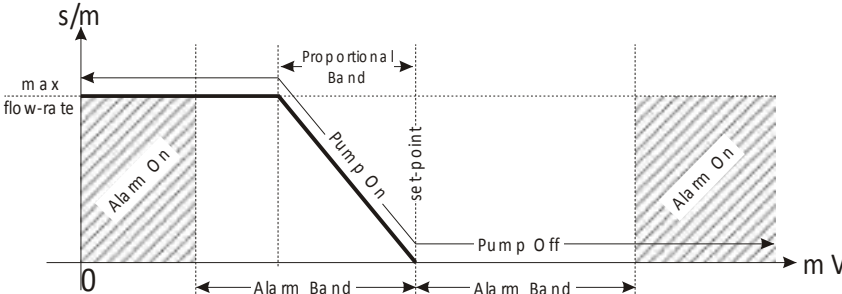
| Display during Operation | Display at start-up (MODE key) |
|--------------------------|--------------------------------|
|                          |                                |

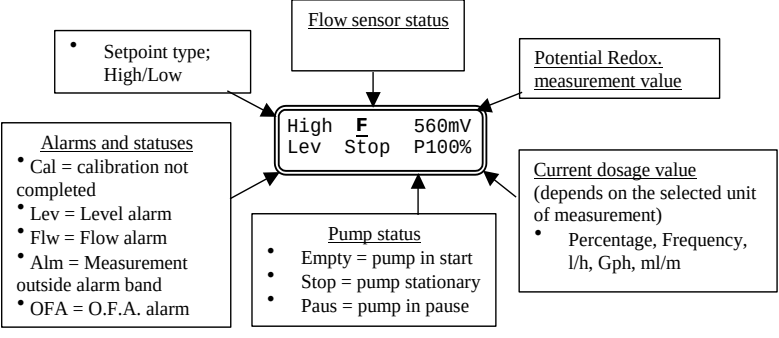
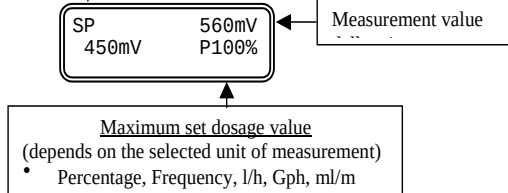
## Paragraph 9 – Dosage Proportional to the pH (factory setting)

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>The pump measures and controls the pH of a solution, programming in sequence: set-point, set-point type, proportional band and alarm band</p> <p>Set-point type: acid</p> <p>Set-point type: alkaline</p> <p>It is also possible to programme:</p> <ul style="list-style-type: none"> <li>- the O.F.A. (Over Feed Alarm) time in minutes, or rather a time beyond which an alarm signal is triggered if the pH value does not reach the set-point.</li> <li>- The measurement resolution (1 or 2 decimal points)</li> <li>- Deactivation/activation of the calibration procedure</li> <li>- Manual temperature value in °C (default) or °F</li> </ul> <p>The maximum frequency can be modified during operation, by pressing the <b>mode enter</b> <b>+</b> keys at the same time to increase the flow, or the <b>mode enter</b> <b>-</b> keys to decrease it.</p> |

| Display during Operation | Display during Setting (MODE key) |
|--------------------------|-----------------------------------|
|                          |                                   |

## Paragraph 10 – Dosage Proportional to the Potential Redox Measurement (O.R.P.)

| Programming                                                                        | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>The pump measures and controls the pH of a solution, programming in sequence: set-point, set-point type, proportional band and alarm band</p> <p>Set-point type: maximum</p>  <p>Set-point type: minimum</p>  <p>It is also possible to programme:</p> <ul style="list-style-type: none"> <li>- the O.F.A. (Over Feed Alarm) time in minutes, or rather a time beyond which an alarm signal is triggered if the pH value does not reach the set-point.</li> <li>- The measurement resolution (1 or 2 decimal points)</li> <li>- Deactivation/activation of the calibration procedure</li> </ul> <p>The maximum frequency can be modified during operation, by pressing the  keys at the same time to increase the flow, or the  keys to decrease it.</p> |

| Display during Operation                                                            | Display during Setting (MODE key)                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><u>Displays in sequence</u></p> <ul style="list-style-type: none"> <li>• SP = Setpoint value</li> <li>• BP = Proportional band value</li> <li>• BA = Alarm band value</li> <li>• OFA = O.F.A. value</li> </ul>  |

## Settings menu items for pH and Redox measuring mode

## Power On Delay Setting

| Programming                                                                                                                                                                                                                                                                                                                                                     | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     A[PROG] --&gt; B[PROG Configuration]     B --&gt; C[enter]     C --&gt; D[Configuration Pump functions]     D --&gt; E[Max flow rate v100%]     E --&gt; F[Language English]     F --&gt; G[Delay Power ON Off]     G --&gt; H[enter]     H --&gt; I[+]     I --&gt; J[enter]     J --&gt; K[ ]     style K stroke-dasharray: 5 5     </pre> | <p>Allows the user to set a pump activation delay time when turning on the pump itself. This delay will only take effect if the pump is turned off and then on again by disconnecting its electrical power supply. The setting can be disabled (Off - factory default) or else can be set to a delay time ranging from 1 to 60 minutes.</p> <p>The alarm and pulse LED indicators will flash while the delay time is in progress (1 sec ON - 1 sec Off) and the countdown will be shown on the display in seconds. If the pump is in Stop mode, the LEDs alone will be flashing. While the time delay is in progress, the function can be disabled by accessing the menu and setting the time to Off.</p> <p>Press  to access the modification option and use the  and  buttons to set the desired value. Press  to confirm and return to the main menu.</p> |

## Delay calibration Setting

| Programming                                                                                                                                                                                                                                                                                                                                                                                   | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph LR     A[PROG] --&gt; B[PROG Configuration]     B -- enter --&gt; C[Configuration Pump Functions]     C --&gt; D[Max flow rate 100%]     D --&gt; E[Language English]     E --&gt; F[Delay power ON Off]     F --&gt; G[Delay Calib. Off]     G -- enter --&gt; H[ ]     H --&gt; I[ ]     style I fill:none,stroke-dasharray: 5 5     style I width:100px,height:20px     </pre> | <p>Used to set a pump operation delay after calibration of the probe (Redox or pH).</p> <p>The setting can be disabled (Off - factory default) or else can be set to a delay time ranging from 1 to 60 minutes.</p> <p>The alarm and pulse LED indicators will flash while the delay time is in progress (1 sec ON - 1 sec Off) and the countdown will be shown on the display in seconds. If the pump is in Stop mode, the LEDs alone will be flashing. While the time delay is in progress, the function can be disabled by accessing the menu and setting the time to Off.</p> <p>Press  to access the modification option and use the  and  buttons to set the desired value. Press  to confirm and return to the main menu.</p> |

## Paragraph 11 – Setting the Maximum Flow

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>This makes it possible to set the maximum flow offered by the pump, and the programmed mode (% or frequency) is used as the standard unit of measurement when displaying the flow. Changes can be made by pressing the <b>mode enter</b> key, then using the <b>+</b> <b>-</b> keys to set the new value. Press <b>mode enter</b> to confirm and return to the main menu</p> |

## Paragraph 12 – Flow Calibration

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>The memorised cc value per strike appears in the main menu. It can be calibrated in two different ways:<br/> <b>MANUAL</b> – manually enter the cc value per strike using the <b>+</b> <b>-</b> keys and confirm by pressing the <b>mode enter</b> key<br/> <b>AUTOMATIC</b> – the pump makes 100 strikes, which are started by pressing the <b>mode enter</b> key. At the end of this process, enter the quantity sucked up by the pump using the <b>+</b> <b>-</b> keys and confirm by pressing the <b>mode enter</b> key. The entered figure will be used in flow calculations.</p> |

## Paragraph 13 - Statistics

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>The main menu displays the pump operation times. By pressing the <b>mode enter</b> key you can access other statistics:</p> <ul style="list-style-type: none"> <li>- Strokes = number of strokes made by the pump</li> <li>- Q.ty (L) = quantity dosed by the pump in litres; this figure is calculated on the basis of the memorised cc/stroke value</li> <li>- Power = number of pump starts</li> <li>- Reset = use the <b>+</b> <b>-</b> to reset the counters (YES) or otherwise (NO), then confirm by pressing the <b>mode enter</b> key.</li> </ul> <p>Pressing the <b>ESC</b> key will take you back to the main menu.</p> |

## Paragraph 14 - Password

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>By entering the password, you can enter the programming menu and see all the set values. The password will be requested whenever you seek to modify them. The flashing line indicates the number that can be modified.</p> <p>Use the  key to select the number (from 1 to 9), and the  key to select the number to be modified. Confirm by pressing the  key. By setting "0000" (default), the password is eliminated.</p> |

## Paragraph 15 – Flow Alarm

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>This makes it possible to activate (deactivate) the flow sensor.</p> <p>When activated (On), press the  key to access the request for the number of signals that the pump waits for before an alarm is triggered. The number flashes when you press the  key, and you can then use the   keys to set the value. Confirm by pressing the  key. Press  to return to the main menu</p> |

## Paragraph 16 – Level Alarm

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>This makes it possible to set the pump when the level sensor alarm is activated. In other words you can decide whether to stop dosage (Stop) or simply activate the alarm signal without stopping dosage.</p> <p>Changes can be made by pressing the  key, then using the   keys to set the alarm type. Confirm by pressing the  key. Press  to return to the main menu</p> |

## Paragraph 17 - Level 1 alarm

| Programming | Operation                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <p>This menu item appears in Manual, pH or Redox mode only. It makes it possible to set the activation of the alarm without blocking dispensing or to set dispensing blocking (Stop) when a level sensor alarm occurs.</p> <p>Press  to access edit mode, then use   to set the type of alarm. Press  to confirm. Press  to go back to the main menu.</p> |

## Paragraph 18 – Flow Display Unit

| Programming                                                                                                                                                                                                                                        | Operation                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     A[PROG] --&gt; B[PROG Configuration]     B -.-&gt; C[Unit Standard]     C -- enter --&gt; D[Unit Standard &lt;-]     D -- down arrow --&gt; E[Unit L/h]     E -- enter --&gt; F[ ]     style F stroke-dasharray: 5 5     </pre> | <p>This makes it possible to set the dosage unit of measurement on the display.</p> <p>Changes can be made by pressing the <b>mode enter</b> key, then using the   keys to set the unit of measurement, choosing between L/h (litres/hour), Gph (Gallons/hour), ml/m (millilitres/minute) or standard (% or frequency, depending on settings). Press <b>mode enter</b> to confirm and return to the main menu</p> |

## Paragraph 19 - Setting the Pause

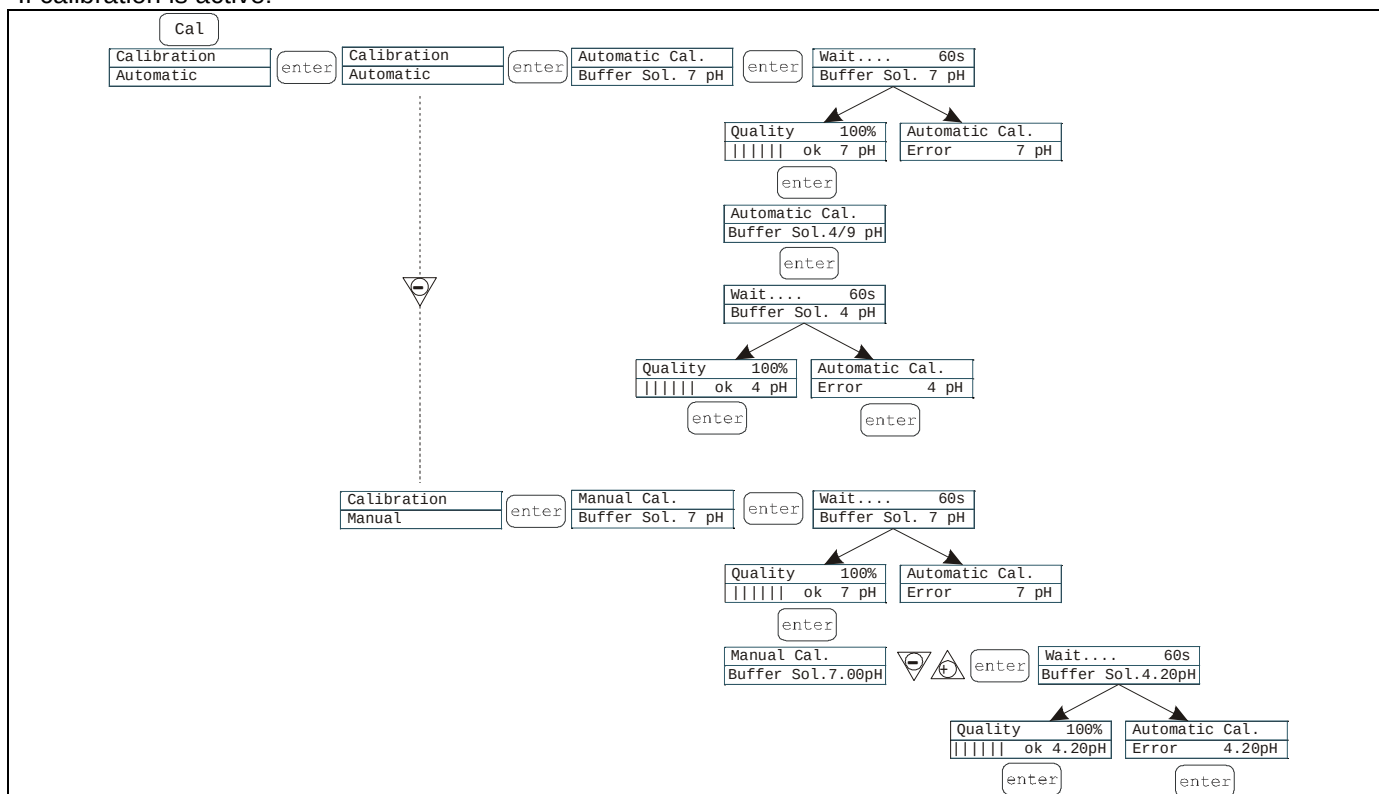
| Programming                                                                                                                                                             | Operation                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     A[PROG] --&gt; B[PROG Configuration]     B -- up arrow --&gt; C[Paus N.Open]     C -- enter --&gt; D[ ]     style D stroke-dasharray: 5 5     </pre> | <p>The pump can be paused by remote input. The factory setting is Normally Open.</p> <p>Changes can be made by pressing the <b>mode enter</b> key, then using the   keys to set the new value ( N. OPEN or N. CLOSED).</p> <p>Press <b>mode enter</b> to confirm and return to the main menu.</p> |

## pH Calibration Menu

Pressing the CAL key for 3 seconds takes you into the calibration menu. If calibration was excluded during programming, the following appears on the display:

|             |
|-------------|
| Calibration |
| Off         |

If calibration is active:



It is possible to select automatic or manual mode. In both cases, it is automatically calibrated to pH 7.

- Automatic calibration:

The buffer solution value appears on the display. Enter the probe in the bottle and press the **mode enter** key. A 60 second countdown necessary to complete calibration will appear on the display. If the alignment quality is below

50%, an error message appears on the display and you should press **mode enter** to exit calibration (the pump exits automatically after 4 seconds). If the quality is above 50%, the value is shown on the display and, after pressing the

**mode enter** key, the buffer solution at pH 4 or 9 will be requested. At this point the procedure is the same as above.

- Manual calibration:

when the buffer solution value appears on the display, insert the probe in the bottle and press the **mode enter** key. A 60 second countdown necessary to complete calibration will appear on the display. If the alignment quality is below

50%, an error message appears on the display and you should press **mode enter** to exit calibration (the pump exits automatically after 4 seconds). If the quality is above 50%, the value is shown on the display and, after pressing the

**mode enter** key, the value of pH 7.00 flashes on the display. Use the **+** **-** keys to enter the value of the solution

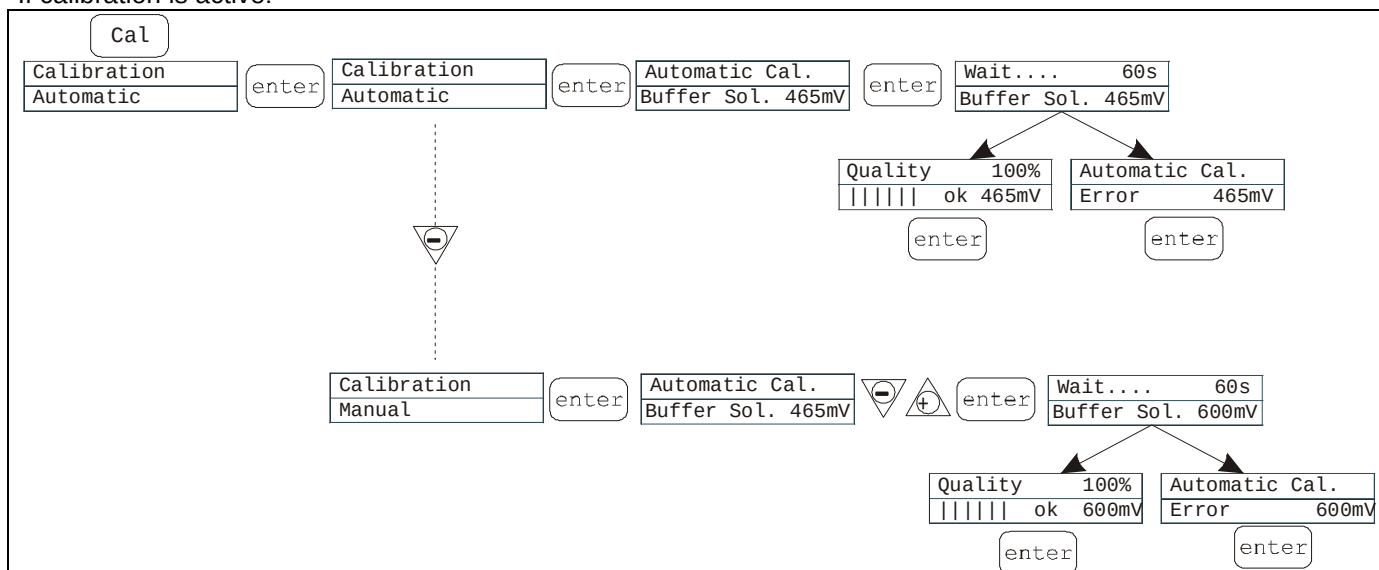
in your possession, then press **mode enter** to confirm and start the calibration procedure as before.

## Potential Redox Calibration Menu (O.R.P.)

Pressing the CAL key for 3 seconds takes you into the calibration menu. If calibration was excluded during programming, the following appears on the display:

|             |
|-------------|
| Calibration |
| Off         |

If calibration is active:



It is possible to select automatic or manual mode.

- Automatic calibration:

The buffer solution value appears on the display. Insert the probe in the bottle and press the  key. A 60 second countdown necessary to complete calibration will appear on the display. If the alignment quality is below

50%, an error message appears on the display and you should press  to exit calibration (the pump exits automatically after 4 seconds). If the quality is above 50%, the value is shown on the display and you should press

the  key to complete the procedure.

- Manual calibration:

The buffer solution value appears on the display. Insert the probe in the bottle and press the  key. The value

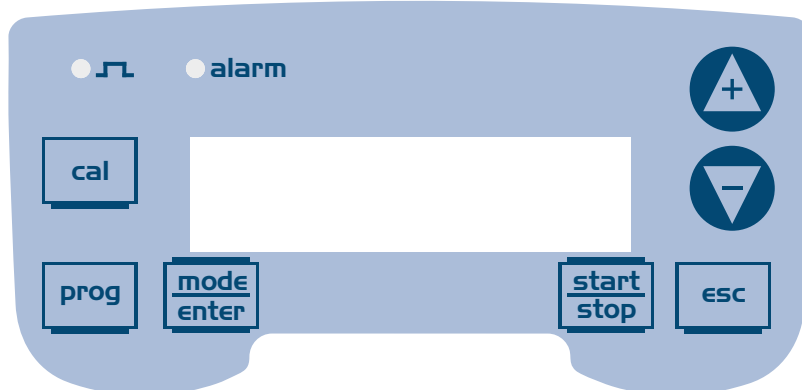
of 465 mV should now flash on the display. Insert the probe in your solution and use the   keys to

display the value of the solution in your possession, then confirm by pressing the  key and begin the calibration procedure as before

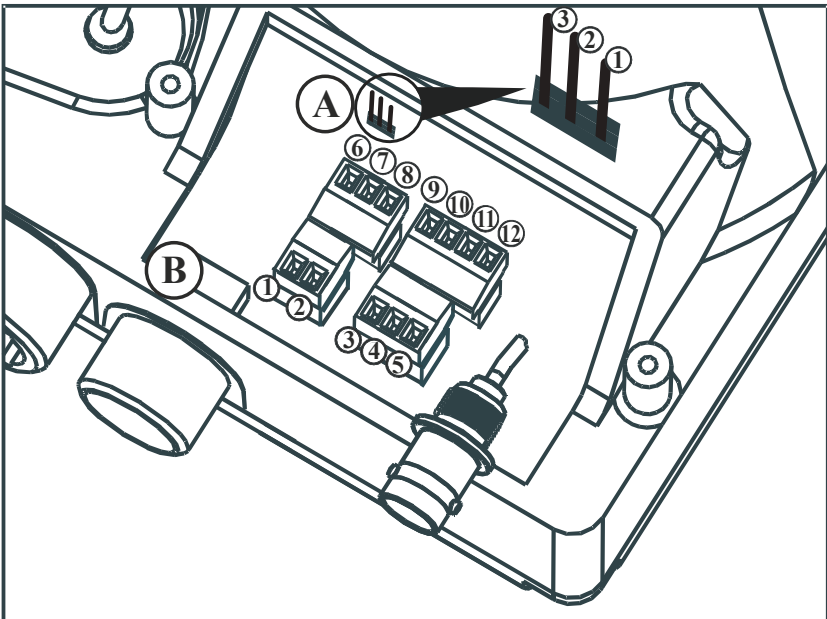
## Alarms

| Display                                                                                                                                          | Cause           | Interruption |            |       |                                                                                                     |                                                                                                                                                              |       |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|------------|-------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|
| Fixed alarm LED<br>Flashing word "Lev"<br>I.e. <table><tr><td>Man</td><td></td></tr><tr><td>Lev</td><td>P100%</td></tr></table>                  | Man             |              | Lev        | P100% | End of level alarm, without interrupting pump operation                                             | Restore the liquid level.                                                                                                                                    |       |      |
| Man                                                                                                                                              |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Lev                                                                                                                                              | P100%           |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Fixed alarm LED<br>Flashing words "Lev" and "stop"<br>I.e. <table><tr><td>Man</td><td></td></tr><tr><td>Lev Stop</td><td>P100%</td></tr></table> | Man             |              | Lev Stop   | P100% | End of level alarm, with interruption to pump operation                                             | Restore the liquid level.                                                                                                                                    |       |      |
| Man                                                                                                                                              |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Lev Stop                                                                                                                                         | P100%           |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Fixed alarm LED<br>Flashing word "Flw"<br>I.e. <table><tr><td>Man</td><td><b>F</b></td></tr><tr><td>Flw</td><td>P100%</td></tr></table>          | Man             | <b>F</b>     | Flw        | P100% | Active flow alarm. The pump has not received the programmed number of signals from the flow sensor. | Press the <table><tr><td>start</td></tr><tr><td>stop</td></tr></table> key                                                                                   | start | stop |
| Man                                                                                                                                              | <b>F</b>        |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Flw                                                                                                                                              | P100%           |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| start                                                                                                                                            |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| stop                                                                                                                                             |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| I.e. <table><tr><td>Parameter Error</td><td>PROG</td></tr><tr><td>to default</td><td></td></tr></table>                                          | Parameter Error | PROG         | to default |       | Communication error with the eeprom.                                                                | Press the <table><tr><td>prog</td></tr></table> key to restore the default parameters.                                                                       | prog  |      |
| Parameter Error                                                                                                                                  | PROG            |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| to default                                                                                                                                       |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| prog                                                                                                                                             |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Flashing word "OFA"<br>Flashing word "stop"<br>I.e. <table><tr><td>High</td><td>475 mV OFA</td></tr><tr><td>Stop</td><td>P 75%</td></tr></table> | High            | 475 mV OFA   | Stop       | P 75% | O.F.A. alarm                                                                                        | Press the <table><tr><td>start</td></tr><tr><td>stop</td></tr></table> key to stop the flashing word "stop". Press the key again to start up the pump again. | start | stop |
| High                                                                                                                                             | 475 mV OFA      |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Stop                                                                                                                                             | P 75%           |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| start                                                                                                                                            |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| stop                                                                                                                                             |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Flashing word "Alm"<br>I.e. <table><tr><td>High</td><td>475 mV Alm</td></tr><tr><td>P 75%</td><td></td></tr></table>                             | High            | 475 mV Alm   | P 75%      |       | The probe reading is outside the set alarm band range                                               | Make sure that the "Alarm Band" parameter is set correctly in the programme                                                                                  |       |      |
| High                                                                                                                                             | 475 mV Alm      |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| P 75%                                                                                                                                            |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| Flashing word "Cal"<br>I.e. <table><tr><td>High</td><td>475 mV Cal</td></tr><tr><td>P 75%</td><td></td></tr></table>                             | High            | 475 mV Cal   | P 75%      |       | Probe not calibrated alarm                                                                          | Calibrate the probe                                                                                                                                          |       |      |
| High                                                                                                                                             | 475 mV Cal      |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |
| P 75%                                                                                                                                            |                 |              |            |       |                                                                                                     |                                                                                                                                                              |       |      |

## Steuertafel –TEKNA TPT

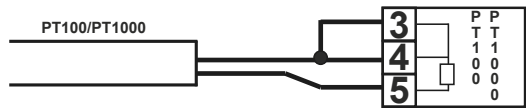


|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Zugriff auf das Programmiermenü                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|    | Während des Pumpenbetriebs: Durch Drücken werden die programmierten Werte zyklisch auf dem Display angezeigt; bei gleichzeitigem Drücken der Tasten   wird ein Wert, je nach ausgewähltem Betriebsmodus, erhöht bzw. verringert. Während der Programmierung übernimmt diese Taste die Funktion "Enter", d.h. dass der Zugriff auf die verschiedenen Menüstufen und die dort vorgenommenen Veränderungen bestätigt werden. |
|   | Startet und stoppt die Pumpe. Wenn ein Füllstandsalarm (nur Alarmfunktion), ein Durchflussalarm und ein Memoryalarm aktiv ist, deaktiviert diese Taste die Anzeige auf dem Display.                                                                                                                                                                                                                                                                                                                                                                                                            |
|  | Zum "Verlassen" der verschiedenen Menüstufen. Vor dem endgültigen Verlassen der Programmierung, öffnet sich ein Speicherungsdialog für Veränderungen.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  | Zugriff auf das Kalibrierungsmenü der Pumpe. Im Off-Modus wird das Kalibrierungsmenü nicht aktiviert.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  | Blättert nach oben im Menü, oder erhöht die numerischen Werte, die verändert werden sollen. Im Batch-Modus kann diese Taste die Dosierung starten.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|  | Blättert nach unten im Menü, oder verringert die numerischen Werte, die verändert werden sollen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  | Grüne Led, die während dem Dosiervorgang blinkt.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  | Rote Led, die sich bei den verschiedenen Alarmsituationen einschaltet.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

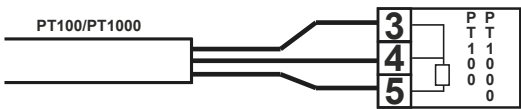
| Stromanschlüsse:                                                                  |    |                                                                               |
|-----------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------|
|  | 1  | Eingang Durchflusssensor                                                      |
|                                                                                   | 2  |                                                                               |
|                                                                                   | 3  | Eingang Temperatursonde PT100/PT1000<br>(siehe Pläne und Anschlüsse)          |
|                                                                                   | 4  |                                                                               |
|                                                                                   | 5  |                                                                               |
|                                                                                   | 6  | Eingänge Frequenzsignal<br>(Impulszähler)                                     |
|                                                                                   | 7  | Eingang Außentrigger                                                          |
|                                                                                   | 8  | Eingang Füllstandkontrollsonde 2 (nur<br>in pH-, Redox- oder manuellem Modus) |
|                                                                                   | 9  | + Pol                                                                         |
|                                                                                   | 10 | - Pol                                                                         |
|                                                                                   | 11 | Eingang Pausensignal                                                          |
|                                                                                   | 12 | Eingang Remotesteuerung (Start-Stop)                                          |
|                                                                                   | A  | Auswahl-Jumper Eingangsfrequenz                                               |
|                                                                                   | B  | Eingang Füllstandkontrollsonde                                                |

**PLÄNE UND ANSCHLÜSSE**

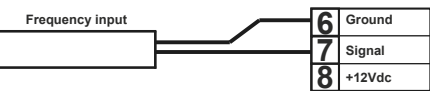
Anschlussdiagramm PT100/PT1000 2-  
drahtig



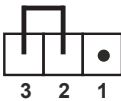
Anschlussdiagramm PT100/PT1000 3-  
drahtig



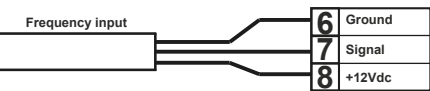
Anschlussdiagramm Eingangsfrequenz  
Trockenkontakt.



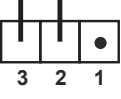
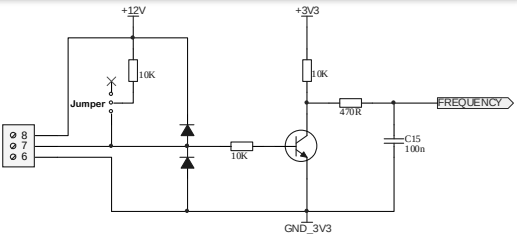
Jumper Position



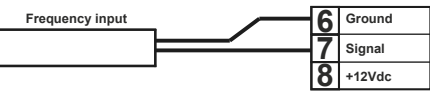
Anschlussdiagramm Eingangsfrequenz Hall-  
Sensor.



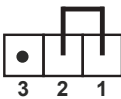
Jumper Position



Anschlussdiagramm Eingangsfrequenz  
Spannungssignal (0-5V).



Jumper Position



Durch über drei Sekunden langes Drücken der Taste **prog** erhalten Sie Zugriff auf die Programmierung. Über die Tasten **+** **-** können Sie die Menüpunkte durchblättern. Über die Taste **mode enter** erhalten Sie Zugriff auf die Veränderungen.

Werkseitig ist die Pumpe auf den Konstant-Modus programmiert. Die Pumpe kehrt nach 1 Minute Inaktivität automatisch zum Betriebs-Modus zurück. In diesem Fall werden etwaig eingegebene Daten nicht gespeichert.

Über die Taste **ESC** verlassen Sie die Programmierstufen. Bei Verlassen der Programmierung wird auf dem Display folgendes angezeigt:

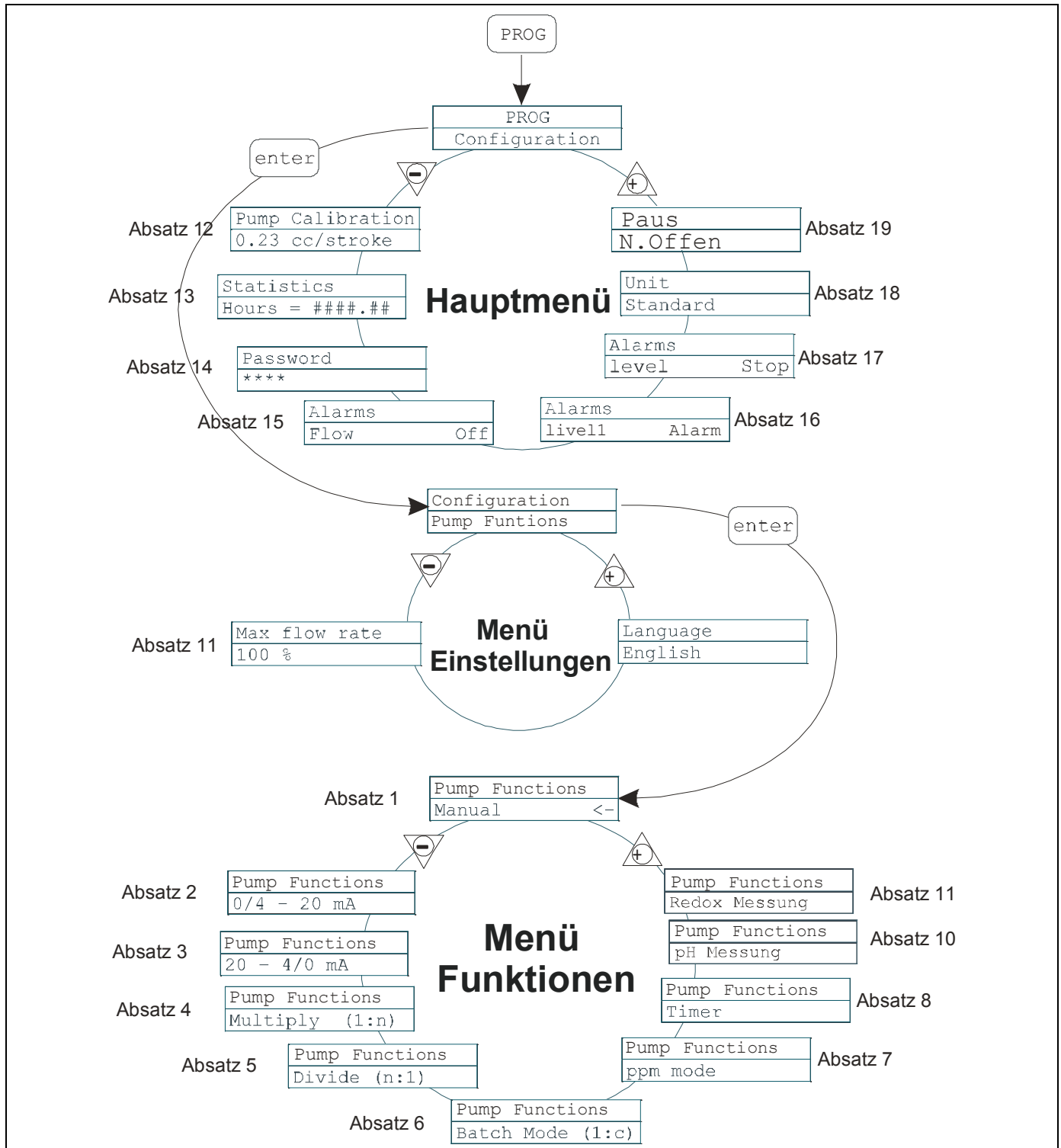
|         |
|---------|
| Exit    |
| No Save |

▽ ▲

|      |
|------|
| Exit |
| Save |

|            |
|------------|
| mode enter |
|------------|

Zur Bestätigung der Auswahl



## Sprachauswahl

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                  |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Ermöglicht die Sprachauswahl. Werkseitig ist die Sprache Englisch eingestellt.</p> <p>Durch Drücken von  erhalten Sie Zugriff auf die Veränderung.</p> <p>Stellen Sie dann über die Tasten   den Wert ein. Über  bestätigen Sie und werden zum Hauptmenü zurückgeleitet.</p> |

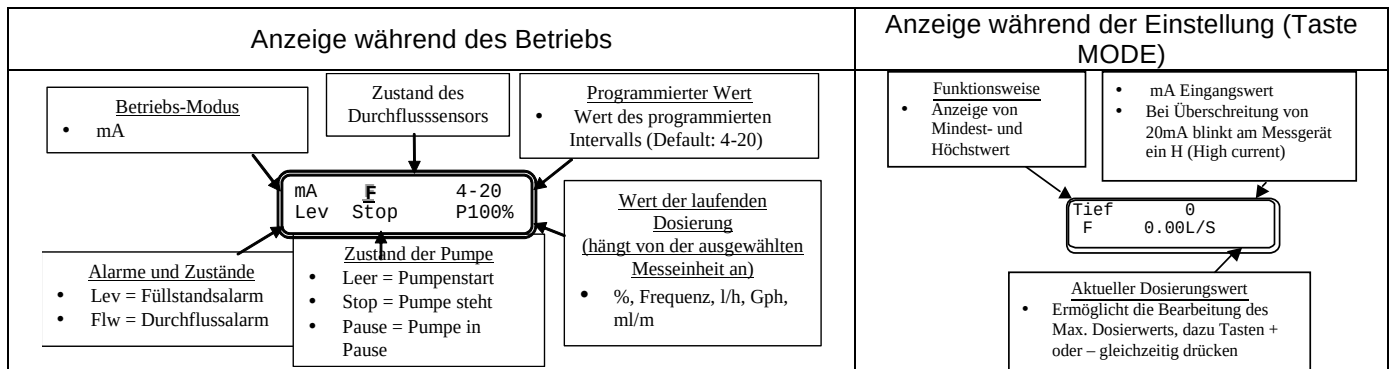
## Absatz 1 –Manuelle Dosierung

| Programmierung | Funktionsweise                                                                                                                                                                                     |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Die Pumpe arbeitet im Konstant-Modus. Die Förderleistung wird manuell geregelt. Durch gleichzeitiges Drücken der Tasten   wird die Förderleistung erhöht bzw. über die Tasten   verringert.</p> |

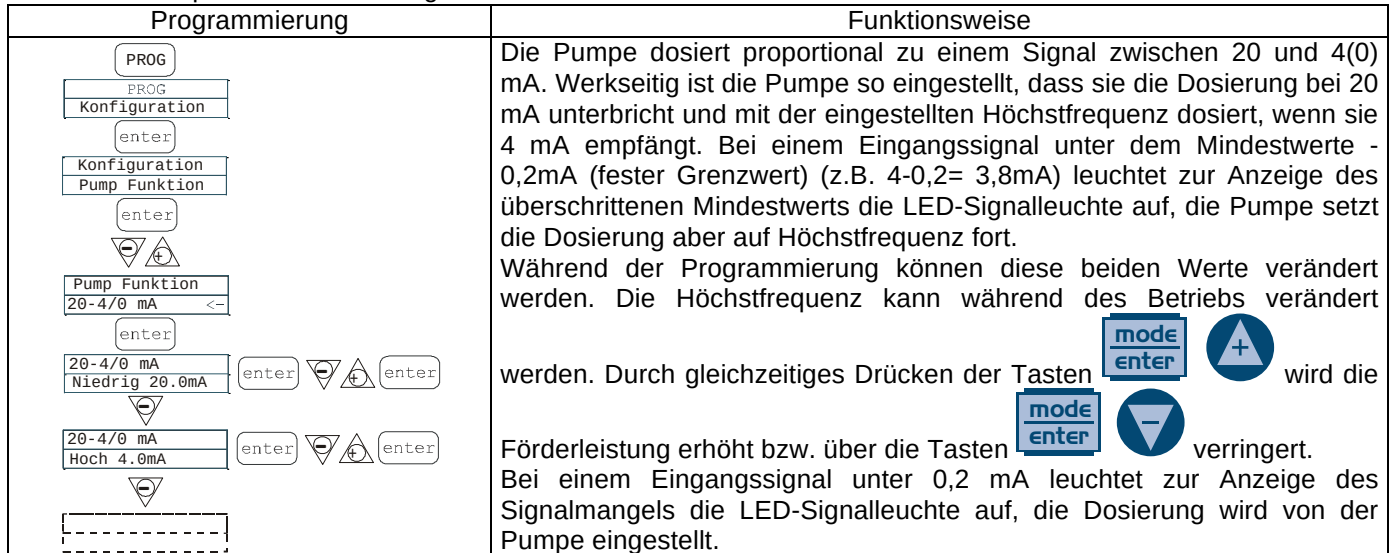
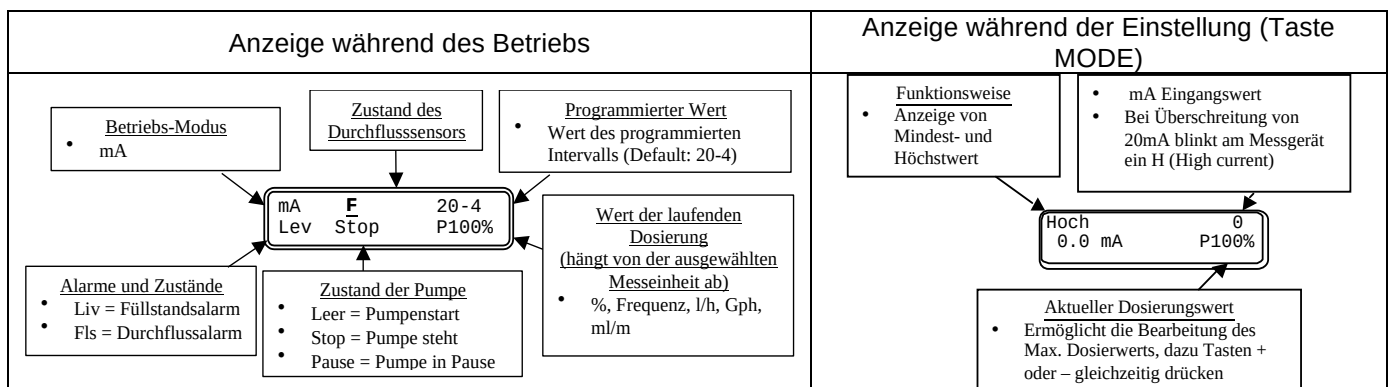
| Anzeige während des Betriebs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Anzeige während der Einstellung (Taste MODE)                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div> <b>Betriebs-Modus</b> <ul style="list-style-type: none"> <li>Man = Manuell</li> </ul> </div> <div> <b>Zustand</b><br/>Durchflusssensor         </div> <div> <b>Wert der laufenden Dosierung</b><br/>(hängt von der ausgewählten Messeinheit ab)           <ul style="list-style-type: none"> <li>%, Frequenz, l/h, Gph, ml/m</li> </ul> </div> <div> <b>Alarmer und Zustände</b> <ul style="list-style-type: none"> <li>Liv = Füllstandsalarm</li> <li>Fls = Durchflussalarm</li> </ul> </div> <div> <b>Zustand der Pumpe</b> <ul style="list-style-type: none"> <li>Leer = Pumpenstart</li> <li>Stop = Pumpe steht</li> <li>Pause = Pumpe in Pause</li> </ul> </div> </div> <div> <div>MAN</div> <div>Lev</div> <div>Stop</div> <div>P100%</div> </div> | <div> <b>Betriebs-Modus</b> <ul style="list-style-type: none"> <li>Zeigt den der Frequenz entsprechenden Wert an</li> </ul> </div> <div> <div>F320s/m</div> <div>P100%</div> </div> <div> <b>Wert der laufenden Dosierung</b> <ul style="list-style-type: none"> <li>Verändert die maximale Förderleistung durch gleichzeitiges Drücken der Tasten + und -</li> </ul> </div> |

## Absatz 2 – Proportionale Dosierung 0/4-20 mA

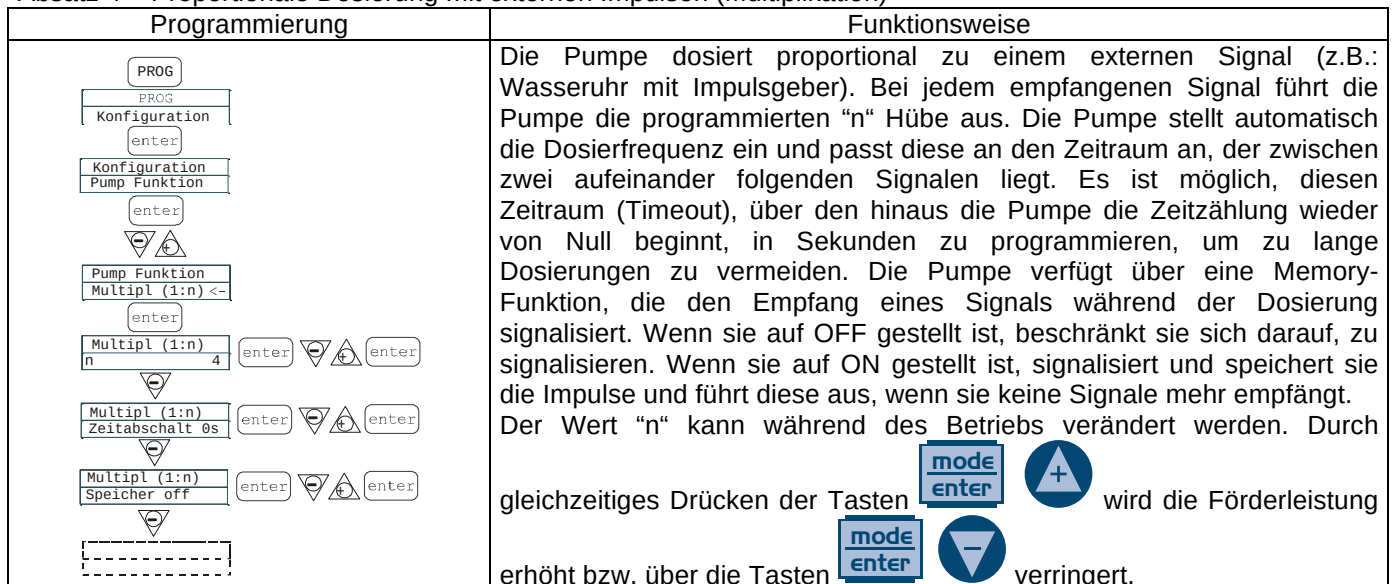
| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Die Pumpe dosiert proportional zu einem Signal zwischen (0)4 und 20 mA. Werkseitig ist die Pumpe so eingestellt, dass sie die Dosierung bei 4 mA unterbricht und mit der eingestellten Höchsfrequenz dosiert, wenn sie 20 mA empfängt. Während der Programmierung können diese beiden Werte verändert werden. Die Höchsfrequenz kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten   wird die Förderleistung erhöht bzw. über die Tasten   verringert.</p> <p>Bei einem Eingangssignal unter 0,2 mA leuchtet zur Anzeige des Signalmangels die LED-Signalleuchte auf.</p> |

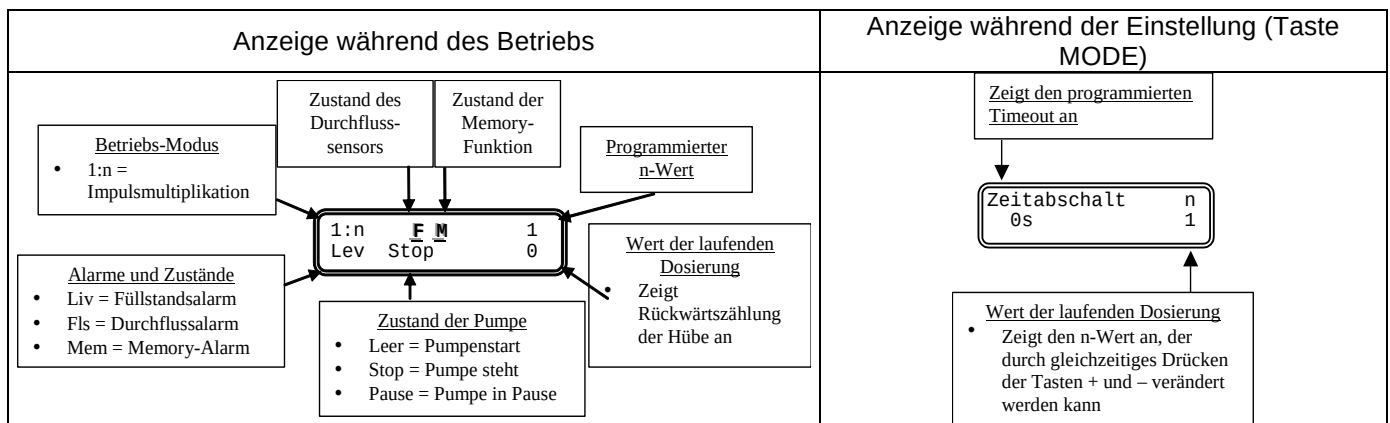


### Absatz 3 – Proportionale Dosierung 20-4/0 mA

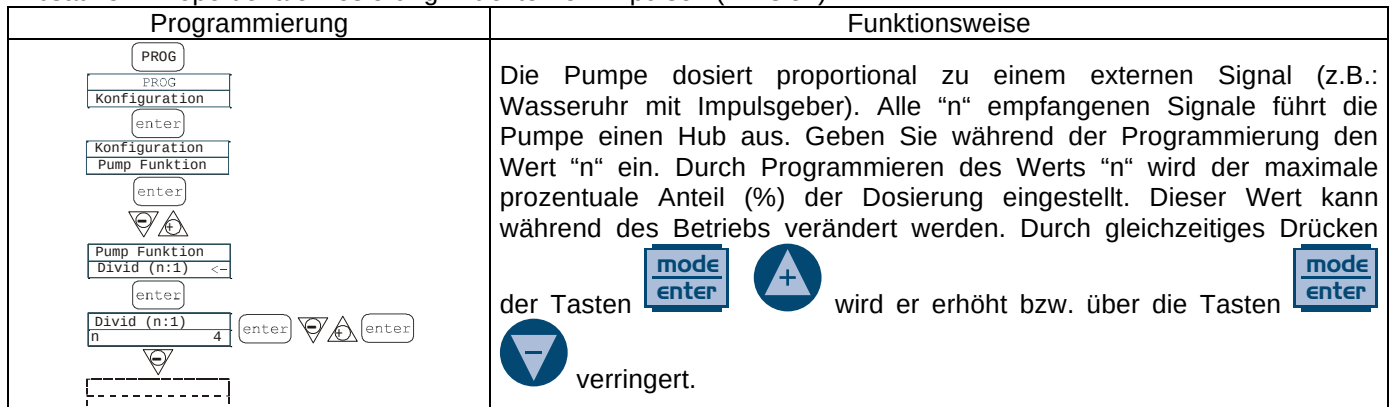
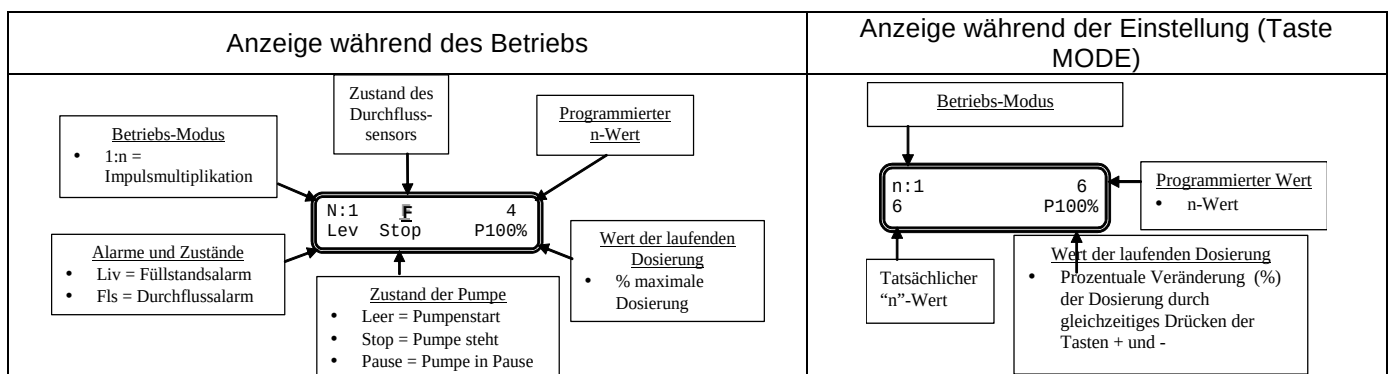


### Absatz 4 – Proportionale Dosierung mit externen Impulsen (Multiplikation)

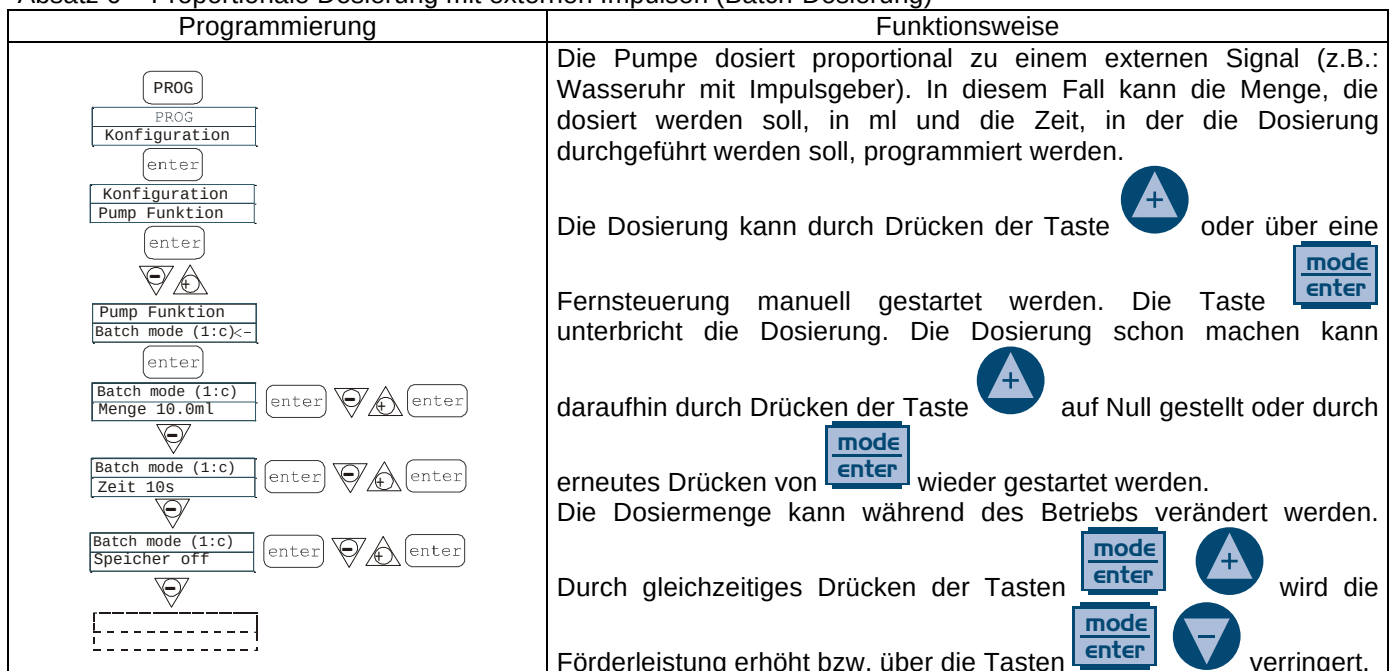


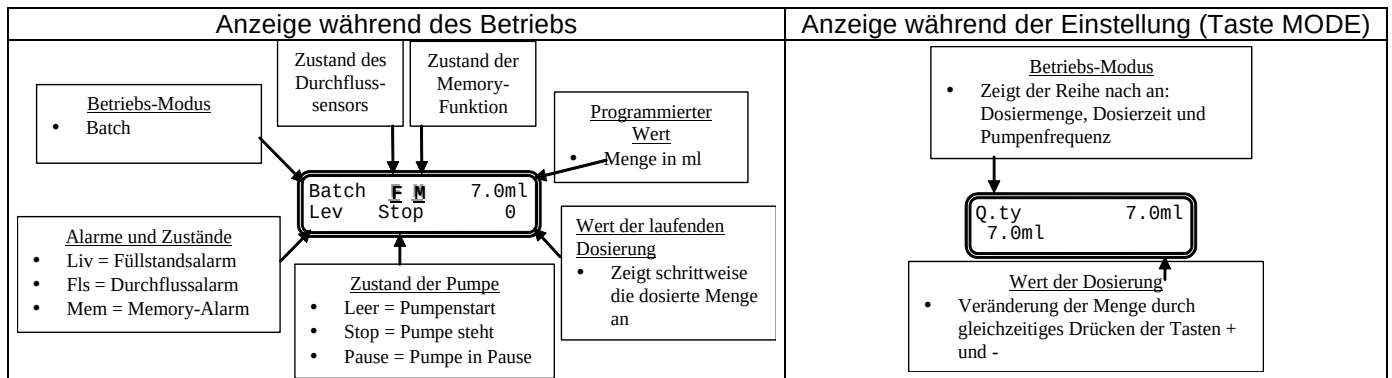


#### Absatz 5 – Proportionale Dosierung mit externen Impulsen (Division)

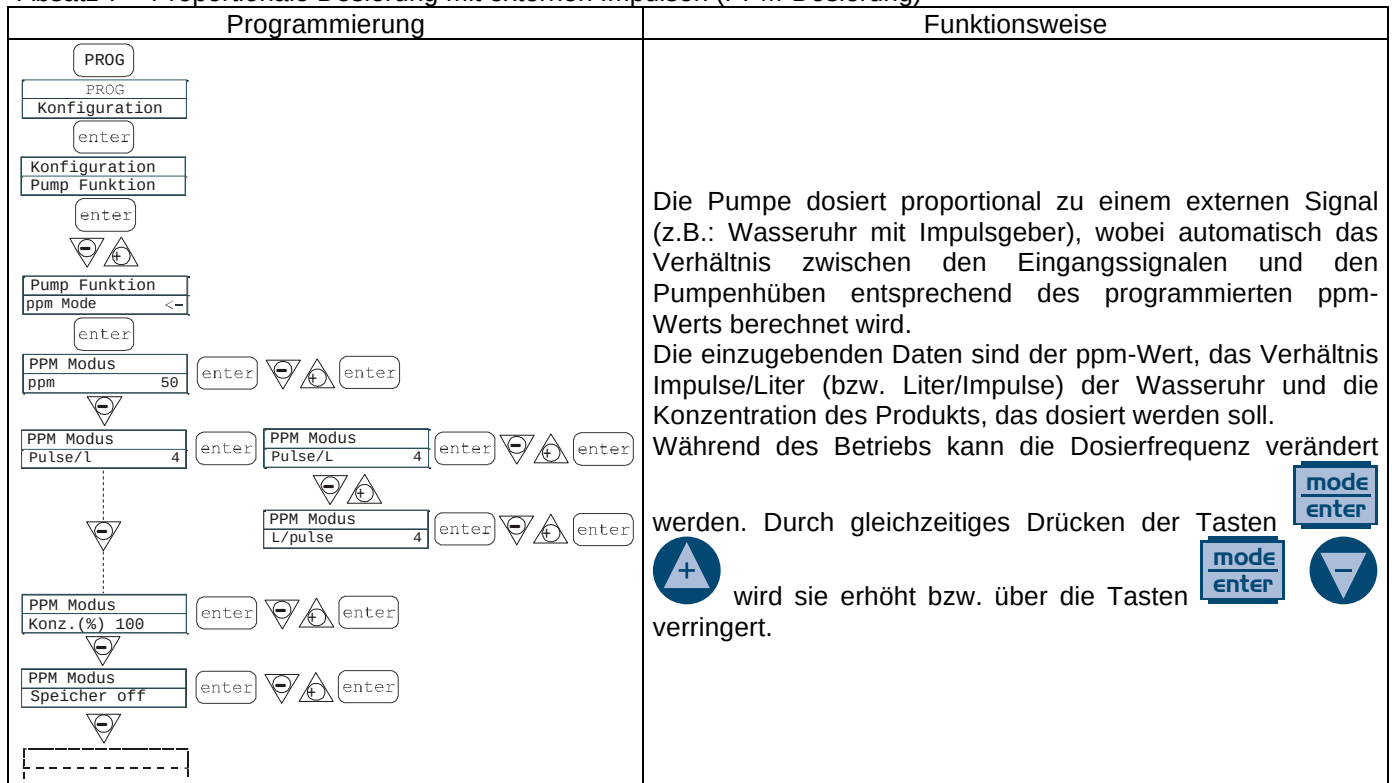
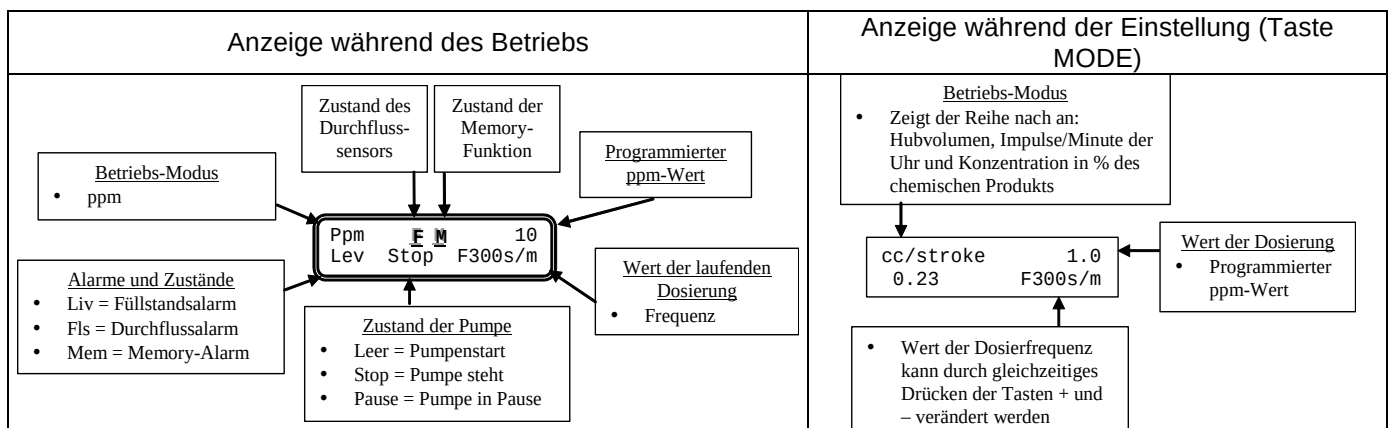


#### Absatz 6 – Proportionale Dosierung mit externen Impulsen (Batch-Dosierung)

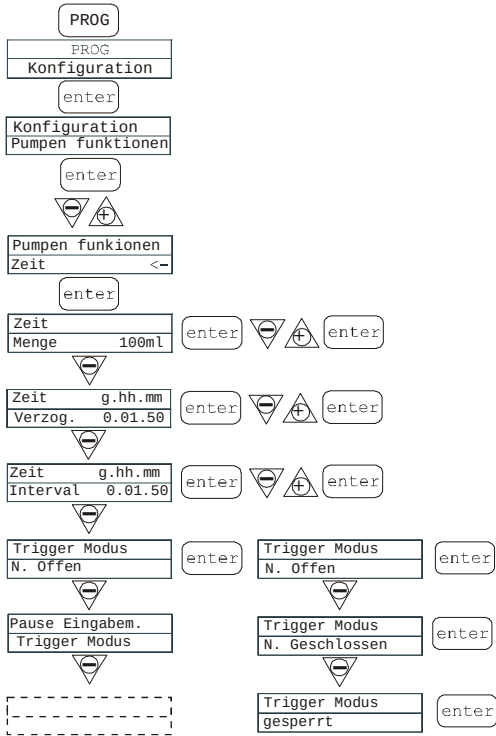
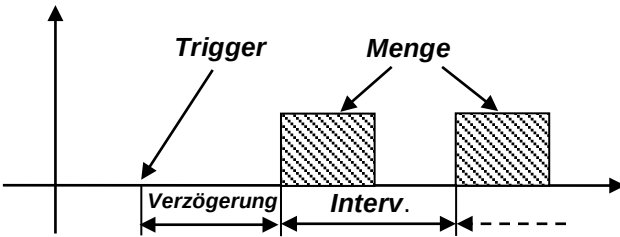
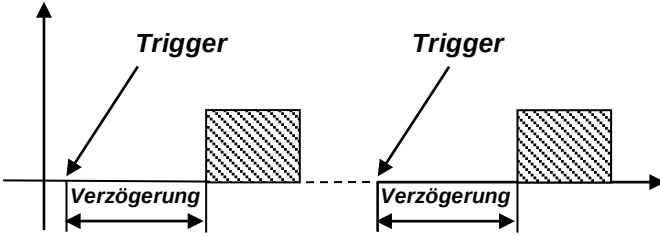
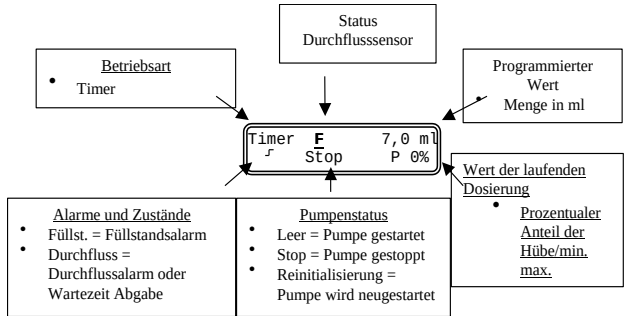
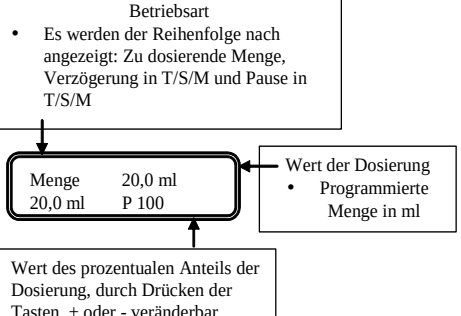




## Absatz 7 – Proportionale Dosierung mit externen Impulsen (PPM-Dosierung)



## Absatz 8 – Getaktete Dosierung (Eingang Frequenzsignal "TRIGGER" aktiviert)

| Programmazione                                                                      | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Nach Empfang des eingestellten <b>TRIGGER</b>-Signals dosiert die Pumpe eine in ml programmierbare Menge. Es kann eine Verzögerungszeit vor der Dosierung (<b>Verzögerung</b>) und der Zeitabstand zwischen aufeinander folgenden Dosierungen (<b>Pause</b>) eingestellt werden, wie im Schema gezeigt:</p>  <p>Wird zum Beispiel eine Zeit <b>Pause</b> = 0 eingegeben, erhält man ein System, bei dem die programmierte Menge nach jedem <b>TRIGGER</b>-Signal dosiert wird (mit der etwaig eingestellten Verzögerung):</p>  <p>Es ist auch möglich, die Dosierung durch Drücken der Taste + zu starten, die praktisch das <b>Trigger</b>-Signal nachahmt. Das <b>Trigger</b>-Signal kann auf <b>N. Offen</b> eingestellt werden (es aktiviert sich, wenn der Eingang von der Betriebsart geöffnet zur Betriebsart geschlossen übergeht), oder auf <b>N. Geschlossen</b> (es aktiviert sich, wenn der Eingang von der Betriebsart geschlossen zur Betriebsart geöffnet übergeht).</p> <p>Das <b>Trigger</b>-Signal ist während der Dosierung blockiert (sein Empfang wird weder gespeichert, noch verwaltet). Der Eingang <b>Pause</b> (<b>Eingang Fernbedienung</b>) kann nicht programmiert werden und seine Aktivierung blockiert die Dosierung, während die nachfolgende Deaktivierung das System wieder in den Zustand Warten auf das <b>Trigger</b>-Signal für eine neue Dosierung versetzt.</p> <p>Während des Pumpenbetriebs kann die Dosierfrequenz verändert werden, indem gleichzeitig die Tasten   gedrückt werden, um die Frequenz zu erhöhen bzw. die Tasten   , um sie zu verringern.</p> |
| Anzeige während des Betriebs                                                        | Anzeige während der Einstellung (Taste MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Absatz 8 – Getaktete Dosierung (Eingang Frequenzsignal "TRIGGER" nicht aktiviert)

| Programmierung | Funktionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Die Pumpe dosiert eine in ml programmierbare Menge. Es kann eine Startverzögerung der Pumpe (<b>Verzögerung</b>) und der Zeitabstand zwischen zwei aufeinander folgenden Dosierungen (<b>Pause</b>) eingestellt werden, wie im Schema gezeigt:</p> <p>Die <b>Verzögerungs-</b> und <b>Pausenzeiten</b> sind in T/S/M (Tage, Stunden, Minuten) angegeben.</p> <p>Der <b>Pausen</b>-Eingang kann auf drei unterschiedliche Arten programmiert werden:</p> <ol style="list-style-type: none"> <li>1. <b>Blocki Zeit:</b> Bei aktivierter Pause blockiert das System die Zählung der aktuellen Zeit und nimmt sie wieder auf, wenn die Pause deaktiviert wird.</li> <li>2. <b>Dosierpause:</b> Bei aktivierter Pause zählt das System die Zeit weiter und blockiert die Dosierung.</li> <li>3. <b>Time neu start.:</b> Bei aktivierter Pause blockiert das System die Dosierung und startet die Zählung neu, wenn die Pause deaktiviert wird.</li> </ol> <p>Während des Pumpenbetriebs kann die Dosierfrequenz verändert werden, indem gleichzeitig die Tasten  gedrückt werden, um die Frequenz zu erhöhen bzw. die Tasten  werden, um sie zu verringern.</p> |

| Anzeige während des Betriebs | Anzeige während der Einstellung (Taste MODE) |
|------------------------------|----------------------------------------------|
|                              |                                              |

## Absatz 9 – Dosierung proportional zur Messung des pH-Werts (werkseitige Einstellung)

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Die Pumpe misst und überwacht den pH-Wert durch die aufeinander folgende Programmierung folgender Werte: Set-Point, Art des Set-Points, Proportionalbereich und Alarmbereich.</p> <p>Art des Set-Points: sauer</p> <p>Art des Set-Points: alkalisch</p> <p>Ferner kann folgendes programmiert werden:</p> <ul style="list-style-type: none"> <li>- Die O.F.A.-Zeit (Over Feed Alarm) in Minuten, d.h. einen Zeitraum, über den hinaus eine Alarmsignal aktiviert wird, wenn die Messung des pH-Werts den Set-Point nicht erreicht.</li> <li>- Die Auflösung der Messung (1 oder 2 Dezimalstellen)</li> <li>- Deaktivierung/Aktivierung des Kalibrierverfahrens</li> <li>- Manueller Wert der Temperatur in °C (werkseitige Einstellung) oder °F</li> </ul> <p>Die Höchsthäufigkeit kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten   wird die Förderleistung erhöht bzw. über die Tasten   verringert.</p> |

| Anzeige während des Betriebs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Anzeige während der Einstellung (Taste MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Art des Set-Points; sauer/alkalisch</li> </ul> <p><b>Zustand des Durchflusssensors</b></p> <p><b>pH-Messwert</b></p> <p><b>Alca F 7.00pH</b><br/>Lev Stop P100%</p> <p><b>Zustand der Pumpe</b></p> <ul style="list-style-type: none"> <li>• Leer = Pumpenstart</li> <li>• Stop = Pumpe steht</li> <li>• Pause = Pumpe in Pause</li> </ul> <p><b>Wert der laufenden Dosierung</b><br/>(hängt von der ausgewählten Messeinheit ab)</p> <ul style="list-style-type: none"> <li>• %, Frequenz, l/h, Gph, ml/m</li> </ul> <p><b>Alarme und Zustände</b></p> <ul style="list-style-type: none"> <li>• Cal = Kalibrierung nicht durchgeführt</li> <li>• Lev = Füllstandsalarm</li> <li>• Flw = Durchflussalarm</li> <li>• Alm = Messung ausserhalb des Alarmbereichs</li> </ul> | <p>Der Reihe nach wird angezeigt:</p> <ul style="list-style-type: none"> <li>• SP = Set-Point-Wert</li> <li>• BP = Wert Proportionalbereich</li> <li>• BA = Wert Alarmbereich</li> <li>• OFA = O.F.A.-Wert</li> <li>• Temp = Temperaturwert</li> </ul> <p><b>SP 4.50pH</b>   <b>7.00pH</b>   <b>P100%</b></p> <p>Messwert</p> <p>Eingestellter Höchstwert der Dosierung<br/>(hängt von der ausgewählten Messeinheit ab)</p> <ul style="list-style-type: none"> <li>• %, Frequenz, l/h, Gph, ml/m</li> </ul> |

## Absatz 10 – Dosierung proportional zur Messung des Redox-Potentials (O.R.P.)

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Die Pumpe misst und überwacht den pH-Wert durch die aufeinander folgende Programmierung folgender Werte: Set-Point, Art des Set-Points, Proportionalbereich und Alarmbereich.</p> <p>Art des Set-Points: Höchstwert</p> <p>Art des Set-Points: Tiefstwert</p> <p>Ferner kann folgendes programmiert werden:</p> <ul style="list-style-type: none"> <li>- Die O.F.A.-Zeit (Over Feed Alarm) in Minuten, d.h. einen Zeitraum, über den hinaus eine Alarmsignal aktiviert wird, wenn die Messung des pH-Werts den Set-Point nicht erreicht.</li> <li>- Die Auflösung der Messung (1 oder 2 Dezimalstellen)</li> <li>- Deaktivierung/Aktivierung des Kalibrierverfahrens</li> </ul> <p>Die Höchstfrequenz kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten   wird die Förderleistung erhöht bzw. über die Tasten   verringert.</p> |

| Anzeige während des Betriebs | Anzeige während der Einstellung (Taste MODE)                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              | <p>Der Reihe nach wird angezeigt:</p> <ul style="list-style-type: none"> <li>• SP = Set-Point-Wert</li> <li>• BP = Wert Proportionalbereich</li> <li>• BA = Wert Alarmbereich</li> <li>• OFA = O.F.A.-Wert</li> </ul> <p>Eingestellter Höchstwert der Dosierung (hängt von der ausgewählten Messeinheit ab)</p> <ul style="list-style-type: none"> <li>• %, Frequenz, l/h, Gph, ml/m</li> </ul> |

## Einstellungsmenüpunkte für pH- und Redox-Messung

### Einstellung der Einschaltverzögerung

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Mit dieser Funktion kann man eine Einschaltverzögerung des Pumpenbetriebs einstellen. Diese Verzögerung tritt nur dann ein, wenn die Pumpe durch Unterbrechung der Stromversorgung aus- und wieder eingeschaltet wird.</p> <p>Diese Einstellung kann deaktiviert werden, indem man sie auf Off (werkseitige Einstellung) stellt, oder man wählt eine Verzögerung zwischen 1 und 60 Minuten.</p> <p>Bei aktivierter Einschaltverzögerung blinken die Alarm- und Impuls-Led während der eingestellten Zeit gleichzeitig (1 Sek. On – 1 Sek. Off) und auf dem Display wird der Countdown der verbleibenden Sekunden angezeigt. Steht die Pumpe auf Stopp werden nur die blinkenden Leds angezeigt. Die Funktion kann während der Verzögerungszeit über das Menü auf OFF gestellt und somit deaktiviert werden.</p> <p>Mit der Taste  gelangt man zur Bearbeitung, dann mit den  Tasten den Wert eingeben. Mit  bestätigen und zurück zum Hauptmenü.</p> |

### Einstellung der Verzögerungskalibrierung

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Gestattet die Einstellung einer Verzögerung des Betriebs der Pumpe nach der Kalibrierung der Sonde (Redox oder pH).</p> <p>Diese Einstellung kann deaktiviert werden, indem man sie auf Off (werkseitige Einstellung) stellt, oder man wählt eine Verzögerung zwischen 1 und 60 Minuten.</p> <p>Bei aktivierter Einschaltverzögerung blinken die Alarm- und Impuls-Led während der eingestellten Zeit gleichzeitig (1 Sek. On – 1 Sek. Off) und auf dem Display wird der Countdown der verbleibenden Sekunden angezeigt. Steht die Pumpe auf Stopp werden nur die blinkenden Leds angezeigt. Die Funktion kann während der Verzögerungszeit über das Menü auf OFF gestellt und somit deaktiviert werden.</p> <p>Mit der Taste  gelangt man zur Bearbeitung, dann mit den  Tasten den Wert eingeben. Mit  bestätigen und zurück zum Hauptmenü.</p> |

## Absatz 11 – Einstellung der maximalen Förderleistung

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Ermöglicht die Einstellung der maximalen Förderleistung, die die Pumpe erreichen kann, und der programmierte Betriebs-Modus (% oder Frequenz) wird zur Anzeige der Förderleistung in der Standardmesseinheit. Durch Drücken von  erhalten Sie Zugriff auf die Veränderung.</p> <p>Stellen Sie dann über die Tasten   den Wert ein. Über  bestätigen Sie und werden zum Hauptmenü zurückgeleitet</p> |

## Absatz 12 – Kalibrierung der Förderleistung

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Im Hauptmenü erscheint das gespeicherte Hubvolumen. Es kann auf zwei Arten kalibriert werden:</p> <p> <br/> <b>MANUELL</b> – Geben Sie über die Tasten   manuell das Hubvolumen ein und bestätigen Sie über .</p> <p><b>AUTOMATISCH</b> – Die Pumpe führt 100 Hube aus, die über die Taste  gestartet werden. Wenn diese Hube ausgeführt worden sind, geben Sie über die Tasten   die von der Pumpe angesaugte Menge ein und bestätigen Sie über .</p> <p>Der eingeegebene Wert wird bei der Berechnung der Förderleistungen verwendet.</p> |

## Absatz 13 – Statistiken

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Im Hauptmenü werden die Betriebsstunden der Pumpe angezeigt. Durch Drücken der Taste  erhalten Sie Zugriff auf die anderen Statistiken:</p> <ul style="list-style-type: none"> <li>- Strokes = Anzahl der von der Pumpe ausgeführten Hube</li> <li>- Q.ty(L) = in Litern ausgedrückte von der Pumpe dosierte Menge; dieser Wert wird entsprechend des gespeicherten Hubvolumens berechnet.</li> <li>- Power = Anzahl der Pumpenstarts</li> <li>- Reset = über die Tasten   können Sie die Uhr auf Null stellen (YES) oder nicht (NO), über  bestätigen Sie.</li> </ul> <p>Durch Drücken von  gelangen Sie zum Hauptmenü zurück.</p> |

## Absatz 14 – Passwort

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Durch Eingabe des Passworts erhalten Sie Zugriff auf die Programmierung und können sich alle eingegebenen Werte ansehen. Jedes Mal wenn Sie versuchen, diese Werte zu verändern, erscheint ein eigener Passwortdialog. Die blinkende Linie zeigt die veränderbare Nummer an.</p> <p>Wählen Sie über die Taste  die Nummer aus (zwischen 1 und 9), wählen Sie über die Taste  die Nummer aus, die verändert werden soll, und bestätigen Sie . Durch Eingabe von "0000" (werkseitige Einstellung) wird die Passwortabfrage übersprungen.</p> |

## Absatz 15 – Durchflussalarm

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Ermöglicht die Aktivierung (Deaktivierung) des Durchflusssensors. Wenn er einmal aktiviert ist (ON), erhalten Sie durch Drücken der Taste  Zugriff auf den Abfragedialog, wie viele Signale die Pumpe abwartet, bevor Sie einen Alarm auslöst. Durch Drücken von  beginnt die Nummer zu blinken. Stellen Sie dann über die Tasten   den Wert ein. Über  bestätigen Sie. Durch Drücken von  werden Sie zum Hauptmenü zurückgeleitet.</p> |

## Absatz 16 – Füllstandalarm 1

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                   |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Dieser Menüpunkt ist nur bei im manuellen Modus bzw. im pH- oder Redox-Modus vorhanden. Mit ihm kann man beim Auftreten eines Füllstandalarms die Aktivierung des Alarms ohne oder mit Dosierungssperre (Stop) einstellen.</p> <p>Mit  gelangt man zur Bearbeitung, dann mit den Tasten   den gewünschten Alarmtyp einstellen. Mit  bestätigen. Mit  zurück zum Hauptmenü</p> |

## Absatz 17 – Füllstandsalarm

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Ermöglicht die Einstellung des Zeitpunkts, an dem der Füllstandsalarm aktiviert, d.h. die Dosierung blockiert wird (Stop), oder einfach nur das Alarmsignal aktiviert werden soll, ohne dabei die Dosierung zu blockieren.</p> <p>Durch Drücken von  erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten   die Alarmart ein. Über  bestätigen Sie. Durch Drücken von  werden Sie zum Hauptmenü zurückgeleitet.</p> |

## Absatz 18 – Anzeigeeinheit der Förderleistung

| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Ermöglicht die Einstellung der Maßeinheit der Dosierung über eine Anzeige auf dem Display.</p> <p>Durch Drücken von  erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten   die gewünschte Maßeinheit ein, L/H (Liter/Stunde), GpH (Gallone/Stunde), ml/m (Milliliter/Minute) oder die Standardeinstellung (% oder Frequenz, je nach Einstellung).</p> <p>Über  bestätigen Sie und werden zum Hauptmenü zurückgeleitet</p> |

## Absatz 19 - Einstellung Pause

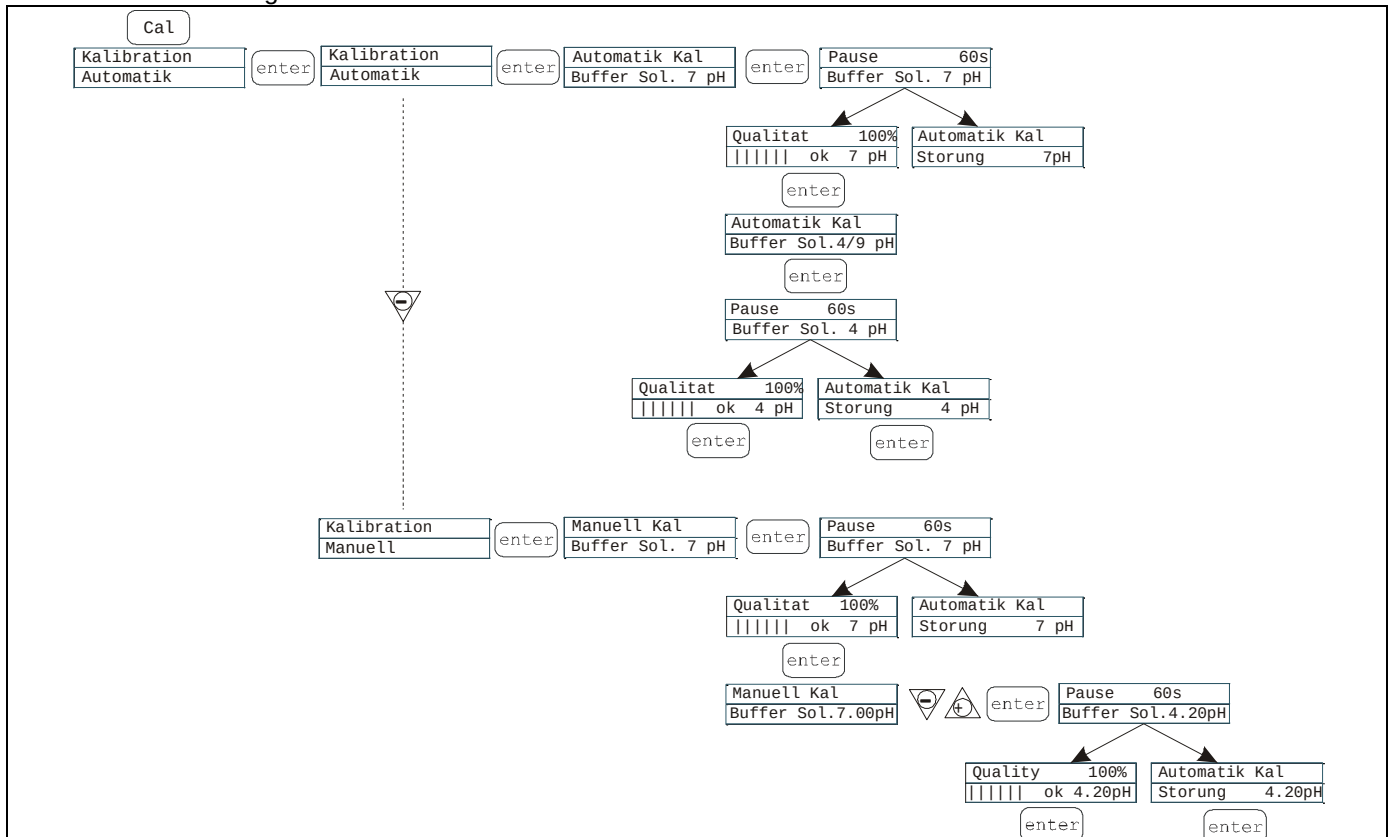
| Programmierung | Funktionsweise                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Steuereingang: Pumpe Stop / Start.<br/>Werkseinstellung: Bei Schließerkontakt (elektrisch leitende Verbindung zwischen beiden Anschlussklemmen) Pumpenstop.</p> <p>Durch Drücken von  erhalten Sie Zugriff auf die Veränderung.</p> <p>Stellen Sie dann über die Tasten   den Wert ein (N. OFFEN oder N. GESCHLOSSEN).</p> <p>Über  bestätigen Sie und werden zum Hauptmenü zurückgeleitet.</p> |

## Menü zur Kalibrierung des pH-Wert

Durch 3 Sekunden langes Drücken der Taste CAL erhalten Sie Zugriff auf das Kalibriermenü. Wenn die Kalibrierung während der Programmierung ausgeschlossen wurde, wird auf dem Display folgendes angezeigt:

|             |
|-------------|
| Kalibration |
| Off         |

Wenn die Kalibrierung aktiv ist:



Es ist möglich, die automatische oder die manuelle Kalibrierung zu wählen. In beiden Fällen erfolgt die Kalibrierung auf den pH-Wert 7 automatisch.

- Automatische Kalibrierung:

Auf dem Display erscheint der Wert der Pufferlösung. Die Sonde in das Fläschchen einführen, durch Drücken von



erscheint auf dem Display die Rückwärtszählung der für die vollständige Durchführung der Kalibrierung erforderlichen 60 Sekunden. Wenn die Qualität des Abgleichs unter 50% liegt, erscheint eine Fehlermeldung auf



dem Display und durch Drücken von verlassen Sie die Kalibrierung (nach 4 Sekunden verlässt die Pumpe die Kalibrierung automatisch). Wenn die Qualität des Abgleichs über 50% liegt, wird der Wert auf dem Display



angezeigt und durch Drücken von wird die Pufferlösung mit pH-Wert 4 oder 9 gefordert; an diesem Punkt ist das Verfahren identisch zum zuvor liegenden Verfahren.

- Manuelle Kalibrierung:

Wenn auf dem Display der Wert der Pufferlösung erscheint, die Sonde in das Fläschchen einführen, durch



Drücken von erscheint auf dem Display die Rückwärtszählung der für die vollständige Durchführung der Kalibrierung erforderlichen 60 Sekunden. Wenn die Qualität des Abgleichs unter 50% liegt, erscheint eine



Fehlermeldung auf dem Display und durch Drücken von verlassen Sie die Kalibrierung (nach 4 Sekunden verlässt die Pumpe die Kalibrierung automatisch). Wenn die Qualität des Abgleichs über 50% liegt, wird der Wert



auf dem Display angezeigt und durch Drücken von blinkt der pH-Wert 7.00 auf dem Display. Geben Sie



über die Tasten den Wert der zur Verfügung stehenden Pufferlösung ein, bestätigen Sie durch



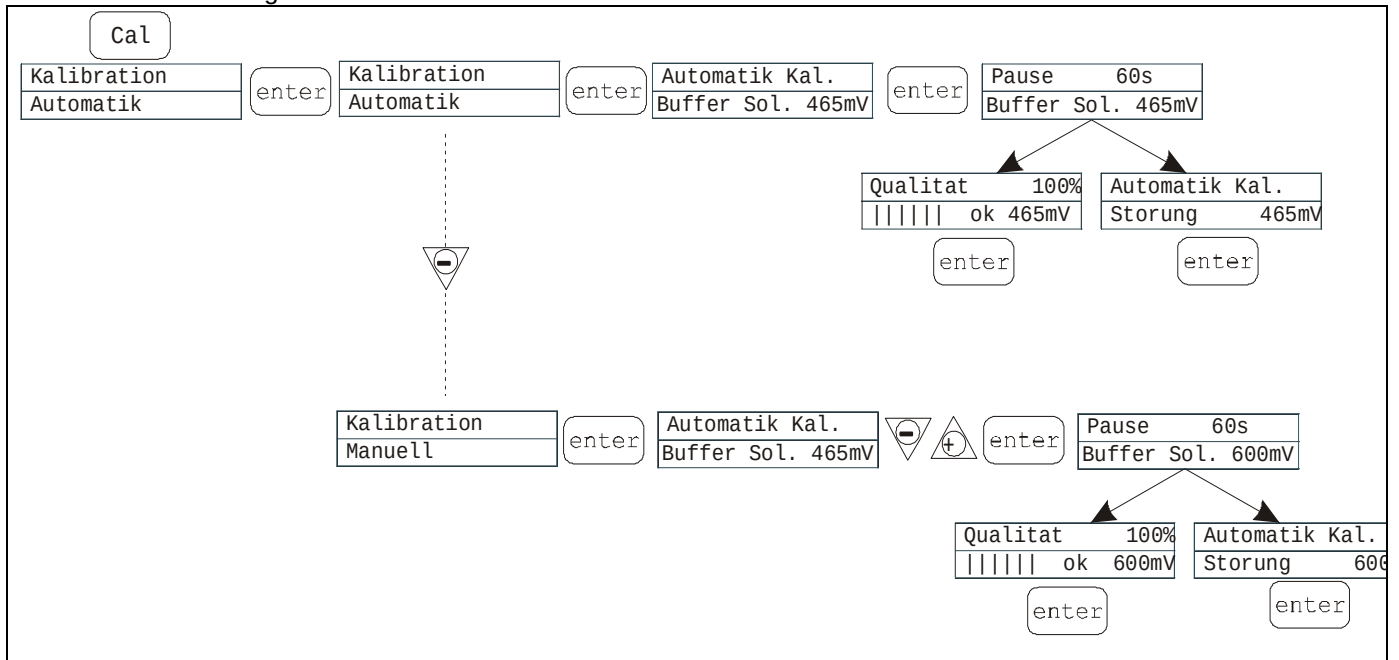
Drücken von und starten Sie das Kalibrierverfahren wie zuvor.

## Menü zur Kalibrierung des Redox-Potentials (O.R.P.)

Durch 3 Sekunden langes Drücken der Taste CAL erhalten Sie Zugriff auf das Kalibriermenü, wenn die Kalibrierung während der Programmierung ausgeschlossen wurde, wird auf dem Display folgendes angezeigt:

|             |
|-------------|
| Kalibration |
| Off         |

Wenn die Kalibrierung aktiv ist:



Es ist möglich, die automatische oder die manuelle Kalibrierung zu wählen.

### - Automatische Kalibrierung:

Auf dem Display erscheint der Wert der Pufferlösung. Die Sonde in das Fläschchen einführen, durch Drücken von



erscheint auf dem Display die Rückwärtszählung der für die vollständige Durchführung der Kalibrierung erforderlichen 60 Sekunden. Wenn die Qualität des Abgleichs unter 50% liegt, erscheint eine Fehlermeldung auf



dem Display und durch Drücken von verlassen Sie die Kalibrierung (nach 4 Sekunden verlässt die Pumpe die Kalibrierung automatisch). Wenn die Qualität des Abgleichs über 50% liegt, wird der Wert auf dem Display



angezeigt und durch Drücken von wird das Verfahren zu Ende geführt.

### - Manuelle Kalibrierung:

Auf dem Display erscheint der Wert der Pufferlösung. Die Sonde in das Fläschchen einführen, durch Drücken von



blinkt der Wert 465mV auf dem Display. Führen Sie die Sonde in Ihre Lösung ein und zeigen Sie dann über



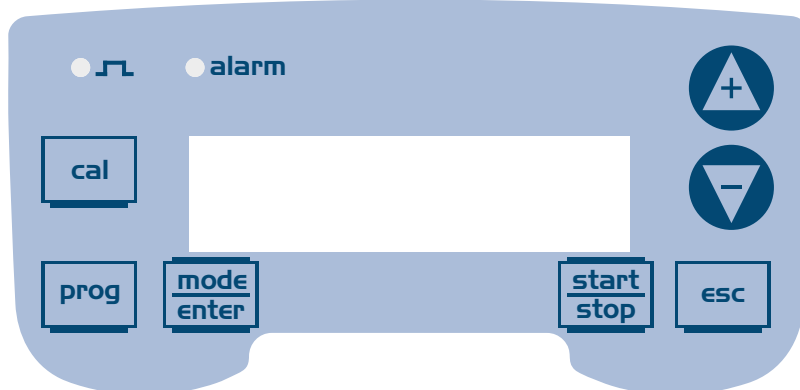
die Tasten den Wert der zur Verfügung stehenden Lösung an. Durch Drücken von bestätigen Sie und starten das Kalibrierverfahren wie zuvor.



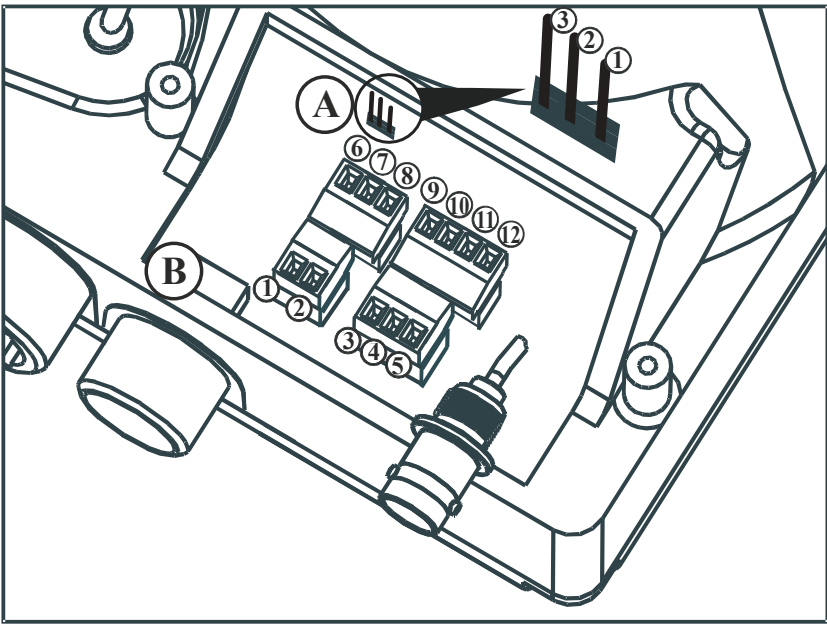
## Alarme

| Anzeige                                                                                                                                                               | Ursache        | Unterbrechung    |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|-------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|
| Alarm-Led leuchtet kontinuierlich<br>Der Schriftzug Lev blinkt<br>Bsp. <table><tr><td>Man</td><td></td></tr><tr><td>Lev</td><td>P100%</td></tr></table>               | Man            |                  | Lev                                 | P100%                                                                                                | Alarm Füllstand nicht ausreichend, ohne Unterbrechung des Pumpenbetriebs                              | Flüssigkeit nachfüllen                                                                                                                                                                    |       |      |
| Man                                                                                                                                                                   |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Lev                                                                                                                                                                   | P100%          |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Alarm-Led leuchtet kontinuierlich<br>Der Schriftzug Lev und Stop blinkt<br>Bsp. <table><tr><td>Man</td><td></td></tr><tr><td>Lev Stop</td><td>P100%</td></tr></table> | Man            |                  | Lev Stop                            | P100%                                                                                                | Alarm Füllstand nicht ausreichend, mit Unterbrechung des Pumpenbetriebs                               | Flüssigkeit nachfüllen                                                                                                                                                                    |       |      |
| Man                                                                                                                                                                   |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Lev Stop                                                                                                                                                              | P100%          |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Alarm-Led leuchtet kontinuierlich<br>Der Schriftzug Flw blinkt<br>Bsp. <table><tr><td>Man</td><td><b>F</b></td></tr><tr><td>Flu</td><td>P100%</td></tr></table>       | Man            | <b>F</b>         | Flu                                 | P100%                                                                                                | Durchflussalarm aktiv, die Pumpe hat nicht die programmierten Signale vom Durchflusssensor empfangen. | Die Taste <table><tr><td>start</td></tr><tr><td>stop</td></tr></table> drücken                                                                                                            | start | stop |
| Man                                                                                                                                                                   | <b>F</b>       |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Flu                                                                                                                                                                   | P100%          |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| start                                                                                                                                                                 |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| stop                                                                                                                                                                  |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Bsp. <table><tr><td>Param. Störung</td></tr><tr><td>Programm störung</td></tr></table>                                                                                | Param. Störung | Programm störung | Kommunikationsfehler mit dem EEPROM | Die Taste <table><tr><td>prog</td></tr></table> drücken, um auf die Default-Parameter rückzustellen. | prog                                                                                                  |                                                                                                                                                                                           |       |      |
| Param. Störung                                                                                                                                                        |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Programm störung                                                                                                                                                      |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| prog                                                                                                                                                                  |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Der Schriftzug „OFA“ blinkt<br>Der Schriftzug “Stop” blinkt<br>Bsp. <table><tr><td>Hoch</td><td>475 mV OFA</td></tr><tr><td>Stop</td><td>P 75%</td></tr></table>      | Hoch           | 475 mV OFA       | Stop                                | P 75%                                                                                                | O.F.A.-Alarm                                                                                          | Die Taste <table><tr><td>start</td></tr><tr><td>stop</td></tr></table> drücken, um das Blinken des Schriftzugs Stop anzuhalten. Die Taste erneut drücken, um die Pumpe wieder zu starten. | start | stop |
| Hoch                                                                                                                                                                  | 475 mV OFA     |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Stop                                                                                                                                                                  | P 75%          |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| start                                                                                                                                                                 |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| stop                                                                                                                                                                  |                |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Der Schriftzug „Alm“ blinkt<br>Bsp. <table><tr><td>Hoch</td><td>475 mV Alm</td></tr><tr><td>P</td><td>75%</td></tr></table>                                           | Hoch           | 475 mV Alm       | P                                   | 75%                                                                                                  | Der von der Sonde gemessene Wert befindet sich außerhalb des eingestellten Alarmbereichs              | Die richtige Einstellung des Parameters „Alarmbereich“ in der Programmierung überprüfen.                                                                                                  |       |      |
| Hoch                                                                                                                                                                  | 475 mV Alm     |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| P                                                                                                                                                                     | 75%            |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| Der Schriftzug „OFA“ blinkt<br>Bsp. <table><tr><td>Hoch</td><td>475 mV Cal</td></tr><tr><td>P</td><td>75%</td></tr></table>                                           | Hoch           | 475 mV Cal       | P                                   | 75%                                                                                                  | Alarm Sonde nicht kalibriert                                                                          | Die Kalibrierung der Sonde vornehmen.                                                                                                                                                     |       |      |
| Hoch                                                                                                                                                                  | 475 mV Cal     |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |
| P                                                                                                                                                                     | 75%            |                  |                                     |                                                                                                      |                                                                                                       |                                                                                                                                                                                           |       |      |

## Panel de control – TEKNA TPT



|  |                                                                                                                                                                                                                                                                                                                                                                                                          |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Acceso al menú de programación.                                                                                                                                                                                                                                                                                                                                                                          |
|  | Durante el funcionamiento de la bomba: Si se pulsa visualiza cíclicamente en el display los valores programados; si se pulsa simultáneamente a las teclas   aumenta o disminuye un valor dependiente del modo de funcionamiento escogido. En programación ejerce la función “enter”, es decir, confirma la entrada en los diferentes niveles del menú y las modificaciones en el interior de los mismos. |
|  | Pone en marcha y detiene la bomba. En condiciones de alarma de nivel (sólo función de alarma), de alarma de flujo y alarma <i>memory</i> activas, desactiva la señalización en el display.                                                                                                                                                                                                               |
|  | Para “salir” de los diferentes niveles del menú. Antes de salir definitivamente de la programación se accede a la solicitud de memorización de las modificaciones.                                                                                                                                                                                                                                       |
|  | Acceso al menú de calibración de la bomba. Si está en modo OFF, el menú de calibración no se activa.                                                                                                                                                                                                                                                                                                     |
|  | Desplaza los menús hacia arriba o aumenta los valores numéricos a modificar. En modo Batch puede poner en marcha la dosificación.                                                                                                                                                                                                                                                                        |
|  | Desplaza los menús hacia abajo o disminuye los valores numéricos a modificar.                                                                                                                                                                                                                                                                                                                            |
|  | Led verde parpadeante durante la dosificación.                                                                                                                                                                                                                                                                                                                                                           |
|  | Led rojo que se enciende durante las diferentes situaciones de alarma.                                                                                                                                                                                                                                                                                                                                   |

| Conexiones eléctricas                                                             |    |                                                                      |
|-----------------------------------------------------------------------------------|----|----------------------------------------------------------------------|
|  | 1  | Entrada sensor de flujo                                              |
|                                                                                   | 2  |                                                                      |
|                                                                                   | 3  | Entrada sonda de temperatura                                         |
|                                                                                   | 4  | PT100/PT1000 (ver esquemas y conexiones)                             |
|                                                                                   | 5  |                                                                      |
|                                                                                   | 6  | Entradas señal en frecuencia (contador lanza-impulsos)               |
|                                                                                   | 7  | Entrada trigger externo                                              |
|                                                                                   | 8  | Entrada sonda control nivel 2 (sólo en modalidad pH, Redox o manual) |
|                                                                                   | 9  | Polo +                                                               |
|                                                                                   | 10 | Polo -                                                               |
|                                                                                   | 11 | Entrada señal Pausa                                                  |
|                                                                                   | 12 | Entrada control remoto (start-stop)                                  |
|                                                                                   | A  | Jumper selección entrada frecuencia                                  |
|                                                                                   | B  | Entrada sonda control nivel                                          |

**DIAGRAMAS Y CONEXIONES**

Diagrama conexiones PT100/PT1000 2 hilos

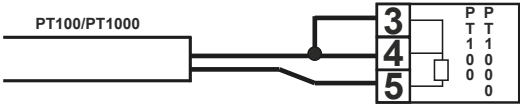


Diagrama conexiones PT100/PT1000 3 hilos

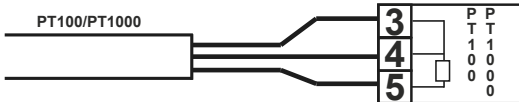
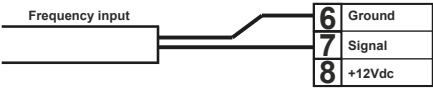


Diagrama conexiones entrada en frecuencia tipo contacto seco.



Posición Jumper

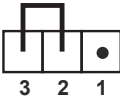
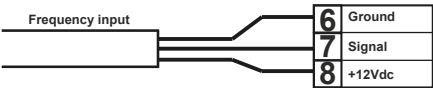


Diagrama conexiones entrada en frecuencia tipo sensor de hall.



Posición Jumper

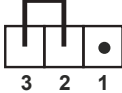
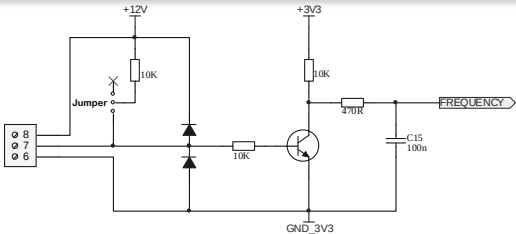
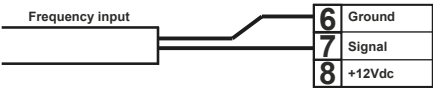
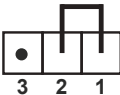


Diagrama conexiones entrada en frecuencia tipo señal de tensión (0-5V)



Posición Jumper



Pulsando la tecla **prog** durante más de tres segundos se accede a la programación. Con las teclas   se pueden desplazar las voces del menú, con la tecla **mode enter** se accede a las modificaciones. En la fábrica la bomba se programa en modo constante. La bomba vuelve automáticamente al modo de funcionamiento después de 1 minuto de inactividad. En este caso los datos que se han introducido no serán memorizados. Con la tecla **ESC** se sale de los niveles de la programación. Al salir de la programación el display visualiza:

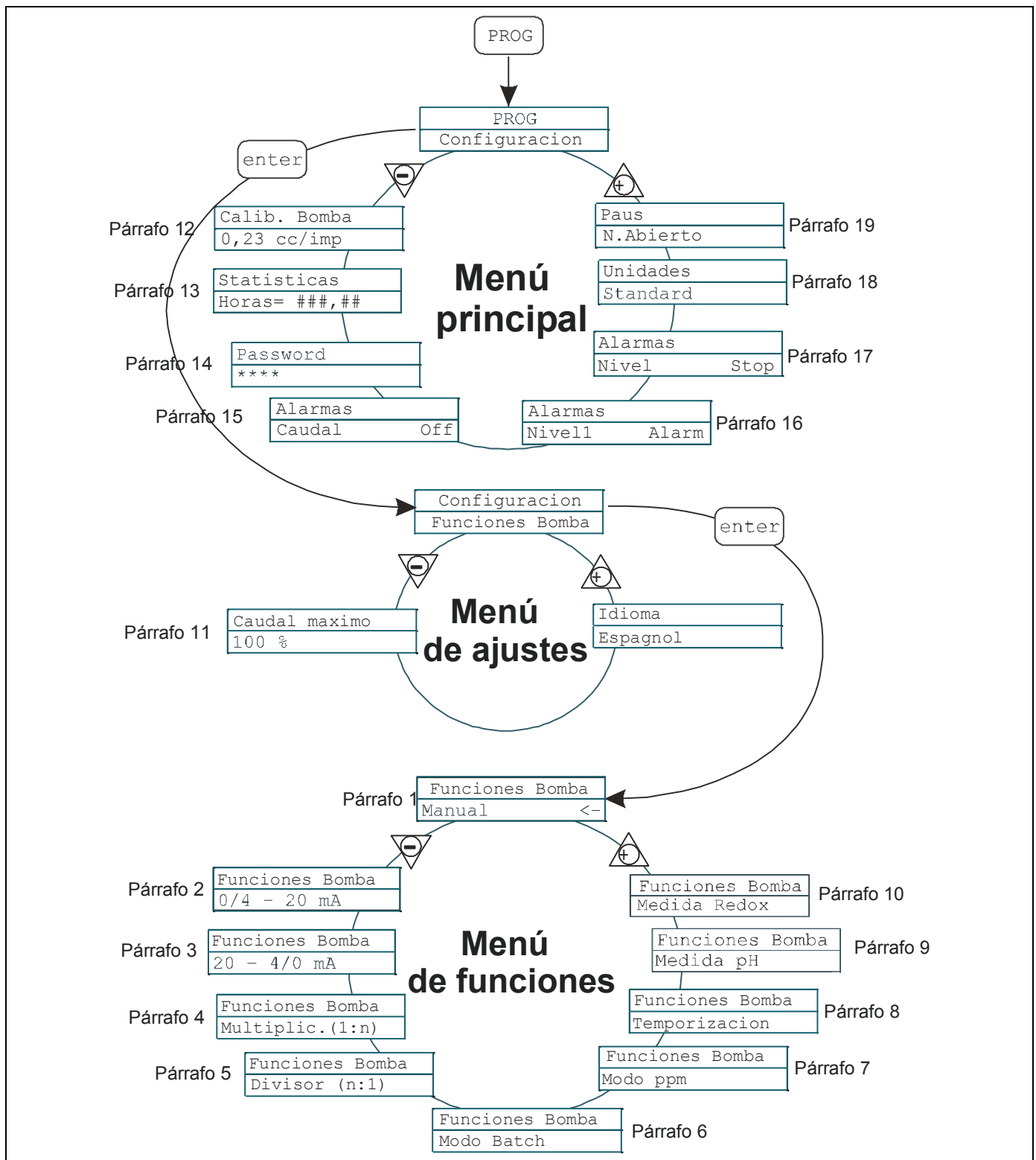
|         |
|---------|
| Exit    |
| No Save |

▽ ▲

|      |
|------|
| Exit |
| Save |

**mode enter**

para confirmar la elección



## Programación del idioma

| Programación | Funcionamiento                                                                                                                                                                                                                      |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Permite seleccionar el idioma, en la fábrica la bomba se programa en inglés. Pulsando la tecla  se accede a la modificación, con las teclas   se programa el valor. Con la tecla  se confirma y se vuelve al menú principal.</p> |

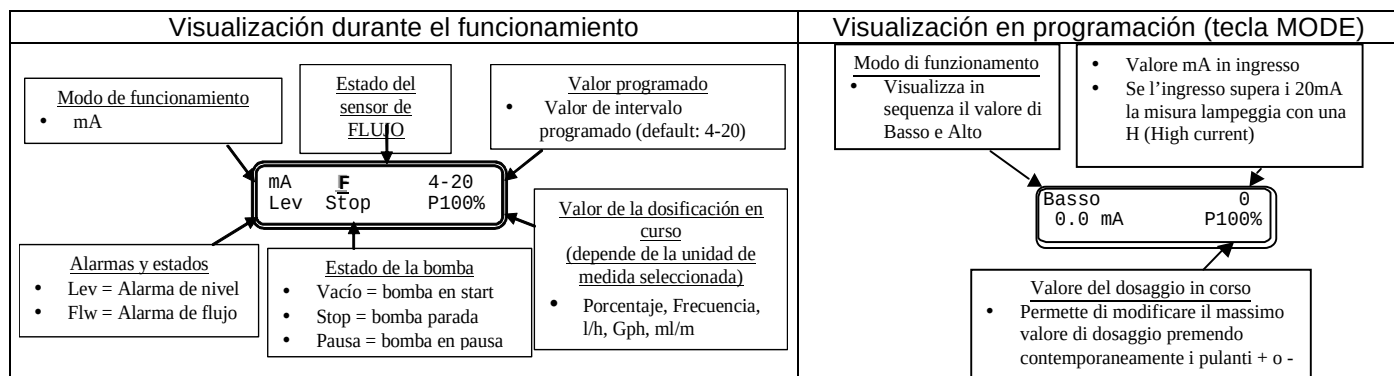
## Párrafo 1 – Dosificación manual

| Programación | Funcionamiento                                                                                                                                                            |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>La bomba trabaja en modo constante. El caudal se regula manualmente pulsando simultáneamente las teclas   para aumentar el caudal o las teclas   para disminuirlo.</p> |

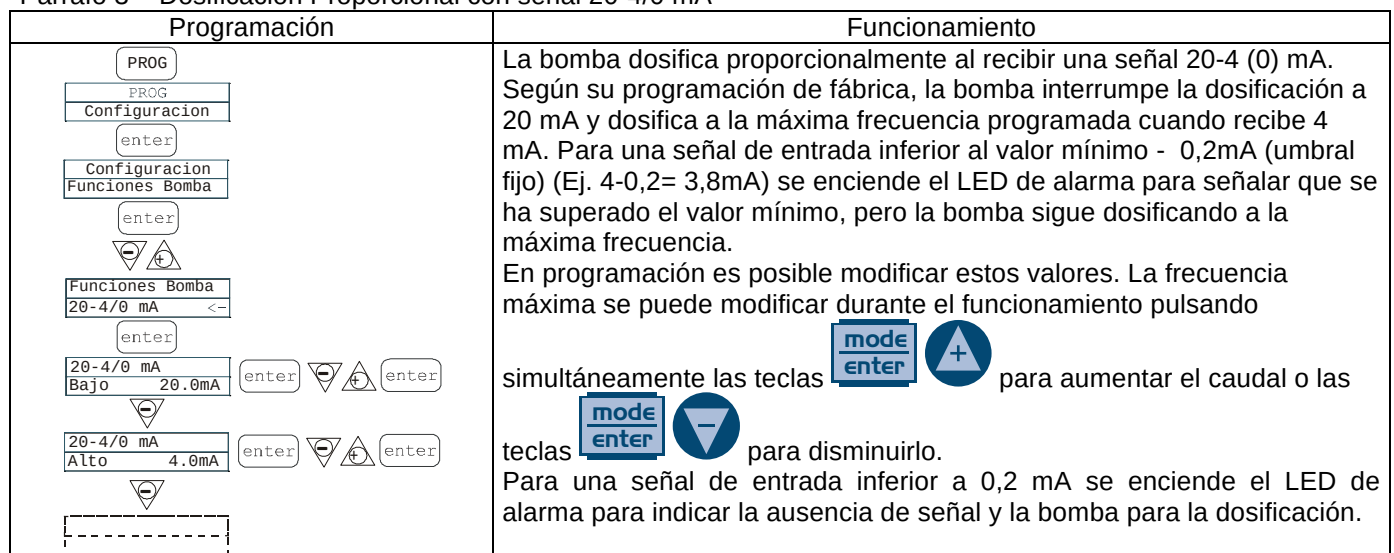
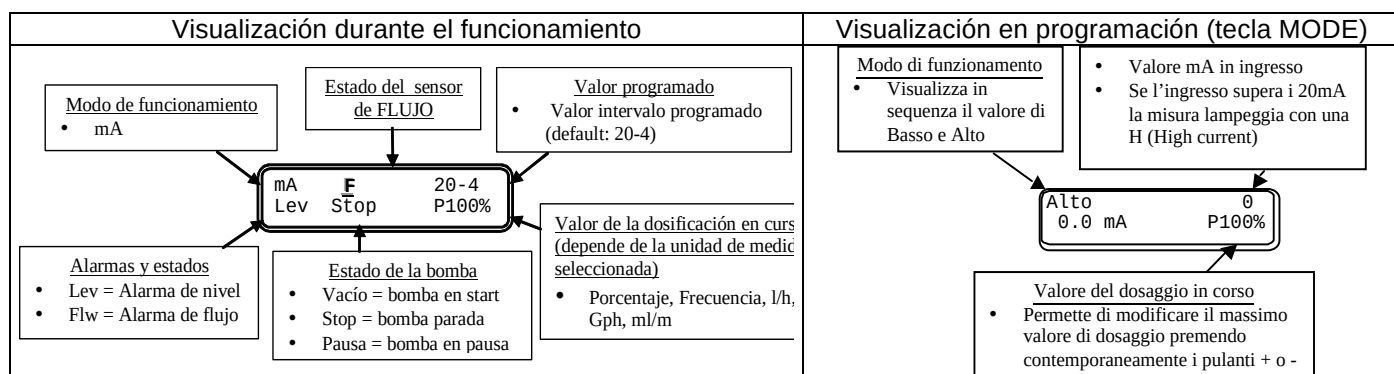
| Visualización durante el funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Visualización en programación (tecla MODE)                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Modo de funcionamiento</b></p> <ul style="list-style-type: none"> <li>Man = Manual</li> </ul> <p><b>Estado del sensor de FLUJO</b></p> <p>MAN <b>F</b> Stop P100%</p> <p><b>Alarmas y estados</b></p> <ul style="list-style-type: none"> <li>Liv = Alarma de nivel</li> <li>Fls = Alarma de flujo</li> </ul> <p><b>Estado de la bomba</b></p> <ul style="list-style-type: none"> <li>Vacío = bomba en start</li> <li>Stop = bomba parada</li> <li>Pausa = bomba en pausa</li> </ul> <p><b>Valor de la dosificación en curso (depende de la unidad de medida seleccionada)</b></p> <ul style="list-style-type: none"> <li>Porcentaje, Frecuencia, l/h, Gph, ml/m</li> </ul> | <p><b>Modo de funcionamiento</b></p> <ul style="list-style-type: none"> <li>Visualiza el valor correspondiente de la frecuencia</li> </ul> <p>F320s/m P100%</p> <p><b>Valor de la dosificación en curso</b></p> <ul style="list-style-type: none"> <li>Modifica el caudal máximo pulsando simultáneamente las teclas + o -</li> </ul> |

## Párrafo 2 – Dosificación Proporcional con señal 0/4-20 mA

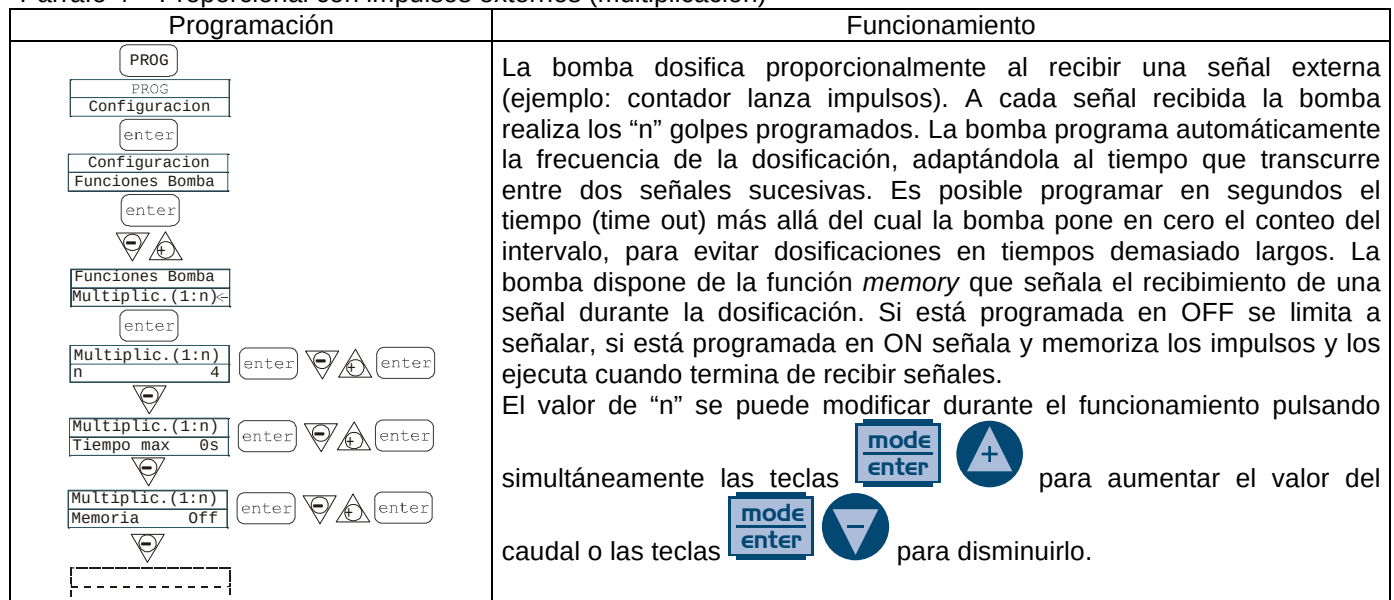
| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>La bomba dosifica proporcionalmente al recibir una señal (0) 4-20 mA. Según su programación de fábrica, la bomba interrumpe la dosificación a 4 mA y dosifica a la máxima frecuencia programada cuando recibe 20 mA. En programación se pueden modificar estos dos valores. La frecuencia máxima se puede modificar durante el funcionamiento pulsando simultáneamente las teclas   para aumentar el caudal o las teclas   para disminuirlo.</p> <p>Para una señal de entrada inferior a 0,2 mA se enciende el LED de alarma para indicar la ausencia de señal.</p> |

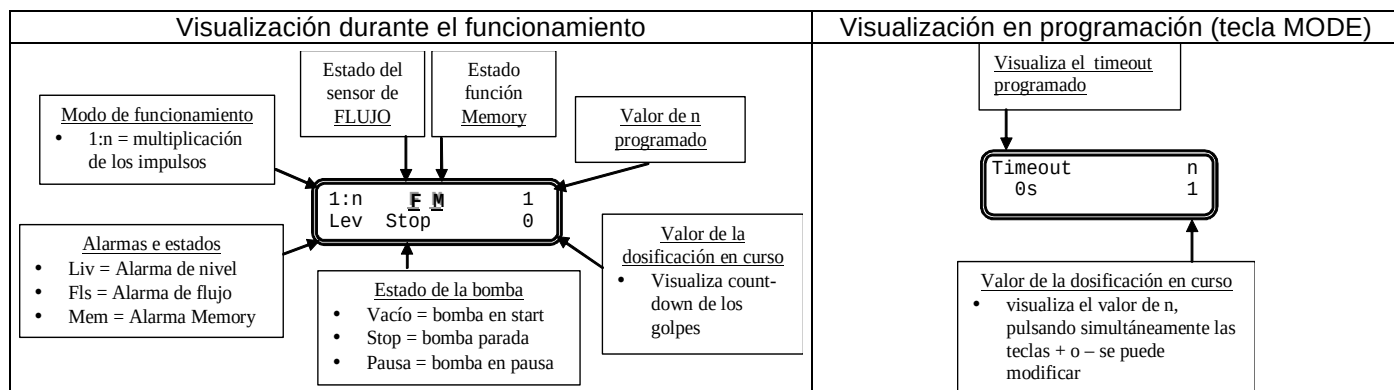


### Párrafo 3 – Dosificación Proporcional con señal 20-4/0 mA

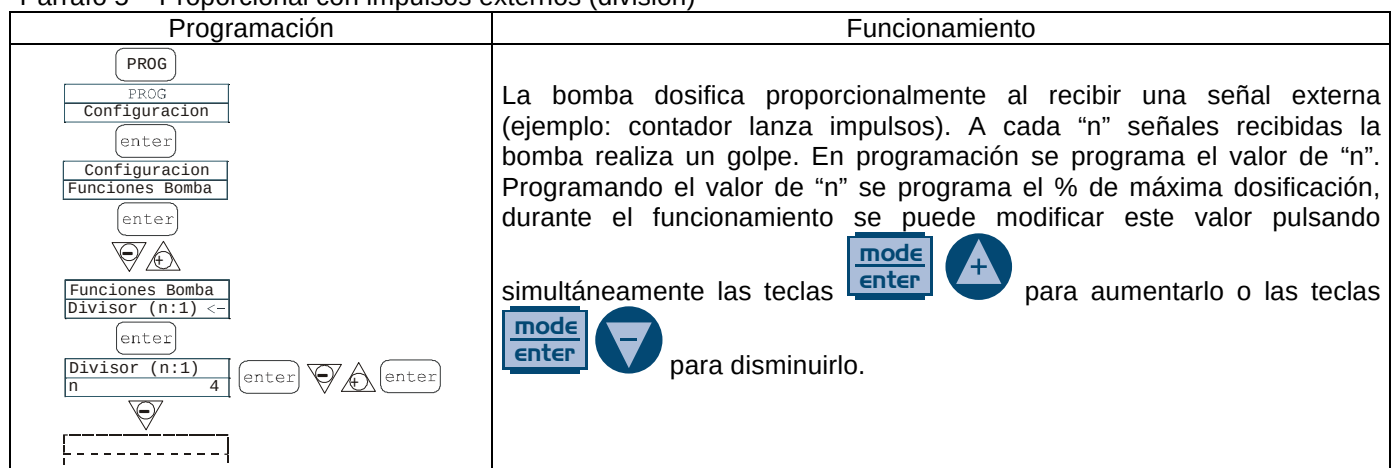
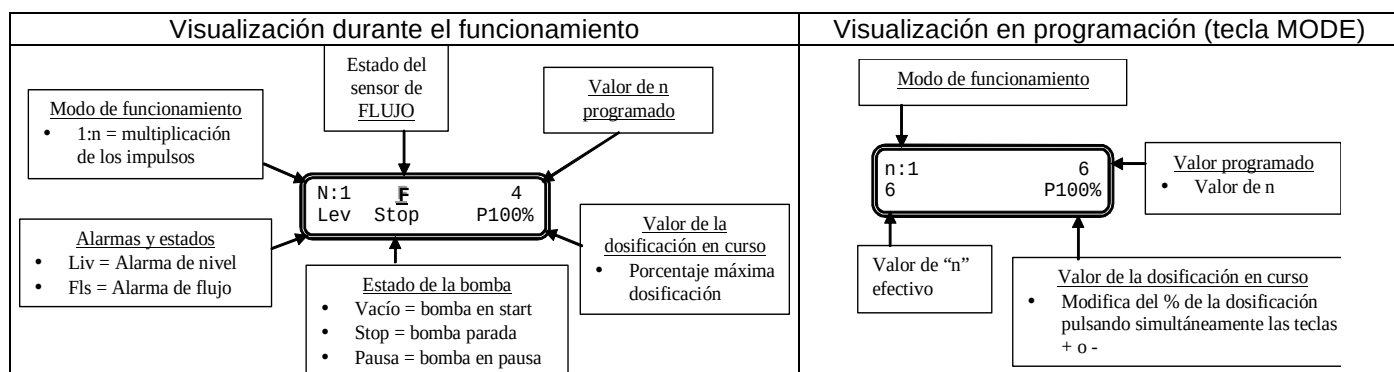


### Párrafo 4 – Proporcional con impulsos externos (multiplicación)

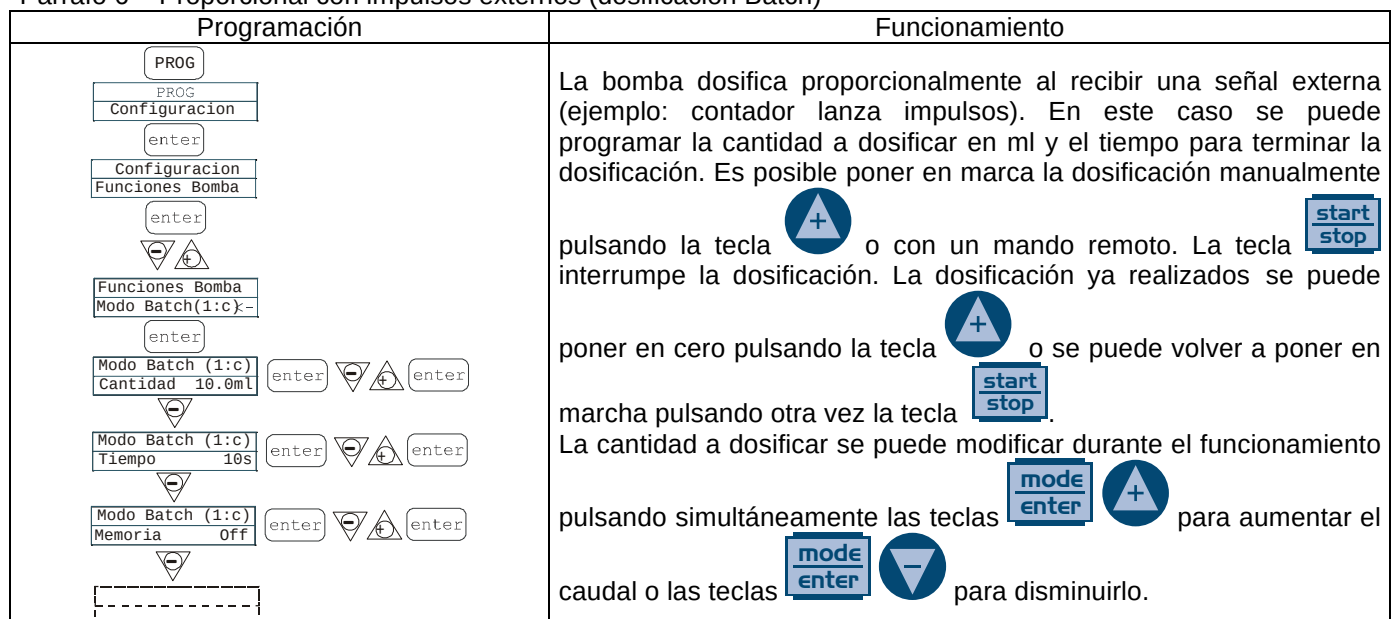


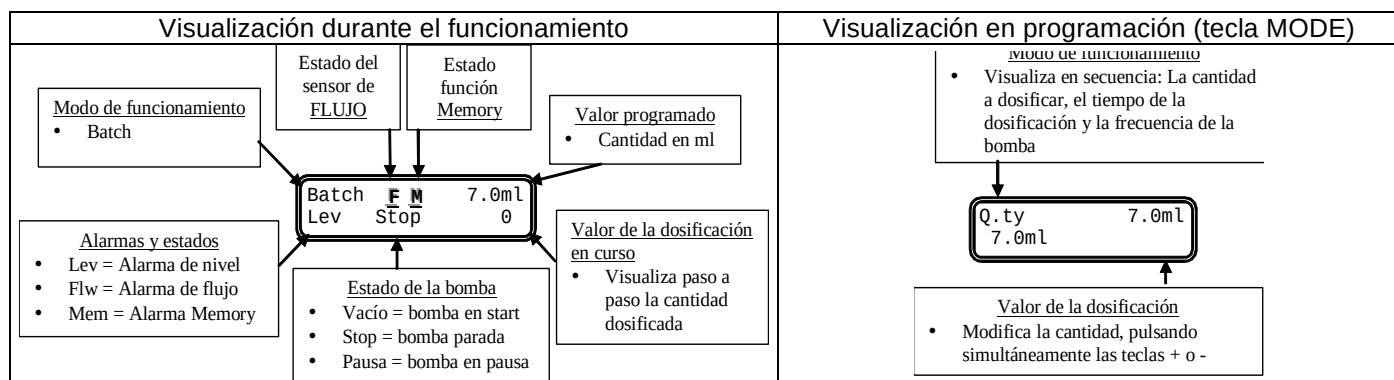


#### Párrafo 5 – Proporcional con impulsos externos (división)

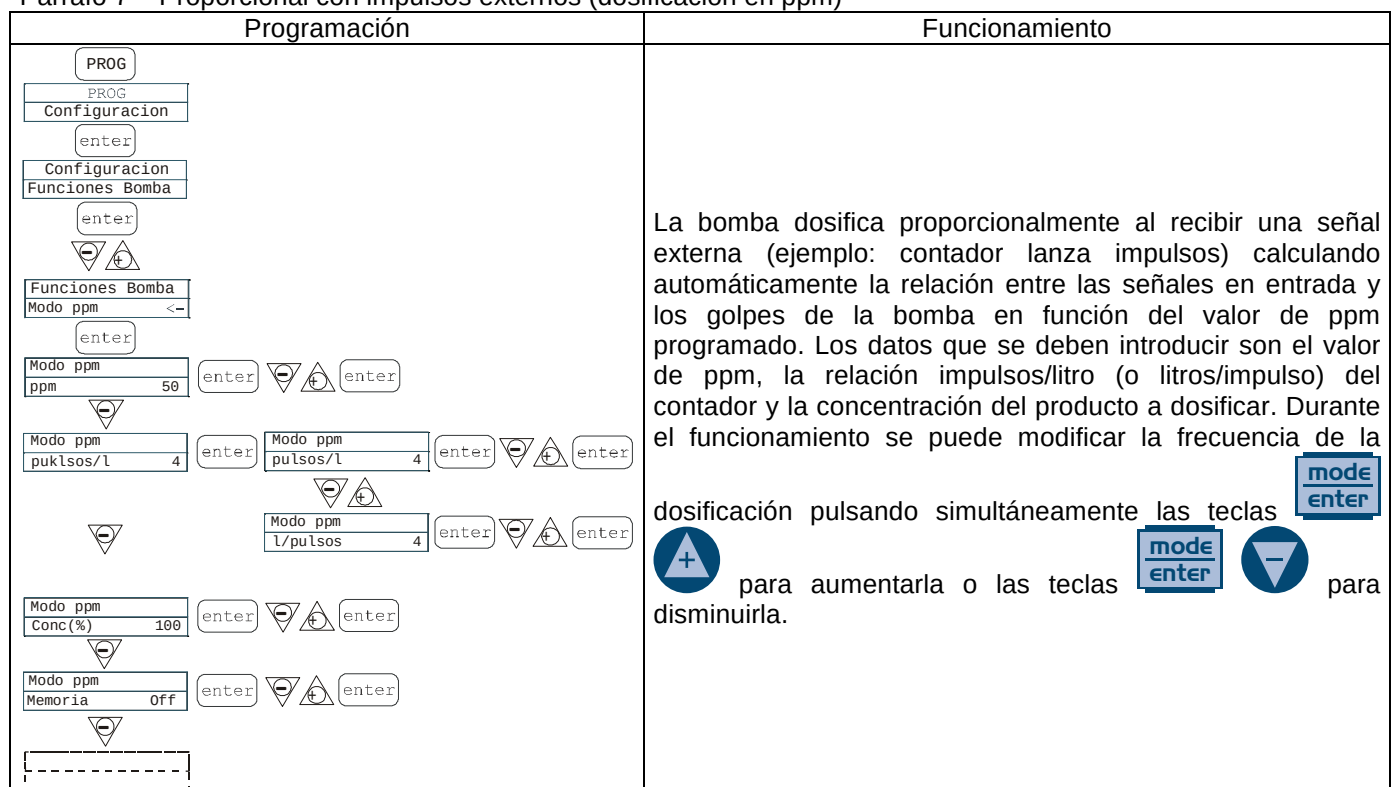
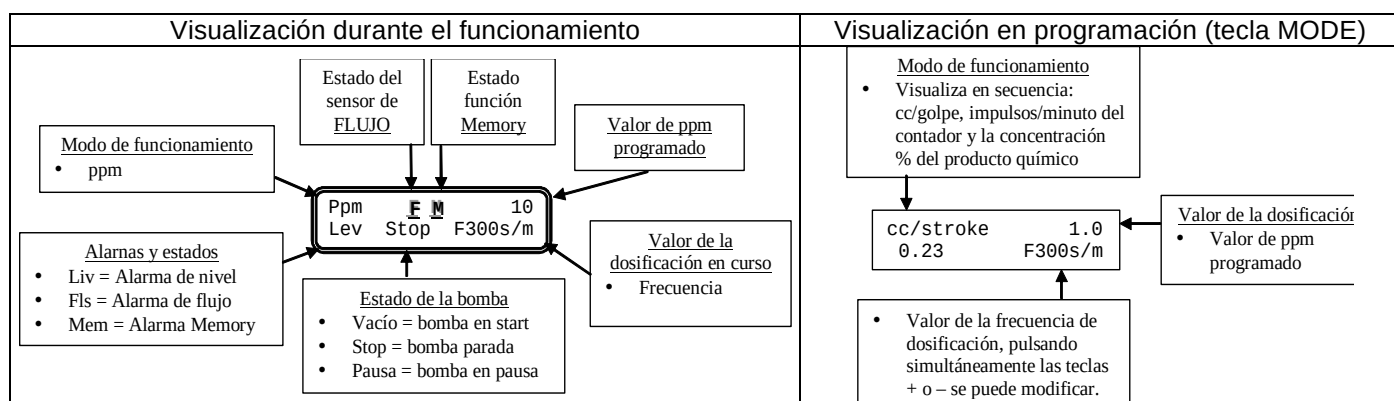


#### Párrafo 6 – Proporcional con impulsos externos (dosificación Batch)

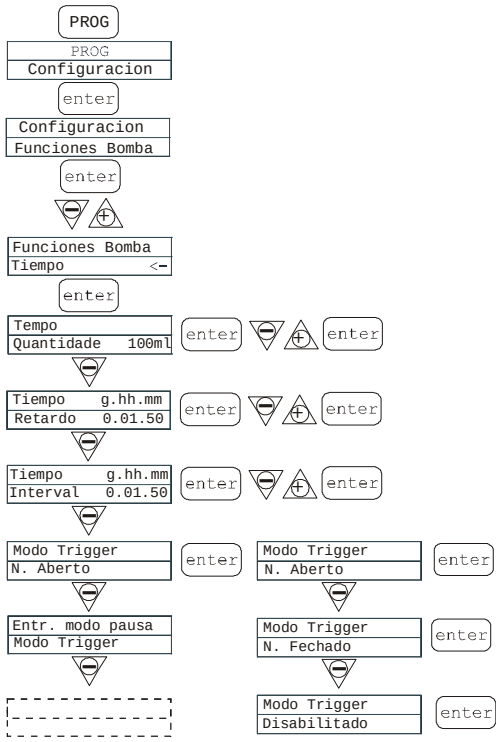
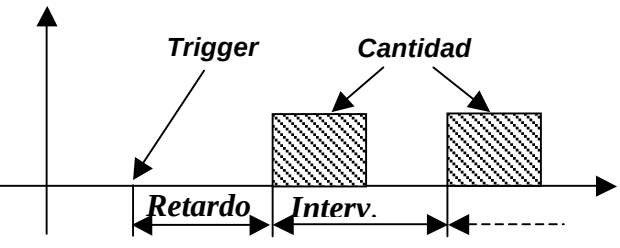
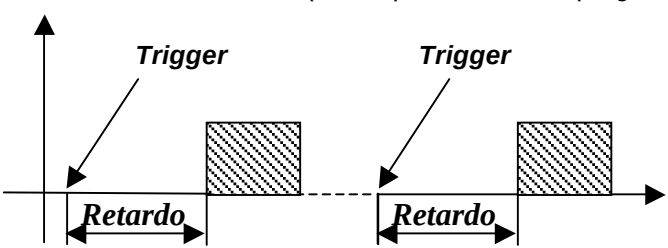


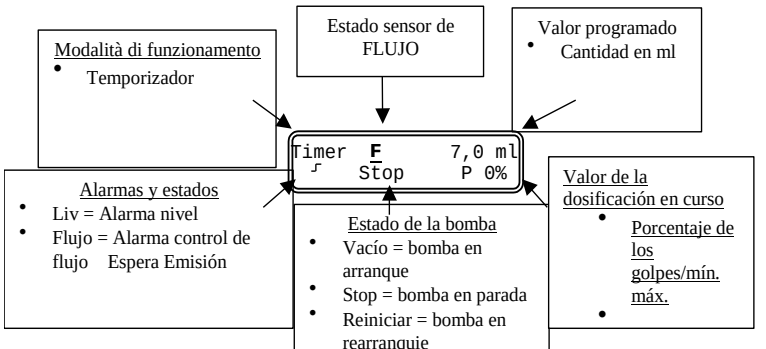
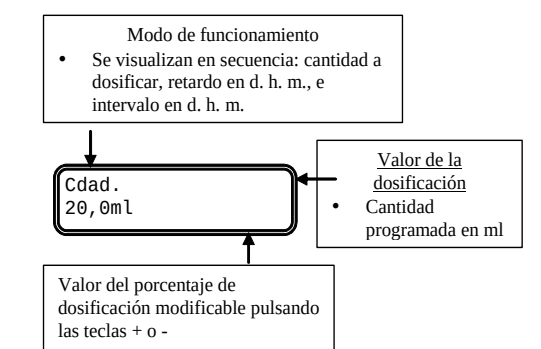


## Párrafo 7 – Proporcional con impulsos externos (dosificación en ppm)

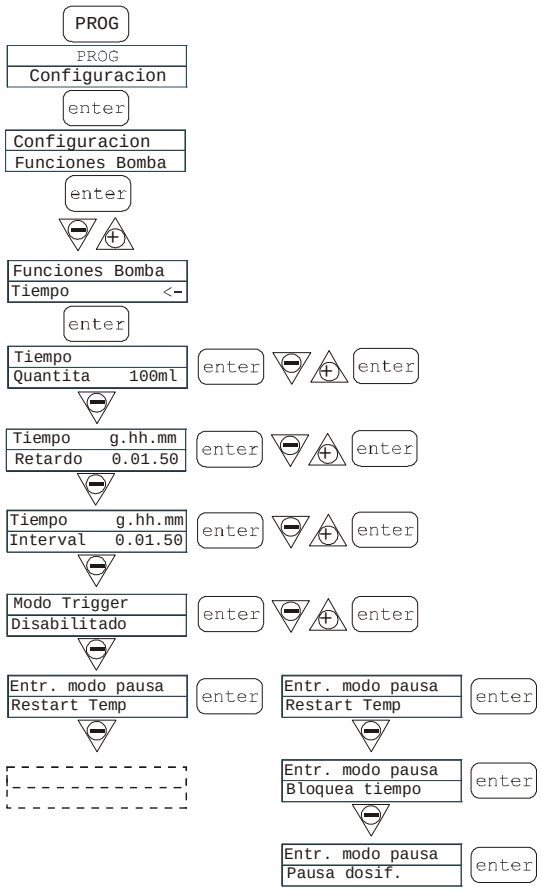
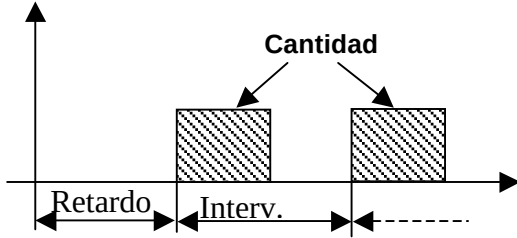
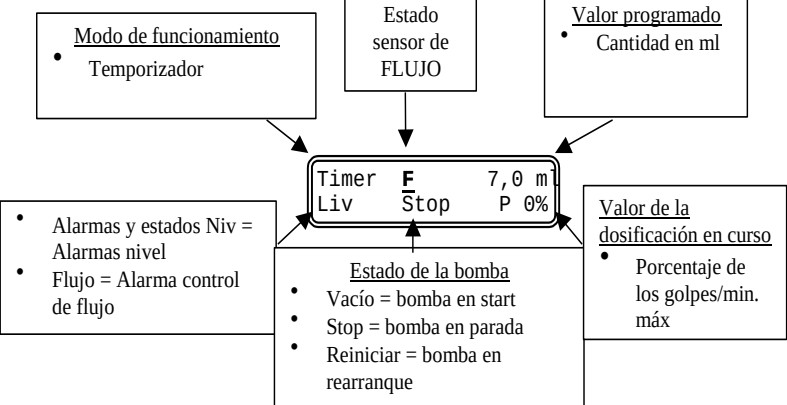
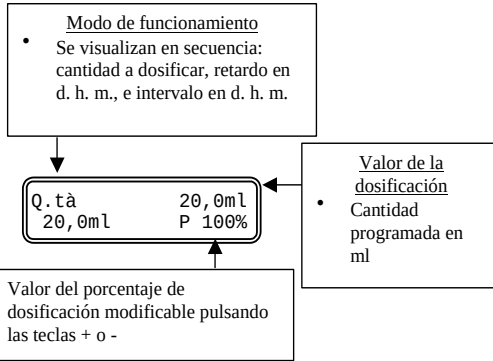


**Párrafo 8 – Dosificación temporizada (*Entrada señal de frecuencia “TRIGGER” activada*)**

| Programación                                                                       | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Después de recibir la señal de <b>TRIGGER</b> programada, la bomba dosifica una cantidad programable en ml. Es posible programar un tiempo de retardo antes de la dosificación (<b>Retardo</b>) y la distancia entre dosificaciones sucesivas (<b>Interv.</b>) como se ilustra en el esquema:</p>  <p>Por ejemplo, programando un tiempo <b>Interv.</b>= 0 se obtiene un sistema en el que la cantidad programada es dosificada después de cada señal de <b>TRIGGER</b> (con el posible retardo programado):</p>  <p>También puede ponerse en marcha la dosificación pulsando la tecla <b>+</b>, que prácticamente simula la señal de <b>Trigger</b>. La señal <b>Trigger</b> puede programarse en <b>N. Aberto</b> (se activa cuando la entrada pasa del modo abierto al cerrado) o en <b>N. Fechado</b> (se activa cuando la entrada pasa del modo cerrado al abierto). La señal <b>Trigger</b> permanece bloqueada durante la dosificación (su recepción no es memorizada ni gestionada). La entrada <b>Pausa (Entrada mando a distancia)</b> no puede ser programada y su activación bloquea la dosificación, mientras que la siguiente desactivación vuelve a poner el sistema en estado de espera de la señal <b>Trigger</b> para efectuar una nueva dosificación.</p> <p>Durante el funcionamiento de la bomba se puede modificar la frecuencia de dosificación pulsando simultáneamente las teclas   para aumentar la frecuencia o las teclas   para disminuirla.</p> |

| Visualización durante el funcionamiento                                             | Visualización en programación (tecla MODE)                                           |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

Párrafo 8 – Dosificación temporizada (**Entrada señal de frecuencia “TRIGGER”no activada**)

| Programación                                                                        | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>La bomba dosifica una cantidad que se puede programar en ml; se puede programar un tiempo de retardo para la puesta en marcha de la bomba (<b>Retardo</b>) y la distancia entre dos dosificaciones sucesivas (<b>Interv.</b>), como se muestra en el esquema:</p>  <p>Los tiempos de <b>Retardo</b> y de <b>Interv</b> son en d.h.m. (días, horas, minutos).</p> <p>La entrada de la <b>Pausa</b> puede programarse de tres modos distintos:</p> <ol style="list-style-type: none"> <li>1. <b>Bloquea tiempo:</b> con la pausa activada, el sistema bloquea el conteo del tiempo actual y lo reanuda cuando se desactiva la pausa.</li> <li>2. <b>Pausa dosificación:</b> con la pausa activada, el sistema sigue contando el tiempo y bloquea la dosificación</li> <li>3. <b>Restart temp:</b> con la pausa activada, el sistema bloquea la dosificación y al desactivarse la pausa el conteo empieza de nuevo desde el principio.</li> </ol> <p>Durante el funcionamiento de la bomba se puede modificar la frecuencia de dosificación pulsando simultáneamente las teclas    para aumentar la frecuencia o las teclas    para disminuirla.</p> |
| Visualización durante el funcionamiento                                             | Visualización en programación (tecla MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Párrafo 9 – Dosificación proporcional a la medida del pH (programación en la fábrica)

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>La bomba mide y controla el valor del pH de una solución programando en secuencia: Set-point, tipo de set-point, banda proporcional y banda de alarma.</p> <p>Tipo de set-point: Ácido</p> <p>Tipo de set-point: Alcalino</p> <p>Además, se puede programar:</p> <ul style="list-style-type: none"> <li>- El tiempo O.F.A. (Over Feed Alarm) en minutos, es decir el tiempo después del cual se activa una señal de alarma si la medida del pH no alcanza el set-point.</li> <li>- La resolución de la medida (1 ó 2 cifras decimales).</li> <li>- Desactivación/activación del procedimiento de calibración.</li> <li>- Valor manual de la temperatura en °C (fábrica) o °F.</li> </ul> <p>La frecuencia máxima se puede modificar durante el funcionamiento pulsando simultáneamente las teclas   para aumentar el caudal, o las teclas   para disminuirlo.</p> |

| Visualización durante el funcionamiento | Visualización en programación (tecla MODE)                                                                                                                                                                                                                                       |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | <p><u>Visualiza en secuencia</u></p> <ul style="list-style-type: none"> <li>• SP = valor del Setpoint</li> <li>• BP = valor de la banda proporcional</li> <li>• BA = valor de la banda de alarma</li> <li>• OFA = valor O.F.A.</li> <li>• Temp = valor de temperatura</li> </ul> |

# Párrafo 10 – Dosificación Proporcional a la medida del potencial Redox (O.R.P.)

| Programación                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div>PROG</div> <div>Prog</div> <div>Configuración</div> <div>enter</div> <div>Configuración</div> <div>Funciones Bomba</div> <div>enter</div> <div>Funciones Bomba</div> <div>Medida Redox</div> <div>enter</div> <div>Setpoint</div> <div>560 mV</div> <div>enter</div> <div>Tipo Setpoint</div> <div>Alto</div> <div>enter</div> <div>Banda prop.</div> <div>50 mV</div> <div>enter</div> <div>Banda alarma</div> <div>200 mV</div> <div>enter</div> <div>O.F. Alarme</div> <div>0m</div> <div>enter</div> <div>Calib. sonda</div> <div>On</div> <div>enter</div> <div></div> </div> | <p>La bomba mide y controla el valor del pH de una solución programando en secuencia: Set-point, tipo de set-point, banda proporcional y banda de alarma.</p> <p>Tipo de set-point: Máxima</p> <p>Tipo de set-point: mínima</p> <p>Además, se puede programar:</p> <ul style="list-style-type: none"> <li>- El tiempo O.F.A. (Over Feed Alarm) en minutos, es decir el tiempo después del cual se activa una señal de alarma si la medida del pH no alcanza el set-point.</li> <li>- La resolución de la medida (1 ó 2 cifras decimales).</li> <li>- Desactivación/activación del procedimiento de calibración.</li> </ul> <p>La frecuencia máxima se puede modificar durante el funcionamiento pulsando simultáneamente las teclas <b>mode enter</b> <b>+</b> para aumentar el caudal, o las teclas <b>mode enter</b> <b>-</b> para disminuirlo.</p> |

| Visualización durante el funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Visualización en programación (tecla MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div>Tipo de set-point; High/Low</div> <div>Estado del sensor de FLUJO</div> <div>Valor medida del potencial Redox</div> <div>Alarmas y estados</div> <ul style="list-style-type: none"> <li>Cal = calibración no realizada</li> <li>Lev = Alarma de nivel</li> <li>Flw = Alarma de flujo</li> <li>Alm = Medida fuera de la banda de alarma</li> <li>OFA = Alarma O.F.A.</li> </ul> <div>High F 560mV<br/>Lev Stop P100%</div> <div>Estado de la bomba</div> <ul style="list-style-type: none"> <li>Vacío = bomba en start</li> <li>Stop = bomba parada</li> <li>Pausa = bomba en pausa</li> </ul> <div>Valor de la dosificación en curso</div> <p>(depende de la unidad de medida seleccionada)</p> <ul style="list-style-type: none"> <li>Porcentaje, Frecuencia, l/h, Gph, ml/m</li> </ul> </div> | <div> <div>Visualiza en secuencia</div> <ul style="list-style-type: none"> <li>SP = valor del Set-point</li> <li>BP = valor de la banda proporcional</li> <li>BA = valor de la banda alarma</li> <li>OFA = Valor O.F.A.</li> </ul> <div>SP 450mV 560mV<br/>BP 450mV P100%</div> <div>Valor de la medida</div> <div>Valor de la dosificación máxima programada</div> <p>(depende de la unidad de medida seleccionada)</p> <ul style="list-style-type: none"> <li>Porcentaje, Frecuencia, l/h, Gph, ml/m</li> </ul> </div> |

# Líneas de menú configuraciones para modalidades medición pH y Redox

## Configuración Retardo Power On

| Programación                                                                                                                                                                                                                                                                                                                                                                                                         | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>graph TD     PROG[PROG] --&gt; CONFIG[PROG Configuración]     CONFIG -- enter --&gt; FUNC[Configuración Funciones Bomba]     FUNC --&gt; CAUDAL[Caudal Maximo 100%]     CAUDAL --&gt; IDIOMA[Idioma Español]     IDIOMA --&gt; RETARDO[Retardo Power ON Off]     RETARDO -- enter --&gt; DASH[ ]     RETARDO -- mode enter --&gt; PLUS[+]     PLUS --&gt; RETARDO     RETARDO -- '-' enter --&gt; RETARDO</pre> | <p>Permite configurar un retardo del funcionamiento de la bomba al encenderse la misma. Este retardo tiene efecto sólo si la bomba se apaga y se vuelve a encender quitando la alimentación.</p> <p>La configuración puede deshabilitarse, Off (fábrica) o se puede configurar con un retardo de 1 a 60 minutos.</p> <p>Con el retardo activo, durante el tiempo configurado el led alarma y de impulso parpadean contemporáneamente (1 seg On – 1 seg Off) y la pantalla muestra el conteo en segundos. Si la bomba está en Stop, se visualizan sólo los led parpadeantes. Durante el tiempo de retardo puede desactivarse la función accediendo al menú, configurando el tiempo en Off.</p> <p>Presionando  se accede a la modificación, con las teclas   configuro el valor. Con  confirmo y vuelvo al menú principal.</p> |

## Configuración Retardo calibración

| Programación                                                                                                                                                                                                                                                                                                                                                                                                       | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre>graph TD     PROG[PROG] --&gt; CONFIG[PROG Configuración]     CONFIG -- enter --&gt; FUNC[Configuración Funciones Bomba]     FUNC --&gt; CAUDAL[Caudal Maximo 100%]     CAUDAL --&gt; IDIOMA[Idioma Español]     IDIOMA --&gt; RETARDO[Retardo Calib. Off]     RETARDO -- enter --&gt; DASH[ ]     RETARDO -- mode enter --&gt; PLUS[+]     PLUS --&gt; RETARDO     RETARDO -- '-' enter --&gt; RETARDO</pre> | <p>Permite configurar un retardo del funcionamiento de la bomba después de la calibración de la sonda (Redox o pH).</p> <p>La configuración puede deshabilitarse, Off (fábrica) o se puede configurar con un retardo de 1 a 60 minutos.</p> <p>Con el retardo activo, durante el tiempo configurado el led alarma y de impulso parpadean contemporáneamente (1 seg On – 1 seg Off) y la pantalla muestra el conteo en segundos. Si la bomba está en Stop, se visualizan sólo los led parpadeantes. Durante el tiempo de retardo puede desactivarse la función accediendo al menú, configurando el tiempo en Off.</p> <p>Presionando  se accede a la modificación, con las teclas   configuro el valor. Con  confirmo y vuelvo al menú principal.</p> |

## Párrafo 11 – Programación del caudal máximo

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                          |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Permite programar el caudal máximo que la bomba puede alcanzar; el modo programado (% o frecuencia) se vuelve la visualización del caudal en la unidad de medida estándar.</p> <p>Pulsando la tecla  se accede a la modificación, después con las teclas   se programa el valor.</p> <p>Con la tecla  se confirma y se vuelve al menú principal.</p> |

## Párrafo 12 – Calibración del caudal

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>En el menú principal aparece el valor de cc por golpe en memoria. Se puede calibrar en dos modos:</p> <p>MANUAL – Introduciendo manualmente el valor de cc por golpe con las teclas   y confirmando con la tecla .</p> <p>AUTOMÁTICA – La bomba realiza 100 golpes que se activan y confirman con la tecla , al final introducir la cantidad aspirada por la bomba con las teclas   y confirmar con la tecla . El dato introducido será utilizado en los cálculos de los caudales.</p> |

## Párrafo 13 - Estadísticas

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>En el menú principal visualiza las horas de funcionamiento de la bomba, pulsando la tecla  se accede a las demás estadísticas:</p> <ul style="list-style-type: none"> <li>- Strokes = Número de golpes realizados por la bomba.</li> <li>- Q.ty (L) = cantidad dosificada por la bomba expresada en litros; este valor se calcula en base al valor cc/stroke en memoria.</li> <li>- Power = Número de puestas en marcha de la bomba.</li> <li>- Reset = Con las teclas   se pueden poner en cero (YES) o no (NO) los contadores, con la tecla  se confirma. Pulsando la tecla  se vuelve al menú principal.</li> </ul> |

## Párrafo 14 - Password

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Introduciendo la password se puede entrar en programación y ver todos los valores programados, pero cada vez que se quiera realizar una modificación será solicitada la password. La línea parpadeante indica el número que se puede</p> <p>modificar, con la tecla  se selecciona el número (de 1 a 9), con la tecla  se selecciona el número a modificar y con la tecla  se confirma. Programando "0000" (fábrica) la password queda excluida.</p> |

## Párrafo 15 – Alarma de flujo

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                          |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Permite activar (desactivar) el sensor de flujo. Una vez activado (ON) pulsando la tecla  se accede a la solicitud de cuántas señales espera la bomba antes de entrar en alarma. Pulsando la tecla  el número parpadea, con las teclas   se puede programar el valor. Con la tecla  se confirma. Pulsando la tecla  se vuelve al menú principal.</p> |

## Pàrrafo 16 - Alarma de nivel 1

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Esta línea de menú aparece sólo en las modalidades Manual, pH o Redox. Permite configurar, al presentarse la alarma del sensor de nivel, la activación de la alarma sin bloqueo de la dosificación o el bloqueo de la dosificación (Stop).</p> <p>Presionando  se accede a la modificación, con las teclas   configuro el tipo de alarma. Con  confirmo. Presionando  vuelvo al menú principal</p> |

## Párrafo 17 – Alarma de nivel

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                           |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Permite programar la bomba cuando se activa la alarma del sensor de nivel, es decir, si se bloquea la dosificación (Stop) o simplemente activa la señal de alarma sin bloquear la dosificación. Pulsando  la tecla se accede a la modificación, con las teclas   se puede programar el tipo de alarma. Con la tecla  se confirma. Pulsando la tecla  se vuelve al menú principal.</p> |

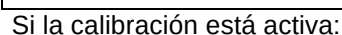
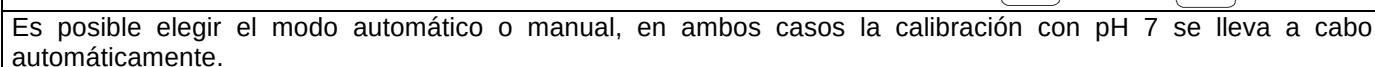
## Párrafo 18 – Unidad de visualización del caudal

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Permite programar la unidad de medida de la dosificación con el display en visualización. Pulsando la tecla  se accede a la modificación, con las teclas   se programa el tipo de unidad de medida, l/h (litros/hora), Gph (galones/hora), ml/m (mililitros/minuto) o estándar (% o frecuencia, según como haya sido programado). Con la tecla  se confirma y se vuelve al menú principal.</p> |

## Párrafo 19 – Programación Pausa

| Programación | Funcionamiento                                                                                                                                                                                                                                                                                                        |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <p>Entrada externa de paro de bomba.<br/>De fábrica el sistema llega configurado como Normalmente Abierto.</p> <p>Pulsando la tecla  se accede a la modificación,</p> <p>después con las teclas   se programa el valor (N. ABIERTO o N. CERRADO.)</p> <p>Con la tecla  se confirma y se vuelve al menú principal.</p> |

Pulsando la tecla CAL por tres segundos se entra en el menú calibración, si en programación la calibración ha sido excluida, en el display aparece:



En el display aparece el valor de la solución tampón, introducir la sonda en el frasco, pulsando la tecla  en el display aparece el conteo al revés de los 60 segundos necesarios para completar la calibración. Si la cantidad

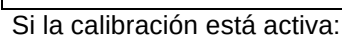
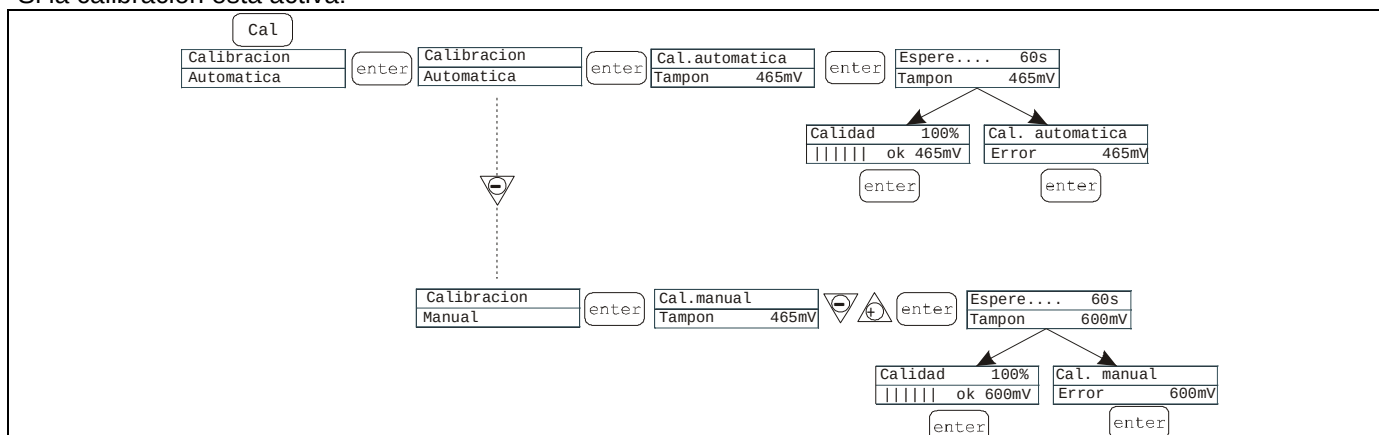
se visualiza en el display y pulsando la tecla **enter** se solicita la solución tampón con pH 4 ó 9; ahora el procedimiento es igual al anterior.

Quando en el display aparece el valor de la solución tampón, introducir la sonda en el frasco, pulsando la tecla

valor se visualiza en el display y pulsando la tecla **enter** en el display parpadea el valor de pH 7.00, con las

se introduce el valor de la solución que se posee; con la tecla  se confirma y se pone en marcha el procedimiento de calibración como anteriormente.

Pulsando la tecla CAL por tres segundos se entra en el menú calibración, si en programación la calibración ha sido excluida, en el display aparece:



- Calibración automática:

mode  
enter

mode  
enter

mode  
enter

- Calibración manual:

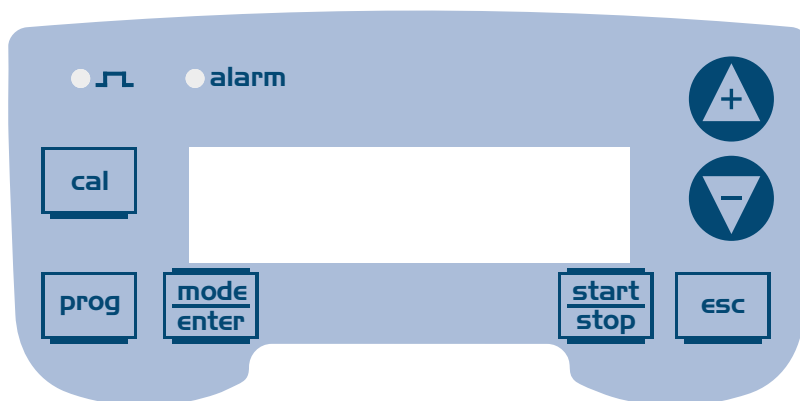
mode  
enter



mode  
enter

## Alarmas

| Visualización                                                                                                                                               | Causa           | Interrupción |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|-----------------|-------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|
| Led Alarma fijo<br>Mensaje Lev parpadeante<br>Ej: <table><tr><td>Man</td><td></td></tr><tr><td>Lev</td><td>P100%</td></tr></table>                          | Man             |              | Lev             | P100% | Alarma de final del nivel sin interrupción del funcionamiento de la bomba.                               | Reestablecer el nivel del líquido.                                                                                                                                                        |       |      |
| Man                                                                                                                                                         |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Lev                                                                                                                                                         | P100%           |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Led Alarma fijo<br>Mensajes Lev y Stop parpadeantes<br>Ej: <table><tr><td>Man</td><td></td></tr><tr><td>Lev Stop</td><td>P100%</td></tr></table>            | Man             |              | Lev Stop        | P100% | Alarma de final del nivel con interrupción del funcionamiento de la bomba.                               | Reestablecer el nivel del líquido.                                                                                                                                                        |       |      |
| Man                                                                                                                                                         |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Lev Stop                                                                                                                                                    | P100%           |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Led Alarma fijo<br>Mensaje Flw parpadeante<br>Ej: <table><tr><td>Man</td><td><b>F</b></td></tr><tr><td>Flw</td><td>P100%</td></tr></table>                  | Man             | <b>F</b>     | Flw             | P100% | Alarma de flujo activa, la bomba no ha recibido el número de señales programadas por el sensor de flujo. | Pulsar la tecla <table><tr><td>start</td></tr><tr><td>stop</td></tr></table>                                                                                                              | start | stop |
| Man                                                                                                                                                         | <b>F</b>        |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Flw                                                                                                                                                         | P100%           |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| start                                                                                                                                                       |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| stop                                                                                                                                                        |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Ej: <table><tr><td>Parameter Error</td><td></td></tr><tr><td>PROG to default</td><td></td></tr></table>                                                     | Parameter Error |              | PROG to default |       | Error de comunicación con la eeprom.                                                                     | Pulsar la tecla <table><tr><td>prog</td></tr></table> para reestablecer los parámetros de <i>default</i> .                                                                                | prog  |      |
| Parameter Error                                                                                                                                             |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| PROG to default                                                                                                                                             |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| prog                                                                                                                                                        |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Mensaje "OFA" parpadeante<br>Mensaje "Stop" parpadeante<br>Ej: <table><tr><td>High</td><td>475 mV OFA</td></tr><tr><td>Stop</td><td>P 75%</td></tr></table> | High            | 475 mV OFA   | Stop            | P 75% | Alarma O.F.A.                                                                                            | Pulsar la tecla <table><tr><td>start</td></tr><tr><td>stop</td></tr></table> para bloquear el parpadeo del mensaje Stop, pulsar otra vez la tecla para volver a poner en marcha la bomba. | start | stop |
| High                                                                                                                                                        | 475 mV OFA      |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Stop                                                                                                                                                        | P 75%           |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| start                                                                                                                                                       |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| stop                                                                                                                                                        |                 |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Mensaje "Alm" parpadeante<br>Ej: <table><tr><td>High</td><td>475 mV Alm</td></tr><tr><td>P</td><td>75%</td></tr></table>                                    | High            | 475 mV Alm   | P               | 75%   | El valor leído por la sonda está fuera del <i>range</i> de la banda de alarma programada.                | Controlar que el parámetro "Banda Alarma" esté programado correctamente en programación.                                                                                                  |       |      |
| High                                                                                                                                                        | 475 mV Alm      |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| P                                                                                                                                                           | 75%             |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| Mensaje "Cal" parpadeante<br>Ej: <table><tr><td>High</td><td>475 mV Cal</td></tr><tr><td>P</td><td>75%</td></tr></table>                                    | High            | 475 mV Cal   | P               | 75%   | Alarma de la sonda no calibrada.                                                                         | Realizar el procedimiento de calibración de la sonda.                                                                                                                                     |       |      |
| High                                                                                                                                                        | 475 mV Cal      |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |
| P                                                                                                                                                           | 75%             |              |                 |       |                                                                                                          |                                                                                                                                                                                           |       |      |

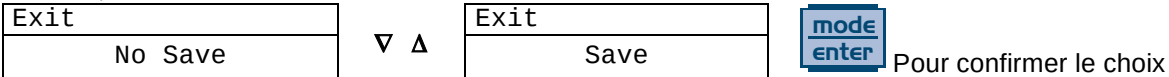
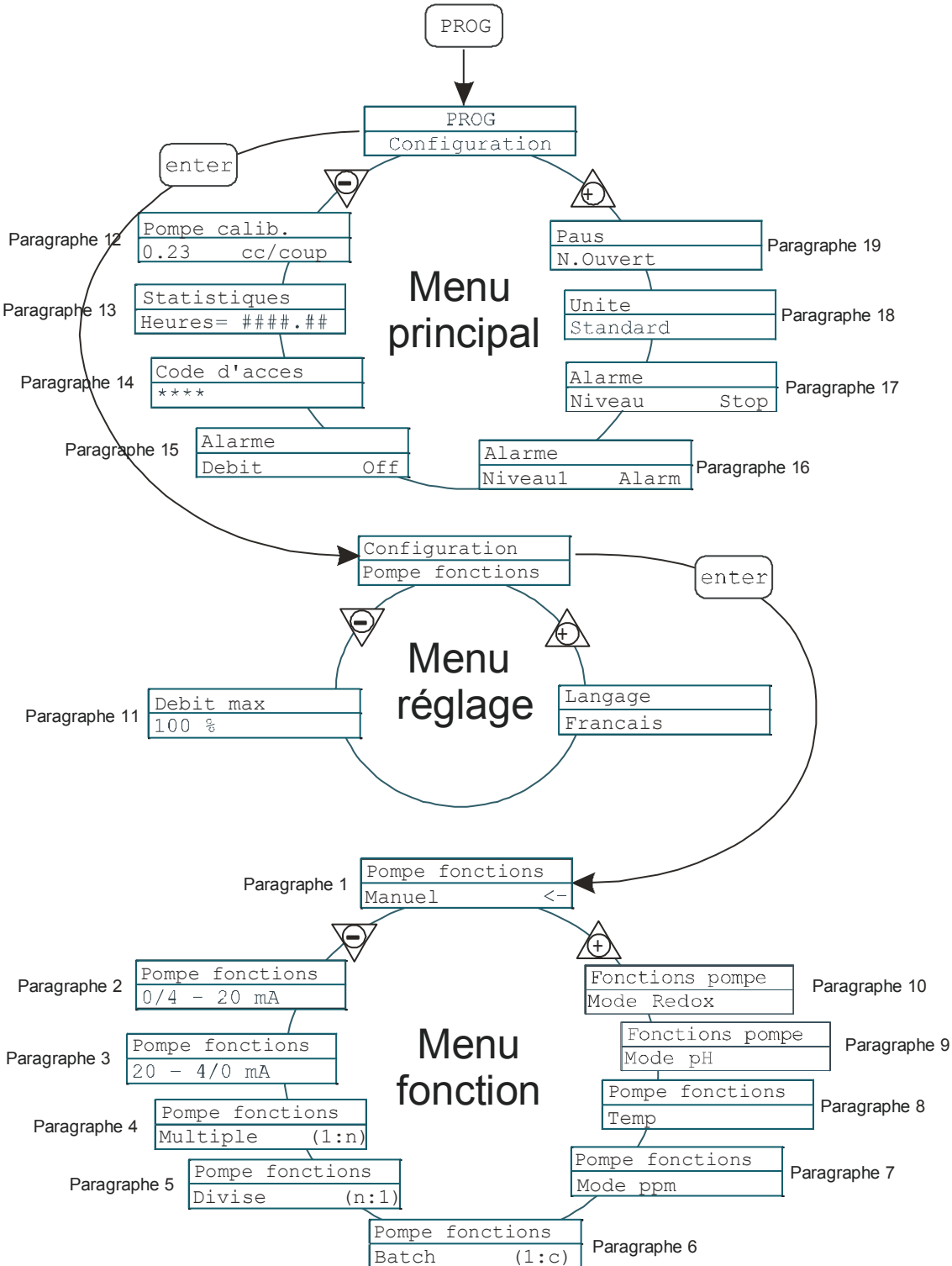


|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Accès au menu de programmation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|    | Pendant la phase de fonctionnement de la pompe: si cette touche est enfoncée elle affiche à des intervalles réguliers les valeurs programmées; si elle est enfoncée en même temps que les touches   elle augmente ou réduit une valeur dépendant du mode de fonctionnement choisi. Au cours de la programmation, elle fait fonction de “enter”, c'est-à-dire qu'elle confirme l'entrée dans les différents niveaux de menu et les modifications à l'intérieur de ces derniers. |
|   | Fait démarrer et met à l'arrêt la pompe. Dans les conditions d'alarme de niveau (unique fonction d'alarme), de flux et de mémoires actives, elle désactive la signalisation sur l'afficheur.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|  | Pour “quitter” ces différents niveaux de menu. Avant de quitter définitivement la programmation, on accède à la demande d'enregistrement des modifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|  | Menu de calibrage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  | Fait défiler les menus vers le haut ou augmente les valeurs numériques à modifier. En mode de fonctionnement Batch, elle peut faire démarrer le dosage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|  | Fait défiler les menus vers le bas, ou réduit les valeurs numériques à modifier.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  | Led verte clignotante pendant le dosage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|  | Led rouge qui s'allume dans les différentes situations d'alarme.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Appuyer sur la touche  pendant plus de trois secondes pour allumer la programmation. Avec les touches   il est possible de faire défiler les options du menu, la touche  permet d'accéder aux modifications.

La pompe est programmée en usine en mode constant. La pompe reprend automatiquement le mode de fonctionnement après 1 minute de non-activité. Dans ce cas, les données éventuellement introduites ne sont pas

enregistrées. La touche  permet de quitter les niveaux de la programmation. À la sortie de la programmation, l'afficheur visualise:



## Programmation de la langue

| Programmation                                                                                                                                                                                                                                                                  | Fonctionnement                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     PROG[PROG] --&gt; Config[Configuration]     Config -- enter --&gt; Pump[Pump Functions]     Pump --&gt; Flow[Max flow rate P100%]     Flow --&gt; Lang[Language English]     Lang -- enter --&gt; Confirm[confirm]     Confirm --&gt; Return[return] </pre> | <p>Permet de sélectionner la langue, la pompe est programmée en usine en anglais.</p> <p>Appuyer sur  pour accéder à la modification, puis sur les touches   pour programmer la valeur. La touche  confirme et permet de retourner au menu principal.</p> |

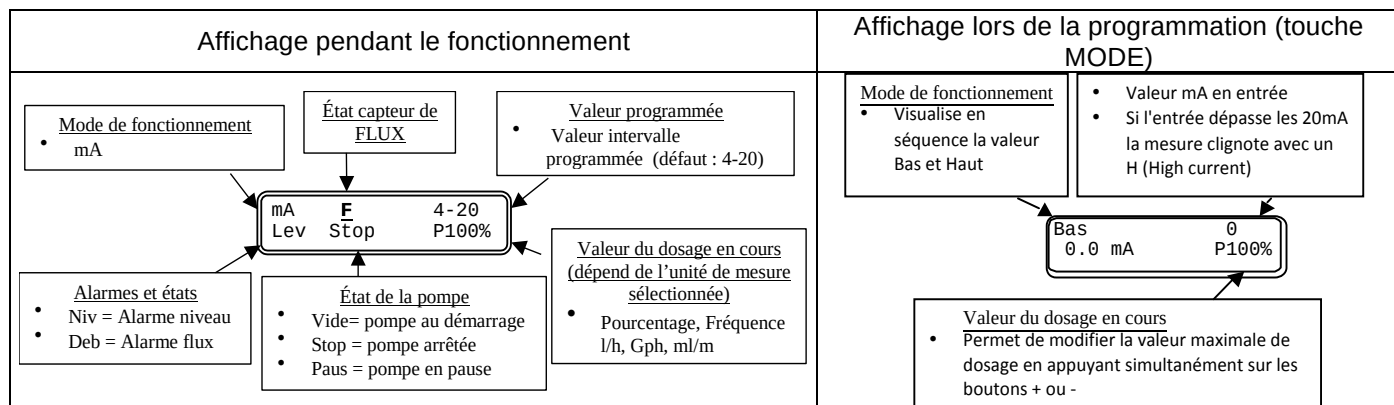
## Paragraphe 1 – Dosage manuel

| Programmation                                                                                                                                                                                 | Fonctionnement                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     PROG[PROG] --&gt; Config[Configuration]     Config -- enter --&gt; Pump[Fonctions pompe]     Pump -- enter --&gt; Manual[Manuel]     Manual -- enter --&gt; Done[ ] </pre> | <p>La pompe travaille en mode constant. Le débit est réglé manuellement en appuyant simultanément sur les touches   pour augmenter le débit. ou sur les touches   pour le réduire.</p> |

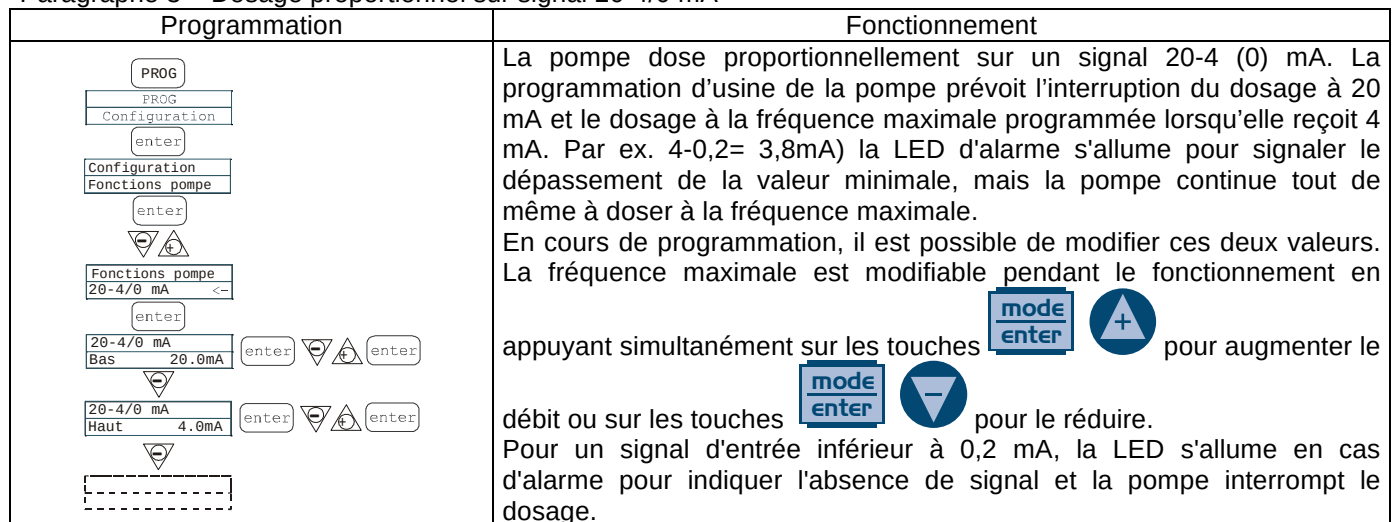
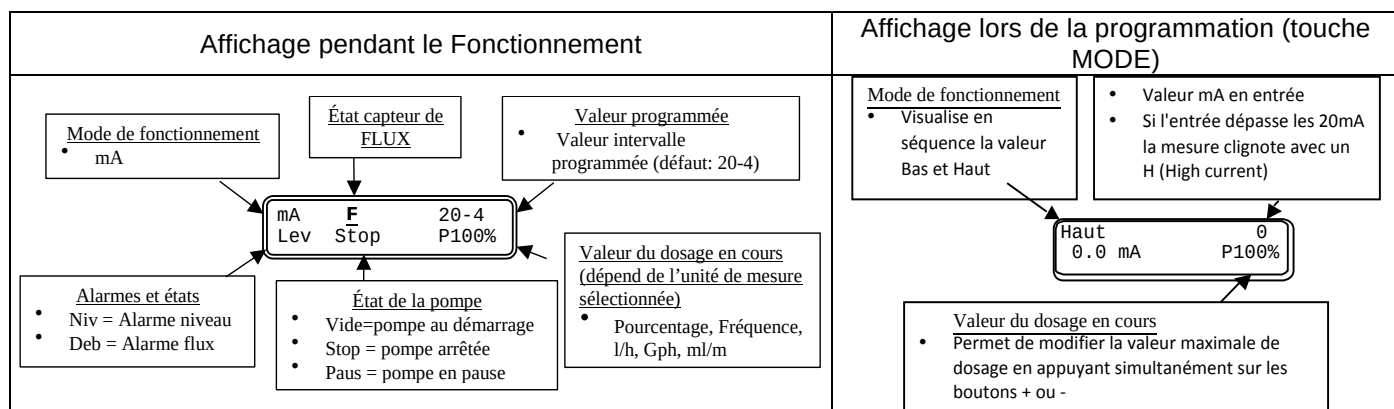
| Affichage pendant le fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Affichage lors de la programmation (touche MODE)                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div> <b>Mode de fonctionnement</b> <ul style="list-style-type: none"> <li>Man = Manuelle</li> </ul> </div> <div> <b>Alarmes et états</b> <ul style="list-style-type: none"> <li>Niv = Alarme niveau</li> <li>Deb = Alarme flux</li> </ul> </div> <div> <b>État capteur de FLUX</b> </div> <div> <b>MAN F Niv Stop P100%</b> </div> <div> <b>Valeur du dosage en cours</b><br/>(dépend de l'unité de mesure sélectionnée) <ul style="list-style-type: none"> <li>Pourcentage, Fréquence, l/h, Gph, ml/m</li> </ul> </div> <div> <b>État de la pompe</b> <ul style="list-style-type: none"> <li>Vide=pompe au démarrage</li> <li>Stop = pompe arrêtée</li> <li>Paus = pompe en pause</li> </ul> </div> </div> | <div> <b>Mode de fonctionnement</b> <ul style="list-style-type: none"> <li>Affiche la valeur correspondante de la fréquence</li> </ul> </div> <div> <b>F320s/m P100%</b> </div> <div> <b>Valeur du dosage en cours</b> <ul style="list-style-type: none"> <li>Modification du débit maximal en appuyant en même temps sur + ou -</li> </ul> </div> |

## Paragraphe 2 – Dosage Proportionnel sur signal 0/4-20 mA

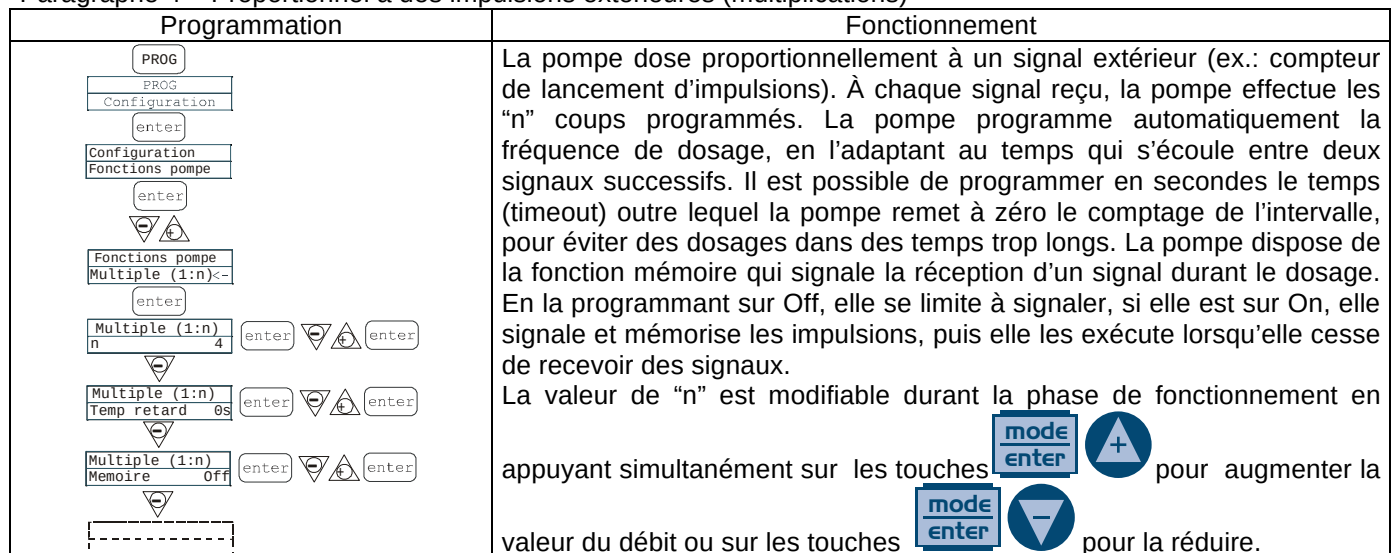
| Programmation                                                                                                                                                                                                                                                                                                    | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     PROG[PROG] --&gt; Config[Configuration]     Config -- enter --&gt; Pump[Fonctions pompe]     Pump -- enter --&gt; Range[0/4 - 20 mA]     Range -- enter --&gt; Low[Bas 4.0mA]     Low -- enter --&gt; Range     Range -- enter --&gt; High[Haut 20.0mA]     High -- enter --&gt; Range </pre> | <p>La pompe dose proportionnellement sur un signal (0)4-20 mA. La programmation d'usine de la pompe prévoit l'interruption du dosage à 4 mA et le dosage à la fréquence maximale programmée lorsqu'elle reçoit 20 mA. En cours de programmation, il est possible de modifier ces deux valeurs. La fréquence maximale est modifiable pendant le fonctionnement en appuyant simultanément sur les touches   pour augmenter le débit ou sur les touches   pour le réduire.</p> <p>Pour un signal d'entrée inférieur à 0,2 mA la LED s'allume en cas d'alarme pour indiquer l'absence de signal.</p> |

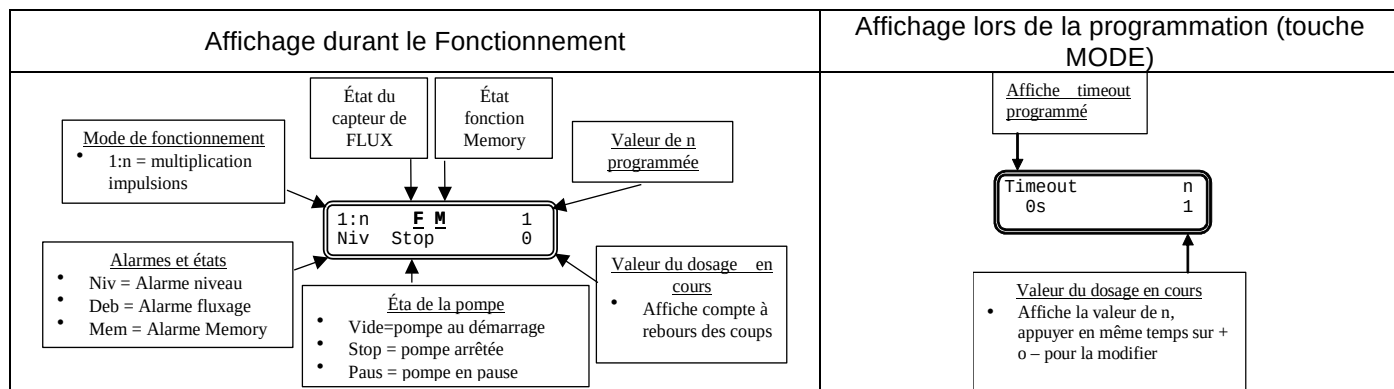


### Paragraphe 3 – Dosage proportionnel sur signal 20-4/0 mA

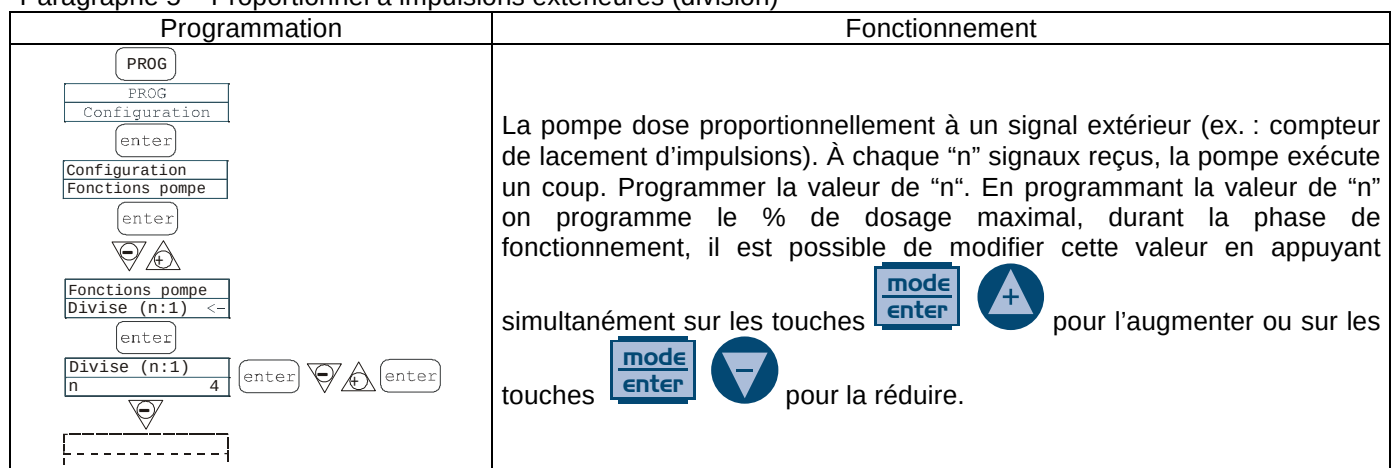
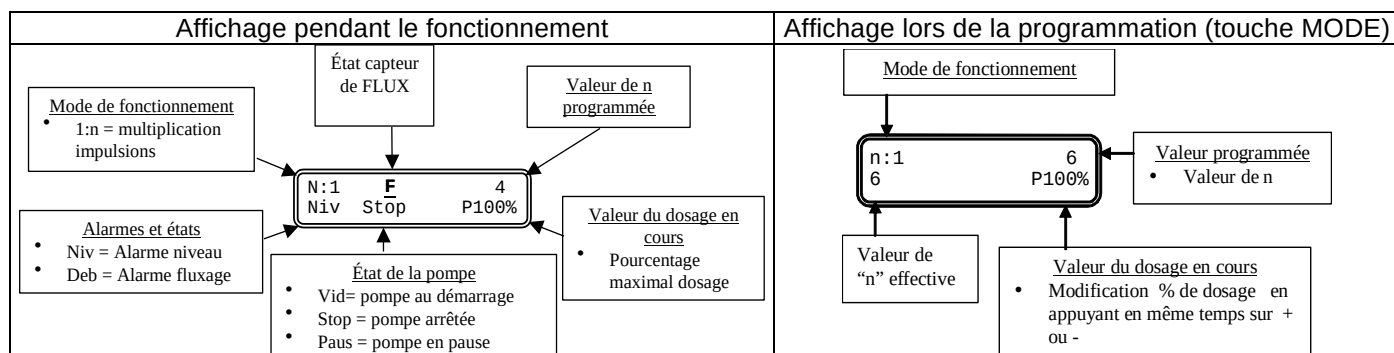


### Paragraphe 4 – Proportionnel à des impulsions extérieures (multiplications)

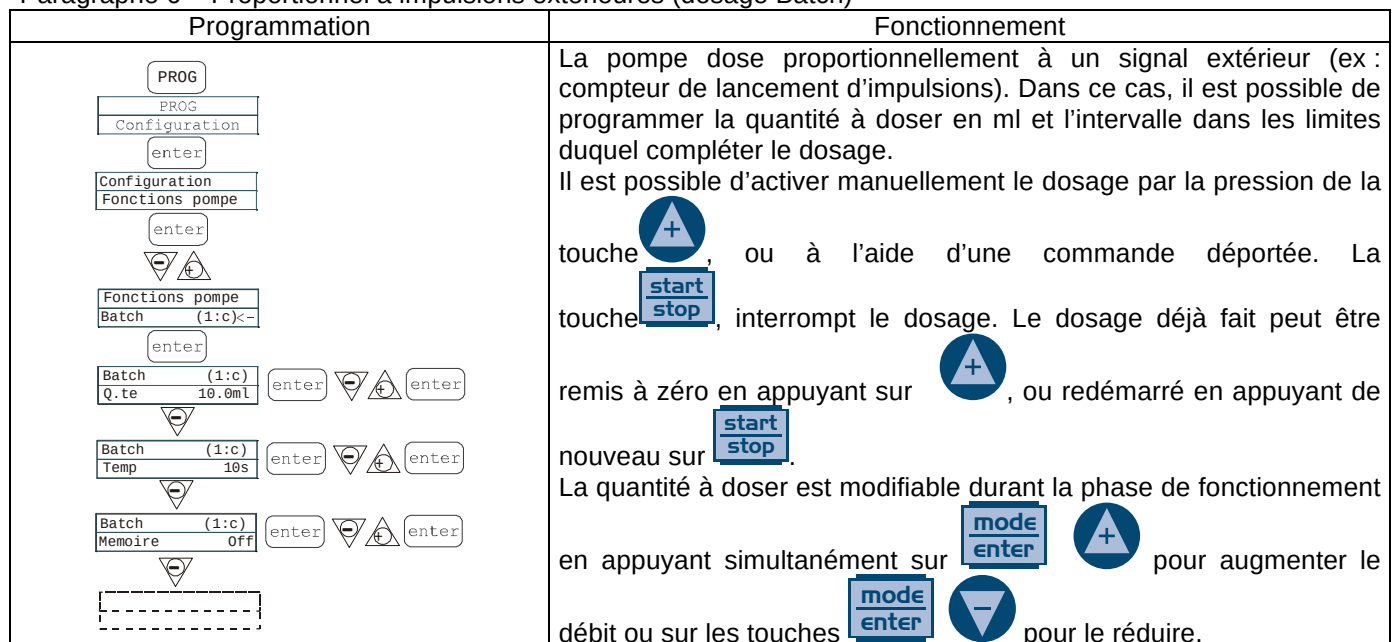


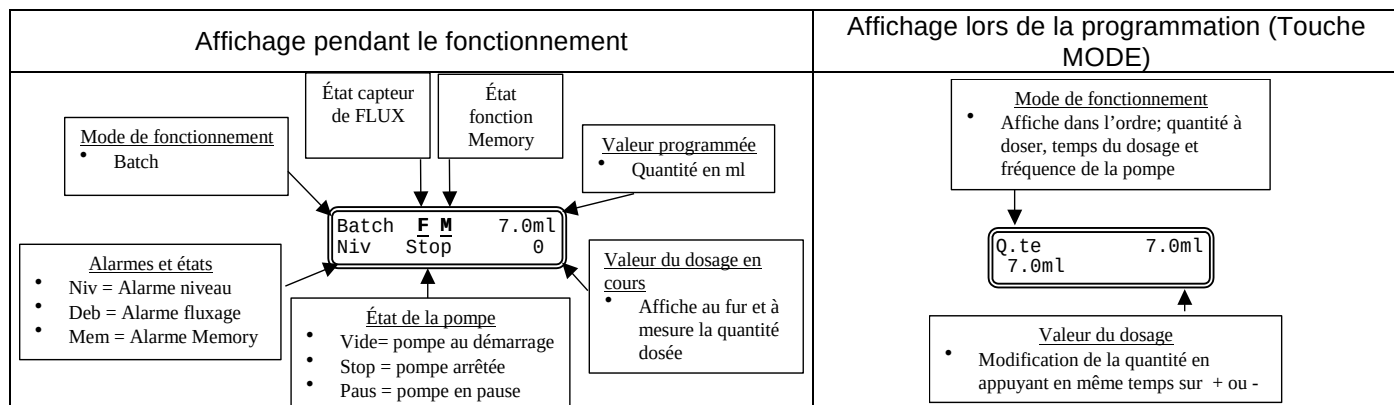


### Paragraphe 5 – Proportionnel à impulsions extérieures (division)

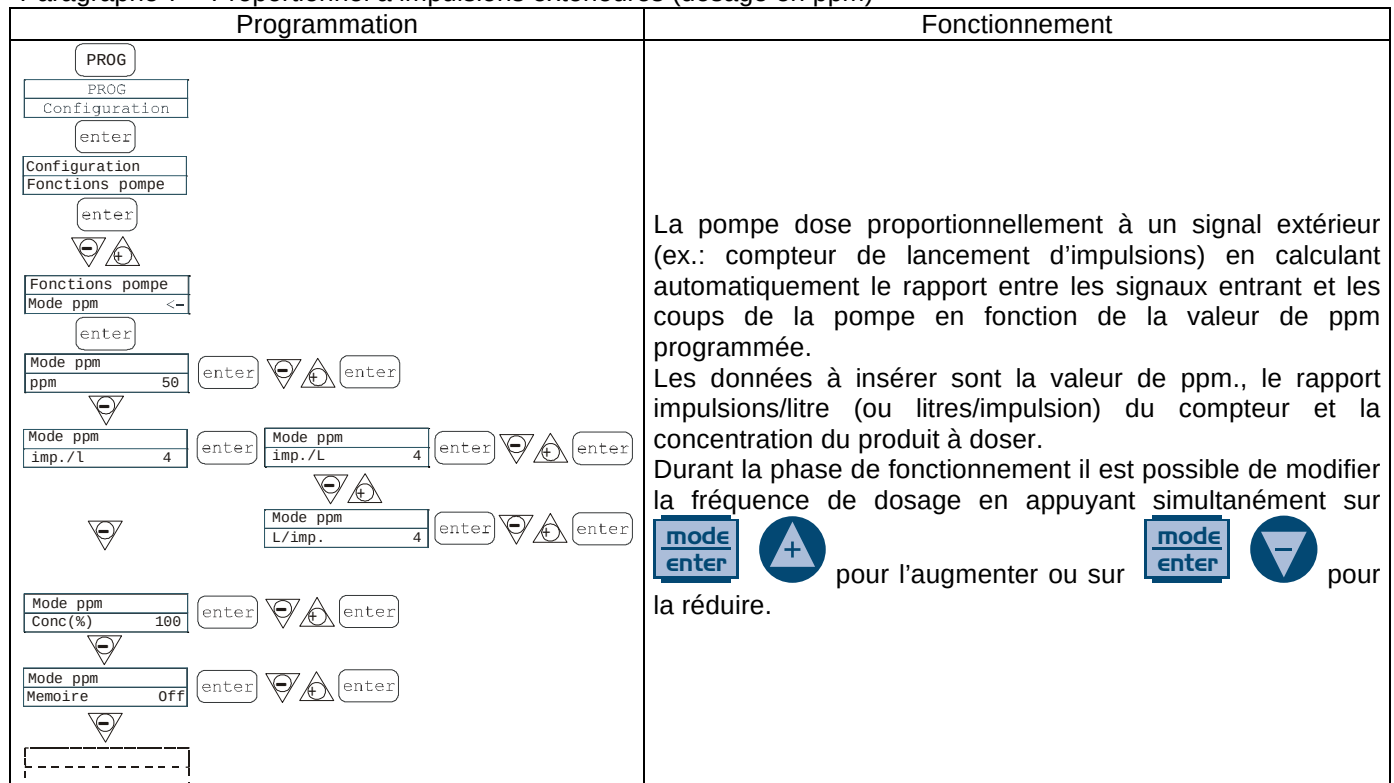
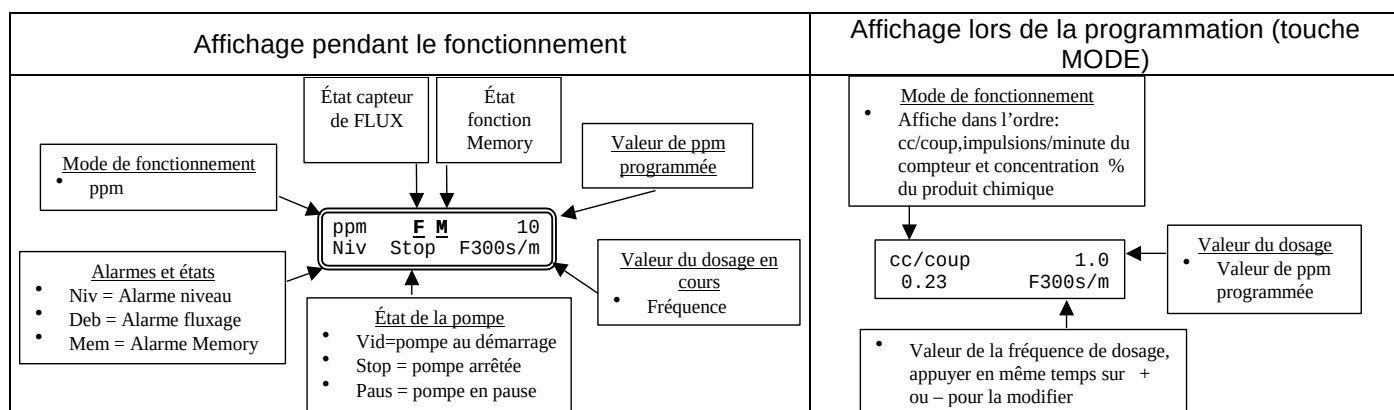


### Paragraphe 6 – Proportionnel à impulsions extérieures (dosage Batch)



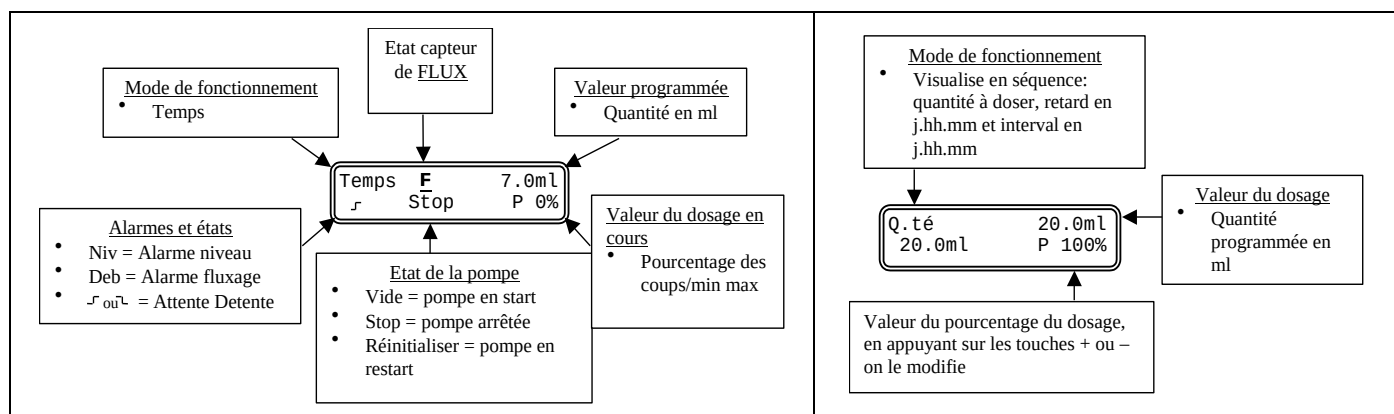


## Paragraphe 7 – Proportionnel à impulsions extérieures (dosage en ppm)



## Paragraphe 8 – Dosage temporisé (**Entrée signal fréquence «Trigger» activé**)

| Programmation                                                                                                                                                                                                                                                                                                                                                                                                                | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>PROG<br/>PROG<br/>Configuration<br/>enter<br/>Configuration<br/>Function pompe<br/>enter<br/>Function pompe<br/>Temps &lt;-<br/>enter<br/>Temps<br/>Quantite 100ml enter<br/>Temps g.hh.mm<br/>Retard 0.01.50 enter<br/>Temps g.hh.mm<br/>Interval 0.01.50 enter<br/>Mode detente N.O. enter<br/>Entree Pause Mode detente<br/>Mode detente N.O. enter<br/>Mode detente N.F. enter<br/>Mode detente Desaffecte' enter</p> | <p>Après l'arrivée du signal de <b>DETENTE</b> réglé, la pompe dose une quantité programmable en ml. Il est possible de régler un temps de retard avant le dosage (<b>Retard</b>) et la distance entre les dosages successifs (<b>Interv.</b>), comme d'après le schéma:</p> <p>En réglant, par exemple, un temps <b>Interv.</b> = 0 on obtient un système dosant la quantité programmée après chaque signal de <b>DETENTE</b> (avec l'éventuel retard réglé):</p> <p>Il est possible de faire démarrer le dosage même en appuyant sur la touche +, simulant pratiquement le signal de <b>Detente</b>.<br/>Le signal <b>Detente</b> peut être réglé <b>NO</b> (il s'active lorsque l'entrée passe du mode ouvert au mode fermé) ou <b>NF</b> (il s'active lorsque l'entrée passe du mode fermé au mode ouvert).<br/>Le signal <b>Detente</b> est bloqué pendant le dosage (son arrivée n'est ni mémorisée ni gérée).<br/>L'entrée <b>Pause (Entrée commande à distance)</b> ne peut pas être programmée et son activation bloque le dosage, tandis que la désactivation successive remet le système en attente du signal <b>Detente</b> pour un nouveau dosage.<br/>Pendant la phase de fonctionnement de la pompe, il est possible de modifier la fréquence du dosage, en appuyant en même temps sur les touches   pour augmenter la fréquence, ou bien sur les touches   pour la diminuer.</p> |
| Visualisation pendant le fonctionnement                                                                                                                                                                                                                                                                                                                                                                                      | Visualisation en démarche (touche MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

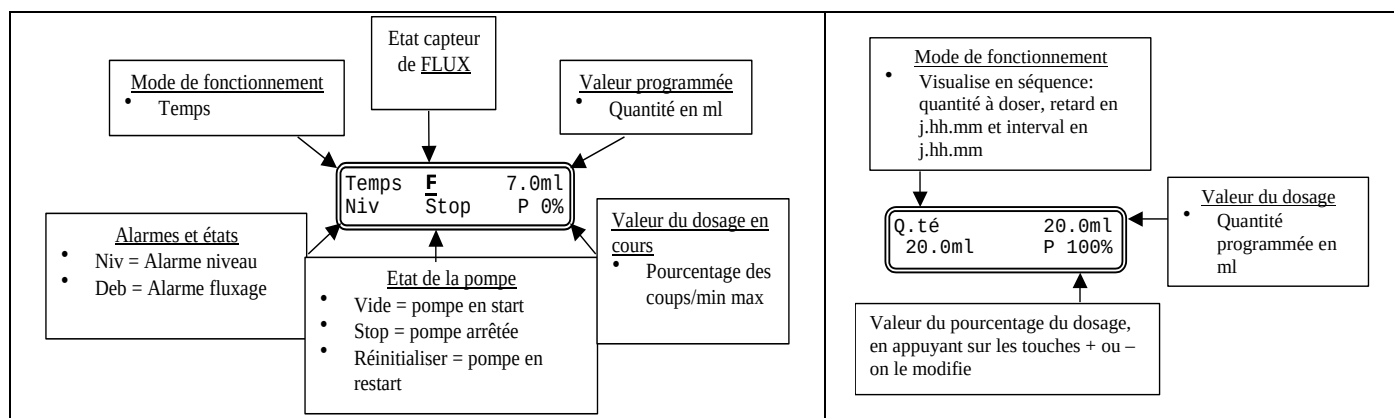


## Paragraphe 8 – Dosage temporisé (*Entrée signal fréquence «Trigger» non activé*)

| Programmation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p> <b>PROG</b><br/> <b>PROG</b><br/> <b>Configuration</b><br/> <b>enter</b><br/> <b>Configuration</b><br/> <b>Function pompe</b><br/> <b>enter</b><br/> <b>Function pompe</b><br/> <b>Temps</b> &lt;-<br/> <b>enter</b><br/> <b>Temps</b> <b>enter</b> <b>Quantite</b> 100ml <b>enter</b> <b>enter</b><br/> <b>Temps</b> g.hh.mm <b>enter</b> <b>Retard</b> 0.01.50 <b>enter</b> <b>enter</b><br/> <b>Temps</b> g.hh.mm <b>enter</b> <b>Interval</b> 0.01.50 <b>enter</b> <b>enter</b><br/> <b>Mode detente</b> <b>Desaffecte'</b> <b>enter</b> <b>enter</b><br/> <b>Entree Pause</b> <b>Redemarr. Temp</b> <b>enter</b> <b>Entree Pause</b> <b>Redemarr. Temp</b> <b>enter</b><br/> <b>Entree Pause</b> <b>Blocage du temps</b> <b>enter</b><br/> <b>Entree Pause</b> <b>Pause Dosage</b> <b>enter</b> </p> | <p>La pompe dose une quantité programmable en ml, il est possible de régler un temps de retard au démarrage de la pompe (<b>Retard</b>) et la distance entre deux dosages successifs (<b>Interv.</b>), comme d'après le schéma:</p> <p>Les temps de <b>Retard</b> et <b>Interv.</b> sont en jj.hh.mm (jours.heures.minutes)</p> <p>L'entrée <b>Pause</b> peut être programmée en trois modes différents:</p> <ol style="list-style-type: none"> <li>1. <b>Blocage du temps</b>: avec la pause activée, le système bloque le comptage du temps actuel qui reprend quand la pause se désactive</li> <li>2. <b>Pause Dosage</b>: avec la pause activée, le système continue à compter le temps et bloque le dosage</li> <li>3. <b>Redemarr. Temp</b>: avec la pause activée, le système bloque le dosage, quand la pause se désactive le comptage recommence dès le début.</li> </ol> <p>Pendant la phase de fonctionnement de la pompe, il est possible de modifier la fréquence du dosage, en appuyant en même temps sur les touches <b>mode enter</b> <b>+</b> pour augmenter la fréquence, ou bien sur les touches <b>mode enter</b> <b>-</b> pour la diminuer.</p> |

Visualisation pendant le fonctionnement

Visualisation en démarche (touche MODE)



## Paragraphe 9 – Dosage proportionnel à la mesure du pH (programmation d'usine)

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>La pompe mesure et contrôle la valeur de pH d'une solution, en programmant dans l'ordre : point de consigne, type de point de consigne, bande proportionnelle et bande d'alarme.</p> <p>Type point de consigne : acide</p> <p>Type point de consigne : alcalin</p> <p>Il est en outre possible de programmer :</p> <ul style="list-style-type: none"> <li>- Le temps O.F.A. (Over Feed Alarm) en minutes soit un temps au-delà duquel, si la mesure du pH n'arrive pas au point de consigne, un signal d'alarme se déclenche.</li> <li>- La résolution de la mesure (1 ou 2 chiffres décimaux)</li> <li>- Désactivation/activation de la procédure de calibrage</li> <li>- Valeur manuelle de la température en °C (usine) ou °F</li> </ul> <p>La fréquence maximale est modifiable pendant la phase de fonctionnement en appuyant simultanément sur les touches</p> <p>pour augmenter le débit ou sur les touches</p> <p>pour le réduire.</p> |

| Affichage pendant le fonctionnement | Affichage lors de la programmation (touche MODE)                                                                                                                                                                                                                    |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <p>Affiche dans l'ordre:</p> <ul style="list-style-type: none"> <li>• SP = valeur Point de consigne</li> <li>• BP = valeur Bande Proportionnelle</li> <li>• BA = valeur Bande Alarme</li> <li>• OFA = Valeur O.F.A.</li> <li>• TEMP = Valeur Température</li> </ul> |

## Paragraphe 10 – Dosage proportionnel à la mesure du potentiel Redox (O.R.P.)

| Programmation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>PROG</p> <p>PROG<br/>Configuration</p> <p>enter</p> <p>Configuration<br/>Fonctions pompe</p> <p>enter</p> <p>⏮ ⏭</p> <p>Fonctions pompe<br/>Mode Redox</p> <p>enter</p> <p>Consigne<br/>560 mV</p> <p>enter ⏮ ⏭ enter</p> <p>Dosage<br/>Haute</p> <p>enter ⏮ ⏭ enter</p> <p>Band proportion.<br/>50 mV</p> <p>enter ⏮ ⏭ enter</p> <p>Alarme de Band<br/>200 mV</p> <p>enter ⏮ ⏭ enter</p> <p>O.F.Alarme<br/>0m</p> <p>enter ⏮ ⏭ enter</p> <p>Calibrage sonde<br/>On</p> <p>enter ⏮ ⏭ enter</p> <p>⏮</p> | <p>La pompe mesure et contrôle la valeur de pH d'une solution, en programmant dans l'ordre : point de consigne, type de point de consigne, bande proportionnelle et bande d'alarme.</p> <p>Type point de consigne : maximal</p> <p>Type point de consigne : minimal</p> <p>Il est en outre possible de programmer :</p> <ul style="list-style-type: none"> <li>- Le temps O.F.A. (Over Feed Alarm) en minutes soit un temps au-delà duquel, si la mesure du pH n'arrive pas au point de consigne, un signal d'alarme se déclenche.</li> <li>- La résolution de la mesure (1 ou 2 chiffres décimaux)</li> <li>- Désactivation/activation de la procédure de calibrage</li> </ul> <p>La fréquence maximale est modifiable pendant la phase de fonctionnement en appuyant simultanément sur les touches  pour augmenter le débit ou sur les touches   pour le réduire.</p> |

| Affichage pendant le fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Affichage lors de la programmation (touche MODE)                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Type P. de Consigne Haut/Bas</p> <p>État capteur de FLUX</p> <p>Valeur mesure du potentiel Redox.</p> <p>Haut F 560mV<br/>Niv S Stop P100%</p> <p>Alar mes et états</p> <ul style="list-style-type: none"> <li>• Cal = calibrage non effectué</li> <li>• Lev = Alarme niveau</li> <li>• Flw = Alarme flux</li> <li>• Alm = Mesure hors Bande alarme</li> <li>• OFA = Alarme O.F.A.</li> </ul> <p>État de la pompe</p> <ul style="list-style-type: none"> <li>• Vide=pompe au démarrage</li> <li>• Stop = pompe arrêtée</li> <li>• Paus = pompe en pause</li> </ul> <p>Valeur du dosage en cours (dépend de l'unité de mesure sélectionnée)</p> <ul style="list-style-type: none"> <li>• Pourcentage, Fréquence, l/h, Gph, ml/m</li> </ul> | <p>Affiche dans l'ordre</p> <ul style="list-style-type: none"> <li>• SP = valeur Point de consigne</li> <li>• BP = valeur Bande Proportionnelle</li> <li>• BA = valeur Bande Alarme</li> <li>• OFA = Valeur O.F.A.</li> </ul> <p>SP 450mV 560mV P100% ← Valeur de la mesure.</p> <p>Valeur du dosage maximal programmé (dépend de l'unité de mesure sélectionnée)</p> <ul style="list-style-type: none"> <li>• Pourcentage, Fréquence, l/h, Gph, ml/m</li> </ul> |

## Rubriques menu configurations pour modalité mesure pH et Redox

### Configuration Retard Power On

| Programmation                                                                                                                                                                                                                                                     | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     PROG1[PROG] --&gt; CONFIG1[Configuration]     CONFIG1 --&gt; FPN1[Functions Pompe]     FPN1 --&gt; DM1[Debit Max]     DM1 --&gt; L1[Langage]     L1 --&gt; RPO1[Retard Power ON]     RPO1 --&gt; OFF1[Off]     OFF1 --&gt; DASH1[ ]     </pre> | <p>Permet de configurer un retard du fonctionnement de la pompe lors de son allumage. Ce retard prend effet uniquement si la pompe est éteinte et rallumée en coupant l'alimentation.</p> <p>La configuration peut être désactivée avec Off (usine) ou alors, il est possible de configurer un retard de 1 à 60 minutes.</p> <p>Avec le retard actif, durant le temps configuré, les leds d'alarme et d'impulsion clignotent en même temps (1 sec On – 1 sec Off) et l'écran affiche un compte à rebours en secondes. Si la pompe est en état d'Arrêt, seules les leds clignotantes s'affichent. Durant le temps de retard la fonction peut être désactivée en accédant au menu et en configurant le temps sur Off.</p> <p>En appuyant sur  l'on accède à la modification, ensuite avec les touches   l'on configure la valeur. Avec  l'on confirme et retourne au menu principal.</p> |

### Configuration Retard Calibrage

| Programmation                                                                                                                                                                                                                                                    | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     PROG2[PROG] --&gt; CONFIG2[Configuration]     CONFIG2 --&gt; FPN2[Functions Pompe]     FPN2 --&gt; DM2[Debit Max]     DM2 --&gt; L2[Langage]     L2 --&gt; RC2[Retard Calibrage]     RC2 --&gt; OFF2[Off]     OFF2 --&gt; DASH2[ ]     </pre> | <p>Permet de programmer un retard du fonctionnement de la pompe après le calibrage de la sonde (Redox ou pH).</p> <p>La configuration peut être désactivée avec Off (usine) ou alors, il est possible de configurer un retard de 1 à 60 minutes.</p> <p>Avec le retard actif, durant le temps configuré, les leds d'alarme et d'impulsion clignotent en même temps (1 sec On – 1 sec Off) et l'écran affiche un compte à rebours en secondes. Si la pompe est en état d'Arrêt, seules les leds clignotantes s'affichent. Durant le temps de retard la fonction peut être désactivée en accédant au menu et en configurant le temps sur Off.</p> <p>En appuyant sur  l'on accède à la modification, ensuite avec les touches   l'on configure la valeur. Avec  l'on confirme et retourne au menu principal.</p> |

## Paragraphe 11 – Programmation débit maximal

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Permet de programmer le débit maximal pouvant être atteint par la pompe et le mode programmé (% ou fréquence) devient l'affichage du débit dans l'unité de mesure standard. Appuyer sur  pour accéder à la mesure standard. Appuyer sur  pour accéder à la modification, puis avec les touches   programmer la valeur. Avec  confirmer et retourner au menu principal.</p> |

## Paragraphe 12 – Calibrage débit

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Le menu principal affiche la valeur de cc par coup en mémoire. Il est possible de calibrer en deux modes :</p> <p>MANUEL – insérer manuellement la valeur en cc par coup</p> <p>avec les touches   et confirmer avec </p> <p>AUTOMATIQUE – la pompe exécute 100 coups qui sont</p> <p>activés avec la touche , une fois terminés, insérer la</p> <p>quantité aspirée par la pompe avec les touches  </p> <p>et confirmer avec .</p> <p>La donnée insérée sera utilisée dans les calculs des débits</p> |

## Paragraphe 13 – Statistiques

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Le menu principal affiche les heures de fonctionnement de la pompe, appuyer sur  pour accéder aux autres statistiques.</p> <ul style="list-style-type: none"> <li>- Strokes = nombre de coups exécutés par la pompe</li> <li>- Q.ty(L) = quantité dosée par la pompe exprimée en litres; cette donnée est calculée d'après la valeur cc/stroke en mémoire</li> <li>- Power = nombre de démarrages de la pompe</li> </ul> <p>- Reset = les touches  permettent de réinitialiser les compteurs (YES) ou non (NO), appuyer sur  pour confirmer.</p> <p>La pression de  permet de retourner au menu principal.</p> |

## Paragraphe 14 – Password

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Entrer le mot de passe pour entrer dans la programmation et voir toutes les valeurs programmées, le mot de passe sera demandé à chaque tentative de modification</p> <p>La ligne clignotante indique le nombre modifiable, avec la</p> <p>touche  sélectionner le nombre (de 1 à 9), avec la</p> <p>touche  sélectionner le nombre à modifier puis avec la</p> <p>touche  confirmer. En programmant "0000" (défaut), le mot de passe est exclu.</p> |

## Paragraphe 15 – Alarme de flux

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Permet d'activer (Désactiver) le capteur de flux.</p> <p>Une fois activé (On) appuyer sur la touche  pour accéder à la demande de combien de signaux la pompe attend avant de déclencher l'état d'alarme. En appuyant sur</p> <p> le nombre clignote, puis avec les touches   programmer la valeur. Avec  confirmer.</p> <p>Appuyer sur  pour retourner au menu principal</p> |

## Paragraphe 16 – Alarme de niveau 1

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Cette rubrique du menu s'affiche seulement en modalité manuelle, pH ou Redox.</p> <p>En cas d'alarme du capteur de niveau, cela permet de configurer l'activation à partir de l'alarme sans verrouillage du dosage ou avec verrouillage du dosage (Stop).</p> <p>En appuyant sur  on accède à la modification,</p> <p>ensuite avec les touches   on configure le type</p> <p>d'alarme. Avec  on confirme. En appuyant sur</p> <p> on retourne au menu principal</p> |

## Paragraphe 17 – Alarme de niveau

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Permet de programmer la pompe lorsque l'alarme du capteur de niveau s'active, à savoir si bloquer le dosage (Stop) ou si tout simplement activer la signalisation d'alarme sans bloquer le dosage.</p> <p>Appuyer sur <b>mode enter</b> pour accéder à la modification. Puis avec les touches <b>+</b> <b>-</b> programmer le type d'alarme.</p> <p>Avec <b>mode enter</b> confirmer. Appuyer sur <b>ESC</b> pour retourner au menu principal.</p> |

## Paragraphe 18 – Unité Affichage débit

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Permet de programmer l'unité de mesure du dosage sur l'afficheur.</p> <p>Appuyer sur <b>mode enter</b> pour accéder à la modification, puis appuyer sur <b>+</b> <b>-</b> pour programmer le type d'unité de mesure, L/h (Litres/heure), Gph (Gallons/heure), ml/m (millilitres/minute) ou standard (% ou fréquence selon la programmation), Appuyer sur <b>mode enter</b> pour confirmer et retourner au menu principal</p> |

## Paragraphe 19 – Programmation Pause

| Programmation | Fonctionnement                                                                                                                                                                                                                                                                                                                             |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <p>Entrée signal pour mettre la pompe en pause. Le système est réglé d'usine en Normalement Ouvert.</p> <p>Appuyer sur <b>mode enter</b> pour accéder à la modification puis avec les touches <b>+</b> <b>-</b> programmer la valeur (N. OUVERT ou N. FERME').</p> <p>Avec <b>mode enter</b> confirmer et retourner au menu principal.</p> |

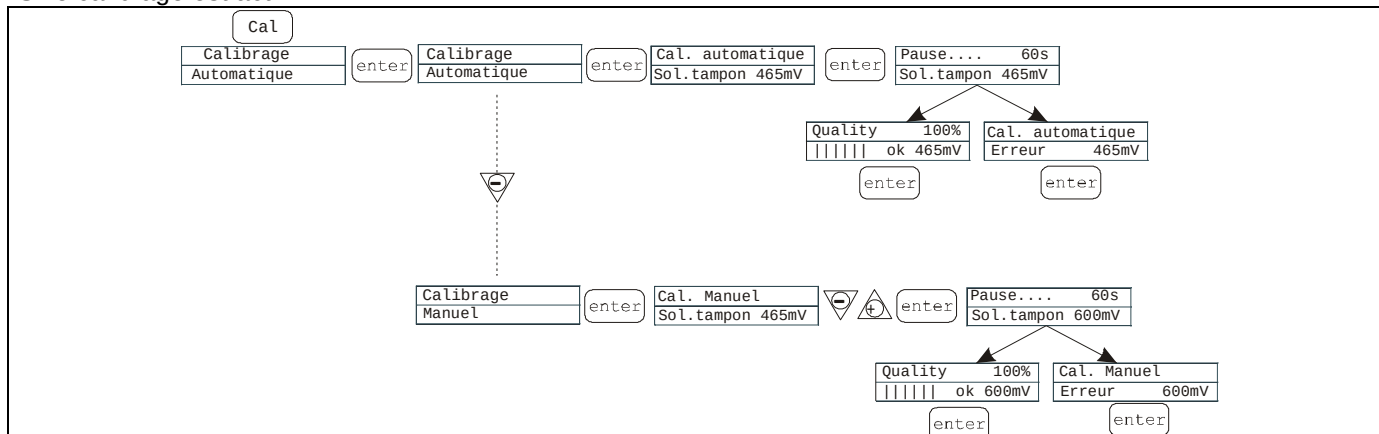


## Menu Calibrage Potentiel Redox (O.R.P.)

Appuyer sur la touche CAL x 3 secondes pour entrer dans le menu de calibrage, si lors de la programmation, le calibrage a été exclu, l'afficheur visualise:

|           |
|-----------|
| Calibrage |
| Off       |

Si le calibrage est actif:



Il est possible de choisir le mode automatique ou manuel.

- Calibrage automatique:

La valeur de la solution tampon s'affiche, insérer la sonde dans le flacon, appuyer sur  pour que le compte à rebours des 60 secondes nécessaires pour compléter le calibrage s'affiche.

Si la qualité de l'alignement est inférieure à 50% l'erreur s'affiche et appuyer sur  pour quitter le calibrage (après 4 secondes la pompe sort automatiquement), si la qualité est supérieure à 50%, la valeur est affichée et

appuyer sur  pour compléter la procédure.

- Calibrage manuel:

la valeur de la solution tampon s'affiche, insérer la sonde dans le flacon, en appuyant sur  on obtient le clignotement sur l'afficheur de la valeur de 465mV, insérer la sonde dans la solution puis appuyer sur les touches

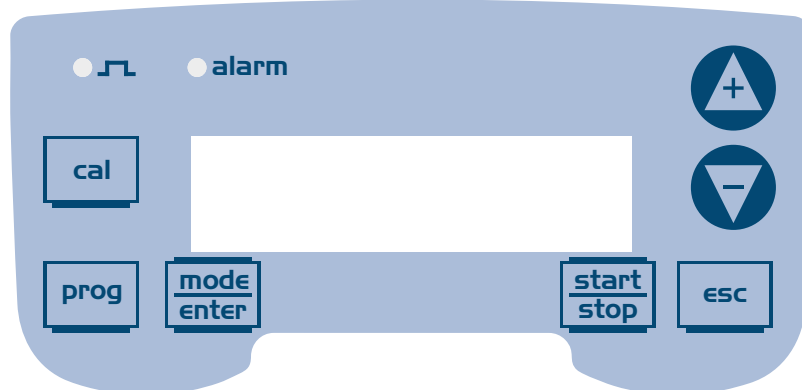


pour visualiser la valeur de la solution possédée puis appuyer sur  pour confirmer et faire démarrer la procédure de calibrage comme auparavant.

## Alarmes

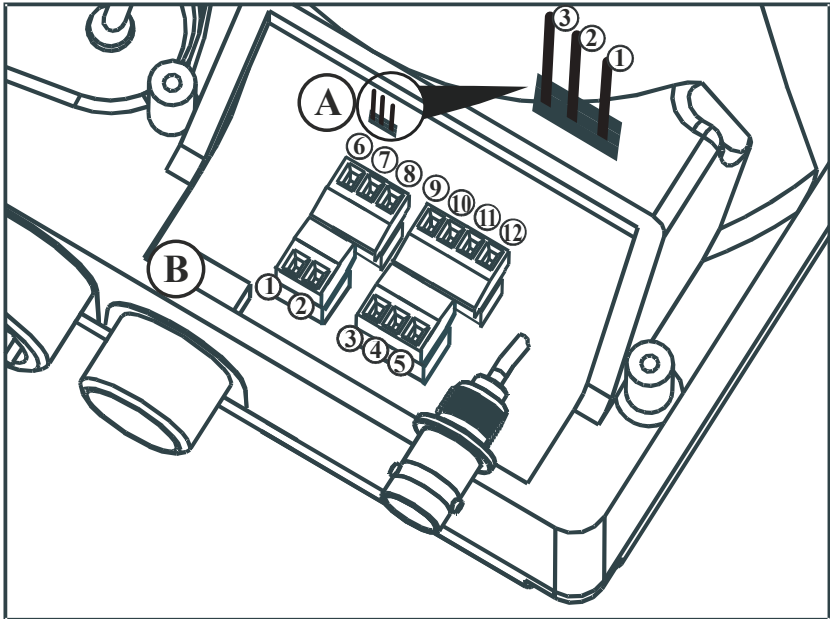
| Affichage                                                                                                                                                 | Causa           | Interruption |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|-----------------|-------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Led Alarme fixe<br>Message Lev clignotant<br>Ex: <table><tr><td>Man</td><td></td></tr><tr><td>Lev</td><td>P100%</td></tr></table>                         | Man             |              | Lev             | P100% | Alarme fin de niveau, sans interruption du fonctionnement de la pompe.                              | Rétablissement du niveau du liquide.                                                                                                                                                                                       |
| Man                                                                                                                                                       |                 |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Lev                                                                                                                                                       | P100%           |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Led Alarme fixe<br>Message Lev et Stop clignotant<br>Ex: <table><tr><td>Man</td><td></td></tr><tr><td>Lev Stop</td><td>P100%</td></tr></table>            | Man             |              | Lev Stop        | P100% | Alarme fin de niveau, avec interruption du fonctionnement de la pompe.                              | Rétablissement du niveau du liquide.                                                                                                                                                                                       |
| Man                                                                                                                                                       |                 |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Lev Stop                                                                                                                                                  | P100%           |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Led Alarme fixe<br>Message Flw clignotant<br>Ex: <table><tr><td>Man</td><td><b>F</b></td></tr><tr><td>Flw</td><td>P100%</td></tr></table>                 | Man             | <b>F</b>     | Flw             | P100% | Alarme de flux actif, la pompe n'a pas reçu le nombre de signaux programmés par le capteur de flux. | Pression de la touche                                                                                                                   |
| Man                                                                                                                                                       | <b>F</b>        |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Flw                                                                                                                                                       | P100%           |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Ex: <table><tr><td>Parameter Error</td><td></td></tr><tr><td>PROG to default</td><td></td></tr></table>                                                   | Parameter Error |              | PROG to default |       | Erreur de communication avec la Eeprom.                                                             | Pression de la touche  pour rétablir les paramètres de défaut.                                                                          |
| Parameter Error                                                                                                                                           |                 |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| PROG to default                                                                                                                                           |                 |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Message "OFA" clignotant<br>Message "Stop" clignotant<br>Ex: <table><tr><td>High</td><td>475 mV OFA</td></tr><tr><td>Stop</td><td>P 75%</td></tr></table> | High            | 475 mV OFA   | Stop            | P 75% | Alarme O.F.A.                                                                                       | Pression de la touche  pour bloquer le clignotement du message Stop, une pression supplémentaire de la touche fait redémarrer la pompe. |
| High                                                                                                                                                      | 475 mV OFA      |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Stop                                                                                                                                                      | P 75%           |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Message "Alm" clignotant<br>Ex: <table><tr><td>High</td><td>475 mV Alm</td></tr><tr><td>P 75%</td><td></td></tr></table>                                  | High            | 475 mV Alm   | P 75%           |       | La valeur lue par la sonde est hors de la plage de la bande d'alarme programmée.                    | Contrôler la programmation correcte du paramètre "Bande Alarme" en programmation.                                                                                                                                          |
| High                                                                                                                                                      | 475 mV Alm      |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| P 75%                                                                                                                                                     |                 |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| Message "Cal" alarme<br>Ex: <table><tr><td>High</td><td>475 mV Cal</td></tr><tr><td>P 75%</td><td></td></tr></table>                                      | High            | 475 mV Cal   | P 75%           |       | Alarme sonde non calibrée.                                                                          | Effectuer la procédure de calibrage de la sonde.                                                                                                                                                                           |
| High                                                                                                                                                      | 475 mV Cal      |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |
| P 75%                                                                                                                                                     |                 |              |                 |       |                                                                                                     |                                                                                                                                                                                                                            |

## Pannello di controllo – TEKNA TPT



|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Accesso al menu di programmazione.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|    | Durante la fase di funzionamento della pompa: premuto visualizza ciclicamente sul display i valori programmati; Premuto contemporaneamente ai pulsanti   aumenta o decrementa un valore dipendente dalla modalità di funzionamento prescelta. In programmazione svolge la funzione “enter”, cioè conferma l'ingresso nei vari livelli di menu e le modifiche all'interno degli stessi. |
|    | Avvia e mette in fase di stop la pompa. Nelle condizioni di allarme di livello (sola funzione allarme), di flusso e memory attive, disattiva la segnalazione sul display.                                                                                                                                                                                                                                                                                                                                                                                   |
|  | Per “uscire” dai vari livelli di menu. Prima di uscire definitivamente dalla programmazione si accede a richiesta di salvataggio delle modifiche.                                                                                                                                                                                                                                                                                                                                                                                                           |
|  | Accesso al menu di calibrazione della pompa. Se in modalità Off, il menu di calibrazione non viene attivato.                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|  | Scorre i menu verso l'alto, oppure incrementa i valori numerici da modificare. Nella modalità Batch può avviare il dosaggio.                                                                                                                                                                                                                                                                                                                                                                                                                                |
|  | Scorre i menu verso il basso, oppure decrementa i valori numerici da modificare.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|  | Led verde lampeggiante durante il dosaggio.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  | Led rosso che si accende nelle varie situazioni d'allarme.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

Connessioni elettriche



|    |                                                                            |                                                      |
|----|----------------------------------------------------------------------------|------------------------------------------------------|
| 1  | Ingresso sensore di flusso                                                 |                                                      |
| 2  |                                                                            |                                                      |
| 3  | Ingresso sonda di temperatura PT100/PT1000 (vedere schemi e connessioni)   |                                                      |
| 4  |                                                                            |                                                      |
| 5  |                                                                            |                                                      |
| 6  | Ingressi segnale in frequenza (contatore lancia-impulsi)                   |                                                      |
| 7  | / Ingresso trigger esterno                                                 |                                                      |
| 8  | / Ingresso sonda controllo livello2 (solo in modalità pH, Redox o manuale) |                                                      |
| 9  | Polo +                                                                     | Ingresso 4-20 mA<br>Impedenza d'ingresso:<br>110 ohm |
| 10 | Polo -                                                                     |                                                      |
| 11 | Ingresso segnale Pausa                                                     |                                                      |
| 12 | / Ingresso controllo remoto (start-stop)                                   |                                                      |
| A  | Jumper selezione ingresso frequenza                                        |                                                      |
| B  | Ingresso sonda controllo livello                                           |                                                      |

SCHEMI E CONNESSIONI

Diagramma connessioni PT100/PT1000 2 fili



Diagramma connessioni PT100/PT1000 3 fili

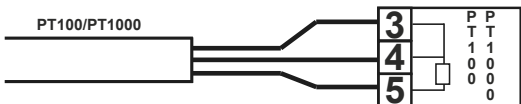
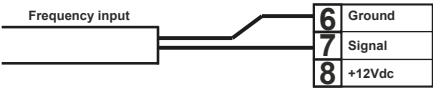


Diagramma connessioni ingresso in frequenza tipo contatto secco.



Posizione Jumper

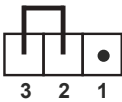
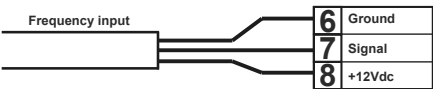


Diagramma connessioni ingresso in frequenza tipo sensore di Hall.



Posizione Jumper

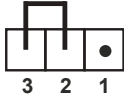
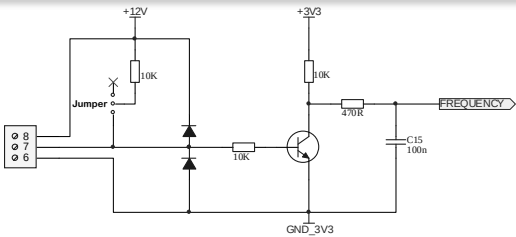
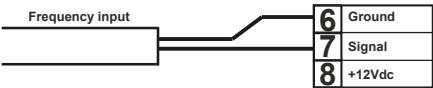
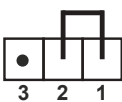


Diagramma connessioni ingresso in frequenza tipo segnale di tensione (0-5V)



Posizione Jumper



Premendo il tasto **prog** per più di tre secondi si accede alla programmazione. Con i tasti   potrete

scorrere le voci del menu, con il pulsante **mode enter** si accede alle modifiche.

Di fabbrica la pompa è programmata in modalità costante. La pompa torna automaticamente nella modalità di funzionamento dopo 1 minuto di non attività. I questo caso dati eventualmente inseriti non vengono salvati.

Con il pulsante **esc** si esce dai livelli della programmazione. All'uscita dalla programmazione il display visualizza:

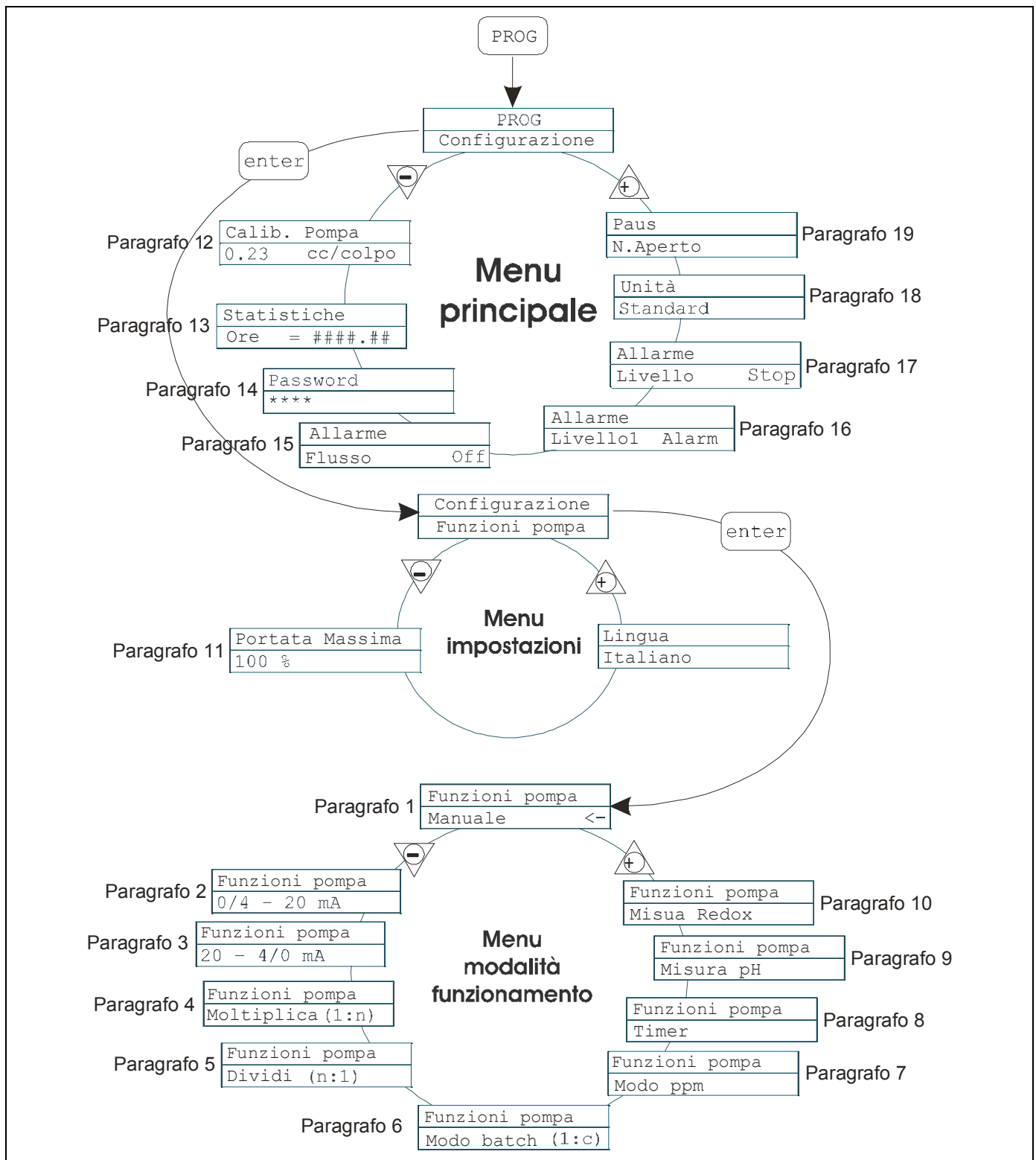
|         |
|---------|
| Exit    |
| No Save |

▽ ▲

|      |
|------|
| Exit |
| Save |

**mode enter**

per confermare la scelta



## Impostazione lingua

| Programmazione | Funzionamento                                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Permette di selezionare la lingua, di fabbrica la pompa è impostata in inglese.</p> <p>Premendo <b>mode enter</b> si accede alla modifica, quindi con i tasti   imposto il valore. Con <b>mode enter</b> confermo e torno al menu principale</p> |

## Paragrafo 1 – Dosaggio manuale

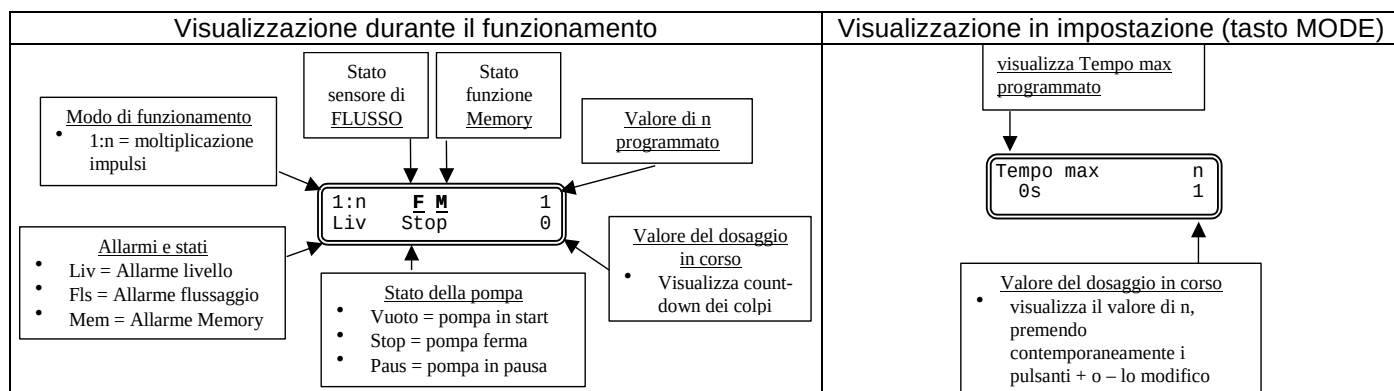
| Programmazione | Funzionamento                                                                                                                                                                                                           |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>La pompa lavora in modalità costante. La portata è regolata manualmente premendo contemporaneamente i pulsanti <b>mode enter</b>  per aumentare la portata, oppure i pulsanti <b>mode enter</b>  per diminuirla.</p> |

| Visualizzazione durante il funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Visualizzazione in impostazione (tasto MODE)                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> <div> <p><u>Modo di funzionamento</u></p> <ul style="list-style-type: none"> <li>Man = Manuale</li> </ul> </div> <div> <p><u>Stato sensore di FLUSSO</u></p> <p>MAN Liv Stop P100%</p> </div> <div> <p><u>Valore del dosaggio in corso</u><br/>(dipende dall'unità di misura selezionata)</p> <ul style="list-style-type: none"> <li>Percentuale, Frequenza, l/h, Gph, ml/m</li> </ul> </div> <div> <p><u>Allarmi e stati</u></p> <ul style="list-style-type: none"> <li>Liv = Allarme livello</li> <li>Fls = Allarme flusso</li> </ul> </div> <div> <p><u>Stato della pompa</u></p> <ul style="list-style-type: none"> <li>Vuoto = pompa in start</li> <li>Stop = pompa ferma</li> <li>Paus = pompa in pausa</li> </ul> </div> </div> | <div> <p><u>Modo di funzionamento</u></p> <ul style="list-style-type: none"> <li>Visualizza il valore corrispondente della frequenza</li> </ul> </div> <div> <p>F320s/m P100%</p> </div> <div> <p><u>Valore del dosaggio in corso</u></p> <ul style="list-style-type: none"> <li>Modifica della portata massima premendo contemporaneamente i pulsanti + o -</li> </ul> </div> |

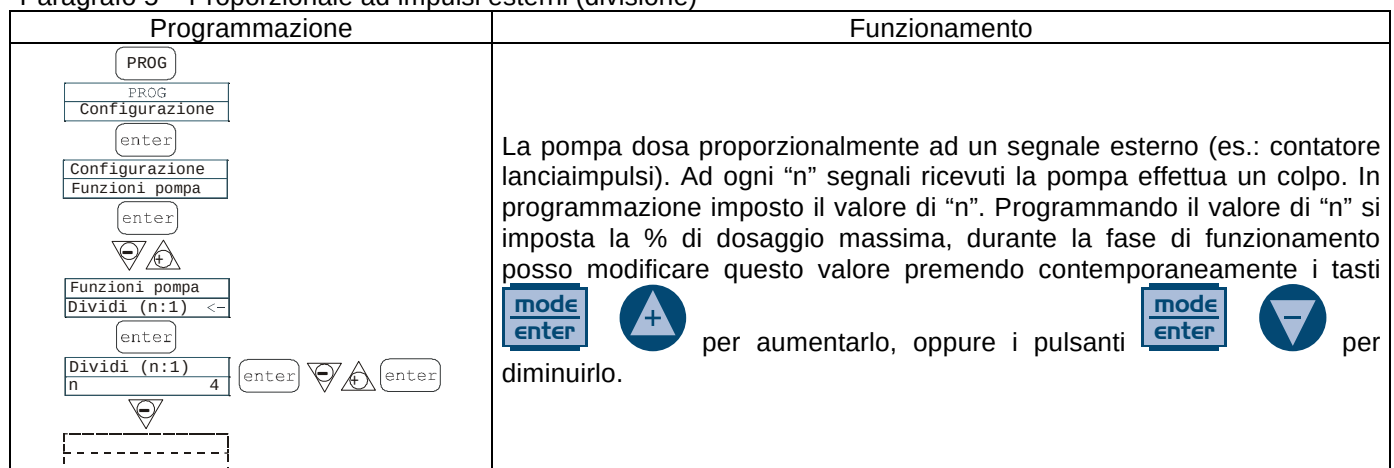
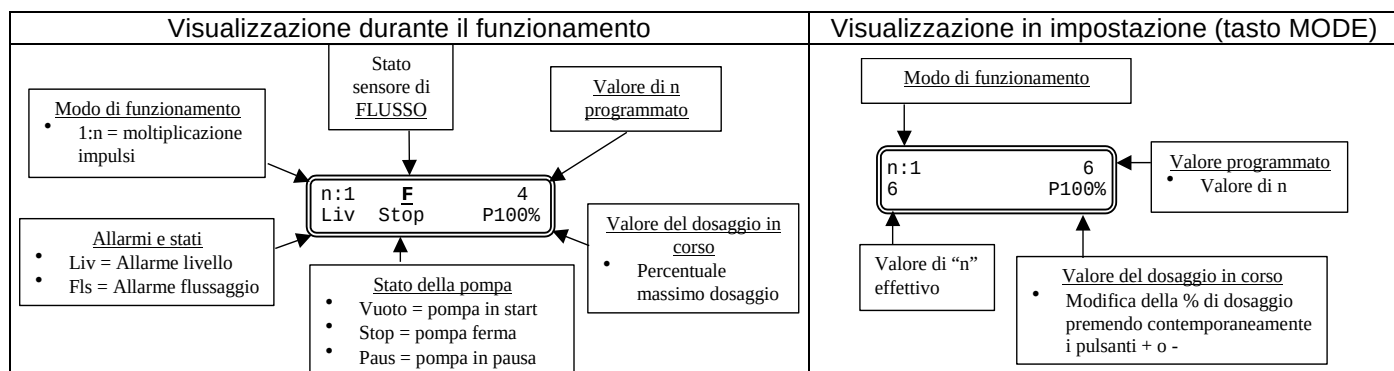
## Paragrafo 2 – Dosaggio Proporzionale a segnale 0/4-20 mA

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>La pompa dosa proporzionalmente ad un segnale (0)4-20 mA. Di fabbrica la pompa interrompe il dosaggio a 4 mA e dosa alla massima frequenza impostata quando riceve 20 mA. In programmazione è possibile modificare questi due valori. La frequenza massima è modificabile durante il funzionamento, premendo contemporaneamente i tasti <b>mode enter</b>  per aumentare la portata, oppure i pulsanti <b>mode enter</b>  per diminuirla.</p> <p>Per un segnale d'ingresso inferiore a 0,2 mA si accende il LED si allarme per indicare l'assenza di segnale.</p> |

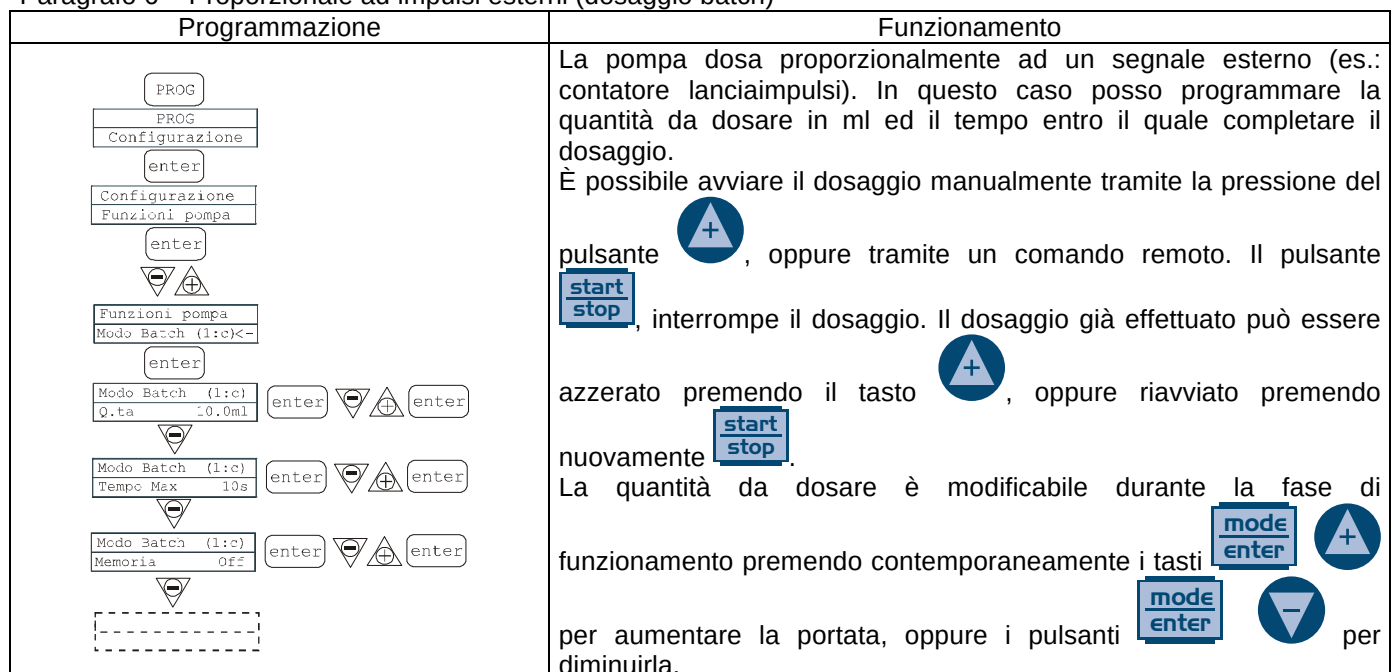


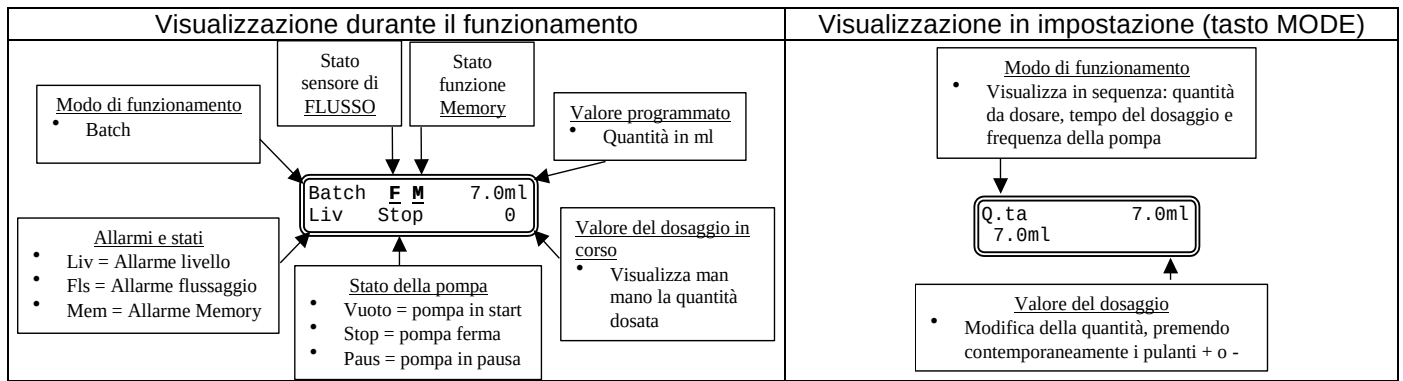


## Paragrafo 5 – Proporzionale ad impulsi esterni (divisione)

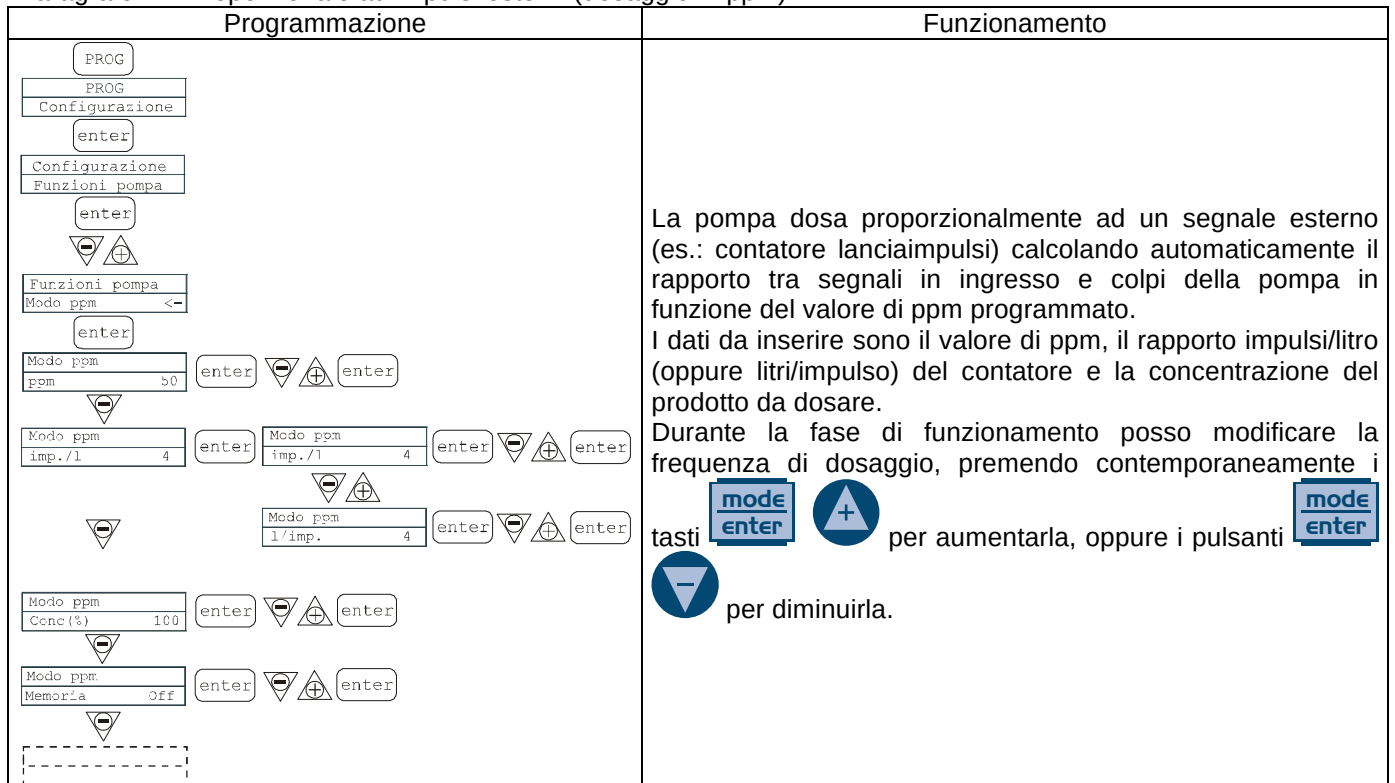
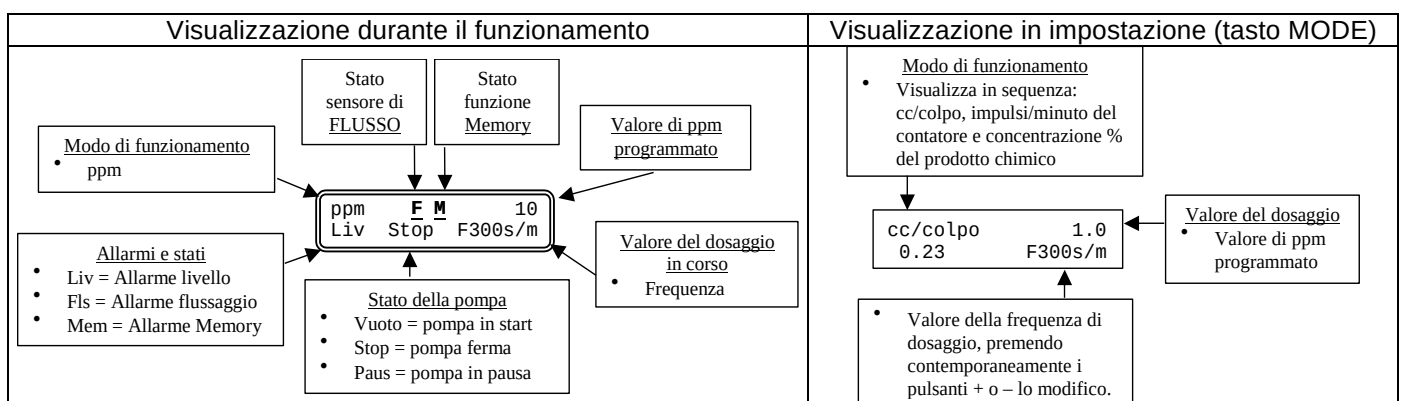


## Paragrafo 6 – Proporzionale ad impulsi esterni (dosaggio batch)

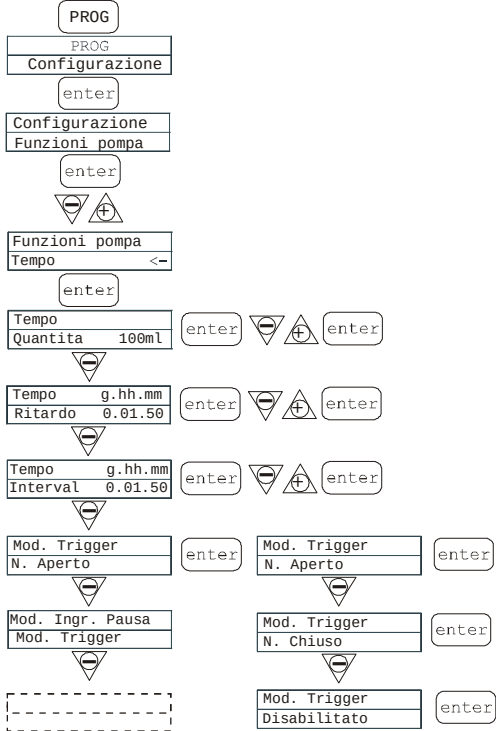
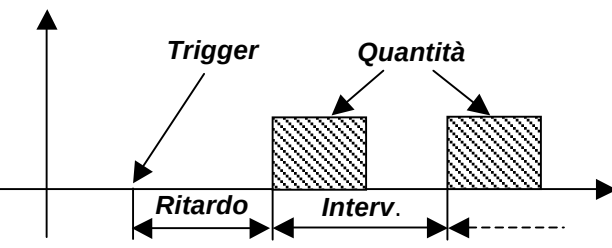
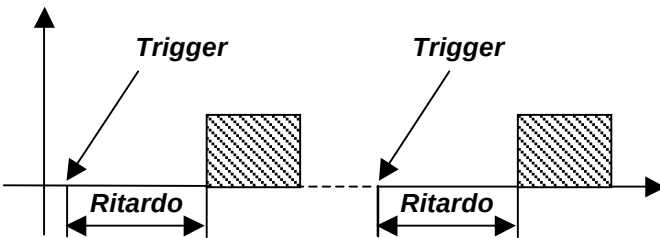


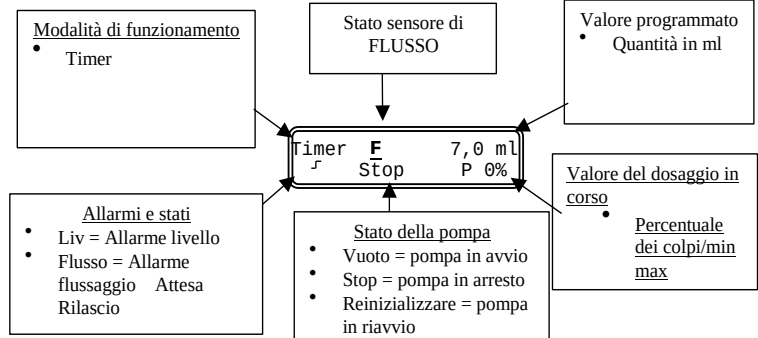
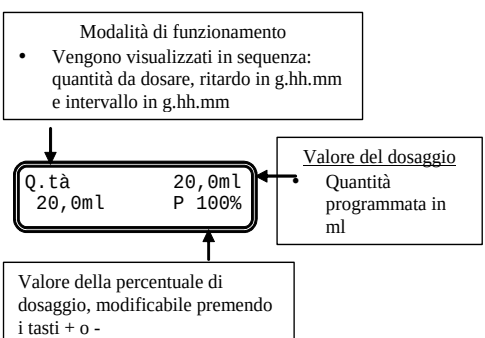


## Paragrafo 7 – Proporzionale ad impulsi esterni (dosaggio in ppm)



## Paragrafo 8 – Dosaggio temporizzato (**Ingresso segnale frequenza “TRIGGER” attivato**)

| Programmazione                                                                     | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Dopo la ricezione del segnale di <b>Trigger</b> impostato, la pompa dosa una quantità programmabile in ml. È possibile impostare un tempo di ritardo prima del dosaggio (<b>Ritardo</b>) e la distanza tra dosaggi successivi (<b>Interval.</b>) come illustrato nello schema:</p>  <p>Impostando, ad esempio, un tempo <b>Interval.</b> = 0 si ottiene un sistema nel quale la quantità programmata viene dosata dopo ogni segnale di <b>TRIGGER</b> (con l'eventuale ritardo impostato):</p>  <p>È possibile avviare il dosaggio anche premendo il tasto +, il quale praticamente simula il segnale di <b>Trigger</b>.</p> <p>Il segnale <b>Trigger</b> può essere impostato su <b>N. Aperto</b> (si attiva quando l'ingresso passa dalla modalità aperta a quella chiusa) o su <b>N. Chiuso</b> (si attiva quando l'ingresso passa dalla modalità chiusa a quella aperta).</p> <p>Il segnale <b>Trigger</b> è bloccato durante il dosaggio (la sua ricezione non viene né memorizzata né gestita).</p> <p>L'ingresso <b>Pausa</b> (<b>Ingresso telecomando</b>) non può essere programmato e la sua attivazione blocca il dosaggio, mentre la successiva disattivazione rimette il sistema in attesa del segnale <b>Trigger</b> per un nuovo dosaggio.</p> <p>Durante la fase di funzionamento della pompa, è possibile modificare la frequenza di dosaggio premendo contemporaneamente i tasti   per aumentare la frequenza oppure i tasti   per diminuirla.</p> |

| Visualizzazione durante il funzionamento                                            | Visualizzazione all'avvio (tasto MODE)                                               |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |

## Paragrafo 8 – Dosaggio temporizzato (**Ingresso segnale frequenza "TRIGGER" non attivato**)

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>La pompa dosa una quantità programmabile in ml, è possibile impostare un tempo di ritardo all'avvio della pompa (<b>Ritardo</b>) e la distanza tra due dosaggi successivi (<b>Interval.</b>) come illustrato nello schema:</p> <p>I tempi di <b>Ritardo</b> e di <b>Interv.</b> sono in gg.hh.mm (giorni.ore.minuti)</p> <p>L'ingresso della <b>Pausa</b> può essere programmato in tre modalità diverse:</p> <ol style="list-style-type: none"> <li>1. <b>Blocca Tempo</b>: con la pausa attivata, il sistema blocca il conteggio del tempo attuale e lo riprende quando la pausa si disattiva</li> <li>2. <b>Pausa dosaggio</b>: con la pausa attivata, il sistema continua a contare il tempo e blocca il dosaggio</li> <li>3. <b>Riavvia Tempo</b>: con la pausa attivata, il sistema blocca il dosaggio e quando la pausa si disattiva il conteggio ricomincia dall'inizio.</li> </ol> <p>Durante la fase di funzionamento della pompa, è possibile modificare la frequenza di dosaggio premendo contemporaneamente i tasti    per aumentare la frequenza oppure i tasti    per diminuirla.</p> |

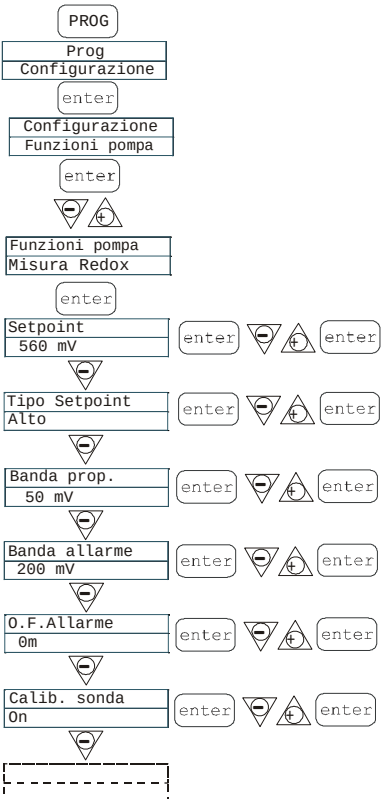
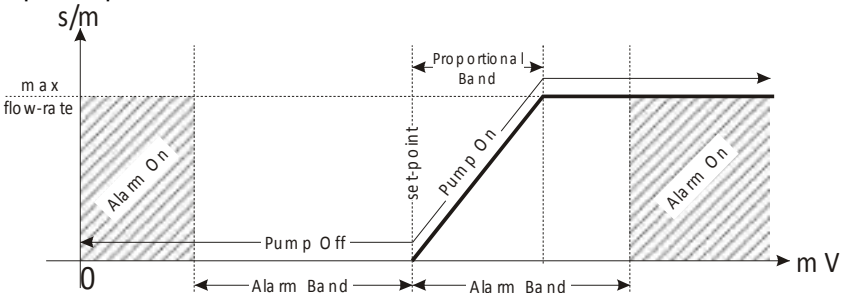
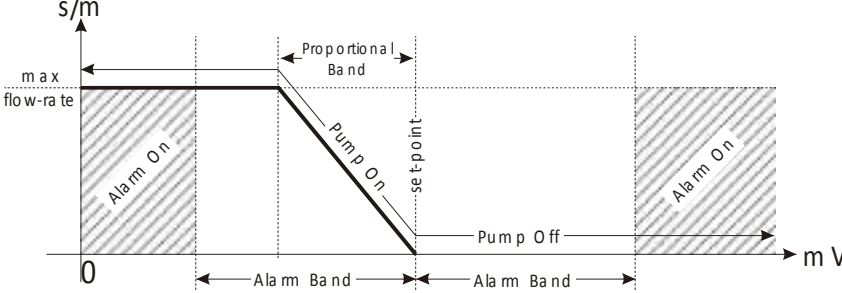
| Visualizzazione durante il funzionamento | Visualizzazione all'avvio (tasto MODE) |
|------------------------------------------|----------------------------------------|
|                                          |                                        |

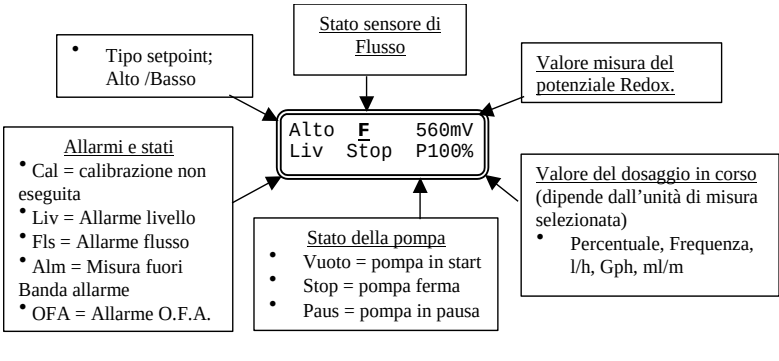
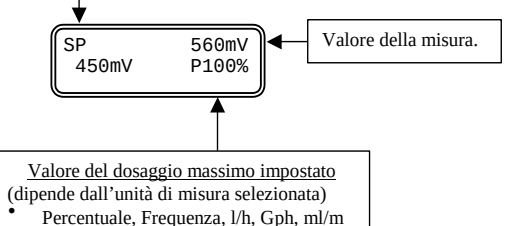
## Paragrafo 9 – Dosaggio Proporzionale alla misura del pH (impostazione di fabbrica)

| Programmazione                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     PROG[PROG] --&gt; Prog[Prog Configurazione]     Prog --&gt; Conf[Configurazione Funzioni pompa]     Conf --&gt; Misura[Misura pH]     Misura --&gt; Setpoint[Setpoint 7.00 pH]     Setpoint --&gt; TipoSetpoint[Tipo Setpoint Acido]     TipoSetpoint --&gt; BandaProp[Banda prop. 0.50 pH]     BandaProp --&gt; BandaAllarme[Banda allarme 2.00 pH]     BandaAllarme --&gt; OFAllarme[O.F. Allarme 0m]     OFAllarme --&gt; Risoluzione[Risoluzione 0.01]     Risoluzione --&gt; CalibSonda[Calib. sonda On]     CalibSonda --&gt; TempManC[Temperatura Man. 25 °C]     TempManC --&gt; TempManF[Temperatura Man. 77 °F]     </pre> | <p>La pompa misura e controlla il valore di pH di una soluzione, programmando in sequenza: set-point, tipo di set-point, banda proporzionale e banda d'allarme.</p> <p>Tipo set-point: acido</p> <p>Tipo set-point: alcalino</p> <p>Si può inoltre programmare:</p> <ul style="list-style-type: none"> <li>- il tempo O.F.A. (Over Feed Alarm) in minuti, cioè un tempo oltre il quale se la misura del pH non arriva al setpoint, si attiva un segnale d'allarme.</li> <li>- La risoluzione della misura (1 o 2 cifre decimali)</li> <li>- Disattivazione/attivazione della procedura di calibrazione</li> <li>- Valore manuale della temperatura in °C (fabbrica) o °F</li> </ul> <p>La frequenza massima è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti <b>mode</b> <b>enter</b> <b>mode</b> <b>enter</b> per aumentare la portata, oppure i pulsanti <b>+</b> <b>-</b> per diminuirla.</p> |

| Visualizzazione durante il funzionamento                                                                                                                           | Visualizzazione in impostazione (tasto MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     subgraph Display         direction TB         D1[Alca F 7.00pH]         D2[Liv Stop P100%]     end     D1 --&gt; D2     D2 --&gt; D1     </pre> | <p><u>Visualizza in sequenza</u></p> <ul style="list-style-type: none"> <li>• SP = valore Setpoint</li> <li>• BP = valore Banda Proporzionale</li> <li>• BA = valore Banda Allarme</li> <li>• OFA = Valore O.F.A.</li> <li>• Temp = valore Temperatura</li> </ul> <p>↓</p> <p>SP 4.50pH 7.00pH P100% ← Valore della misura.</p> <p>↑</p> <p>Valore del dosaggio massimo impostato (dipende dall'unità di misura selezionata)</p> <ul style="list-style-type: none"> <li>• Percentuale, Frequenza, l/h, Gph, ml/m</li> </ul> |

## Paragrafo 10 – Dosaggio Proporzionale alla misura del potenziale Redox (O.R.P.)

| Programmazione                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <pre> graph TD     PROG[PROG] --&gt; Prog[Prog Configurazione]     Prog --&gt; Conf[Configurazione Funzioni pompa]     Conf --&gt; Funz[Funzioni pompa Misura Redox]     Funz --&gt; Setpoint[Setpoint 560 mV]     Setpoint --&gt; TipoSet[Tipo Setpoint Alto]     TipoSet --&gt; BandaProp[Banda prop. 50 mV]     BandaProp --&gt; BandaAll[Banda allarme 200 mV]     BandaAll --&gt; OFA[O.F. Allarme 0m]     OFA --&gt; Calib[Calib. sonda On]     Calib --&gt; End[ ]     </pre> | <p>La pompa misura e controlla il valore del Redox di una soluzione, programmando in sequenza: set-point, tipo di set-point, banda proporzionale e banda d'allarme.</p> <p>Tipo set-point: massima</p>  <p>Tipo set-point: minima</p>  <p>Si può inoltre programmare:</p> <ul style="list-style-type: none"> <li>- il tempo O.F.A. (Over Feed Alarm) in minuti, cioè un tempo oltre il quale se la misura del pH non arriva al setpoint, si attiva un segnale d'allarme.</li> <li>- La risoluzione della misura (1 o 2 cifre decimali)</li> <li>- Disattivazione/attivazione della procedura di calibrazione</li> </ul> <p>La frequenza massima è modificabile durante il funzionamento premendo contemporaneamente i tasti   per aumentare la portata, oppure i pulsanti   per diminuirla.</p> |

| Visualizzazione durante il funzionamento                                                                                                                                                                                                                                                                                                                                                                                               | Visualizzazione in impostazione (tasto MODE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <pre> graph TD     Setpoint[Tipo setpoint; Alto/Basso] --&gt; Display     Flusso[Stato sensore di Flusso] --&gt; Display     Redox[Valore misura del potenziale Redox] --&gt; Display     Allarmi[Allarmi e stati] --&gt; Display     Pompa[Stato della pompa] --&gt; Display     Dosaggio[Valore del dosaggio in corso] --&gt; Display     </pre> | <p>Visualizza in sequenza</p> <ul style="list-style-type: none"> <li>• SP = valore Setpoint</li> <li>• BP = valore Banda Proporzionale</li> <li>• BA = valore Banda Allarme</li> <li>• OFA = Valore O.F.A.</li> </ul>  <pre> graph TD     Setup[Visualizza in sequenza] --&gt; SP[SP 450mV]     Setup --&gt; BP[560mV P100%]     Misura[Valore della misura.] --&gt; SP     Dosaggio[Valore del dosaggio massimo impostato] --&gt; BP     </pre> |

## Voci di menu impostazioni per modalità misura pH e Redox

## Impostazione Ritardo Power On

| Programmazione                                                                                                                                                                                                                                                                                                                    | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> graph TD     A([PROG]) --&gt; B[PROG Configurazione]     B -- enter --&gt; C[Configurazione Funzioni pompa]     C --&gt; D[Portata Massima F100%]     D --&gt; E[Lingua Italiano]     E --&gt; F[Ritardo Power ON Off]     F -- enter --&gt; G[ ]     G --&gt; H[ ]     H -- enter --&gt; I[ ]     I --&gt; J[ ]     </pre> | <p>Permette di impostare un ritardo del funzionamento della pompa all' accensione della stessa. Questo ritardo ha effetto solo se la pompa viene spenta e riaccesa togliendo l'alimentazione.</p> <p>L'impostazione può essere disabilitata, Off (fabbrica) oppure si può impostare un ritardo da 1 a 60 minuti.</p> <p>Con il ritardo attivo, durante il tempo impostato il led allarme e di impulso lampeggiano contemporaneamente (1 sec On – 1 sec Off) e il display mostra il countdown in secondi. Se la pompa è in Stop vengono visualizzati solo i led lampeggianti. Durante il tempo di ritardo può essere disattivata la funzione accedendo al menu, impostando il tempo ad Off.</p> <p>Premendo  si accede alla modifica, quindi con i tasti   imposto il valore. Con  confermo e torno al menu principale</p> |

## Impostazione Ritardo Calibrazione

| Impostazione                 | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Programmazione</b></p> | <p>Permette di impostare un ritardo del funzionamento della pompa dopo la calibrazione della sonda (Redox o pH). L'impostazione può essere disabilitata, Off (fabbrica) oppure si può impostare un ritardo da 1 a 60 minuti. Con il ritardo attivo, durante il tempo impostato il led allarme e di impulso lampeggiano contemporaneamente (1 sec On – 1 sec Off) e il display mostra il countdown in secondi. Se la pompa è in Stop vengono visualizzati solo i led lampeggianti. Durante il tempo di ritardo può essere disattivata la funzione accedendo al menu, impostando il tempo ad Off.</p> <p>Premendo  si accede alla modifica, quindi con i tasti   imposto il valore. Con  confermo e torno al menu principale</p> |

## Paragrafo 11 – Impostazione massima portata

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                   |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Permette di impostare la massima portata raggiungibile dalla pompa e la modalità programmata (% o frequenza) diventa la visualizzazione della portata nell'unità di misura standard. Premendo  si accede alla modifica, quindi con i tasti   imposto il valore. Con  confermo e torno al menu principale</p> |

## Paragrafo 12 – Calibrazione portata

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Nel menu principale appare il valore di cc a colpo in memoria. È possibile calibrare in due modalità:<br/> <b>MANUALE</b> – inserisco manualmente il valore di cc a colpo con i tasti   e confermo con <br/> <b>AUTOMATICA</b> – la pompa esegue 100 colpi, che vengono avviati con il tasto , alla fine dei quali con i tasti   inserisco la quantità aspirata dalla pompa e confermo con .<br/>         Il dato inserito verrà utilizzato nei calcoli delle portate.</p> |

## Paragrafo 13 – Statistiche

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Nel menu principale visualizza le ore di funzionamento della pompa, premendo il tasto  accedo alle altre statistiche:</p> <ul style="list-style-type: none"> <li>- Colpi = numero di colpi eseguito dalla pompa</li> <li>- Q.ta(L) = quantità dosata dalla pompa espressa in litri; questo dato viene calcolato in base al valore cc/colpo in memoria</li> <li>- Accensioni = numero di avviamenti della pompa</li> <li>- Reset = con i tasti   posso azzerare i contatori (YES) oppure no (NO), con  confermo.</li> </ul> <p>La pressione di  permette di tornare al menu principale.</p> |

## Paragrafo 14 – Password

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Inserendo la password, potrò entrare in programmazione e vedere tutti i valori impostati, ma ogni volta che cercherò di modificarli verrà richiesta la password.</p> <p>La linea lampeggiante indica il numero modificabile, con il</p> <p>tasto  seleziono il numero (da 1 a 9), con il tasto  seleziono il numero da modificare, quindi con  confermo. Impostando "0000" (fabbrica), la password viene esclusa.</p> |

## Paragrafo 15 – Allarme di flusso

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Permette di attivare (disattivare) il sensore di flusso.</p> <p>Una volta attivato (On) premendoli tasto  si accede alla richiesta di quanti segnali aspetta la pompa prima di andare in allarme. Premendo  lampeggia il numero, quindi con i tasti   imposto il valore. Con  confermo. Premendo  torno al menu principale</p> |

## Paragrafo 16 – Allarme di livello1

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Questa voce di menu compare solo nelle modalità Manuale, pH o Redox.</p> <p>Permette di impostare al verificarsi dell'allarme del sensore di livello, l'attivazione dall'allarme senza blocco del dosaggio oppure il blocco del dosaggio (Stop).</p> <p>Premendo  si accede alla modifica, quindi con i tasti   imposto il tipo di allarme. Con  confermo.</p> <p>Premendo  torno al menu principale</p> |

## Paragrafo 17 – Allarme di livello

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Permette di impostare la pompa quando si attiva l'allarme del sensore di livello, cioè blocco il dosaggio (Stop), oppure se semplicemente attivare la segnalazione d'allarme senza blocco del dosaggio.</p> <p>Premendo  si accede alla modifica, quindi con i tasti   imposto il tipo di allarme. Con  confermo.</p> <p>Premendo  torno al menu principale</p> |

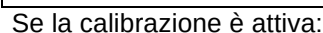
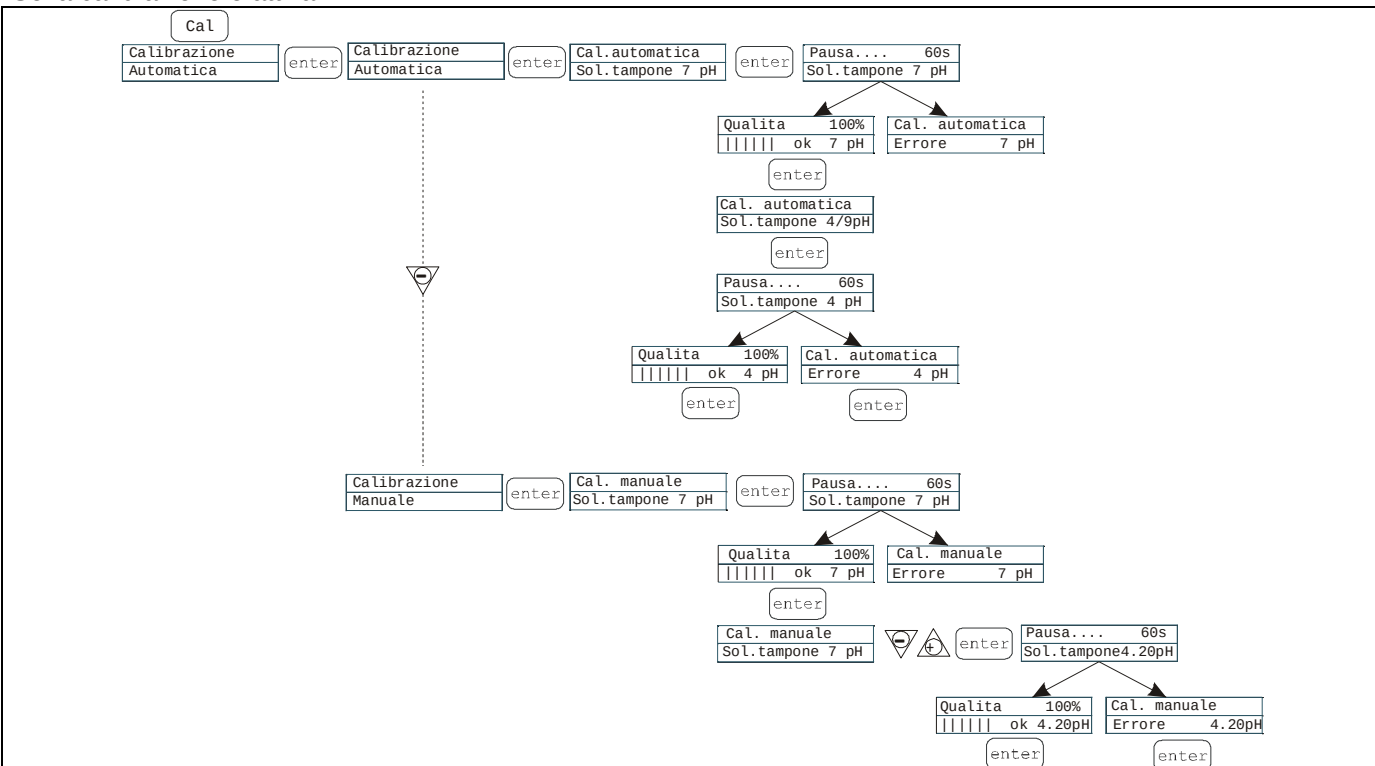
## Paragrafo 18 – Unità visualizzazione portata

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Permette di impostare l'unità di misura del dosaggio a display in visualizzazione.</p> <p>Premendo  si accede alla modifica, quindi con i tasti   imposto il tipo di unità di misura, L/h (Litri/ora), Gph (Galloni/ora), ml/m (millilitri/minuto) o standard (% o frequenza, a seconda di come impostato). Con  confermo e torno al menu principale</p> |

## Paragrafo 19 –Impostazione Pausa

| Programmazione | Funzionamento                                                                                                                                                                                                                                                                    |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p>Ingresso remoto per mettere in pausa la pompa. In fabbrica il sistema è impostato come Normalmente Aperto.</p> <p>Premendo  si accede alla modifica, quindi con i tasti   imposto il valore (N. APERTO oppure N. CHIUSO)</p> <p>Con  confermo e torno al menu principale.</p> |

Premendo il tasto CAL x 3 secondi si entra nel menu calibrazione, se in programmazione la calibrazione è stata esclusa, sul display appare:



- Calibrazione automatica:

mode  
enter

mode  
enter

mode  
enter

- Calibrazione manuale:

mode  
enter

mode  
enter

mode  
enter

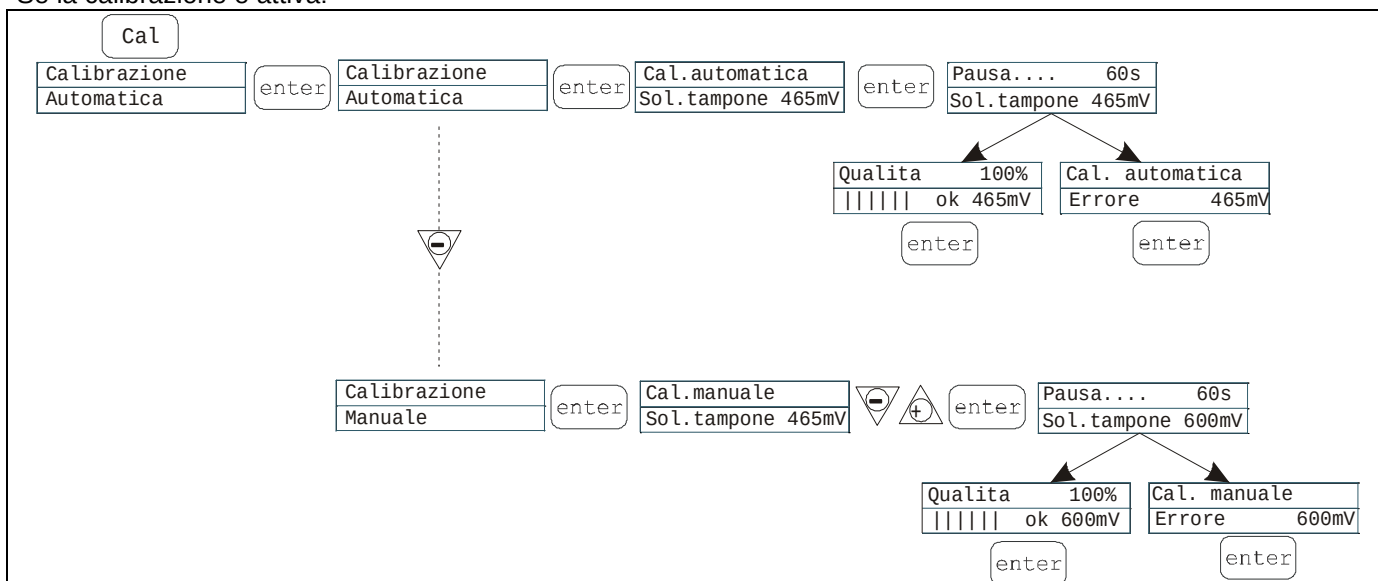
soluzione in mio possesso, quindi premendo **enter** confermo ed avvio la procedura di calibrazione come in precedenza.

## Menu Calibrazione Potenziale Redox (O.R.P.)

Premendo il tasto CAL per 3 secondi si entra nel menu calibrazione, se in programmazione la calibrazione è stata esclusa, sul display appare:

|              |
|--------------|
| Calibrazione |
| Off          |

Se la calibrazione è attiva:



È possibile scegliere la modalità automatica o manuale.

- Calibrazione automatica:

sul display appare il valore della soluzione tampone inserire la sonda nella boccetta, premendo  a display appare il conteggio alla rovescia dei 60 secondi necessari a completare la calibrazione. Se la qualità

dell'allineamento è inferiore al 50% appare errore a display e premendo  si esce dalla calibrazione (dopo 4 secondi la pompa esce automaticamente), se la qualità è superiore al 50%, il valore viene visualizzato a display e

premendo  viene completata la procedura.

- Calibrazione manuale:

sul display appare il valore della soluzione tampone inserire la sonda nella boccetta, premendo  sul display

lampeggia il valore di 465mV, inserisco la sonda nella mia soluzione, quindi con i tasti   visualizzo il

valore della soluzione in mio possesso, quindi premendo  confermo ed avvio la procedura di calibrazione come in precedenza.

## Allarmi

| Visualizzazione                                                                                                                                               | Causa           | Interruzione    |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Led Alarm fisso<br>Scritta Lev lampeggiante<br>Es: <table><tr><td>Man</td><td></td></tr><tr><td>Lev</td><td>P100%</td></tr></table>                           | Man             |                 | Lev                                    | P100%                                                                                                                                             | Allarme fine di livello, senza interruzione del funzionamento della pompa.                                 | Ripristino del livello del liquido.                                                                                                                                                                         |
| Man                                                                                                                                                           |                 |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Lev                                                                                                                                                           | P100%           |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Led Alarm fisso<br>Scritta Lev e Stop lampeggianti<br>Es: <table><tr><td>Man</td><td></td></tr><tr><td>Lev Stop</td><td>P100%</td></tr></table>               | Man             |                 | Lev Stop                               | P100%                                                                                                                                             | Allarme fine di livello, con interruzione del funzionamento della pompa.                                   | Ripristino del livello del liquido.                                                                                                                                                                         |
| Man                                                                                                                                                           |                 |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Lev Stop                                                                                                                                                      | P100%           |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Led Alarm fisso<br>Scritta Flw lampeggiante<br>Es: <table><tr><td>Man</td><td><b>F</b></td></tr><tr><td>Flw</td><td>P100%</td></tr></table>                   | Man             | <b>F</b>        | Flw                                    | P100%                                                                                                                                             | Allarme di flusso attivo, la pompa non ha ricevuto il numero di segnali programmati dal sensore di flusso. | Pressione del tasto                                                                                                      |
| Man                                                                                                                                                           | <b>F</b>        |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Flw                                                                                                                                                           | P100%           |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Es: <table><tr><td>Parameter Error</td></tr><tr><td>PROG to default</td></tr></table>                                                                         | Parameter Error | PROG to default | Errore di comunicazione con la eeprom. | Pressione del tasto  per ripristinare i parametri di fabbrica. |                                                                                                            |                                                                                                                                                                                                             |
| Parameter Error                                                                                                                                               |                 |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| PROG to default                                                                                                                                               |                 |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Scritta "OFA" lampeggiante<br>Scritta "Stop" lampeggiante<br>Es: <table><tr><td>High</td><td>475 mV OFA</td></tr><tr><td>Stop</td><td>P 75%</td></tr></table> | High            | 475 mV OFA      | Stop                                   | P 75%                                                                                                                                             | Allarme O.F.A.                                                                                             | Pressione del tasto  per bloccare il lampeggio della scritta Stop, ulteriore pressione del tasto per riavviare la pompa. |
| High                                                                                                                                                          | 475 mV OFA      |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Stop                                                                                                                                                          | P 75%           |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Scritta "Alm" lampeggiante<br>Es: <table><tr><td>High</td><td>475 mV Alm</td></tr><tr><td>P</td><td>75%</td></tr></table>                                     | High            | 475 mV Alm      | P                                      | 75%                                                                                                                                               | Il valore letto dalla sonda è fuori dall'intervallo della banda d'allarme impostata                        | Controllare la corretta impostazione del parametro "Banda Allarme" in programmazione.                                                                                                                       |
| High                                                                                                                                                          | 475 mV Alm      |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| P                                                                                                                                                             | 75%             |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| Scritta "Cal" lampeggiante<br>Es: <table><tr><td>High</td><td>475 mV Cal</td></tr><tr><td>P</td><td>75%</td></tr></table>                                     | High            | 475 mV Cal      | P                                      | 75%                                                                                                                                               | Allarme sonda non calibrata                                                                                | Effettuare la procedura di calibrazione della sonda.                                                                                                                                                        |
| High                                                                                                                                                          | 475 mV Cal      |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |
| P                                                                                                                                                             | 75%             |                 |                                        |                                                                                                                                                   |                                                                                                            |                                                                                                                                                                                                             |