

ATHENA AT. MT

INSTALLATION MANUAL	EN
HANDBUCH	DE
MANUAL DE INSTALACION	ES
MANUEL D'INSTALLATION	FR
MANUALE D'INSTALLAZIONE	IT
MANUAL DE INSTALAÇÃO	PT
KULLANIM KLAVUZU	TR
РУКОВОДСТВО ПО УСТАНОВКЕ И ЭКСПЛУАТАЦИИ	RU

EM00136269

rev. 1.0

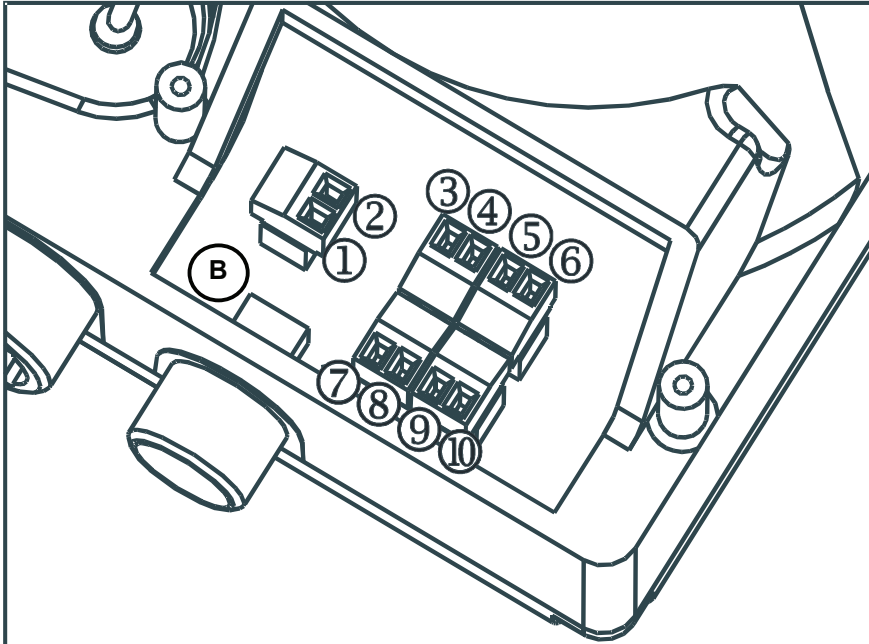
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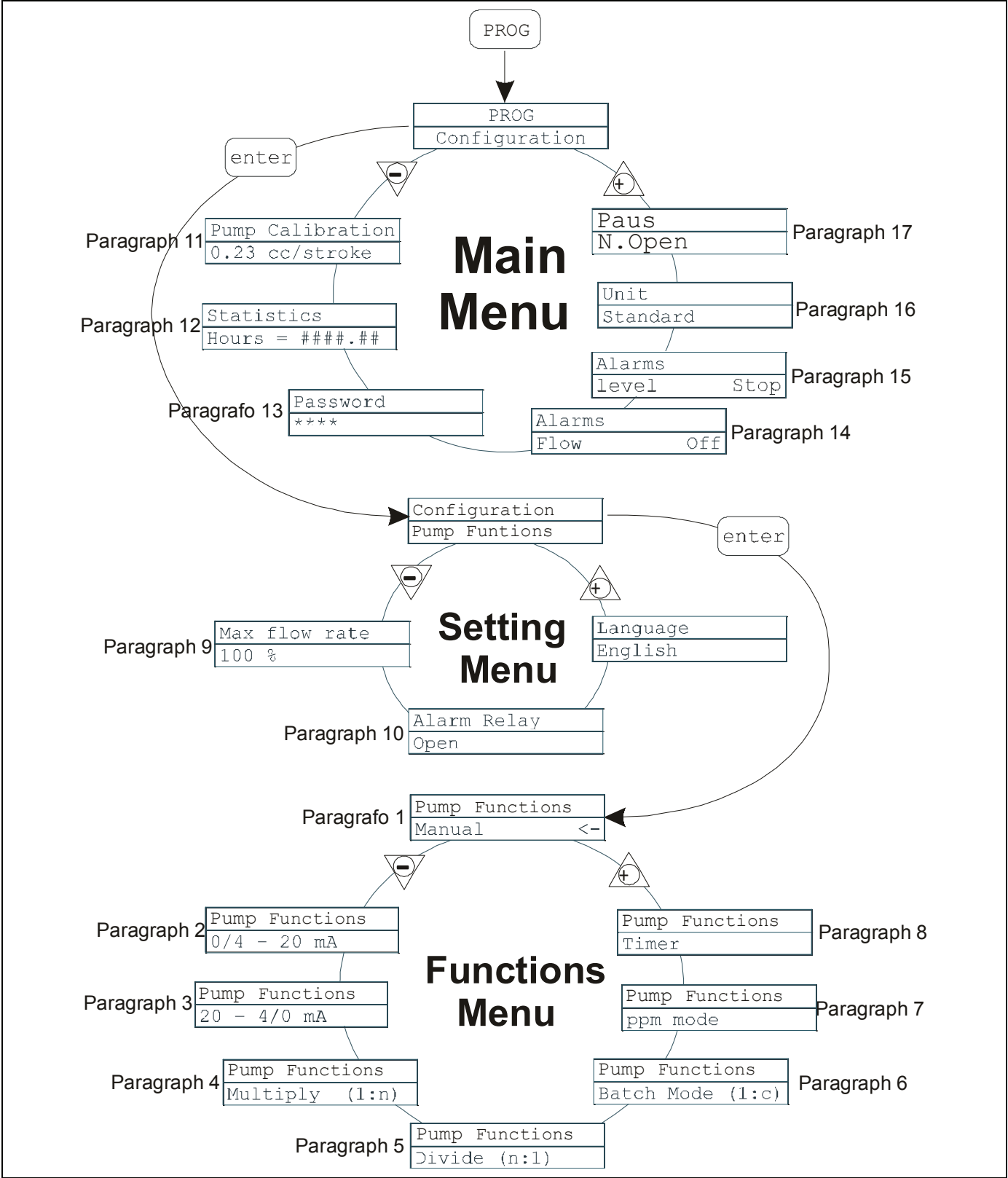
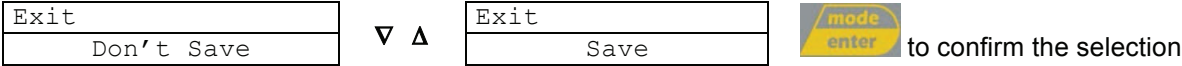
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Control panel – ATHENA AT.MT	
	
	Access to the programming menu
	When pressed during the pump operation phase, it cyclically displays the programmed values on the display; When pressed at the same time  or  keys, it increases or decreases a value dependent 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
	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		
	1	Alarm relay
	2	
	3	Pole +
	4	Pole -
	5	-Remote control input (start-stop) -Pause signal input
	6	
	7	-Frequency signal input (water-meter pulse-sender) -Trigger signal input
	8	
	9	Flow sensor input
	10	
	B	Input level control

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

Setting the Language	Operation
<pre> graph TD A([PROG]) --> B[PROG Configuration] B --> C([enter]) C --> D[Configuration Pump Functions] D --> E[Max flow rate PI00%] E --> F[Alarm Relay N.Open] F --> G[Language English] G --> H([enter]) H --> I[←] I --> J[→] J --> K([enter]) K --> L[Main Menu] style L stroke-dasharray: 5 5 </pre>	Makes it possible to select the language. The pump is set in English in the factory. 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

Paragraph 1 – Manual Dosage

Paragraph 1: Manual Decade	
Programming <pre> graph TD A([PROG]) --> B[Configuration] B --> C([enter]) C --> D[Configuration] D --> E[Pump Functions] E --> F([enter]) F --> G[triangle icon] G --> H[Pump Functions] H --> I[Manual] I --> J([enter]) J --> K[] style K stroke-dasharray: 5 5 </pre>	Operation The pump operates in constant mode. The flow can only be manually regulated by pressing the keys at the same time to increase the flow, or the keys to decrease it.

The diagram is divided into two main sections: "Display during Operation" and "Display during Setting (MODE key)".

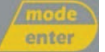
Display during Operation:

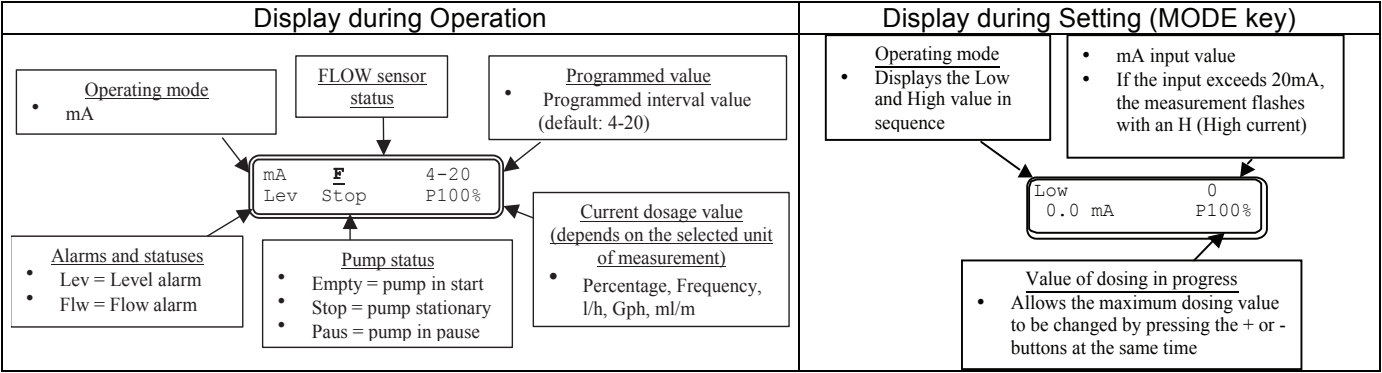
- Operating mode:** Man = Manual
- FLOW sensor status:** (Input to the central display)
- Current dosage speed (depends on selected unit of measurement):**
 - Percentage, Frequency, l/h, Gph, ml/m
- Alarms and statuses:**
 - Lev = Level alarm
 - Flw = Flow alarms
- Pump status:**
 - Empty = pump in start
 - Stop = pump stationary
 - Paus = pump in pause
- Central Display:** A rectangular box with a double border containing the text: MAN, F, Lev, Stop, P100%. Arrows point to this display from the Operating mode, FLOW sensor status, Alarms and statuses, and Pump status boxes.

Display during Setting (MODE key):

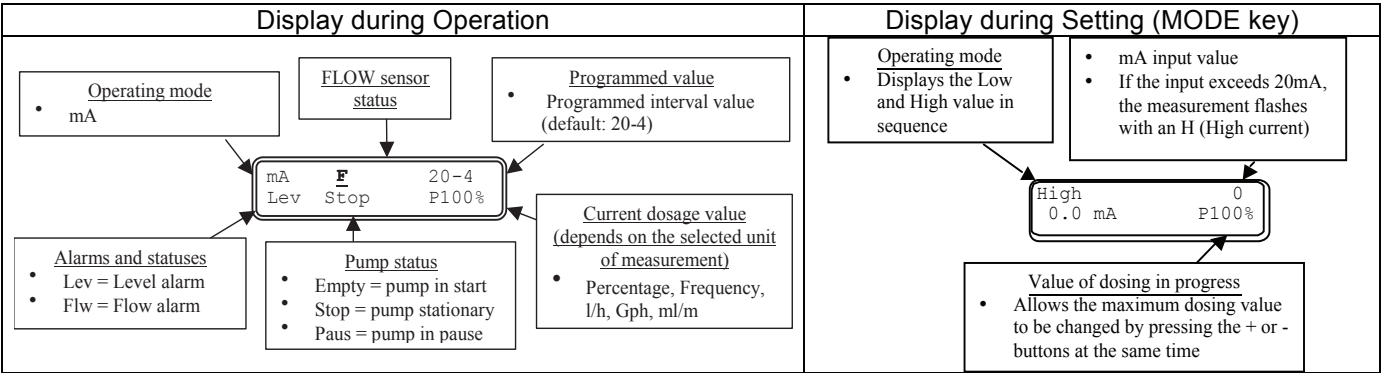
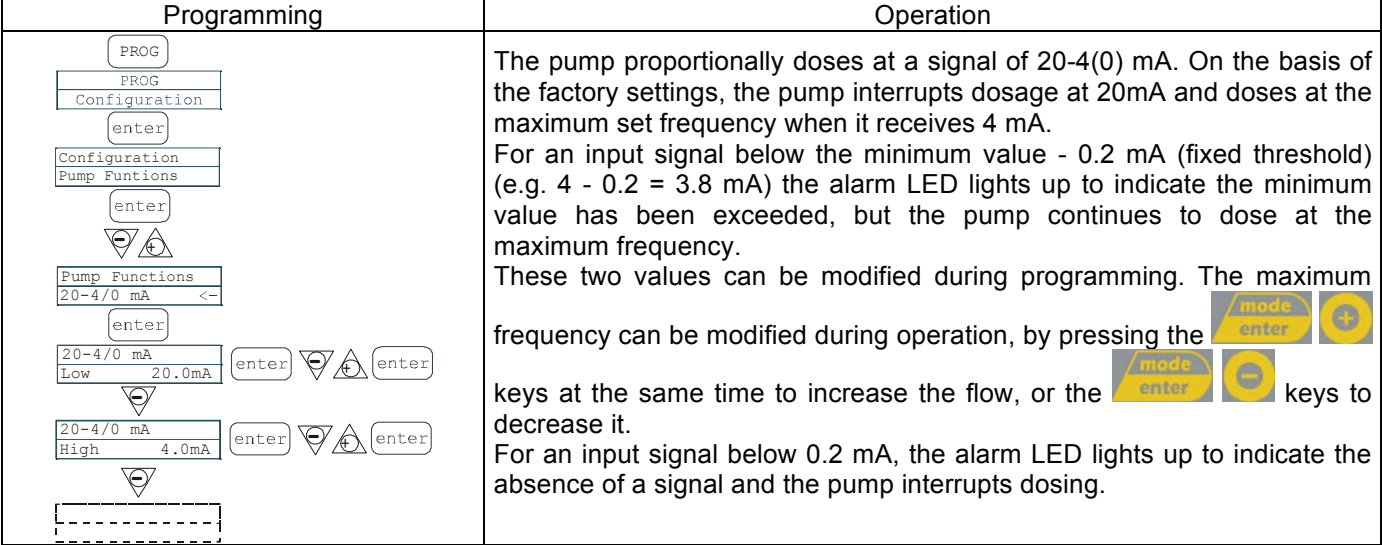
- Operating mode:** Man (during manual modification of the flow it displays the corresponding frequency value)
- Central Display:** A rectangular box with a double border containing the text: MAN, P100%. An arrow points to this display from the Operating mode box.
- Current dosage value:** Modify the maximum flow by pressing the + or - keys at the same time (An arrow points from this box to the central display).

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

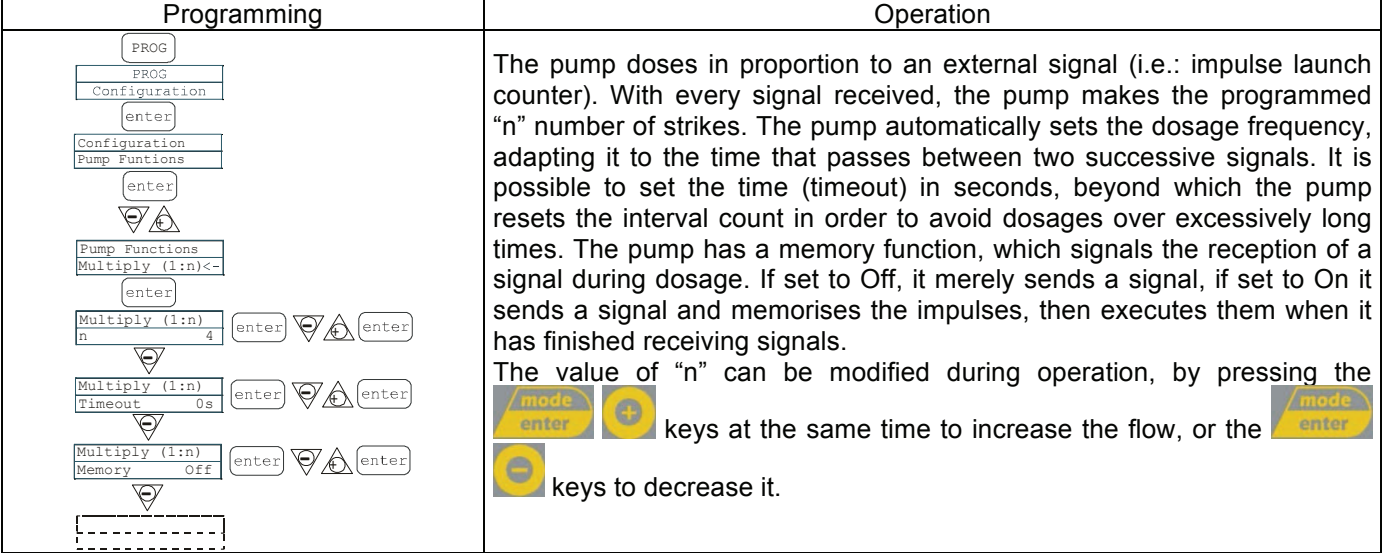
Programming	Operation
	The pump proportionally doses at a signal of (0)4-20 mA. On the basis of the factory settings, the pump interrupts dosage at 4mA and doses at the maximum set frequency when it receives 20 mA. These two values can be modified during programming. The maximum frequency can be modified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

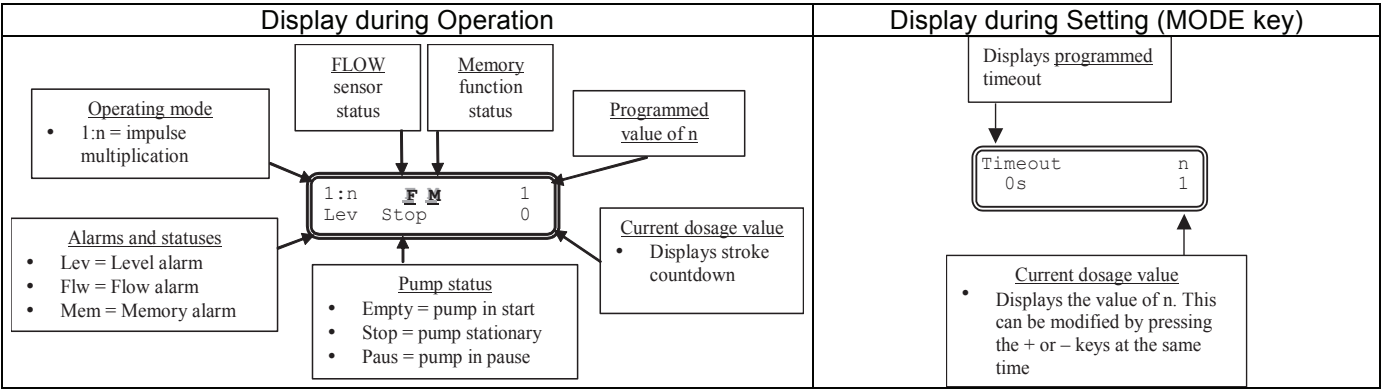


Paragraph 3 - Dosage Proportional to Signal 20-4/0 mA

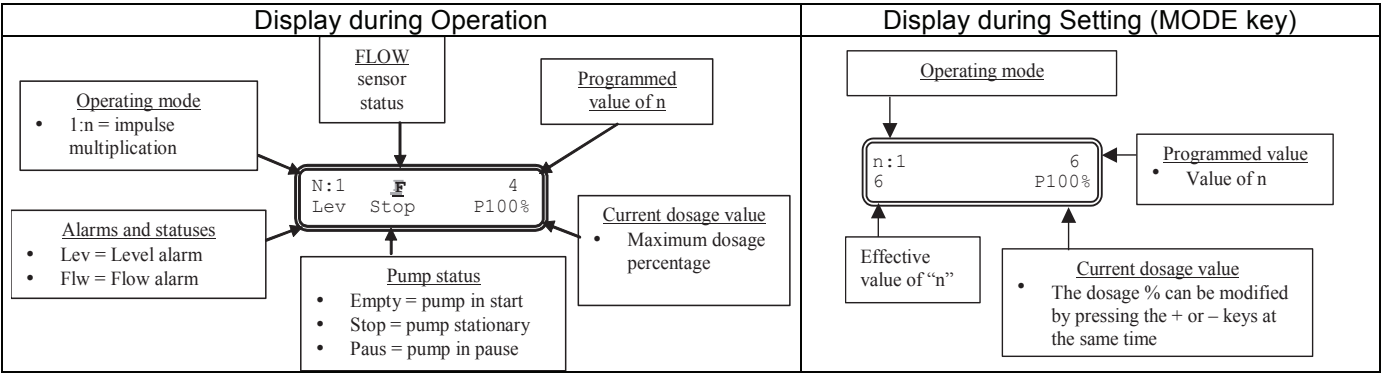
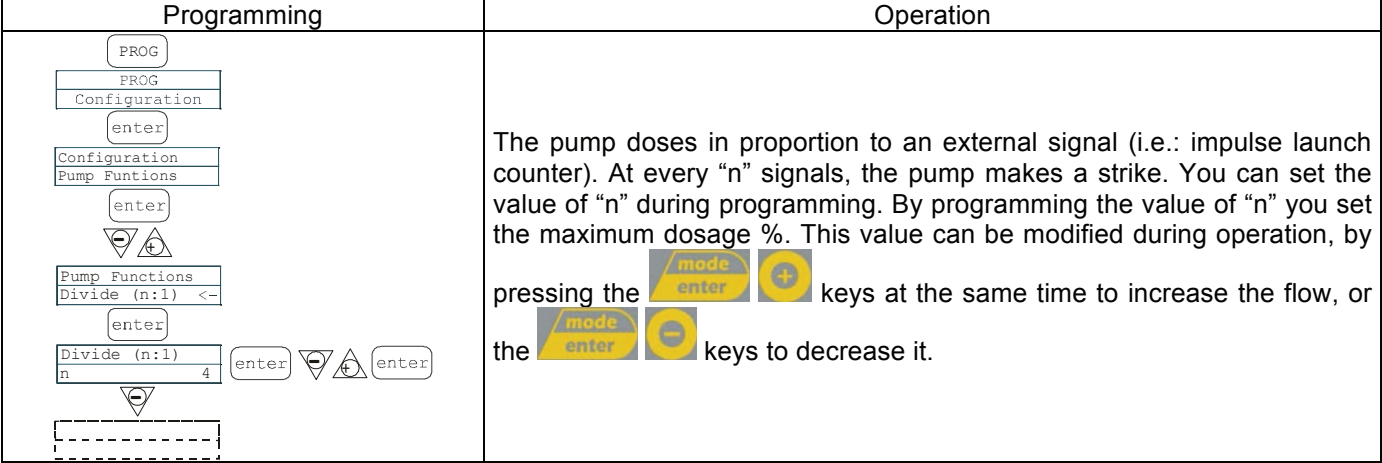


Paragraph 4 – Proportional to External Impulses (multiplication)

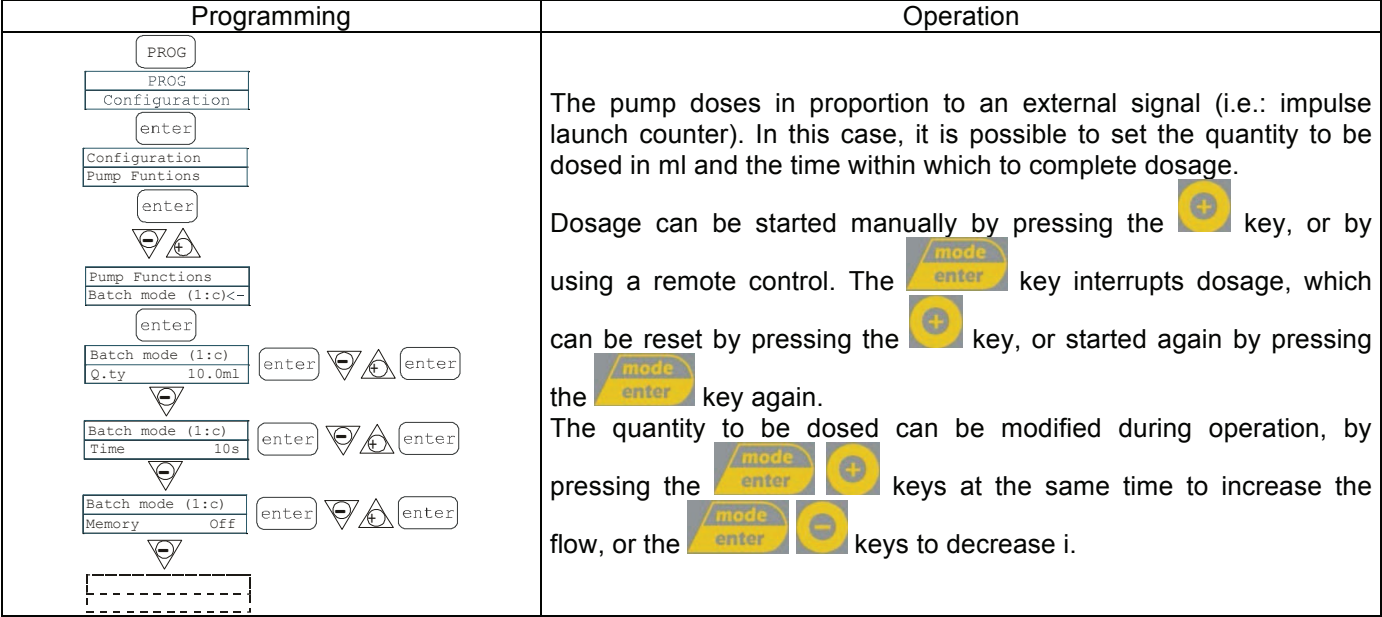


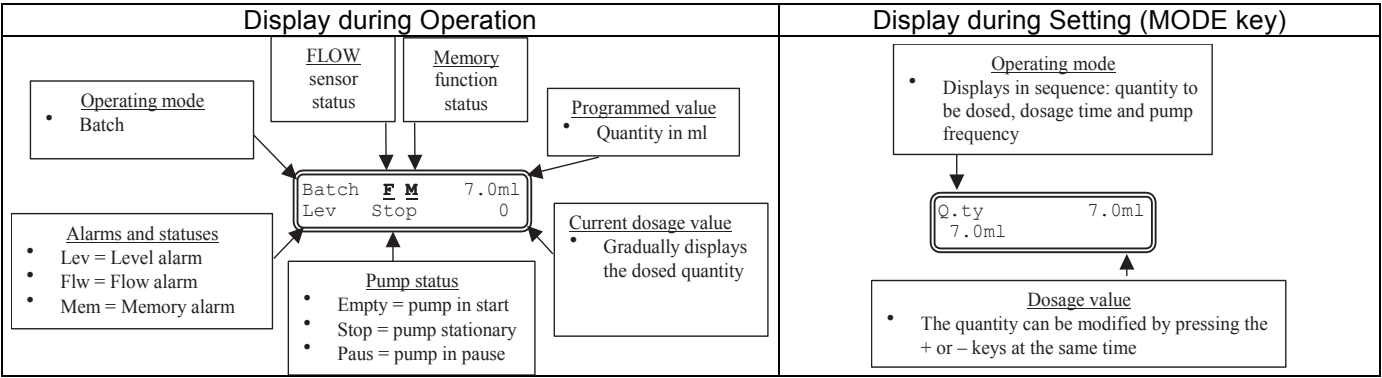


Paragraph 5 – Proportional to External Impulses (division)

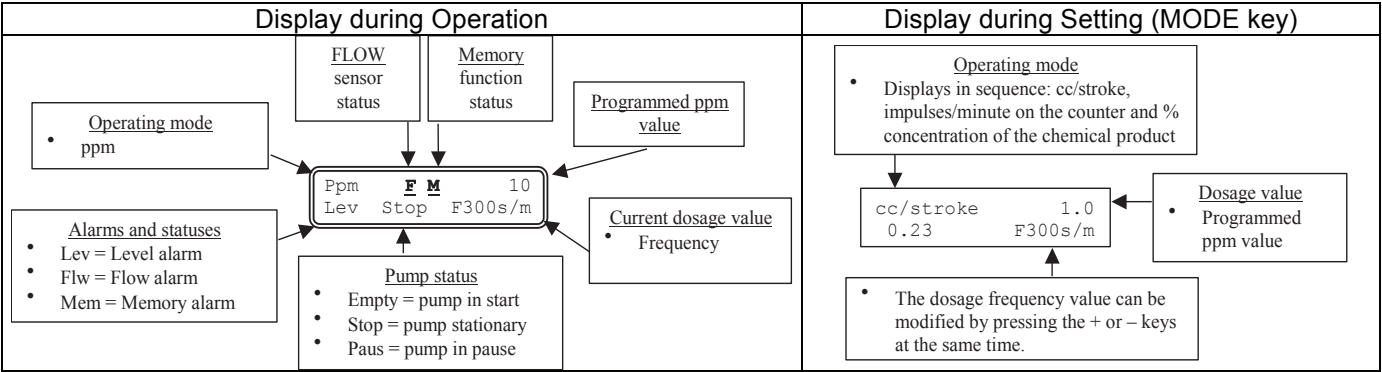
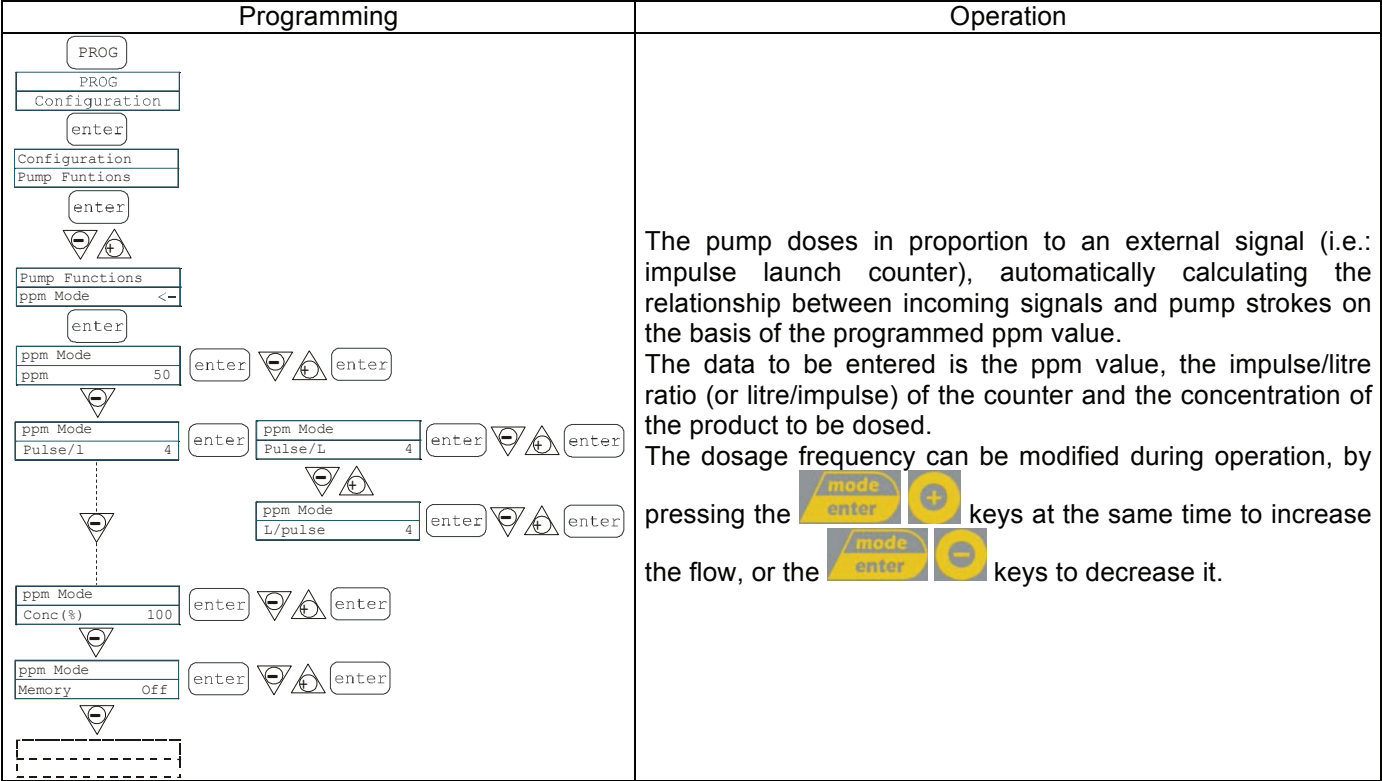


Paragraph 6 – Proportional to External Impulses (batch dosage)

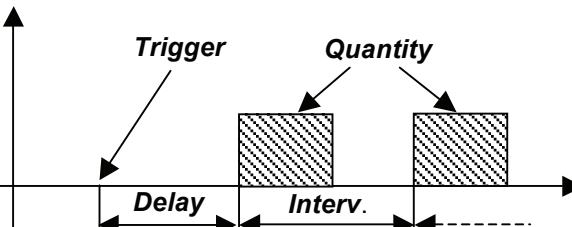
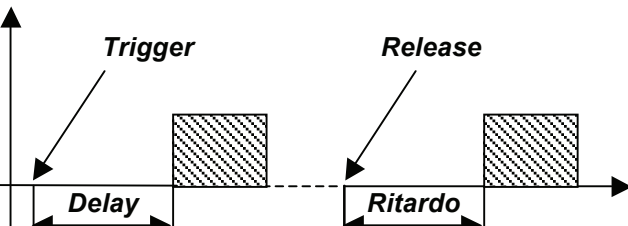




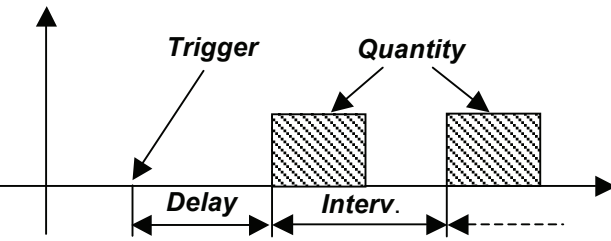
Paragraph 7 – Proportional to External Impulses (ppm dosage)



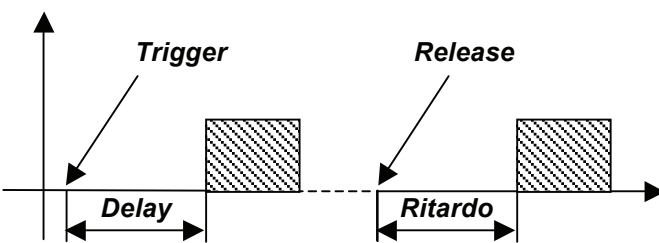
Paragraph 8 – Timed Dosage (**Frequency signal input “TRIGGER” activated**)

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

After receipt of the **TRIGGER** signal set, the pump doses a quantity that can be programmed in ml. It is possible to set a delay time before the dosing (**Delay**) and the interval between subsequent dosings (**Interv.**) as illustrated in the diagram:



By setting for example an **Interval**. time = 0, a system is obtained in which the programmed quantity is dosed after each **TRIGGER** signal (with any delay that has been set):



It is possible to start the dosing by pressing the + key, which, in practice, simulates the **Trigger** signal.

The **Trigger** signal can be set to **N. Open** (it is activated when the input passes from the open to the closed mode) or to **N. Closed** (it is activated when the input passes from the closed to the open mode).

The **Trigger** signal is locked during dosing (its receipt is neither stored nor managed).

The **Pause (Remote input)** input cannot be programmed and its activation stops the dosing, while its further deactivation makes the system wait again for the **Trigger** signal for a new dosing.

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.

Display during Operation	Display during Setting (MODE key)
<u>Operating mode</u> • Timer <u>Alarms and statuses</u> • Liv = level alarm • Flow = flow alarm or ...Release wait <u>Pump status</u> • Dry = pump starting up • Stop = pump stop • Restart = pump restart <u>Value of the dosing in progress</u> • Percentage of strokes/min max FLOW sensor status Programmed value • Quantity in ml Timer F 7,0 ml Stop P 0%	<u>Operating mode</u> • The following are shown in sequence: quantity to dose, delay in d.hh.mm. and interval in d.hh.mm <u>Dosing value</u> Q. tà 20,0ml 20,0ml P 100% <u>Programmed quantity in ml</u> <u>Value of the dosing percentage, which can be modified by pressing the + or – keys</u>

Operating mode

The following are shown in sequence:

quantity to dose, delay in d.hh.mm.

and interval in d.hh.mm

Q.tà 20,0ml

20,0ml

P 100%

Dosing value

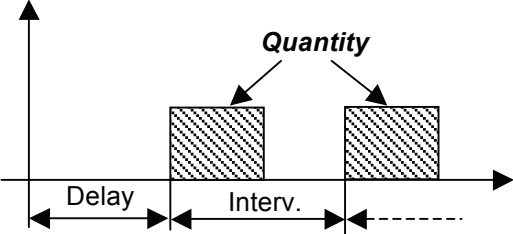
Programmed quantity in ml

Value of the dosing percentage,

which can be modified by

pressing the + or – keys

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

Programming	Operation
PROG PROG Configuration enter Configuration Pum functions enter ↶ ↷ Pum functions Tempo <- enter Time Quantity 100ml enter ↶ ↷ Time g.hh.mm Delay 0.01.50 enter ↶ ↷ Time g.hh.mm Interval 0.01.50 enter ↶ ↷ Trigger Mode Disable enter ↶ ↷ Pause Input Mode Restart Timer enter Pause Input Mode Restart Timer enter ↶ ↷ Pause Input Mode Freeze Time enter ↶ ↷ Pause Input Mode Pause Dosing enter The pump doses a programmed quantity in ml. It is possible to set a pump delay time (Delay) when the pump is started and an interval between two successive dosings (Interval), as illustrated in the diagram:  The Delay and Interval times are in dd.hh.mm (days, hours, minutes) The Pause input can be programmed in three different modes: 1. FreezeTime: when the pause is activated, the system cuts out the current time count and restarts it when the pause is deactivated. 2. Pause Dosing: with the pause activated, the system continues to count time the and stops the dosing. 3. Restart Timer: when the pause is activated, the system stops the dosing and when the pause is deactivated the count starts again from the beginning. The dosage frequency can be modified while the pump is operating, by pressing the mode enter + - keys at the same time to increase the frequency, or the mode enter - + keys to decrease it.	

Display during Operation	Display at start-up (MODE key)
<u>Operating mode</u> • Timer <u>FLOW sensor status</u> ↓ <u>Programmed value</u> • Quantity in ml <u>Value of dosing in progress:</u> • Percentage of strokes/min max <u>Alarms and Level statuses = level alarm</u> • Flow = flow alarm <u>Pump status</u> • Dry = pump starting up • Stop = pump stopping • Restart = pump restarting Timer F 7.0 ml Liv Stop P 0%	<u>Modalità di funzionamento</u> • Vengono visualizzati in sequenza: quantità da dosare, ritardo in g.hh.mm e intervallo in g.hh.mm <u>Valore del dosaggio</u> • Quantità programmata in ml <u>Valore della percentuale di dosaggio, modificabile premendo sui tasti + o -</u> ↑ Q. tà 20,0ml 20,0ml P 100%

Modalità di funzionamento

• Vengono visualizzati in sequenza: quantità da dosare, ritardo in g.hh.mm e intervallo in g.hh.mm

Valore del dosaggio

• Quantità programmata in ml

Q. tà 20,0ml

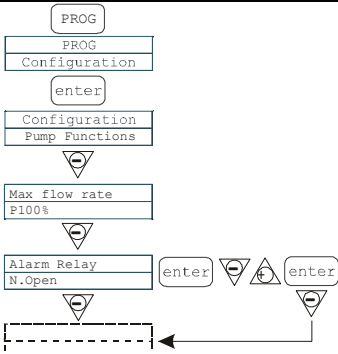
20,0ml P 100%

Valore della percentuale di dosaggio, modificabile premendo sui tasti + o -

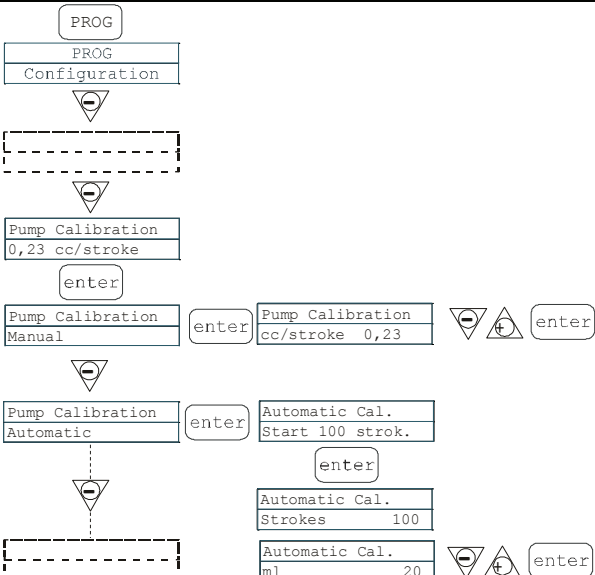
Paragraph 9 – Setting the Maximum Flow

Programming	Operation
PROG PROG Configuration enter Configuration Pump Functions ↶ Max flow rate P100% enter Max flow rate P100% enter ↶ ↷ Max flow rate F320s/m enter ↶ ↷ 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 mode enter key, then using the + - keys to set the new value. Press mode enter to confirm and return to the main menu	

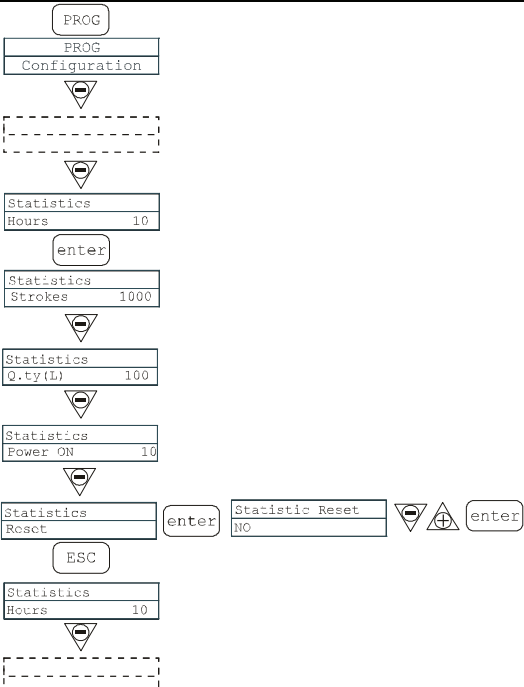
Paragraph 10 – Setting the Alarm Relay

Programming	Operation
	In the absence of an alarm situation, it can be set as open (default) or closed. 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

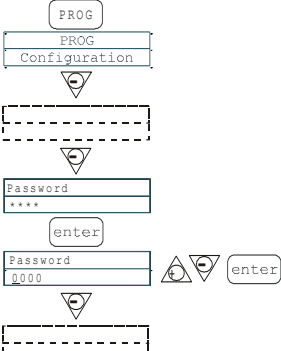
Paragraph 11 – Flow Calibration

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

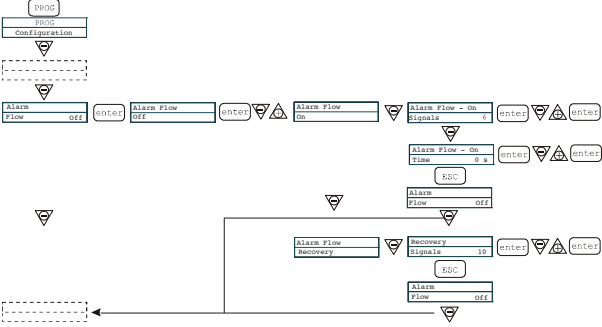
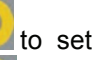
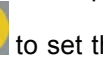
Paragraph 12 - Statistics

Programming	Operation
	The main menu displays the pump operation times. By pressing the  key you can access other statistics: - Strokes = number of strokes made by the pump - Q.ty (L) = quantity dosed by the pump in litres; this figure is calculated on the basis of the memorised cc/stroke value - Power = number of pump starts - Reset = use the   to reset the counters (YES) or otherwise (NO), then confirm by pressing the  key. Pressing the  key will take you back to the main menu.

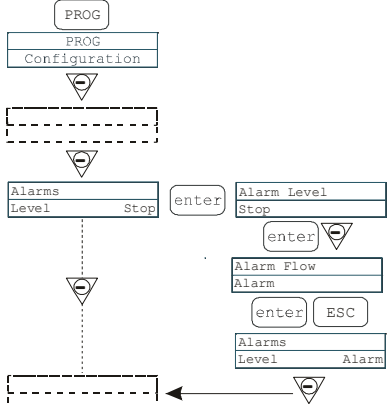
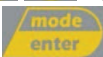
Paragraph 13 – Password

Programming	Operation
	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 than can be modified. 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.

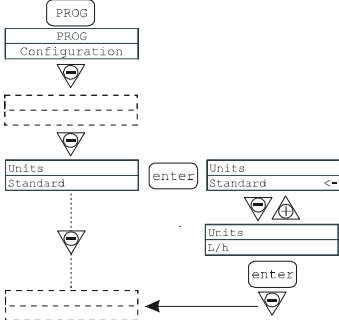
Paragraph 14 – Flow Alarm

Programming	Operation
	This makes it possible to activate (deactivate) the flow sensor. Once activated (On), press  to access the request for the number of signals the pump waits before entering alarm mode (Setting Time = 0 s in the next menu) or priming mode (Setting a Time other than 0 s in the next menu). When  is pressed, the number flashes. Use   to set the value. Press  to confirm. Press  to go back to the main menu. In the Time menu, you can set the time for which the pump, not having received the flow signal for the set number of signals, enters priming mode before entering alarm mode. If, during the priming time, the pump receives the flow signal again, it will return to normal operation. If time = 0 s, after the number of signals set, the pump will enter alarm mode immediately, without performing priming. To edit and set the time: when  is pressed, the number flashes. Then press   to set the value. Press  to confirm. Press  to go back to the main menu. Batch mode can only be enabled in Recovery mode. The pump repeats the number of strokes that were not detected by the flow sensor. Press the  button to request the maximum number of signals that the pump can recover before going into an alarm state. Pressing  will cause the number to flash. At this point the user can use the  and  buttons to set the desired value. Press the  button to confirm. Press  to return to the main menu.

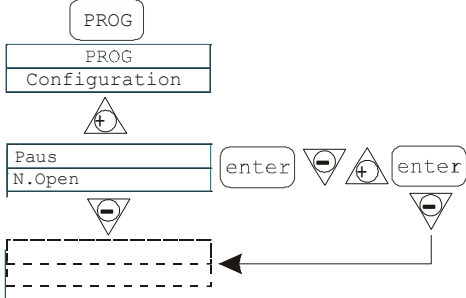
Paragraph 15 – Level Alarm

Programming	Operation
	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. 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

Paragraph 16 – Flow Display Unit

Programming	Operation
	This makes it possible to set the dosage unit of measurement on the display. Changes can be made by pressing the  key, then using the   keys to set the unit of measurement, choosing between L/h (liters/hour), Gph (Gallons/hour), ml/m (milliliters/minute) or standard (% or frequency, depending on settings). Press  to confirm and return to the main menu

Paragraph 17 - Setting the Pause

Programming	Operation
	The pump can be paused by remote input. The factory setting is Normally Open. Changes can be made by pressing the  key, then using the   keys to set the new value (N. OPEN or N. CLOSED). Press  to confirm and return to the main menu.

Display contrast adjustment.

For adjusting the display contrast keep the key  pressed and within 5 seconds press the keys  or 

Alarms

Display	Cause	Interruption
Fixed alarm LED Flashing word "Lev" I.e. Man Lev P100%	End of level alarm, without interrupting pump operation	Restore the liquid level.
Fixed alarm LED Flashing words "Lev" and "stop" I.e. Man Lev Stop P100%	End of level alarm, with interruption to pump operation	Restore the liquid level.
Flashing word "Mem" I.e. 1:n 6 Mem	The pump receives one or more pulses during dosage with memory function on Off	Press the  key
Flashing word "Mem" I.e. 1:n M 6 Mem	The pump receives one or more pulses during dosage with memory function on On	When the pump finishes receiving external impulses, it returns the memorized strokes
Fixed alarm LED Flashing word "Flw" I.e. Man F Flw P100%	Active flow alarm. The pump has not received the programmed number of signals from the flow sensor.	Press the  key
I.e. Parameter Error PROG to default	Internal CPU communication error.	Press the  key to restore the default parameters.