TEKNAEVO TPG

INSTRUCTIONS MANUAL **EN**

HANDBUCH **DE**

MANUAL DE INSTALACION **ES**

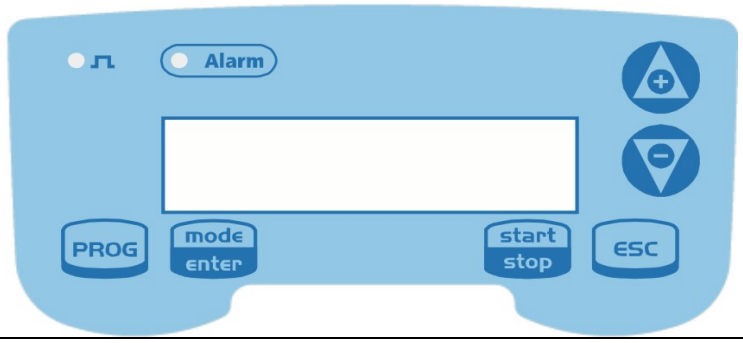
MANUEL D'INSTALLATION **FR**

MANUALE D'INSTALLAZIONE **IT**

MANUAL DE INSTALAÇÃO **PT**

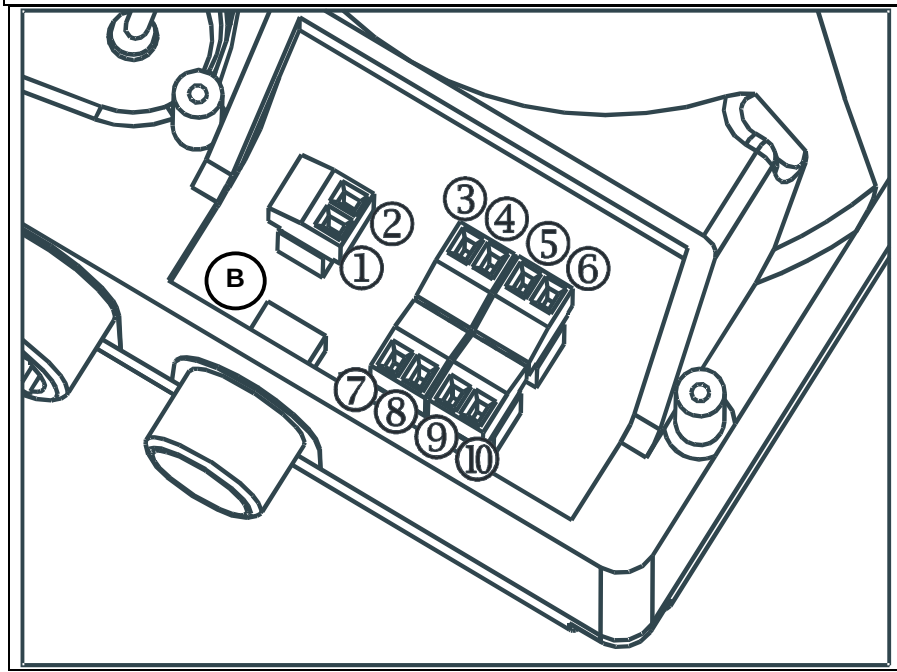
KULLANIM KLAVUZU **TK**

Control panel – TEKNA TPG



PROG	Access to the programming menu
mode enter	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.
start stop	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.
ESC	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
Alarm	Red LED that lights up in various alarm situations

Electrical connections



1	Alarm relay	
2		
3	Pole +	4-20 mA input signal Input Impedante: 200 ohm
4	Pole -	
5	Remote control input (start-stop)	
6		
7	Frequency signal input (water-meter pulse-sender)	
8		
9	Flow sensor input	
10		
B	Input level control	

Programmiermenü Tekna TPG

You can access the programming menu by pressing the PROG key for over three seconds. The ▲ ▼ keys can be used to run through the menu items, with the mode enter 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.

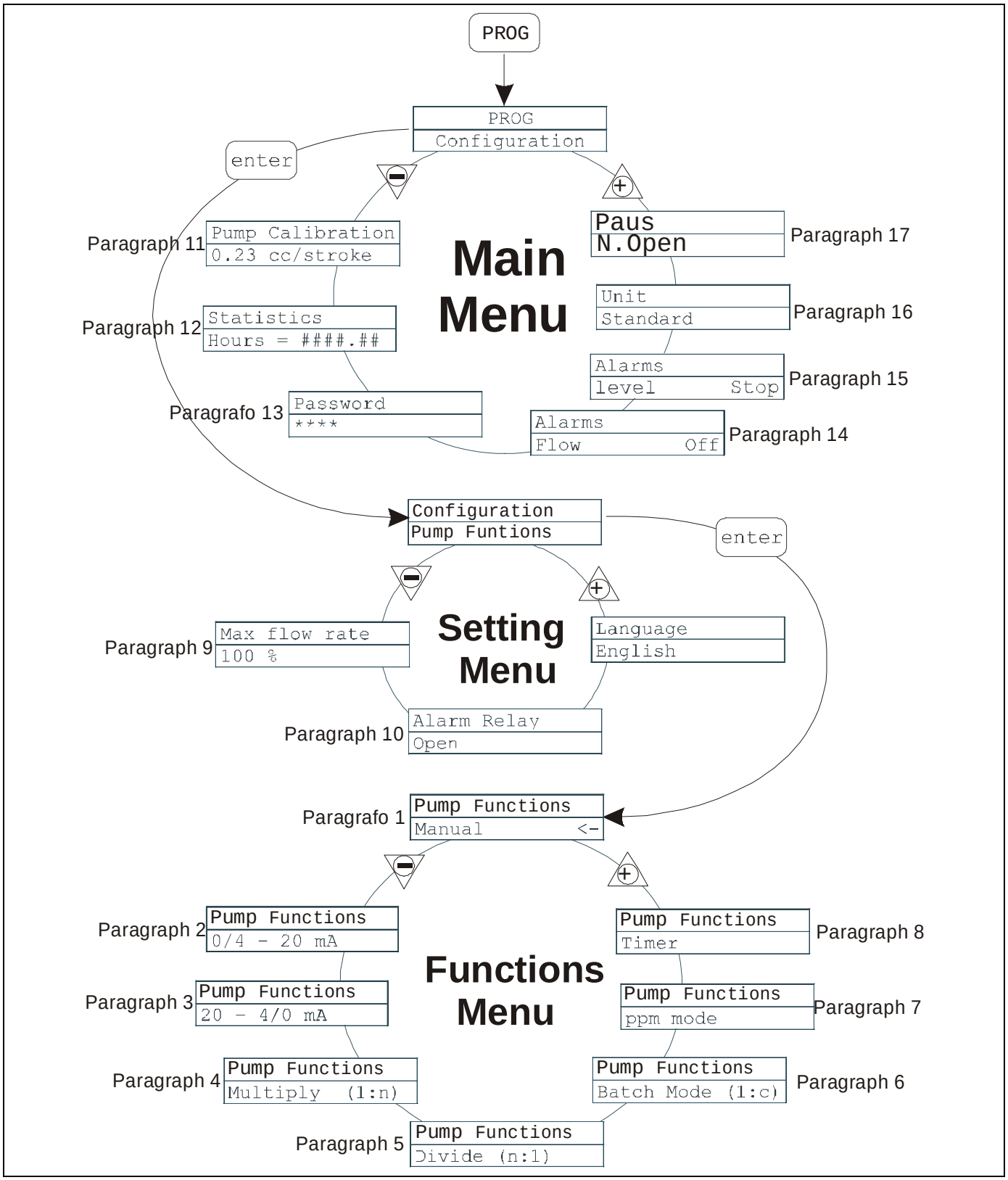
The ESC key can be used to exit the various programming levels. Upon exiting programming, the display will show:

Exit
Don't Save

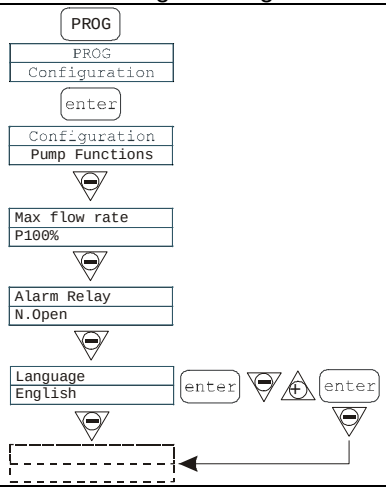
∇ Δ

Exit
Save

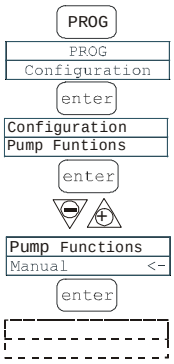
mode enter to confirm the selection

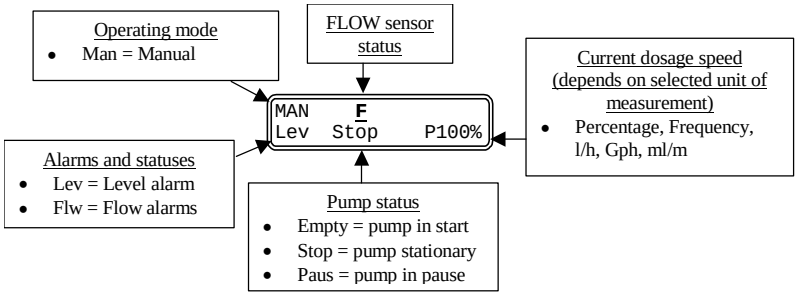
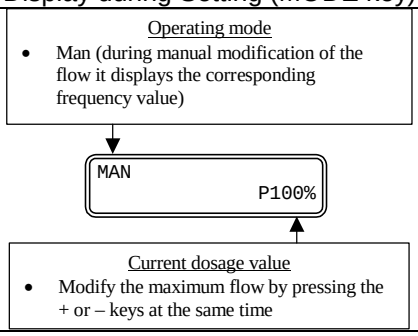


Setting the Language

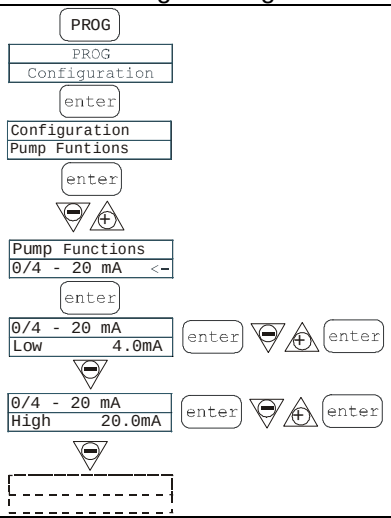
Programming	Operation
	Makes it possible to select the language. The pump is set in English in the factory. Changes can be made by pressing the mode enter key, then using the keys to set the new value. Press mode enter to confirm and return to the main menu

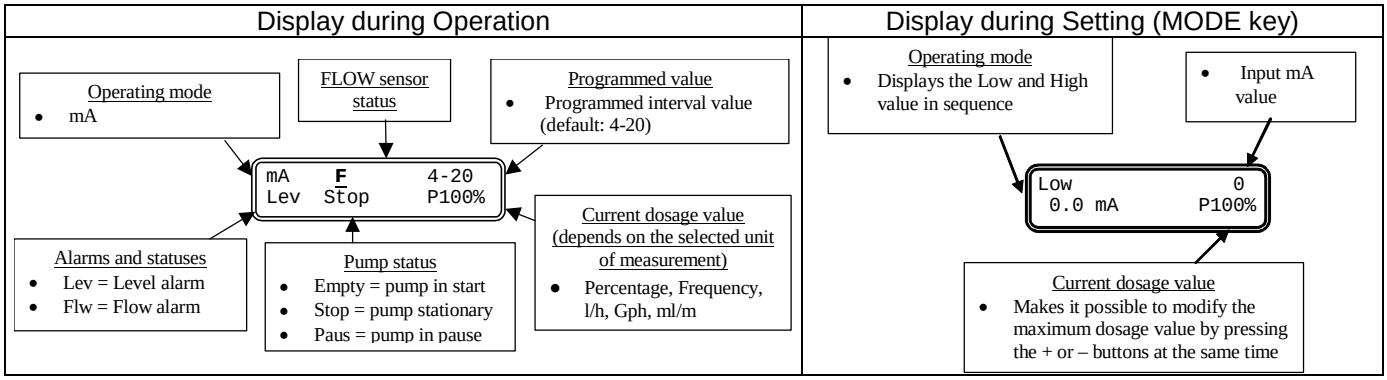
Paragraph 1 – Manual Dosage

Programming	Operation
	The pump operates in constant mode. The flow can only be manually regulated by pressing the mode enter keys at the same time to increase the flow, or the mode enter keys to decrease it.

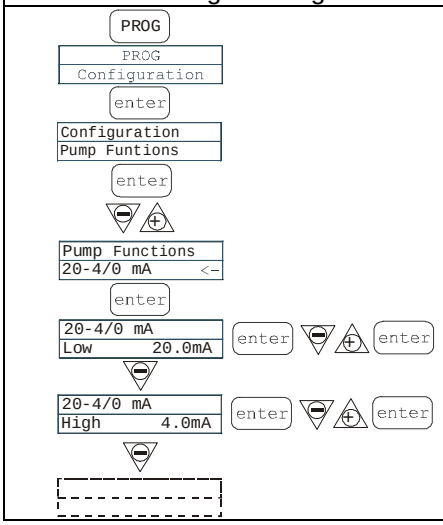
Display during Operation	Display during Setting (MODE key)
	

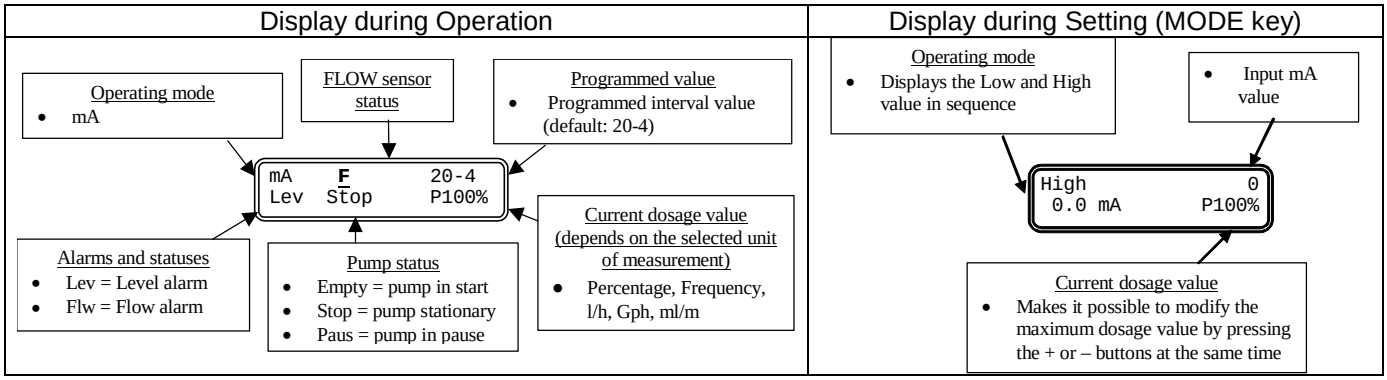
Paragraph 2 - Dosage Proportional to Signal 0/4-20

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 mode enter keys at the same time to increase the flow, or the mode enter keys to decrease it.

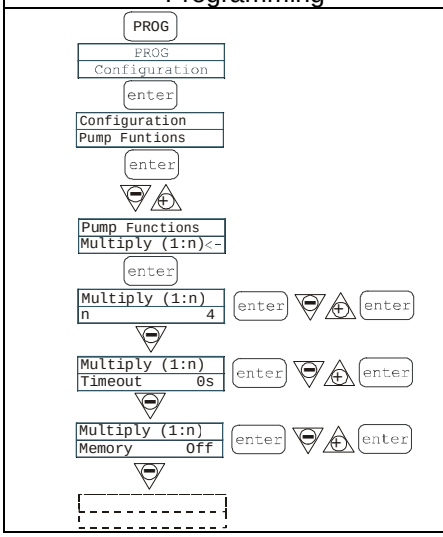


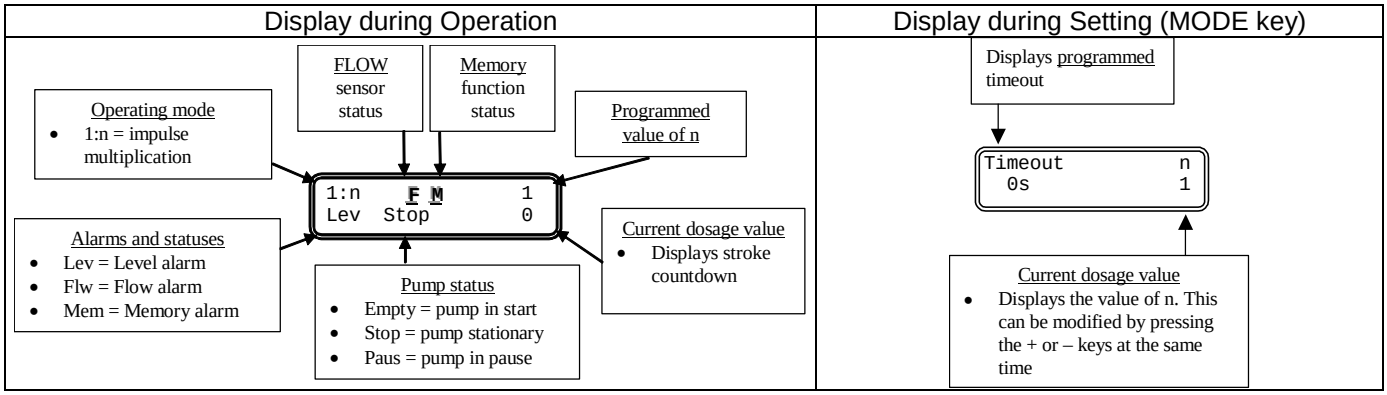
Paragraph 3 - Dosage Proportional to Signal 20-4/0 mA

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

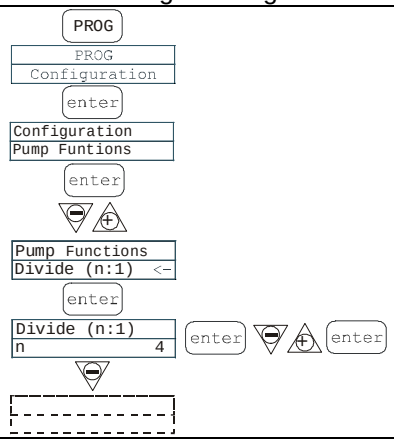


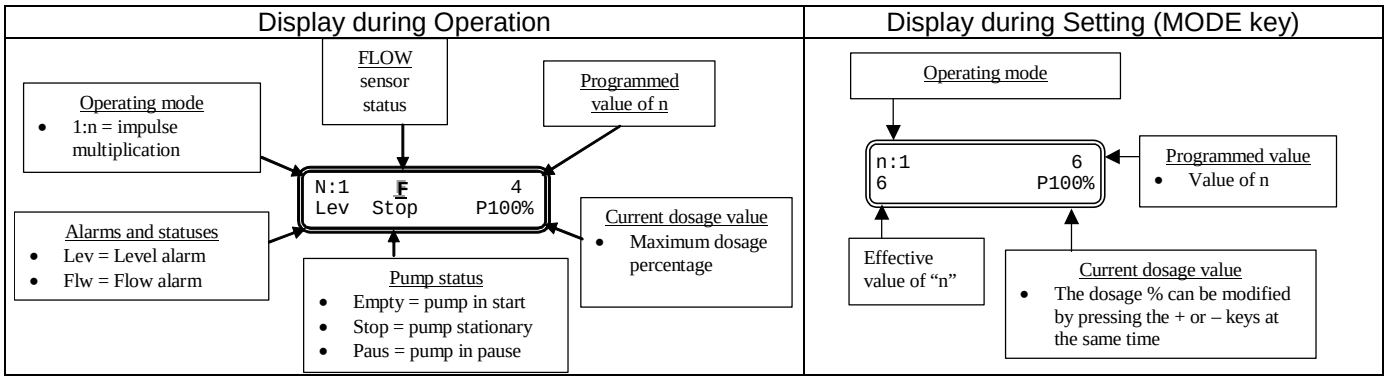
Paragraph 4 – Proportional to External Impulses (multiplication)

Programming	Operation
	The pump doses in proportion to an external signal (i.e.: impulse launch counter). With every signal received, the pump makes the programmed “n” number of strikes. The pump automatically sets the dosage frequency, adapting it to the time that passes between two successive signals. It is possible to set the time (timeout) in seconds, beyond which the pump resets the interval count in order to avoid dosages over excessively long times. The pump has a memory function, which signals the reception of a signal during dosage. If set to Off, it merely sends a signal, if set to On it sends a signal and memorises the impulses, then executes them when it has finished receiving signals. The value of “n” can be modified during operation, by pressing the mode enter keys at the same time to increase the flow, or the mode enter keys to decrease it.

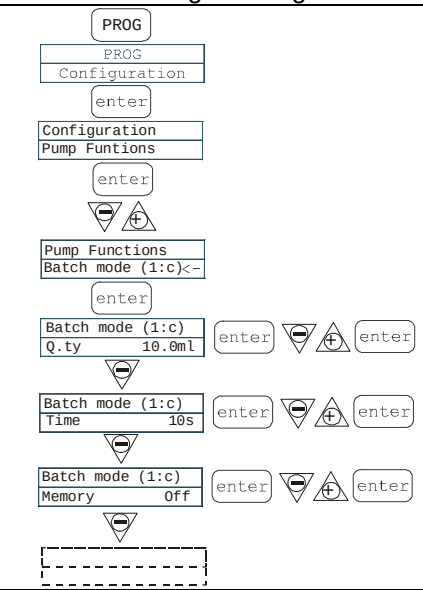


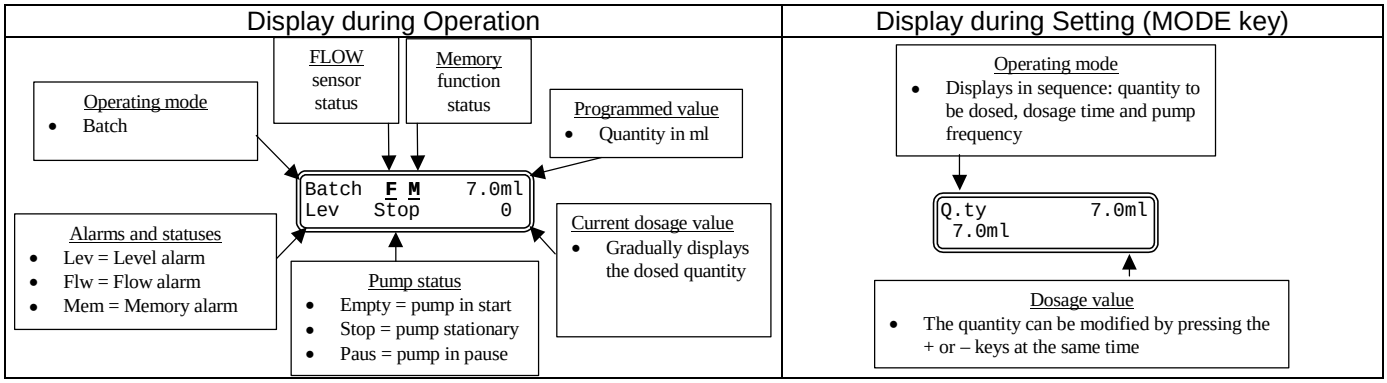
Paragraph 5 – Proportional to External Impulses (division)

Programming	Operation
	The pump doses in proportion to an external signal (i.e.: impulse launch counter). At every "n" signals, the pump makes a strike. You can set the value of "n" during programming. By programming the value of "n" you set the maximum dosage %. This value can be modified during operation, by pressing the mode enter + ⊕ keys at the same time to increase the flow, or the mode enter + ⊖ keys to decrease it.

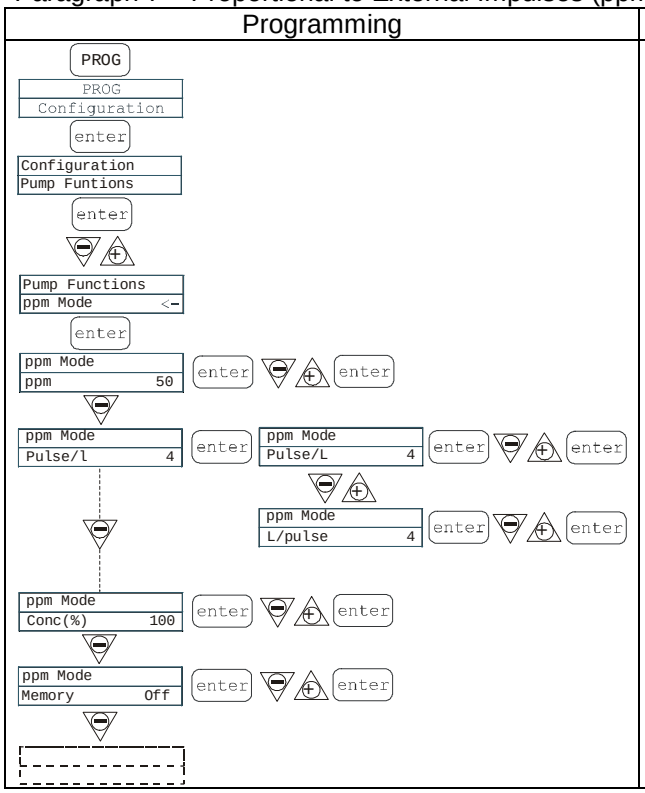


Paragraph 6 – Proportional to External Impulses (batch dosage)

Programming	Operation
	The pump doses in proportion to an external signal (i.e.: impulse launch counter). In this case, it is possible to set the quantity to be dosed in ml and the time within which to complete dosage. Dosage can be started manually by pressing the ⊕ key, or by using a remote control. The start stop key interrupts dosage, which can be reset by pressing the ⊕ key, or started again by pressing the start stop key again. The quantity to be dosed can be modified during operation, by pressing the mode enter + ⊕ keys at the same time to increase the flow, or the mode enter + ⊖ keys to decrease i.

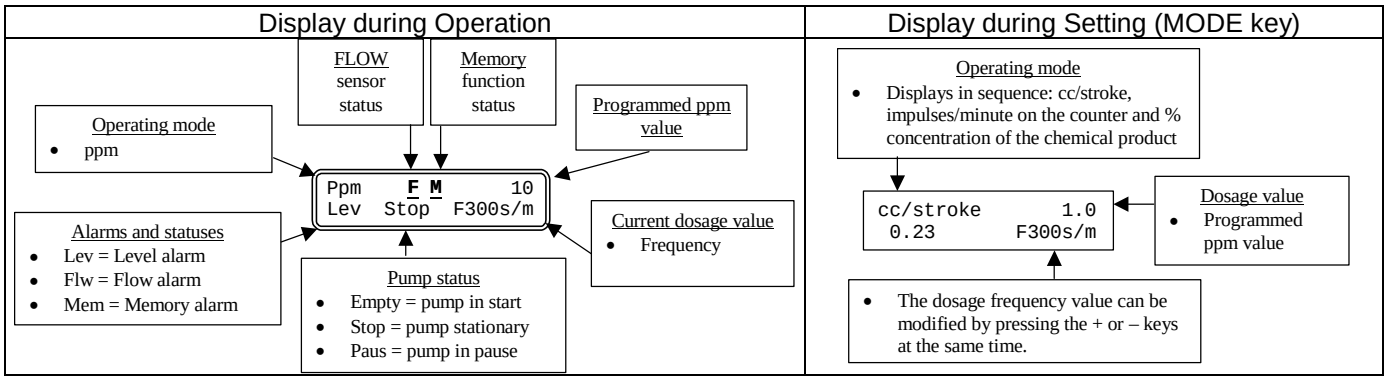


Paragraph 7 – Proportional to External Impulses (ppm dosage)

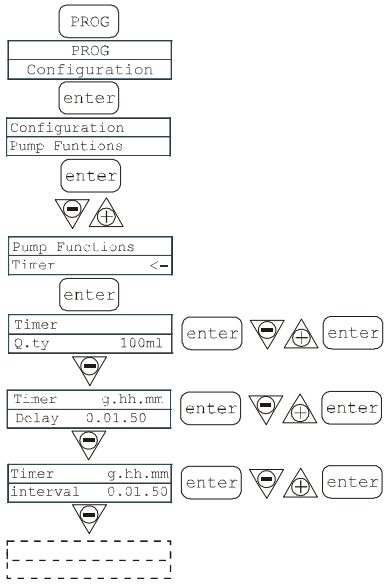
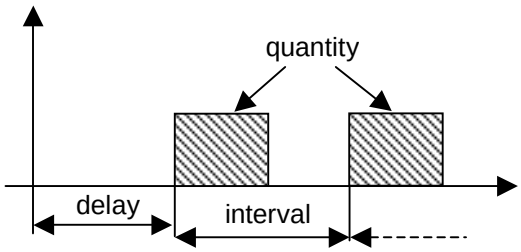


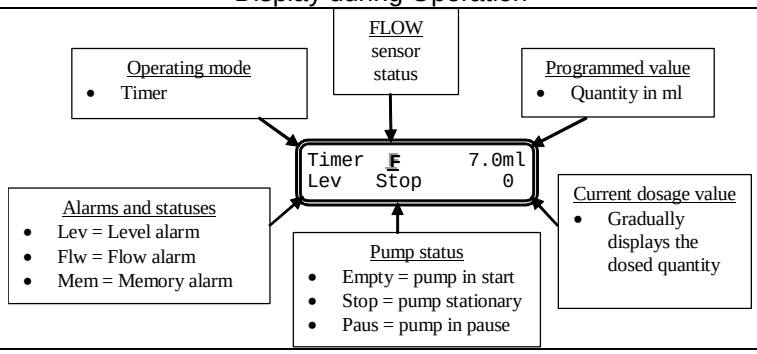
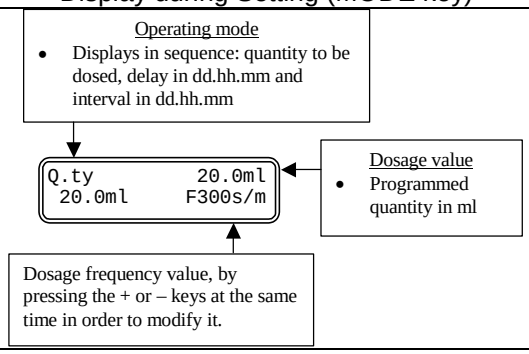
Operation

The pump doses in proportion to an external signal (i.e.: impulse launch counter), automatically calculating the relationship between incoming signals and pump strokes on the basis of the programmed ppm value.
The data to be entered is the ppm value, the impulse/litre ratio (or litre/impulse) of the counter and the concentration of the product to be dosed.
The dosage frequency can be modified during operation, by pressing the mode enter + ⊕ keys at the same time to increase the flow, or the mode enter + ⊖ keys to decrease it.

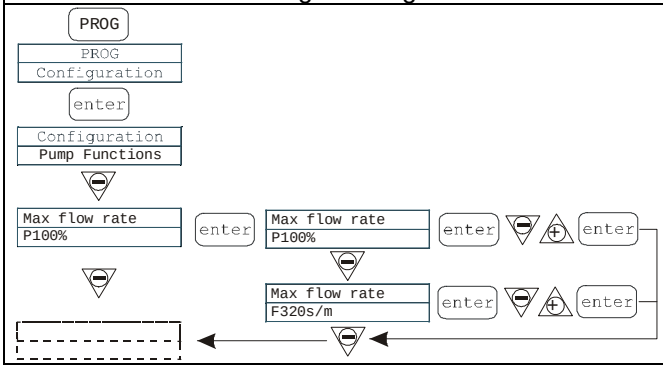


Paragraph 8 – Timed Dosage

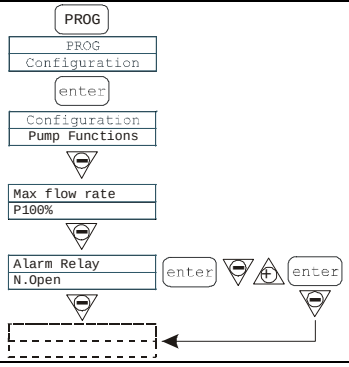
Programming	Operation
	The pump doses a programmed quantity in ml. It is possible to set a pump delay time (Delay) and an interval between two successive operations (Range), as illustrated in the diagram:  The delay times and interval are in dd.hh.mm (days, hours, minutes) It is possible to modify the dosage frequency during the pump operating phase, so as to decide the dosage time of the programmed quantity, by pressing the mode enter keys at the same time in order to increase the frequency, or the mode enter keys in order to decrease it.

Display during Operation	Display during Setting (MODE key)
	

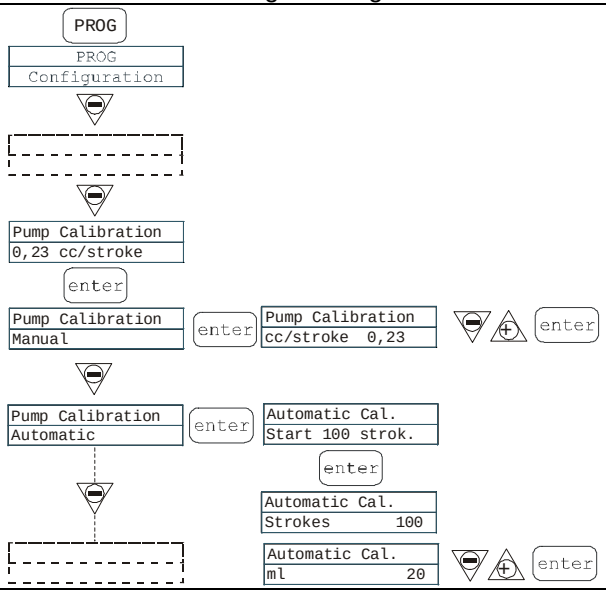
Paragraph 9 – Setting the Maximum Flow

Programming	Operation
	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

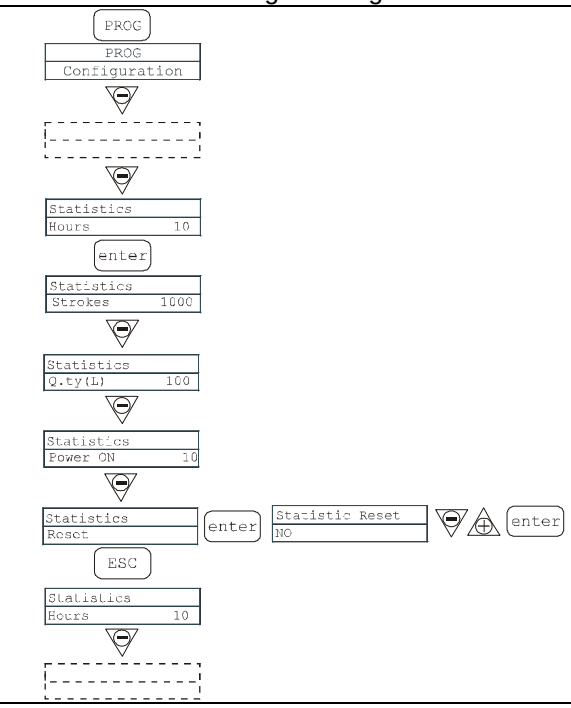
Paragraph 10 – Setting the Alarm Relay

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 mode enter key, then using the keys to set the new value. Press mode enter to confirm and return to the main menu

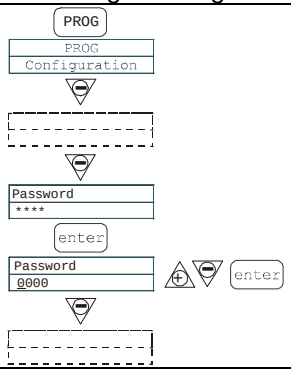
Paragraph 11 – Flow Calibration

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.

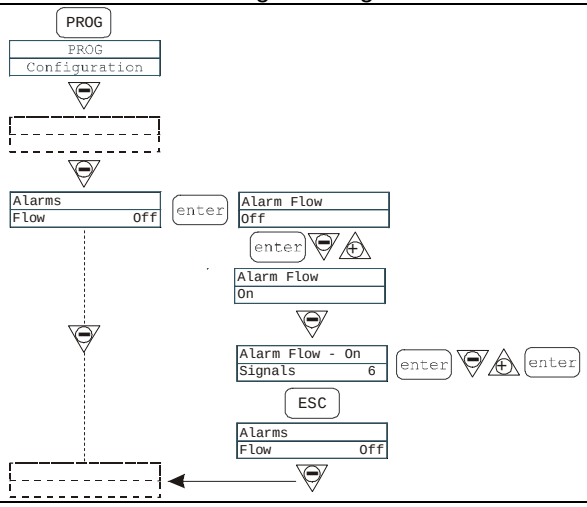
Paragraph 12 - Statistics

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.

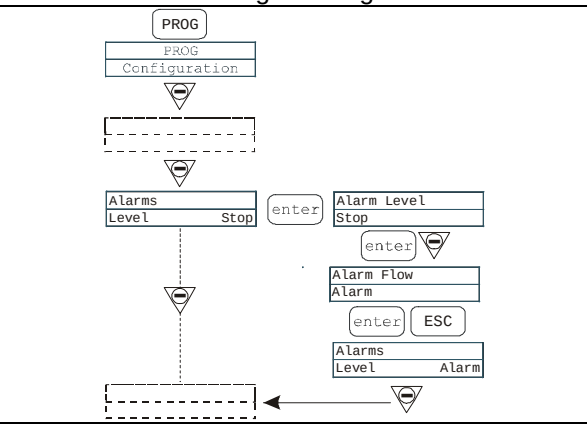
Paragraph 13 – Password

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.

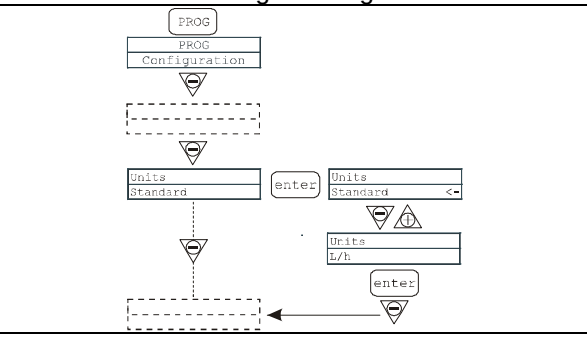
Paragraph 14 – Flow Alarm

Programming	Operation
	This makes it possible to activate (deactivate) the flow sensor. 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 mode enter key, and you can then use the keys to set the value. Confirm by pressing the mode enter key. Press ESC to return to the main menu

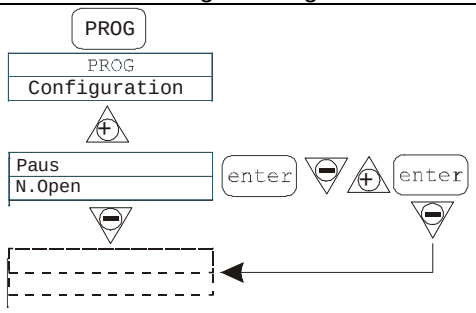
Paragraph 15 – Level Alarm

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 mode enter key, then using the keys to set the alarm type. Confirm by pressing the mode enter key. Press ESC 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 mode enter 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 mode enter 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 mode enter key, then using the keys to set the new value (N. OPEN or N. CLOSED). Press mode enter to confirm and return to the main menu.

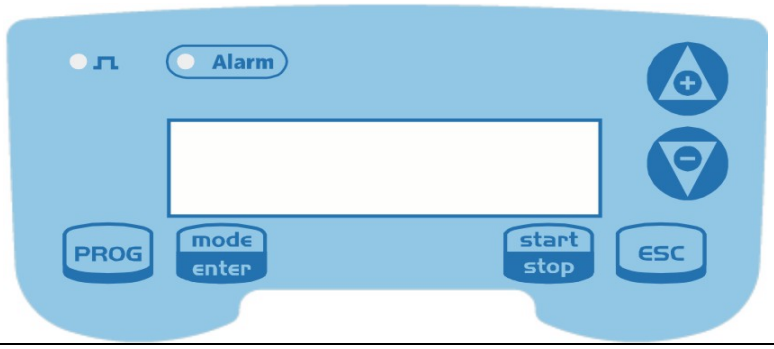
Display contrast adjustment.

For adjusting the display contrast keep the key ESC pressed and within 5 seconds press the keys or to increase or decrease the contrast.

Alarms

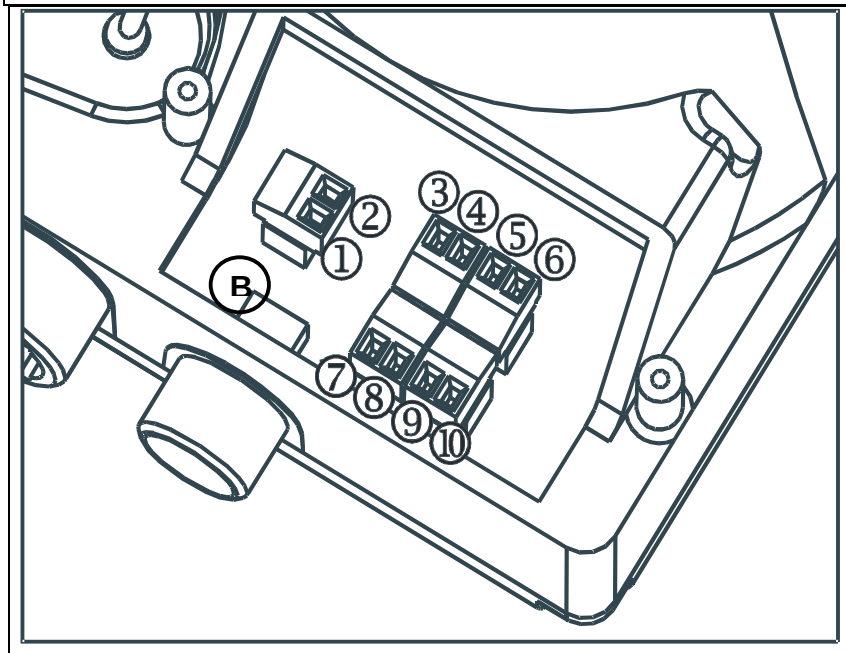
Display	Cause	Interruption
Fixed alarm LED Flashing word “Lev” I.e. Man Lev P100%	End of level alarm, without interrupting pump operation	Restore the liquid level.
Fixed alarm LED Flashing words “Lev” and “stop” I.e. Man Lev Stop P100%	End of level alarm, with interruption to pump operation	Restore the 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 start stop 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 start stop key
I.e. Parameter Error PROG to default	Internal CPU communication error.	Press the PROG key to restore the default parameters.

Steuertafel – TEKNA TPG



PROG	Zugriff auf das Programmiermenü
mode enter	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.
start stop	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.
ESC	Zum “Verlassen” der verschiedenen Menüstufen. Vor dem endgültigen Verlassen der Programmierung öffnet sich ein Speicherungsdialog für Veränderungen.
	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.
Alarm	Rote Led, die sich bei den verschiedenen Alarmsituationen einschaltet.

Anschlusse Elektrik



1 2	Relaisausgang (Alarm) Wahlweise Öffner (NC) oder Schliesser (NO)	
3	Pole +	4-20 mA Eingangs-Signal Eingang Widerstand: 200 ohm
4	Pole -	
5 6	Eingang Fernbedienung(Start-Stop)	
7 8	Impuls – Eingang (Impuls – Wasserzähler)	
9 10	Eingang Fluss - Sensor	
B	Eingang Füllstandkontrolle	

Programmiermenü Tekna TPG

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.

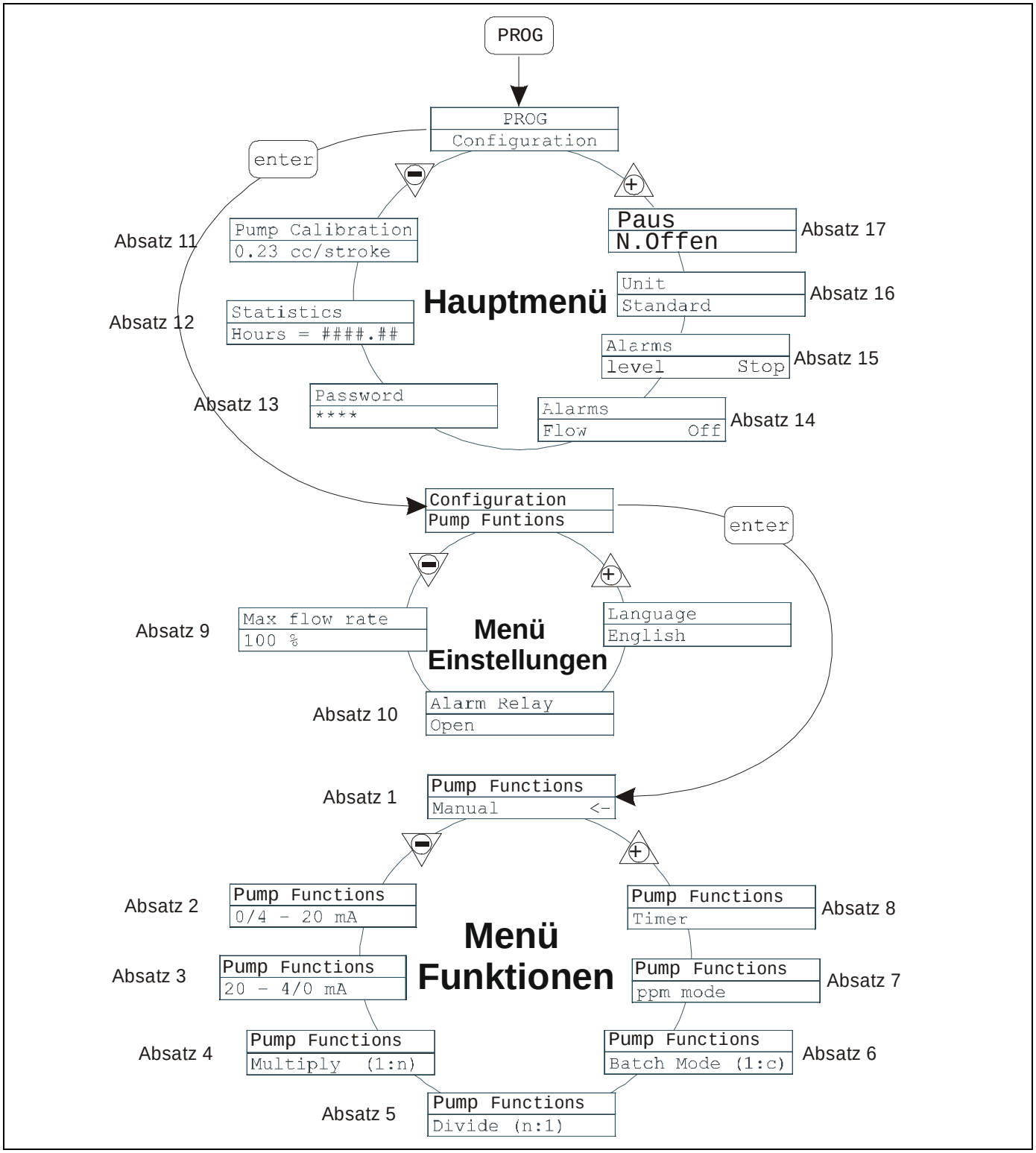
Über die Taste ESC verlassen Sie die Programmierstufen. Bei Verlassen der Programmierung wird auf dem Display folgendes angezeigt:

Exit
No Save

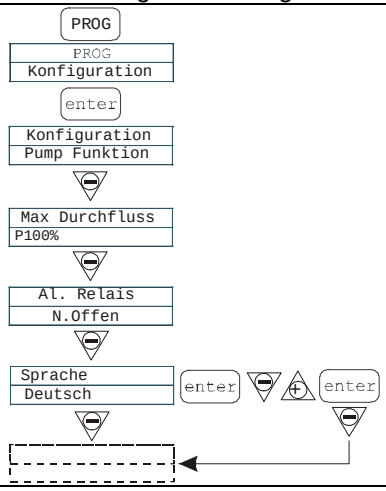
∇ Δ

Exit
Save

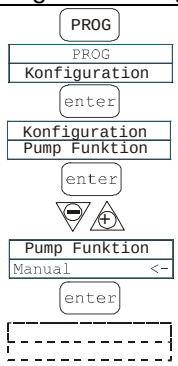
mode enter Zur Bestätigung der Auswahl

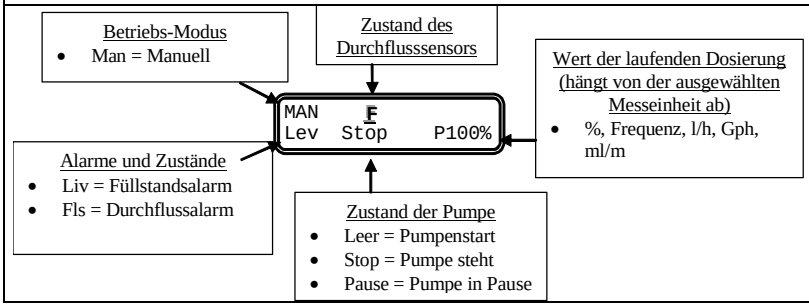
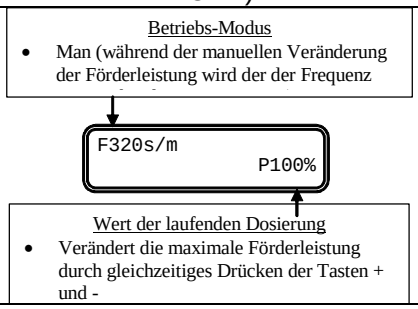


Sprachauswahl

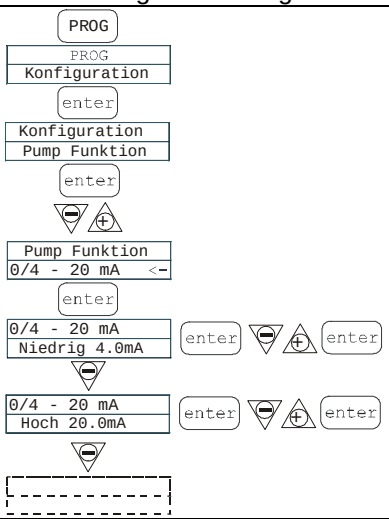
Programmierung	Funktionsweise
	Ermöglicht die Sprachauswahl. Werkseitig ist die Sprache Englisch eingestellt. Durch Drücken von mode enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten den Wert ein. Über mode enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

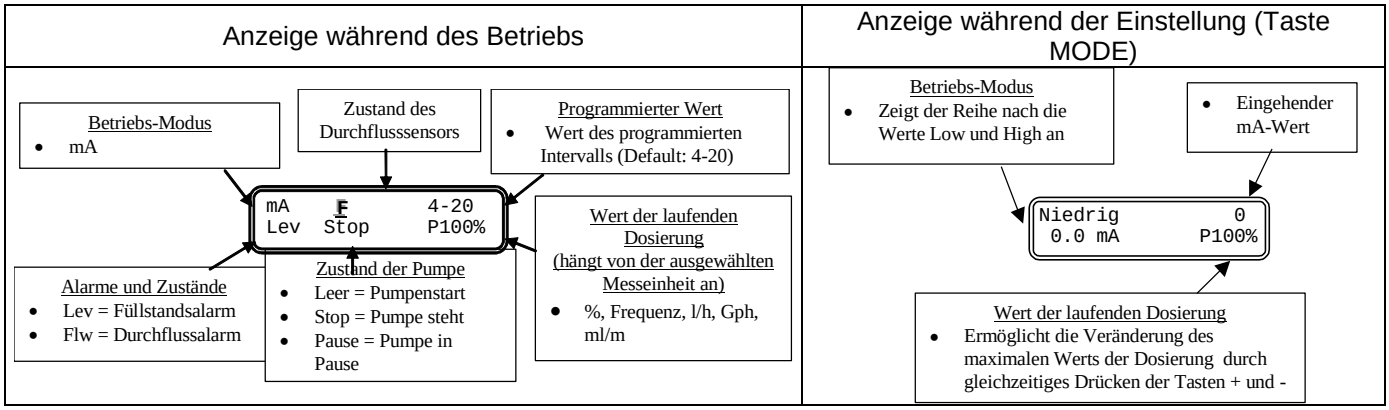
Absatz 1 – Manuelle Dosierung

Programmierung	Funktionsweise
	Die Pumpe arbeitet im Konstant-Modus. Die Förderleistung wird manuell geregelt. Durch gleichzeitiges Drücken der Tasten mode enter wird die Förderleistung erhöht bzw. über die Tasten mode enter verringert.

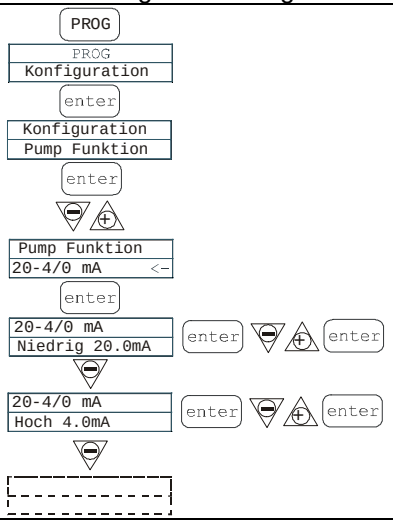
Anzeige während des Betriebs	Anzeige während der Einstellung (Taste MODE)
	

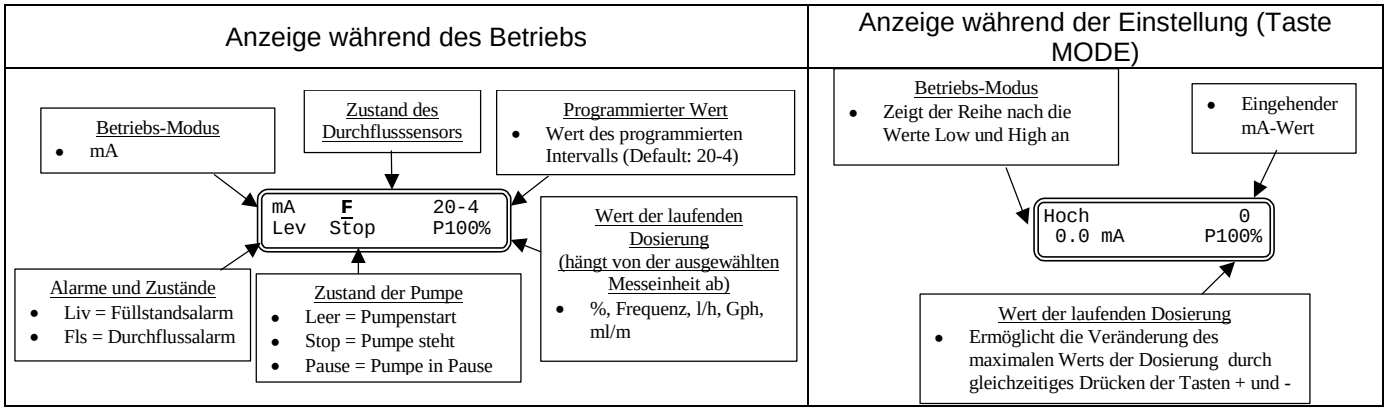
Absatz 2 – Proportionale Dosierung 0/4-20 mA

Programmierung	Funktionsweise
	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 Höchstfrequenz dosiert, wenn sie 20 mA empfängt. Während der Programmierung können diese beiden Werte verändert werden. Die Höchstfrequenz kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten mode enter wird die Förderleistung erhöht bzw. über die Tasten mode enter verringert.

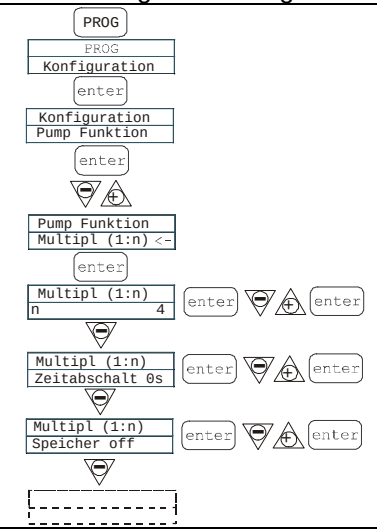


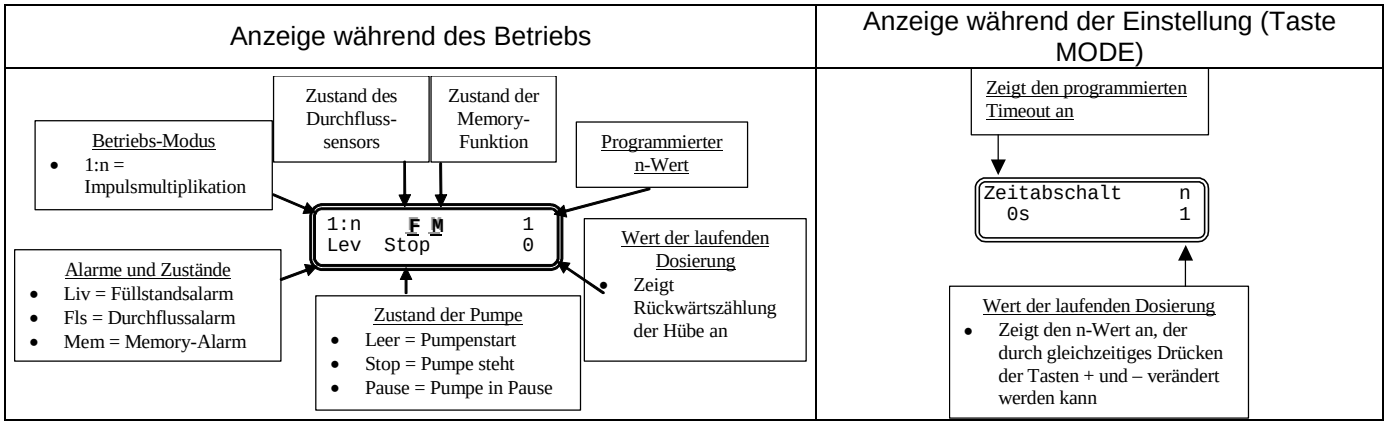
Absatz 3 – Proportionale Dosierung 20-4/0 mA

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem Signal zwischen 20 und 4(0) mA. Werkseitig ist die Pumpe so eingestellt, dass sie die Dosierung bei 20 mA unterbricht und mit der eingestellten Höchstfrequenz dosiert, wenn sie 4 mA empfängt. Während der Programmierung können diese beiden Werte verändert werden. Die Höchstfrequenz kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten wird die Förderleistung erhöht bzw. über die Tasten verringert.

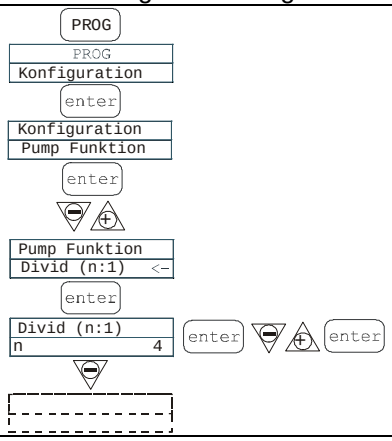


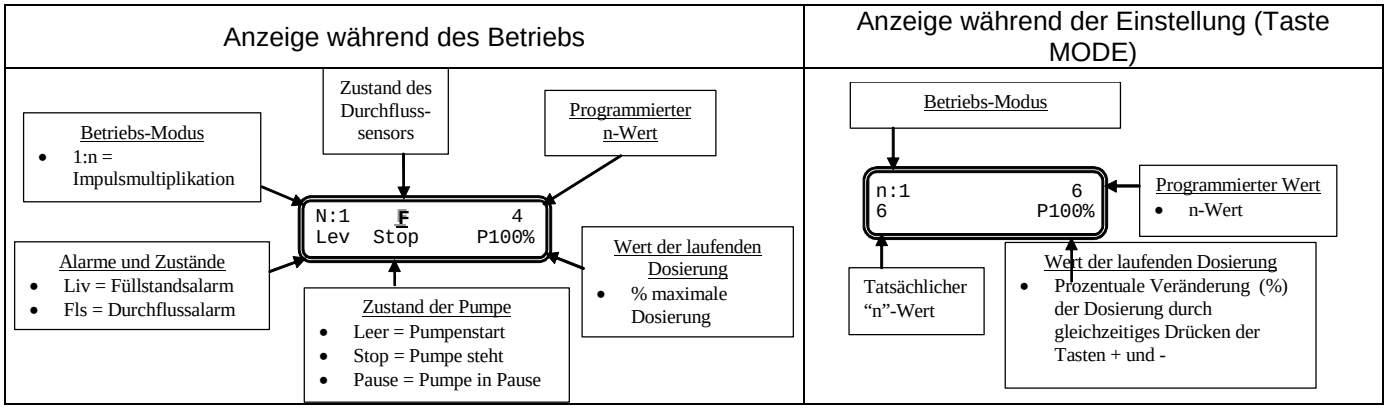
Absatz 4 – Proportionale Dosierung mit externen Impulsen (Multiplikation)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber). Bei jedem empfangenen Signal führt die Pumpe die programmierten “n“ Hübe aus. Die Pumpe stellt automatisch die Dosierfrequenz ein und passt diese an den Zeitraum an, der zwischen zwei aufeinander folgenden Signalen liegt. Es ist möglich, diesen Zeitraum (Timeout), über den hinaus die Pumpe die Zeitzählung wieder von Null beginnt, in Sekunden zu programmieren, um zu lange Dosierungen zu vermeiden. Die Pumpe verfügt über eine Memory-Funktion, die den Empfang eines Signals während der Dosierung signalisiert. Wenn sie auf OFF gestellt ist, beschränkt sie sich darauf, zu signalisieren. Wenn sie auf ON gestellt ist, signalisiert und speichert sie die Impulse und führt diese aus, wenn sie keine Signale mehr empfängt. Der Wert “n“ kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten wird die Förderleistung erhöht bzw. über die Tasten verringert.

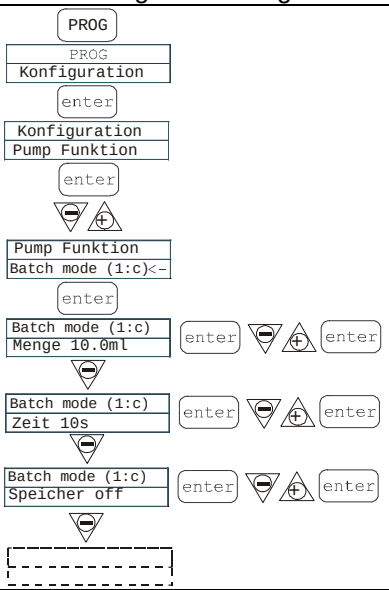


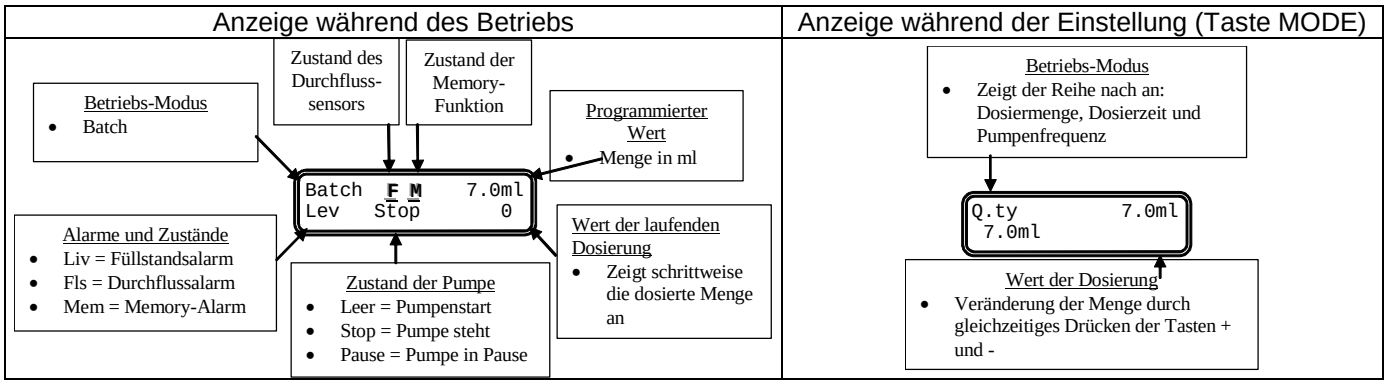
Absatz 5 – Proportionale Dosierung mit externen Impulsen (Division)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber). Alle “n“ empfangenen Signale führt die Pumpe einen Hub aus. Geben Sie während der Programmierung den Wert “n“ ein. Durch Programmieren des Werts “n“ wird der maximale prozentuale Anteil (%) der Dosierung eingestellt. Dieser Wert kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten mode enter + ▲ wird er erhöht bzw. über die Tasten mode enter + ▼ verringert.

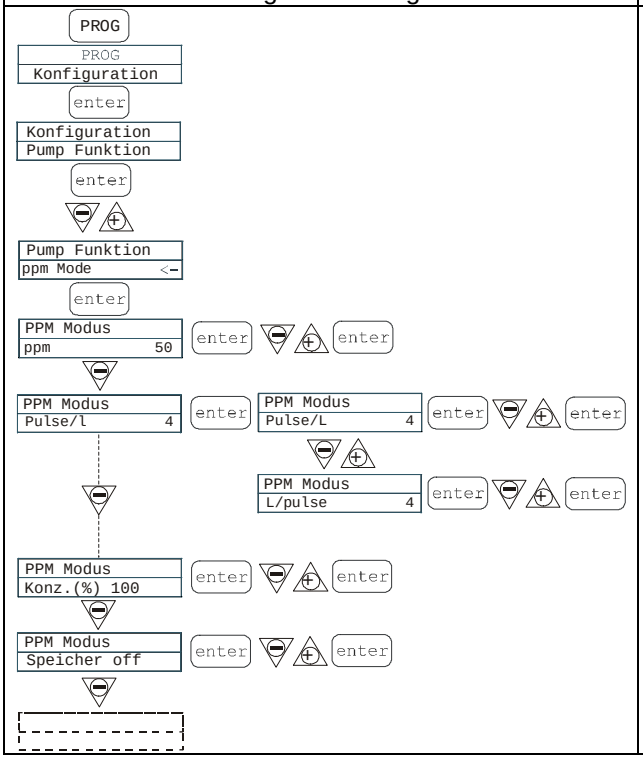


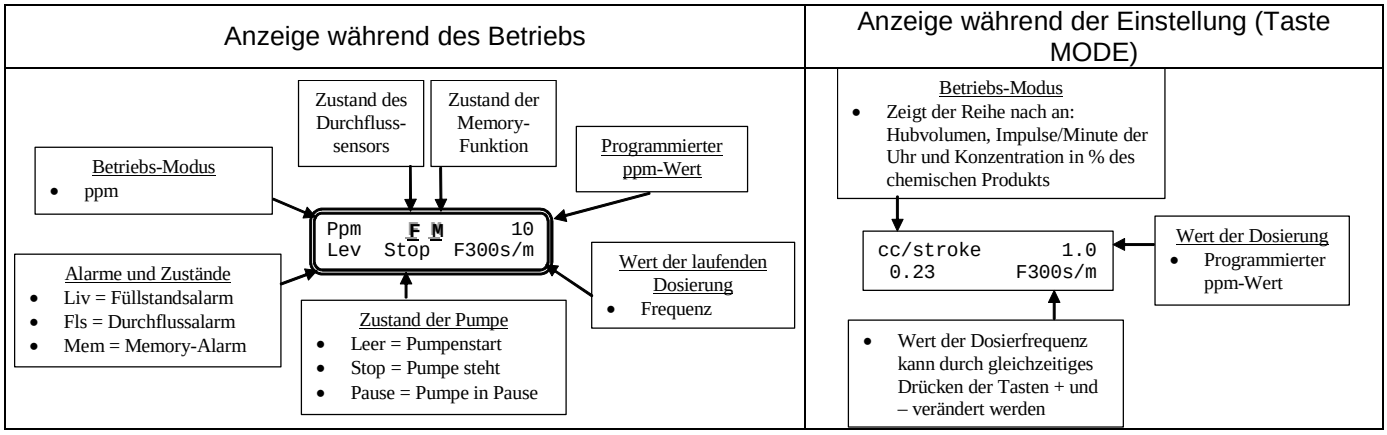
Absatz 6 – Proportionale Dosierung mit externen Impulsen (Batch-Dosierung)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber). In diesem Fall kann die Menge, die dosiert werden soll, in ml und die Zeit, in der die Dosierung durchgeführt werden soll, programmiert werden. Die Dosierung kann durch Drücken der Taste ▲ oder über eine Fernsteuerung manuell gestartet werden. Die Taste start stop unterbricht die Dosierung. Diese kann daraufhin durch Drücken der Taste ▲ auf Null gestellt oder durch erneutes Drücken von start stop wieder gestartet werden. Die Dosiermenge kann während des Betriebs verändert werden. Durch gleichzeitiges Drücken der Tasten mode enter + ▲ wird die Förderleistung erhöht bzw. über die Tasten mode enter + ▼ verringert.

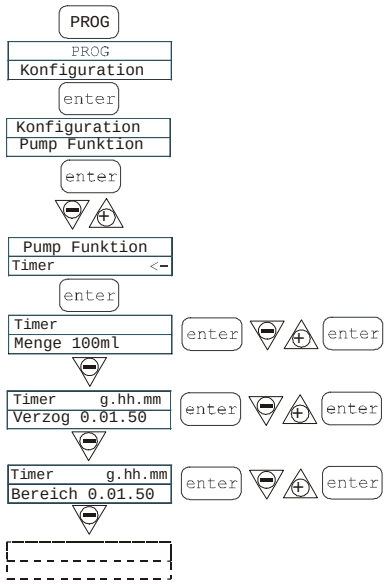
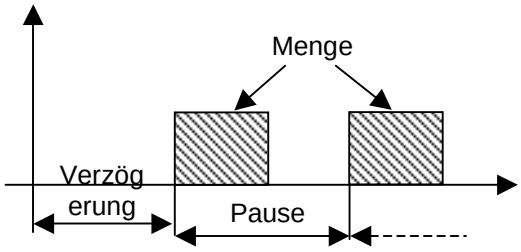


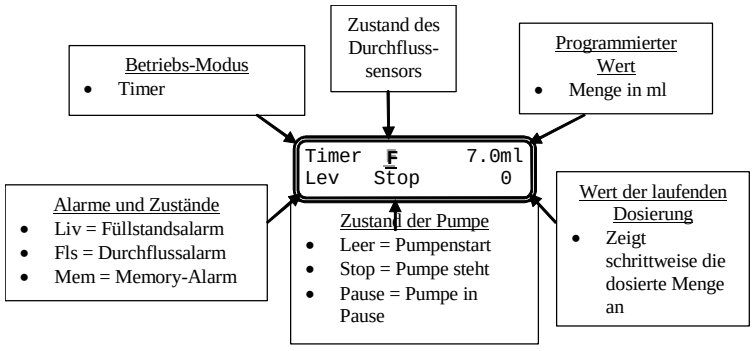
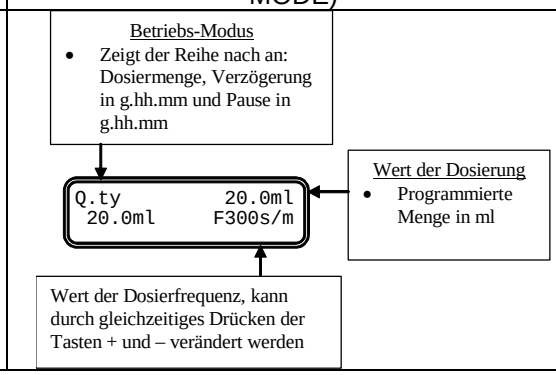
Absatz 7 – Proportionale Dosierung mit externen Impulsen (PPM-Dosierung)

Programmierung	Funktionsweise
	Die Pumpe dosiert proportional zu einem externen Signal (z.B.: Wasseruhr mit Impulsgeber), wobei automatisch das Verhältnis zwischen den Eingangssignalen und den Pumpenhüben entsprechend des programmierten ppm-Werts berechnet wird. Die einzugebenden Daten sind der ppm-Wert, das Verhältnis Impulse/Liter (bzw. Liter/Impulse) der Wasseruhr und die Konzentration des Produkts, das dosiert werden soll. Während des Betriebs kann die Dosierfrequenz verändert werden. Durch gleichzeitiges Drücken der Tasten wird sie erhöht bzw. über die Tasten verringert.

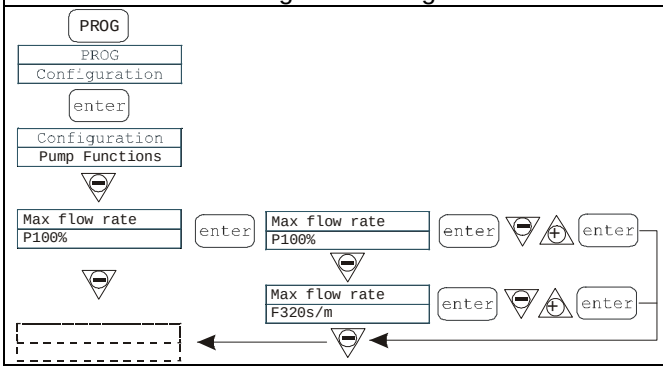


Absatz 8 – Getaktete Dosierung

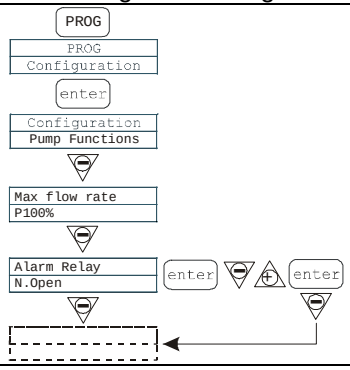
Programmierung	Funktionsweise
	Die Pumpe dosiert eine in ml programmierbare Menge. Demzufolge kann eine Startverzögerung der Pumpe (Retard) und der Zeitabstand zwischen zwei aufeinander folgenden Eingriffen (Range) eingestellt werden, wie es im nachfolgenden Schema dargestellt ist:  Die Verzögerungs- und Pausenzeiten sind in T/S/M (Tage, Stunden, Minuten) angegeben. Während des Betriebs der Pumpe kann die Dosierfrequenz verändert werden, wodurch sich die Dosierzeit für die programmierte Menge wählen lässt. Durch gleichzeitiges Drücken der Tasten mode enter + ⊕ wird die Frequenz erhöht bzw. über die Tasten mode enter + ⊖ verringert.

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

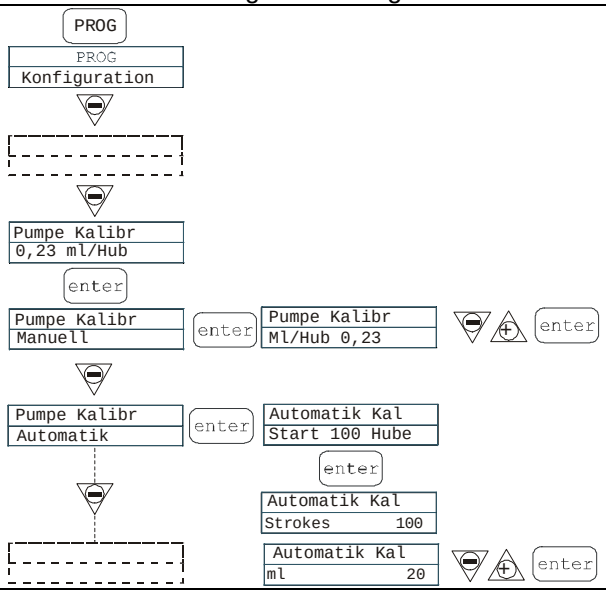
Absatz 9 – Einstellung der maximalen Förderleistung

Programmierung	Funktionsweise
	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 mode enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten ⊕ ⊖ den Wert ein. Über mode enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

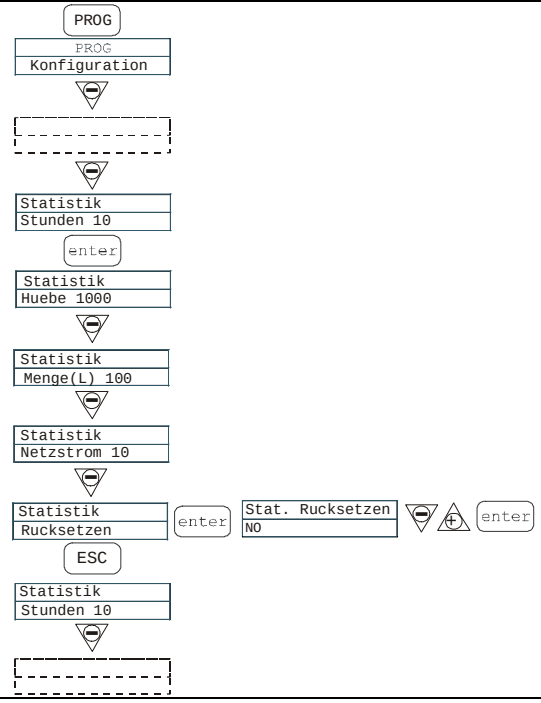
Absatz 10 – Einstellung Alarmrelais

Programmierung	Funktionsweise
	Wenn keine Alarmsituation vorliegt, kann es auf geöffnet (werkseitige Einstellung) oder geschlossen gestellt werden. Durch Drücken von mode enter erhalten Sie Zugriff auf die Veränderung. Stellen Sie dann über die Tasten den Wert ein. Über mode enter bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

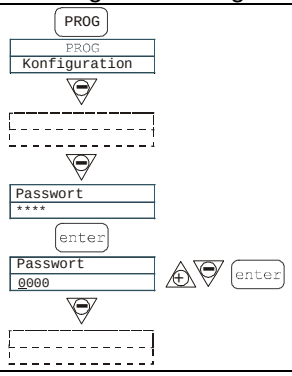
Absatz 11 – Kalibrierung der Förderleistung

Programmierung	Funktionsweise
	Im Hauptmenü erscheint das gespeicherte Hubvolumen. Es kann auf zwei Arten kalibriert werden: MANUELL – Geben Sie über die Tasten manuell das Hubvolumen ein und bestätigen Sie über mode enter AUTOMATISCH – Die Pumpe führt 100 Hübe aus, die über die Taste gestartet und über mode enter bestätigt werden. Wenn diese Hübe ausgeführt worden sind, geben Sie über die Tasten die von der Pumpe angesaugte Menge ein und bestätigen Sie über mode enter. Der eingegebene Wert wird bei der Berechnung der Förderleistungen verwendet.

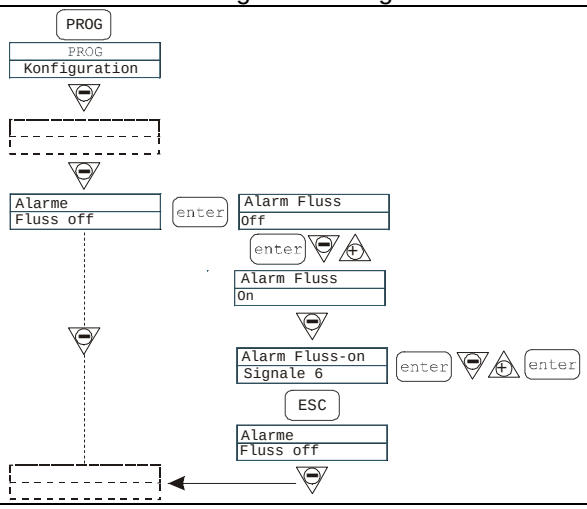
Absatz 12 – Statistiken

Programmierung	Funktionsweise
	Im Hauptmenü werden die Betriebsstunden der Pumpe angezeigt. Durch Drücken der Taste mode enter erhalten Sie Zugriff auf die anderen Statistiken: - Strokes = Anzahl der von der Pumpe ausgeführten Hübe - Q.ty(L) = in Litern ausgedrückte von der Pumpe dosierte Menge; dieser Wert wird entsprechend des gespeicherten Hubvolumens berechnet. - Power = Anzahl der Pumpenstarts - Reset = über die Tasten können Sie wählen, ob Sie die Uhr auf Null stellen möchten (YES) oder nicht (NO), über mode enter bestätigen Sie. Durch Drücken von ESC gelangen Sie zum Hauptmenü zurück.

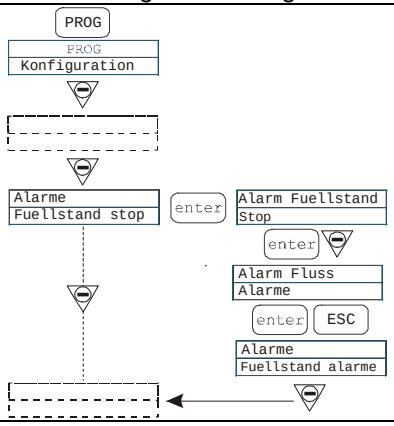
Absatz 13 – Passwort

Programmierung	Funktionsweise
	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. 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 anschließend über . Durch Eingabe von “0000” (werkseitige Einstellung) wird die Passwortabfrage übersprungen.

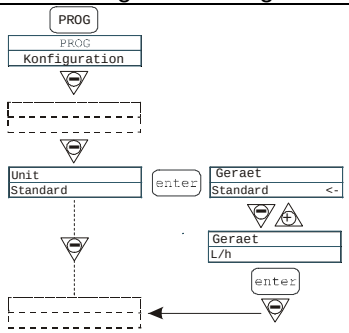
Absatz 14 – Durchflussalarm

Programmierung	Funktionsweise
	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.

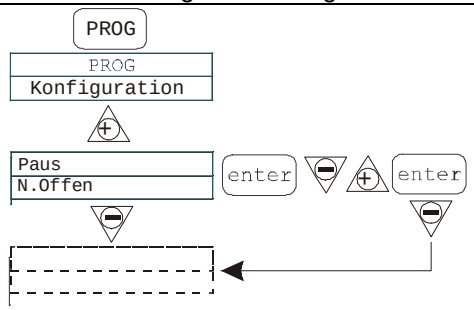
Absatz 15 – Füllstandsalarm

Programmierung	Funktionsweise
	Ermöglicht die Einstellung des Zeitpunkts, an dem der Füllstandsalarm aktiviert wird, also auch ob die Dosierung blockiert (Stop), oder einfach nur das Alarmsignal aktiviert werden soll, ohne dabei die Dosierung zu blockieren. 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.

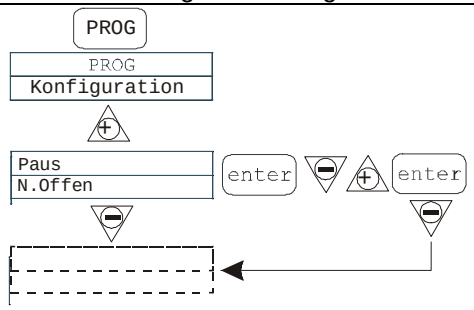
Absatz 16 – Anzeigeeinheit der Förderleistung

Programmierung	Funktionsweise
	Ermöglicht die Einstellung der Maßeinheit der Dosierung über eine Anzeige auf dem Display. 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). Über bestätigen Sie und werden zum Hauptmenü zurückgeleitet.

Absatz 16 - Einstellung Pause

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

Absatz 17 - Einstellung Pause

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

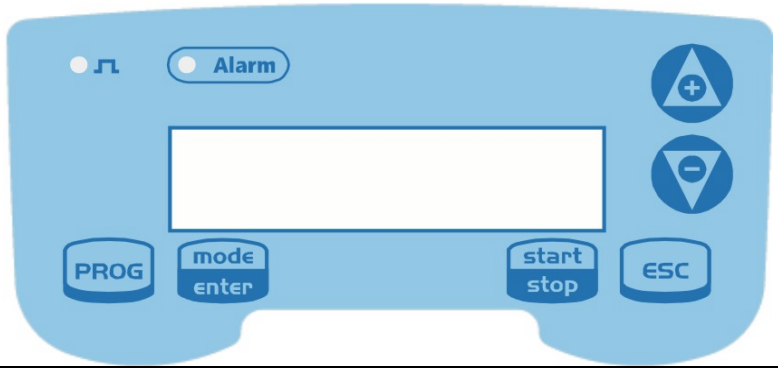
Display - Einstellung Kontrast

Für die Einstellung des Display-Kontrasts wird die esc Taste festgedrückt und innerhalb von 5 Sekunden mit den Tasten oder der gewünschte Kontrast festgelegt

Alarme

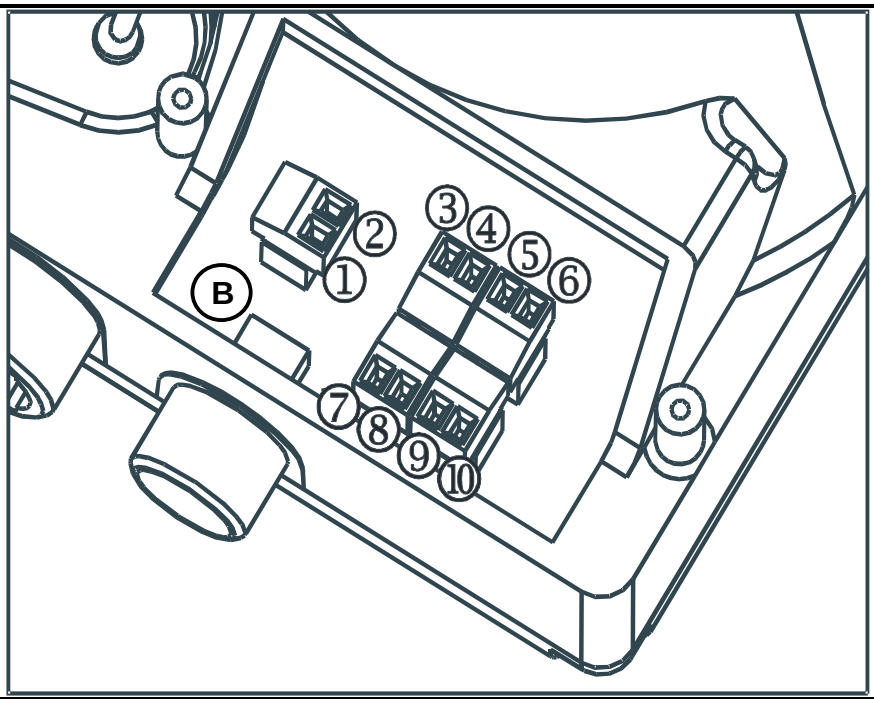
Anzeige	Ursache	Unterbrechung
Alarm-Led leuchtet kontinuierlich Der Schriftzug Lev blinkt Bsp. Man / Lev P100%	Alarm Füllstand nicht ausreichend, ohne Unterbrechung des Pumpenbetriebs	Flüssigkeit nachfüllen
Alarm-Led leuchtet kontinuierlich Der Schriftzug Lev und Stop blinkt Bsp. Man / Lev Stop P100%	Alarm Füllstand nicht ausreichend, mit Unterbrechung des Pumpenbetriebs	Flüssigkeit nachfüllen
Der Schriftzug Mem blinkt Bsp. 1:n 6 / Mem	Die Pumpe empfängt einen oder mehrere Impulse während der Dosierung mit Memory-Funktion in Off-Stellung	Die Taste start stop drücken
Der Schriftzug Mem blinkt Bsp. 1:n **M** 6 / Mem	Die Pumpe empfängt einen oder mehrere Impulse während der Dosierung mit Memory-Funktion in On-Stellung	Wenn die Pumpe keine externen Impulse mehr empfängt, führt sie die gespeicherten Hübe aus
Alarm-Led leuchtet kontinuierlich Der Schriftzug Flw blinkt Bsp. Man **F** / Flw P100%	Durchflussalarm aktiv, die Pumpe hat nicht die programmierten Signale vom Durchflusssensor empfangen.	Die Taste start stop drücken
Bsp. Parameter Error / PROG to default	Interner Kommunikationsfehler der CPU.	Die Taste PROG drücken, um auf die Default-Parameter rückzustellen.

Panel de control – TEKNA TPG



PROG	Acceso al menú de programación.
mode enter	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 de los diferentes niveles del menú y las modificaciones en el interior de los mismos.
start stop	Pone en marcha y detiene la bomba. En condiciones de alarma de nivel (sólo función de alarma), de alarma de flujo y alarma *memory* activas, desactiva la señalización en el display.
ESC	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.
	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.
Alarm	Led rojo que se enciende durante las diferentes situaciones de alarma.

Conexiones eléctricas



1	Relé de Alarma	
2		
3	Pole +	Entrada señal 4-20 mA Impedancia De Entrada: 200 ohm
4	Pole -	
5	Entrada control externo (start-stop)	
6		
7	Entrada señal en frecuencia (contador emisor de impulsos)	
8		
9	Entrada sensor de Flujo	
10		
B	Entrada sonda de nivel	

Menú de programación Tekna TPG

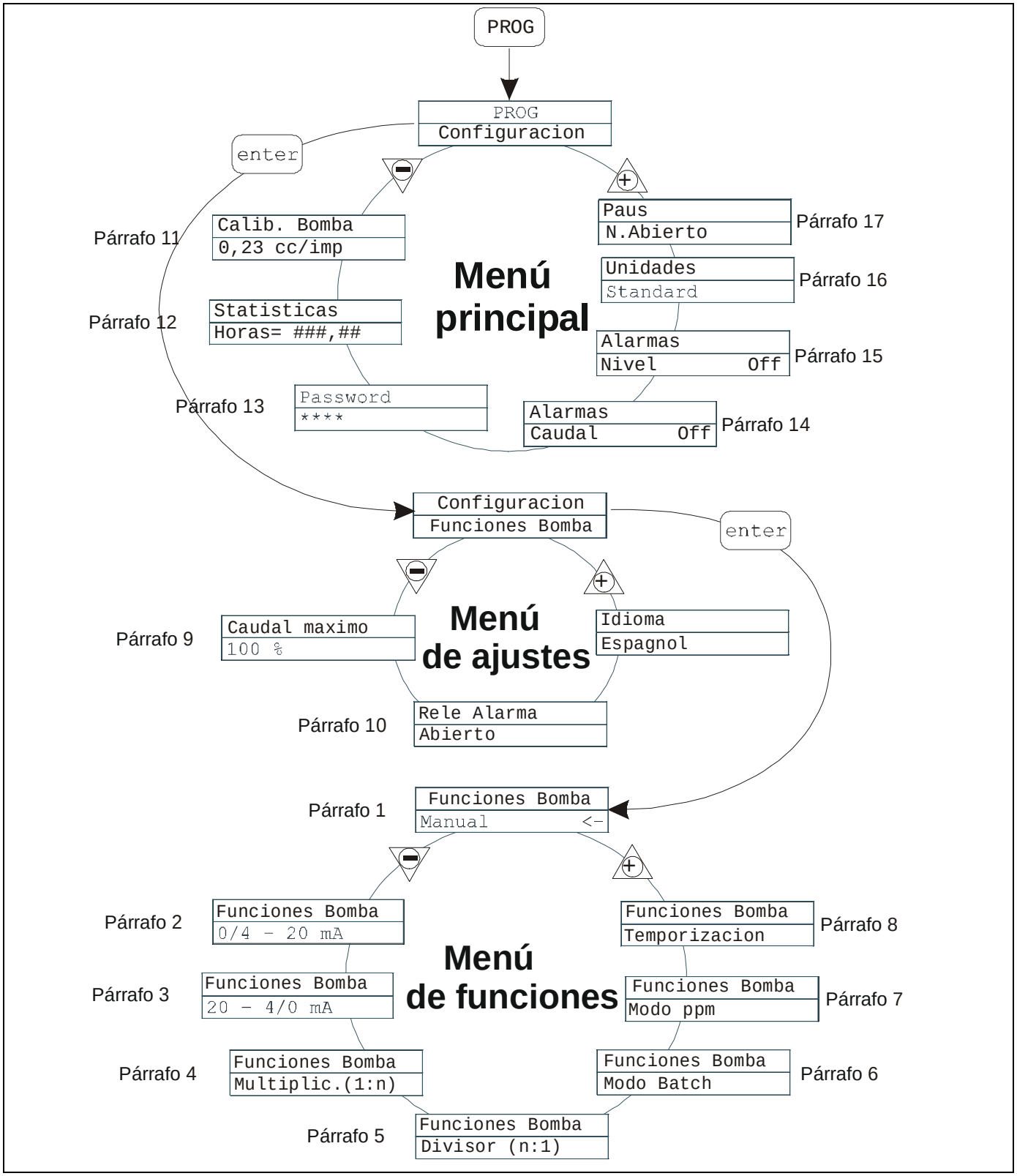
Pulsando la tecla PROG durante más de tres segundos se accede a la programación. Con las teclas ⊕ ⊖ se pueden desplazar las voces del menú, con la tecla mode enter se accede a las modificaciones. En la fábrica la bomba se programa en modo constante. La bomba vuelve automáticamente al modo de funcionamiento 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

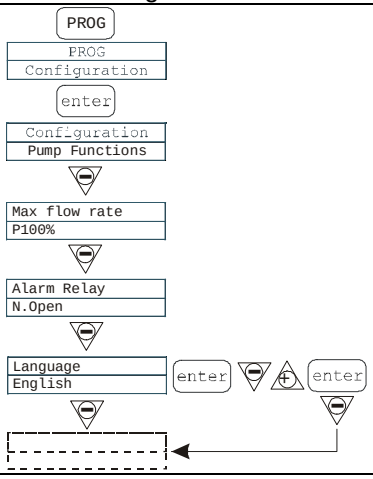
∇ Δ

Exit
Save

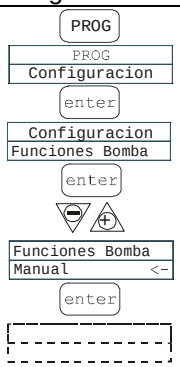
mode enter para confirmar la elección

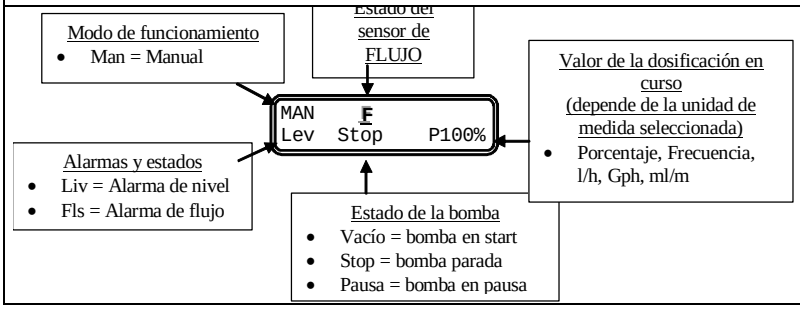
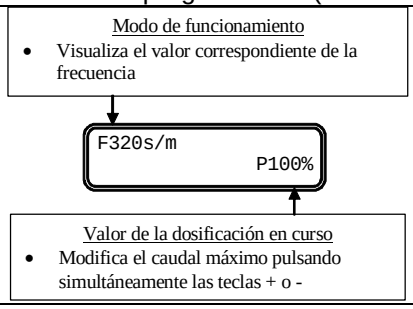


Programación del idioma

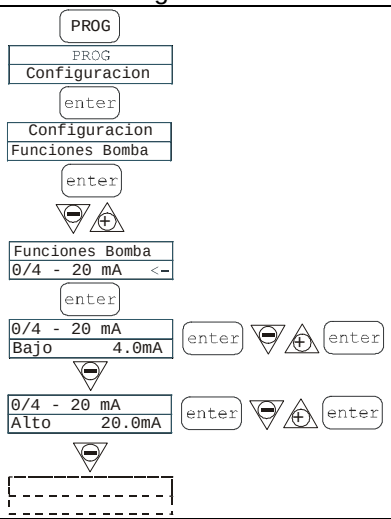
Programación	Funcionamiento
	Permite seleccionar el idioma, en la fábrica la bomba se programa en inglés. Pulsando la tecla mode enter se accede a la modificación, con las teclas ⊕ ⊖ se programa el valor. Con la tecla mode enter se confirma y se vuelve al menú principal.

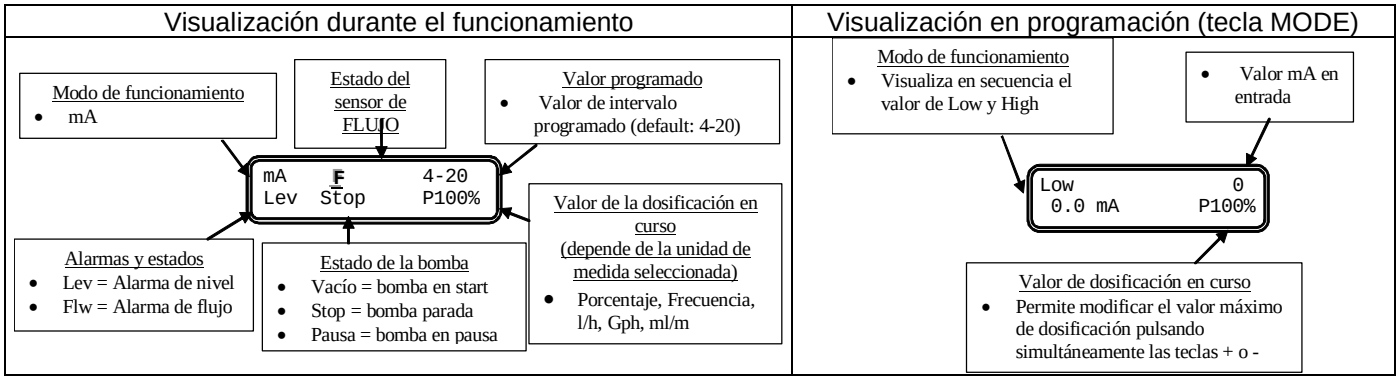
Párrafo 1 – Dosificación manual

Programación	Funcionamiento
	La bomba trabaja en modo constante. El caudal se regula manualmente pulsando simultáneamente las teclas mode enter ⊕ para aumentarlo o las teclas mode enter ⊖ para disminuirlo.

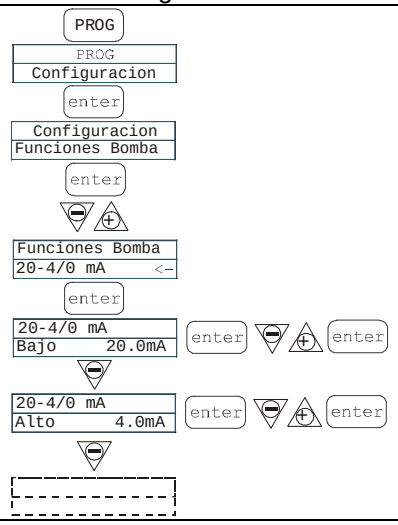
Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

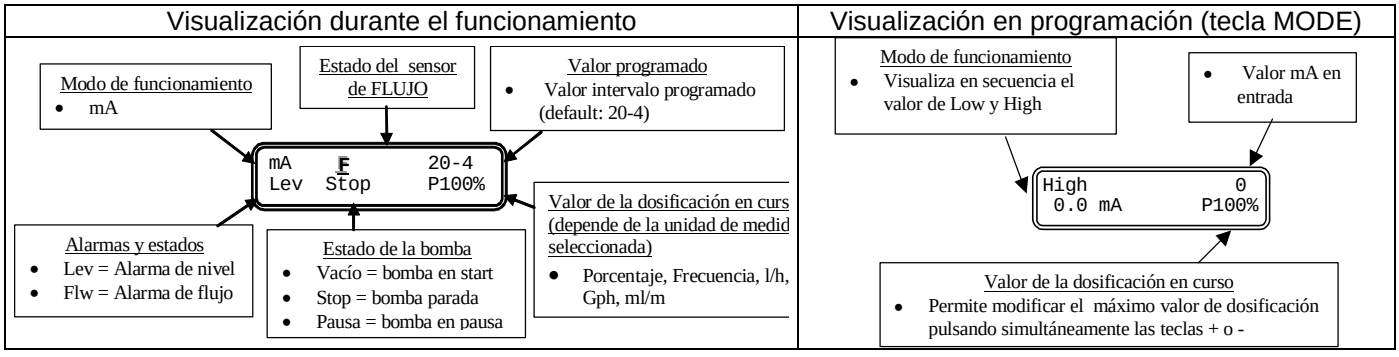
Párrafo 2 – Dosificación Proporcional con señal 0/4-20 mA

Programación	Funcionamiento
	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 mode enter ⊕ para aumentar el caudal o las teclas mode enter ⊖ para disminuirlo.

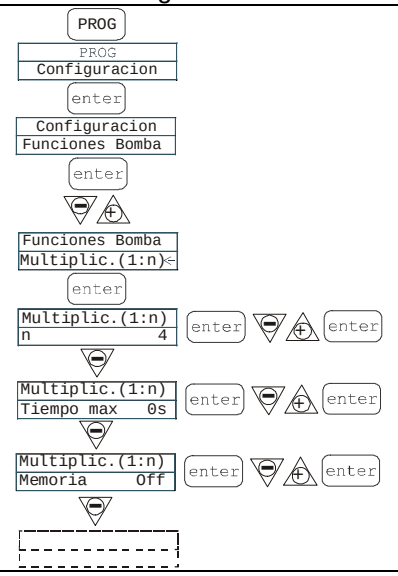


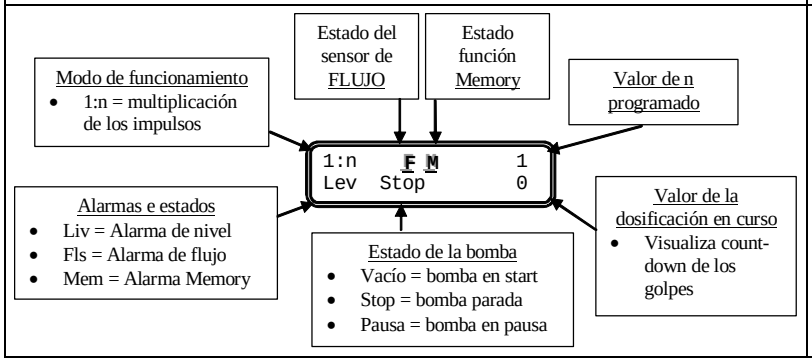
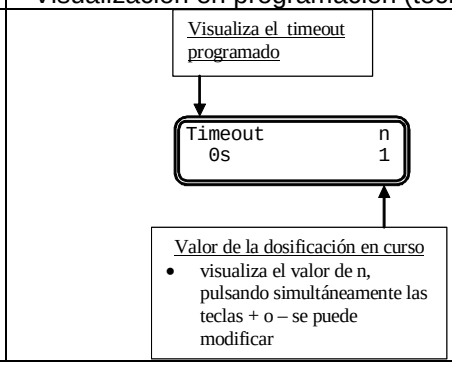
Párrafo 3 – Dosificación Proporcional con señal 20-4/0 mA

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal 20-4 (0) mA. Según su programación de fábrica, la bomba interrumpe la dosificación a 20 mA y dosifica a la máxima frecuencia programada cuando recibe 4 mA. En programación es posible modificar estos valores. La frecuencia máxima se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode enter + ⊕ para aumentar el caudal o las teclas mode enter + ⊖ para disminuirlo.

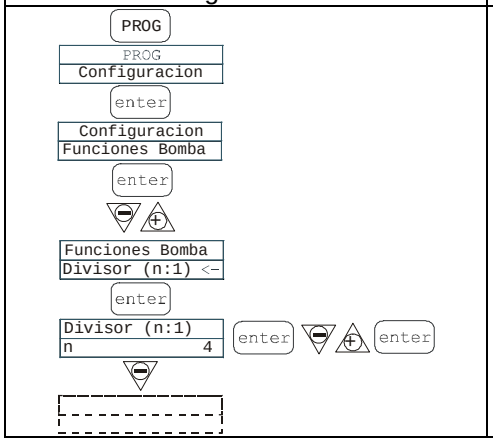


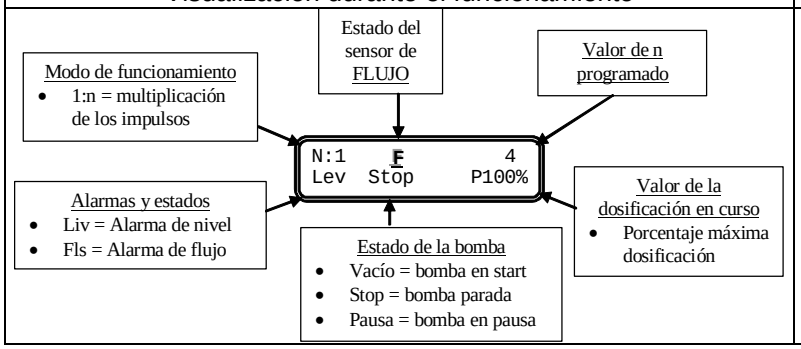
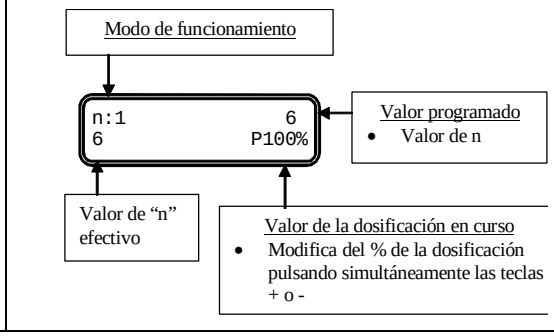
Párrafo 4 – Proporcional con impulsos externos (multiplicación)

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos). A cada señal recibida la bomba realiza los "n" golpes programados. La bomba programa automáticamente la frecuencia de la dosificación, adaptándola al tiempo que transcurre entre dos señales sucesivas. Es posible programar en segundos el tiempo (time out) más allá del cual la bomba pone en cero el conteo del intervalo, para evitar dosificaciones en tiempos demasiado largos. La bomba dispone de la función *memory* que señala el recibimiento de una señal durante la dosificación. Si está programada en OFF se limita a señalar, si está programada en ON señala y memoriza los impulsos y los ejecuta cuando termina de recibir señales. El valor de "n" se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode enter + ⊕ para aumentar el valor del caudal o las teclas mode enter + ⊖ para disminuirlo.

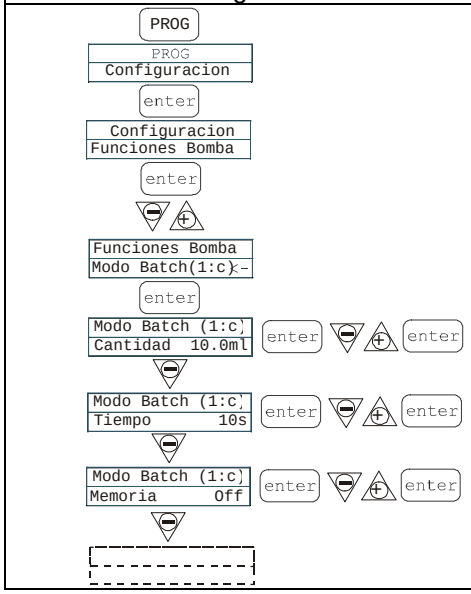
Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

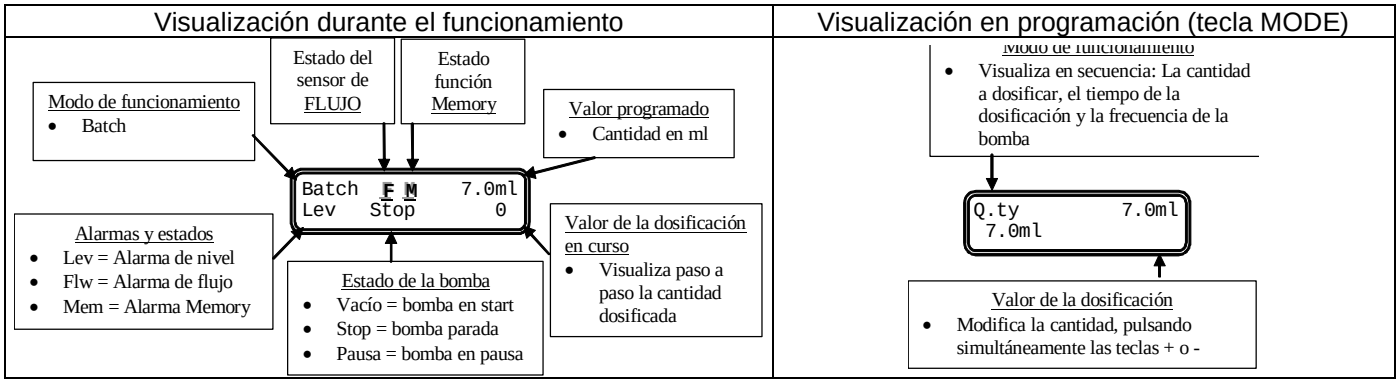
Párrafo 5 – Proporcional con impulsos externos (división)

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos). A cada "n" señales recibidas la bomba realiza un golpe. En programación se programa el valor de "n". Programando el valor de "n" se programa el % de máxima dosificación, durante el funcionamiento se puede modificar este valor pulsando simultáneamente las teclas mode enter + ⊕ para aumentarlo o las teclas mode enter + ⊖ para disminuirlo.

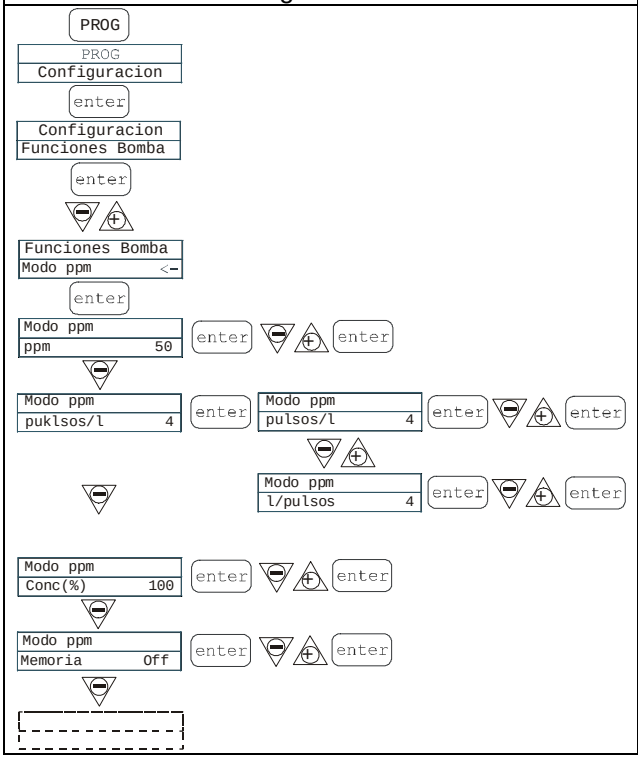
Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

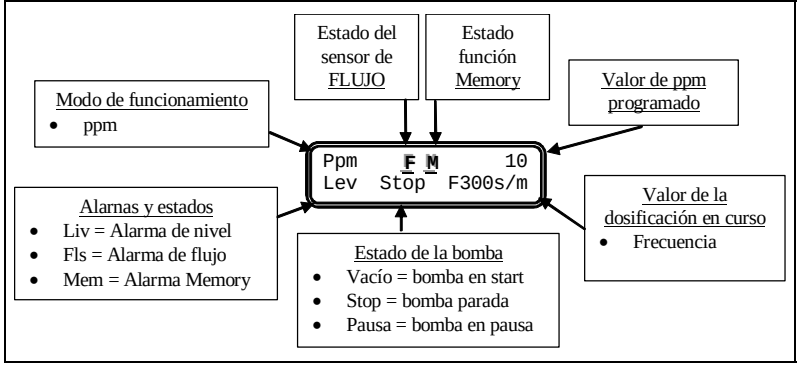
Párrafo 6 – Proporcional con impulsos externos (dosificación Batch)

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos). En este caso se puede programar la cantidad a dosificar en ml y el tiempo para terminar la dosificación. Es posible poner en marca la dosificación manualmente pulsando la tecla ⊕ o con un mando remoto. La tecla start stop interrumpe la dosificación que se puede poner en cero pulsando la tecla ⊕ o se puede volver a poner en marcha pulsando otra vez la tecla start stop. La cantidad a dosificar se puede modificar durante el funcionamiento pulsando simultáneamente las teclas mode enter + ⊕ para aumentar el caudal o las teclas mode enter + ⊖ para disminuirlo.

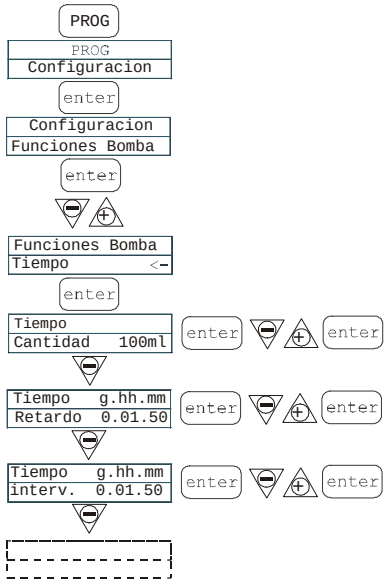
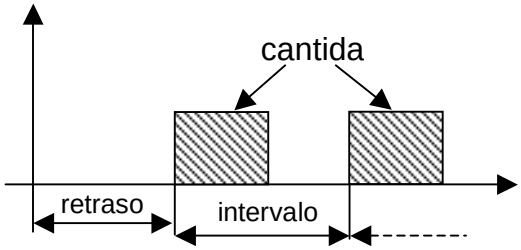


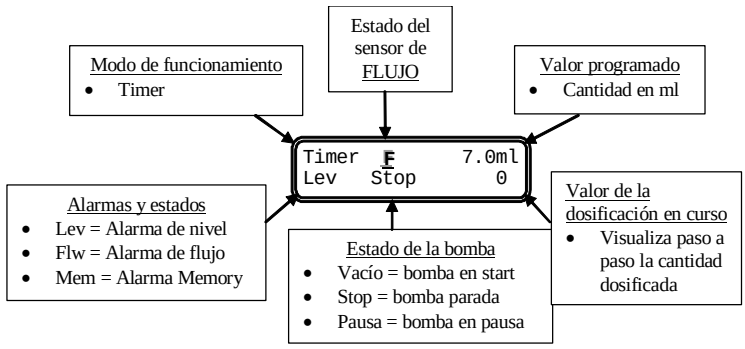
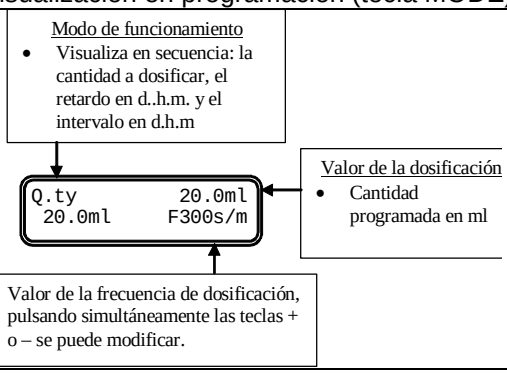
Párrafo 7 – Proporcional con impulsos externos (dosificación en ppm)

Programación	Funcionamiento
	La bomba dosifica proporcionalmente al recibir una señal externa (ejemplo: contador lanza impulsos) calculando automáticamente la relación entre las señales en entrada y los golpes de la bomba en función del valor de ppm programado. Los datos que se deben introducir son el valor de ppm, la relación impulsos/litro (o litros/impulso) del contador y la concentración del producto a dosificar. Durante el funcionamiento se puede modificar la frecuencia de la dosificación pulsando simultáneamente las teclas para aumentarla o las teclas para disminuirla.

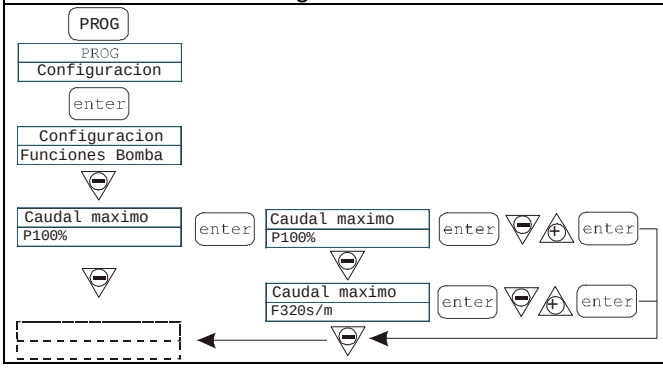


Párrafo 8 – Dosificación temporizada

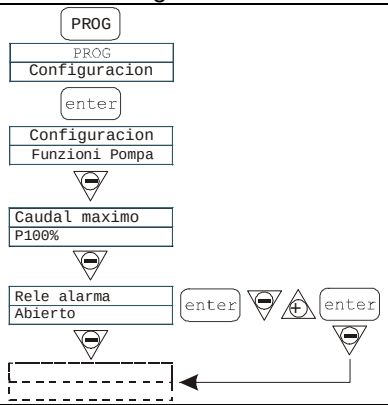
Programación	Funcionamiento
	La bomba dosifica una cantidad que se puede programar en ml, por lo tanto se puede programar un tiempo de retraso a la puesta en marcha de la bomba (*Retard*) y la distancia entre dos intervalos sucesivos (*Range*), como se muestre en el esquema siguiente:  Los tiempos de retraso e intervalo son en d.h.m. (días, horas, minutos). Durante el funcionamiento de la bomba se puede modificar la frecuencia de la dosificación para decidir el tiempo de dosificación de la cantidad programada pulsando simultáneamente las teclas mode enter para aumentar la frecuencia o las teclas mode enter para disminuirla.

Visualización durante el funcionamiento	Visualización en programación (tecla MODE)
	

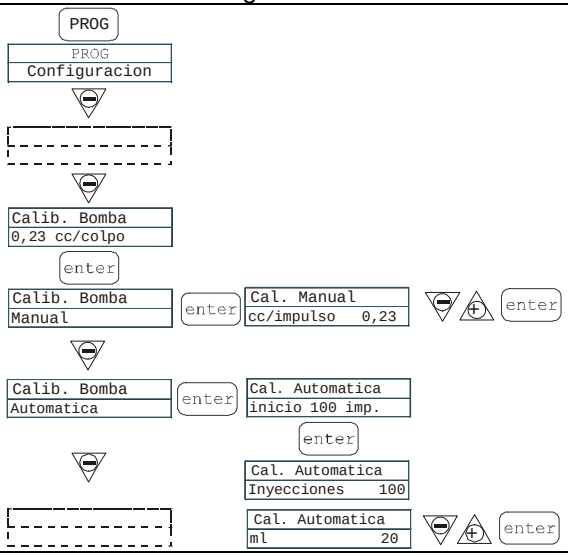
Párrafo 9 – Programación del caudal máximo

Programación	Funcionamiento
	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. Pulsando la tecla mode enter se accede a la modificación, después con las teclas se programa el valor. Con la tecla mode enter se confirma y se vuelve al menú principal.

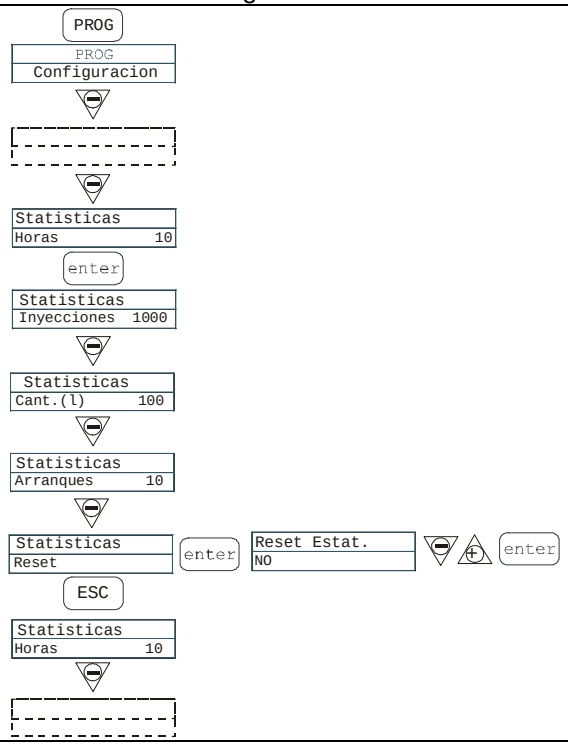
Párrafo 10 – Programación del relé de alarma

Programación	Funcionamiento
	En ausencia de una situación de alarma se puede programar abierto (fábrica) o cerrado. Pulsando la tecla mode enter se accede a la modificación, después con las teclas ⊕ ⊖ se programa el valor. Con la tecla mode enter se confirma y se vuelve al menú principal.

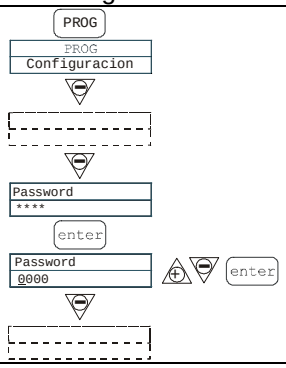
Párrafo 11 – Calibración del caudal

Programación	Funcionamiento
	En el menú principal aparece el valor de cc por golpe en memoria. Se puede calibrar en dos modos: MANUAL – Introduciendo manualmente el valor de cc cada golpe con las teclas ⊕ ⊖ y confirmando con la tecla mode enter. AUTOMÁTICA – La bomba realiza 100 golpes, poner en marcha y confirmar con la tecla mode enter al final introducir la cantidad aspirada por la bomba con las teclas ⊕ ⊖ y confirmar con la tecla mode enter. El dato introducido será utilizado en los cálculos de los caudales.

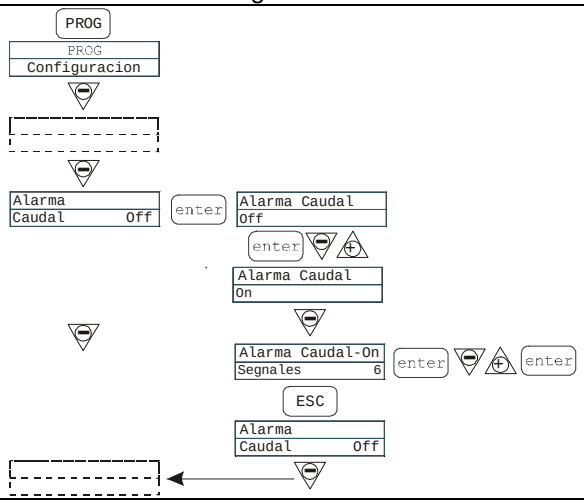
Párrafo 12 – Stadísticas

Programación	Funcionamiento
	En el menú principal visualiza las horas de funcionamiento de la bomba, pulsando la tecla mode enter se accede a las demás estadísticas: - *Strokes* = Número de golpes realizados por la bomba. - *Q.ty* (L) = Cantidad dosificada por la bomba expresada en litros; este valor se calcula en base al valor cc/*stroke* en memoria. - *Power* = Número de puestas en marcha de la bomba. - *Reset* = Con las teclas ⊕ ⊖ se pueden poner en cero (YES) o no (NO) los contadores, con la tecla mode enter se confirma. Pulsando la tecla esc se vuelve al menú principal.

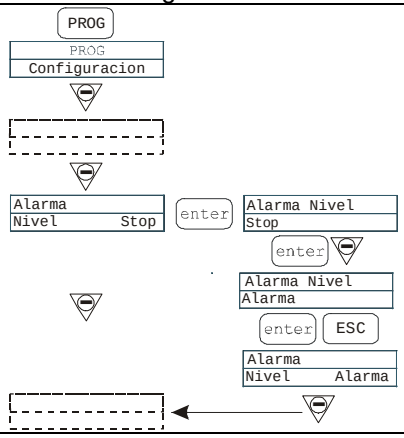
Párrafo 13 - Password

Programación	Funcionamiento
	Introduciendo la password se puede entrar en programación y ver todos los valores programados, pero cada vez que se quieran modificar será solicitada la password. La línea parpadeante indica el número que se puede 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.

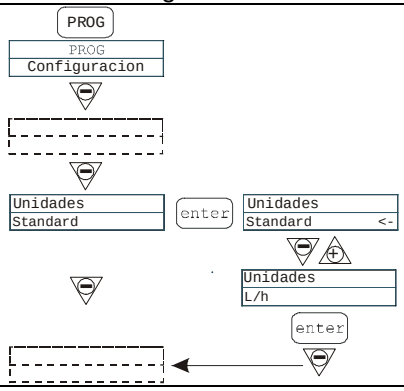
Párrafo 14 – Alarma de flujo

Programación	Funcionamiento
	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.

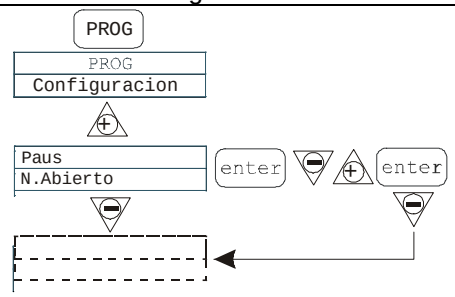
Párrafo 15 – Alarma de nivel

Programación	Funcionamiento
	Permite programar la bomba cuando se activa la alarma del sensor de nivel, es decir 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.

Párrafo 16 – Unidad de visualización del caudal

Programación	Funcionamiento
	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.

Párrafo 17 - Programación Pausa

Programación	Funcionamiento
	Entrada esterna de paro de bomba. De fábrica el sistema llega configurado como Normalmente Abierto. Pulsando la tecla mode enter se accede a la modificación, después con las teclas ⊕ ⊖ se programa el valor (N. ABIERTO o N. CERRADO.) Con la tecla mode enter se confirma y se vuelve al menú principal.

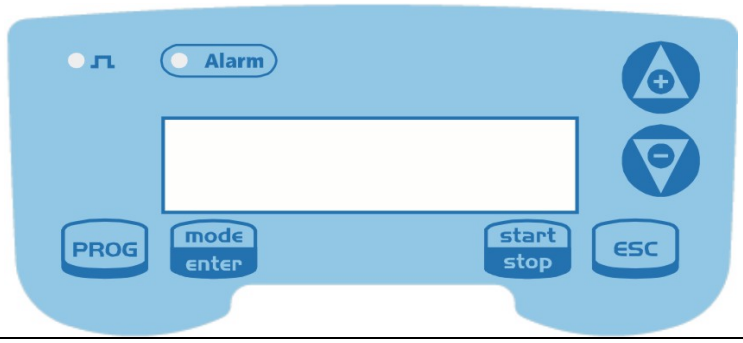
Ajuste contraste display

Para ajustar el contraste del display mantener presionada la tecla ESC y dentro de 5 segundos presionar las teclas ⊕ o ⊖ para aumentar o disminuir el contraste

Alarmas

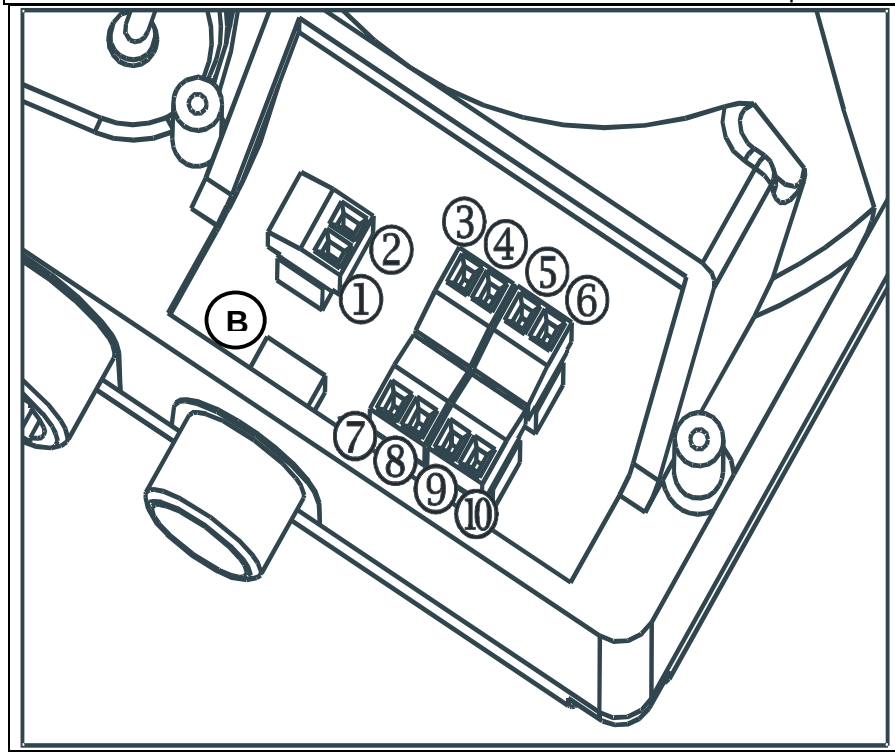
Visualización	Causa	Interrupción
Led Alarma fijo Mensaje Lev parpadeante Ej: `Man` `Lev P100%`	Alarma de final del nivel sin interrupción del funcionamiento de la bomba.	Reestablecer el nivel del líquido.
Led Alarma fijo Mensajes Lev y stop parpadeantes Ej: `Man` `Lev Stop P100%`	Alarma final del nivel con interrupción del funcionamiento de la bomba.	Reestablecer el nivel del líquido.
Mensaje Mem parpadeante Ej: `1:n 6` `Mem`	La bomba recibe uno o más impulsos durante la dosificación con la función *memory* en OFF.	Pulsar la tecla start stop
Mensaje Mem parpadeante Ej: `1:n M 6` `Mem`	La bomba recibe uno o más impulsos durante la dosificación con la función *memory* en ON.	Cuando la bomba termina de recibir los impulsos externos devuelve los golpes memorizados.
Led Alarma fijo Mensaje Flw parpadeante Ej: `Man F` `Flw P100%`	Alarma de flujo activa, la bomba no ha recibido el número de señales programadas por el sensor de flujo.	Pulsar la tecla start stop
Ej: `Parameter Error` `PROG to default`	Error de comunicación interna de la CPU.	Pulsar la tecla PROG para reestablecer los parámetros de *default*.

Panneau de contrôle – TEKNA TPG



PROG	Accès au menu de programmation
mode enter	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.
start stop	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.
ESC	Pour “quitter” ces différents niveaux de menu. Avant de quitter définitivement la programmation, on accède à la demande d’enregistrement des modifications
	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.
Alarm	Led rouge qui s’allume dans les différentes situations d’alarme.

Connexions électriques



1	Relais Alarme	
2		
3	Pole +	Entrée signal 4-20 mA Impédance D'Entrée: 200 ohm
4	Pole -	
5	Entrée commande à distance (start-stop)	
6		
7	Entrée signal fréquence (compteur émetteur d’impulsions)	
8		
9	Entrée capteur de débit	
10		
B	Entrée sonde de niveau	

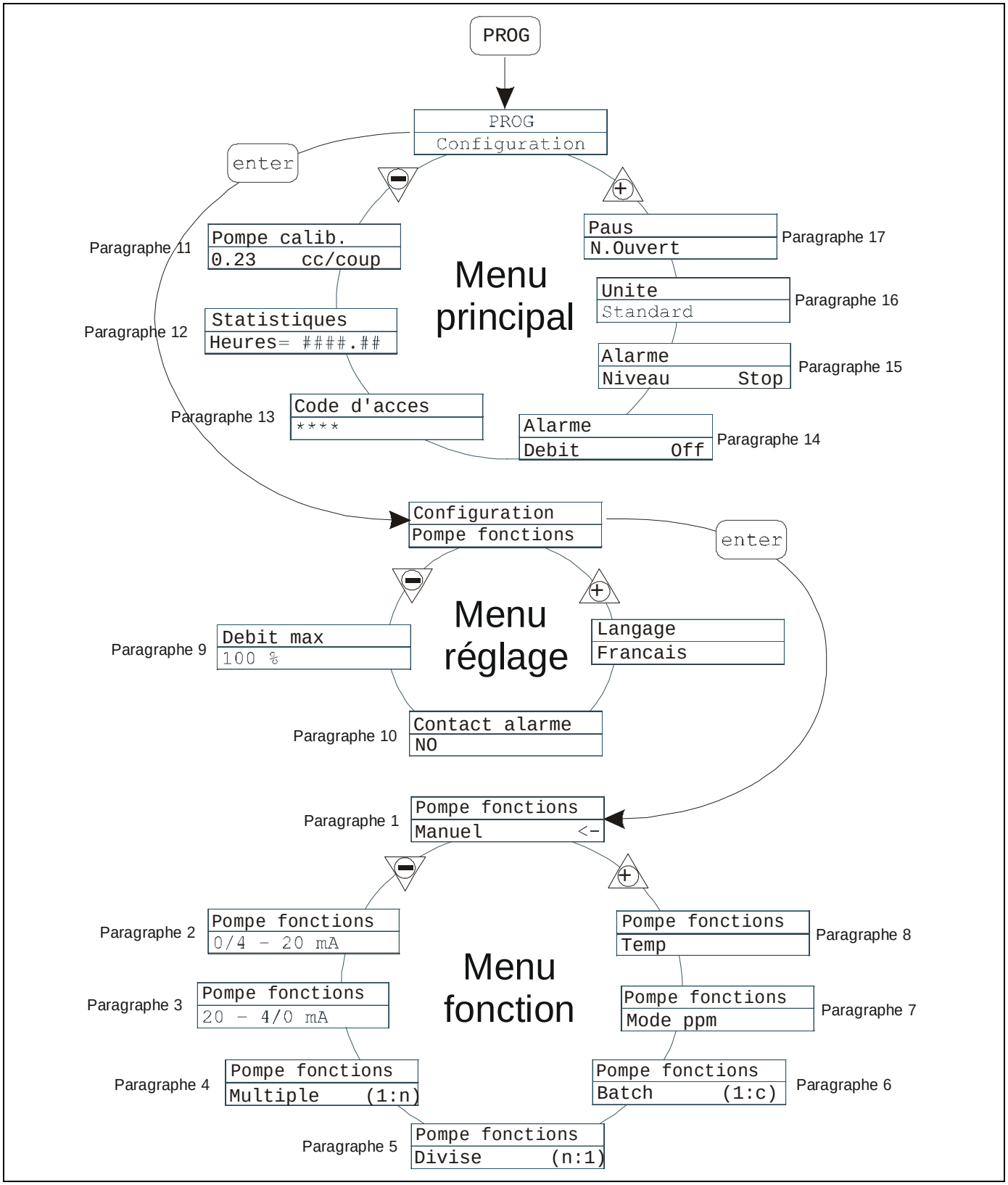
Appuyer sur la touche PROG pendant plus de trois secondes pour allumer la programmation. Avec les touches ⊕ ⊖ il est possible de faire défiler les options du menu, la touche mode enter permet d'accéder aux modifications.
La pompe est programmée en usine en mode constant. La pompe reprend automatiquement le mode de fonctionnement après 1 minute de non-activité. Dans ce cas, les données éventuellement introduites ne sont pas enregistrées. La touche ESC permet de quitter les niveaux de la programmation. À la sortie de la programmation, l'afficheur visualise :

Exit
No Save

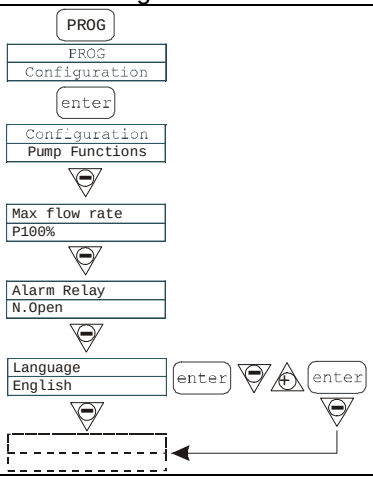
∇ Δ

Exit
Save

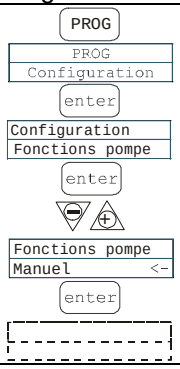
mode enter Pour confirmer le choix

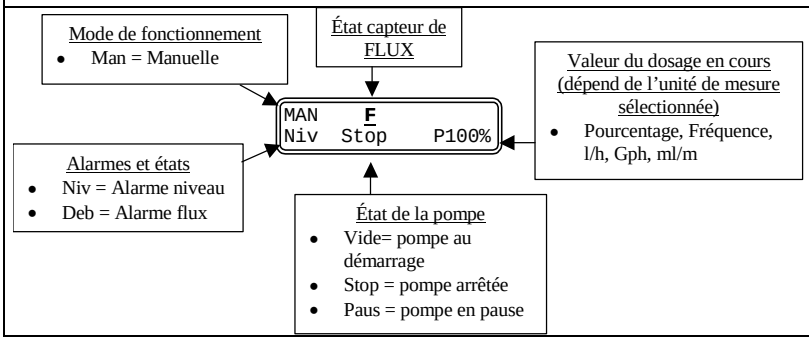
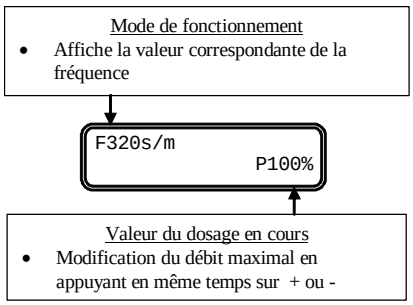


Programmation de la langue

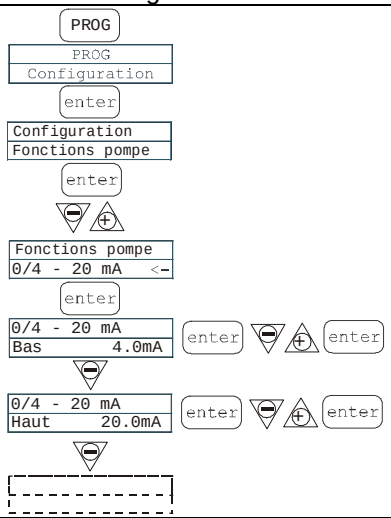
Programmation	Fonctionnement
	Permet de sélectionner la langue, la pompe est programmée en usine en anglais. Appuyer sur mode enter pour accéder à la modification, puis sur les touches pour programmer la valeur. La touche mode enter confirme et permet de retourner au menu principal.

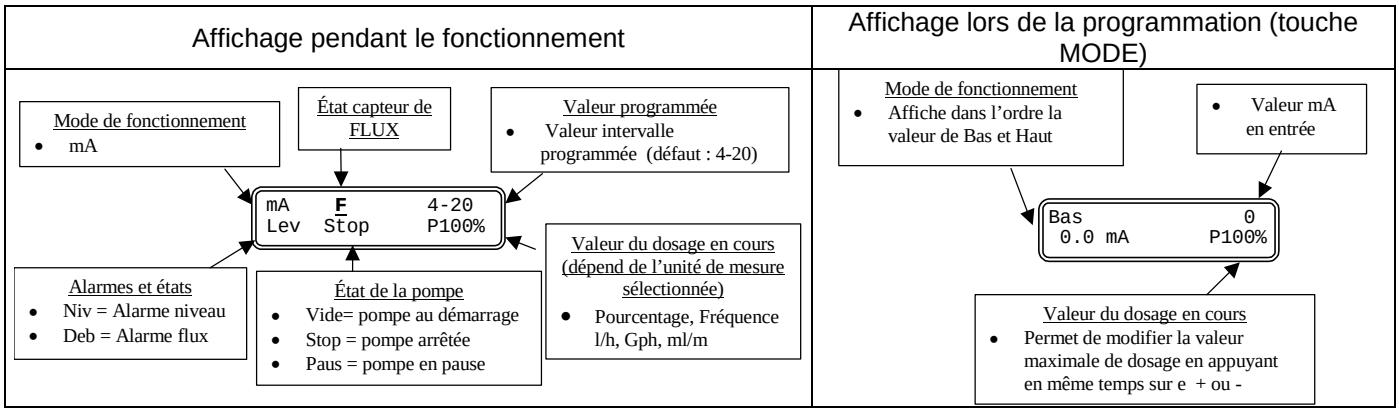
Paragraphe 1 –Dosage manuel

Programmation	Fonctionnement
	La pompe travaille en mode constant et le débit peut être réglé uniquement en mode manuel en appuyant simultanément sur les touches mode enter pour augmenter le débit ou sur les touches mode enter pour le réduire.

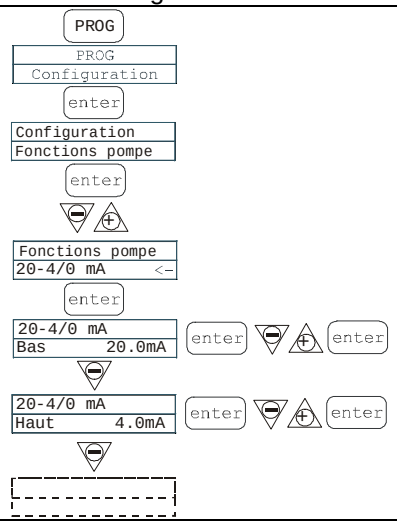
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)
	

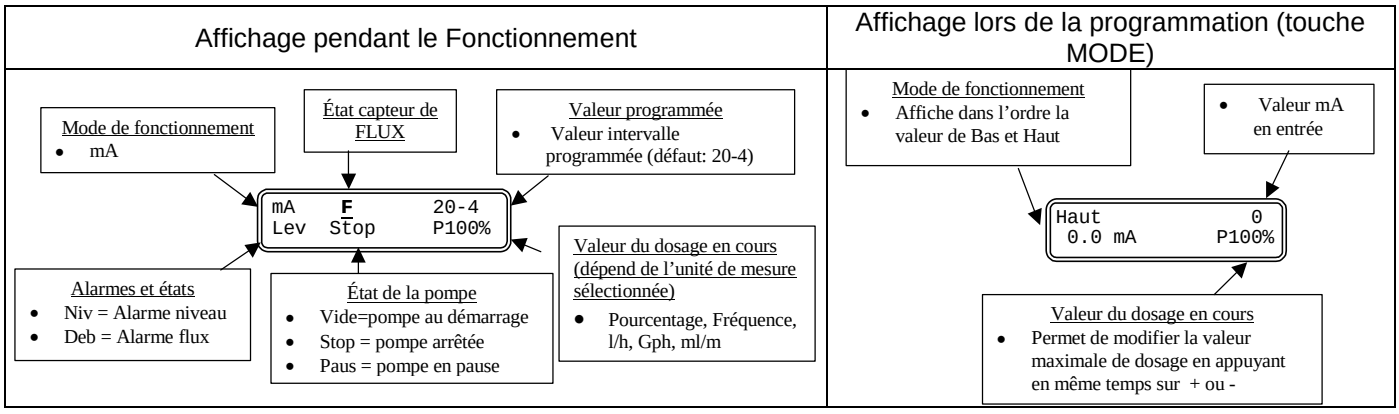
Paragraphe 2 – Dosage Proportionnel sur signal 0/4-20 mA

Programmation	Fonctionnement
	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 mode enter pour augmenter le débit ou sur les touches mode enter pour le réduire.

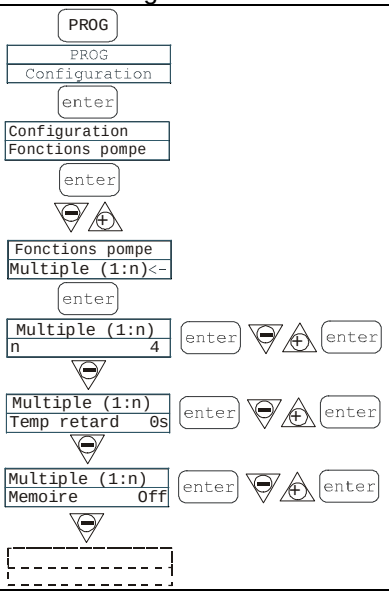


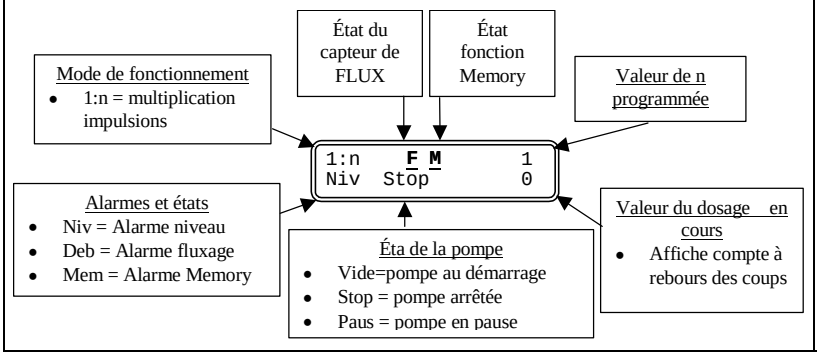
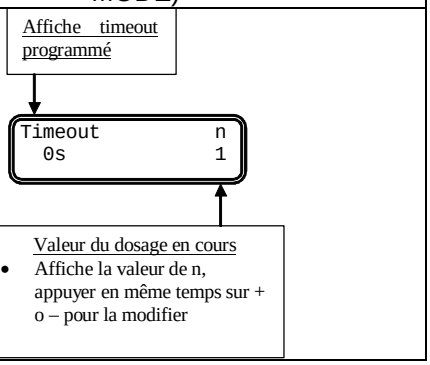
Paragraphe 3 – Dosage proportionnel sur signal 20-4/0 mA

Programmation	Fonctionnement
	La pompe dose proportionnellement sur un signal 20-4 (0) mA. La programmation d'usine de la pompe prévoit l'interruption du dosage à 20 mA et le dosage à la fréquence maximale programmée lorsqu'elle reçoit 4 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 mode enter + ⊕ pour augmenter le débit ou sur les touches mode enter + ⊖ pour le réduire.

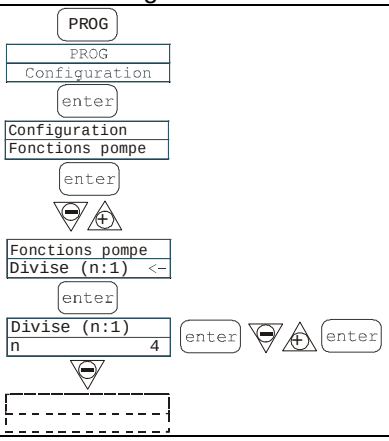


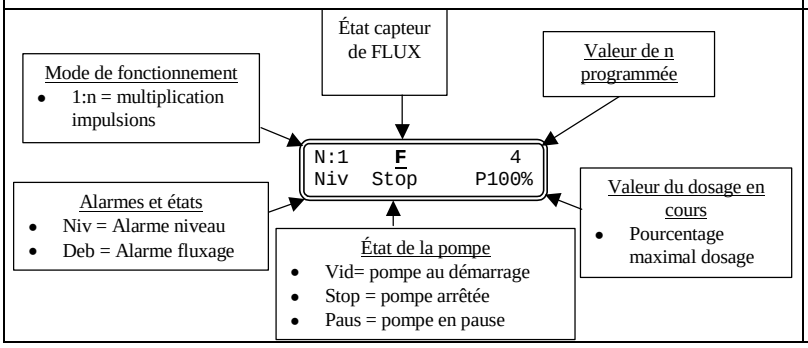
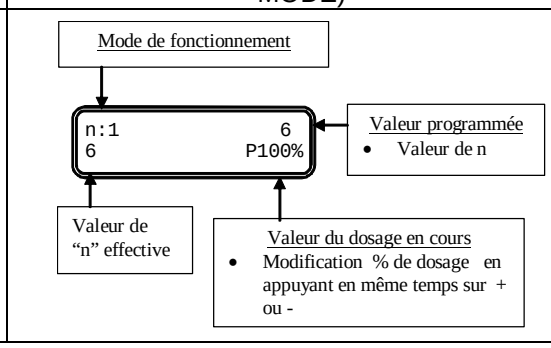
Paragraphe 4 – Proportionnel à des impulsions extérieures (multiplications)

Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex.: compteur de lancement d'impulsions). À chaque signal reçu, la pompe effectue les "n" coups programmés. La pompe programme automatiquement la fréquence de dosage, en l'adaptant au temps qui s'écoule entre deux signaux successifs. Il est possible de programmer en secondes le temps (timeout) outre lequel la pompe remet à zéro le comptage de l'intervalle, pour éviter des dosages dans des temps trop longs. La pompe dispose de la fonction mémoire qui signale la réception d'un signal durant le dosage. En la programmant sur Off, elle se limite à signaler, si elle est sur On, elle signale et mémorise les impulsions, puis elle les exécute lorsqu'elle cesse de recevoir des signaux. La valeur de "n" est modifiable durant la phase de fonctionnement en appuyant simultanément sur les touches mode enter pour augmenter la valeur du débit ou sur les touches mode enter pour la réduire.

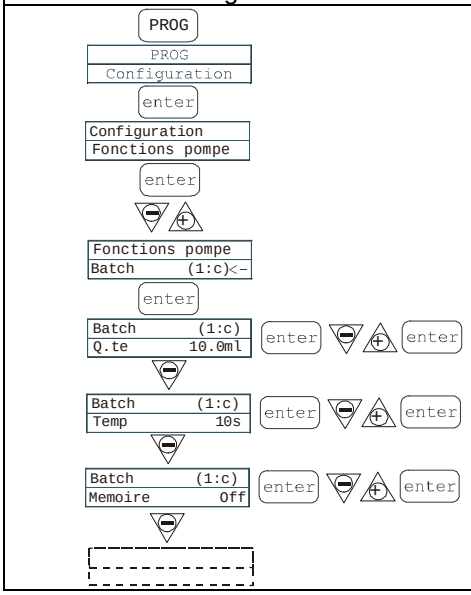
Affichage durant le Fonctionnement	Affichage lors de la programmation (touche MODE)
	

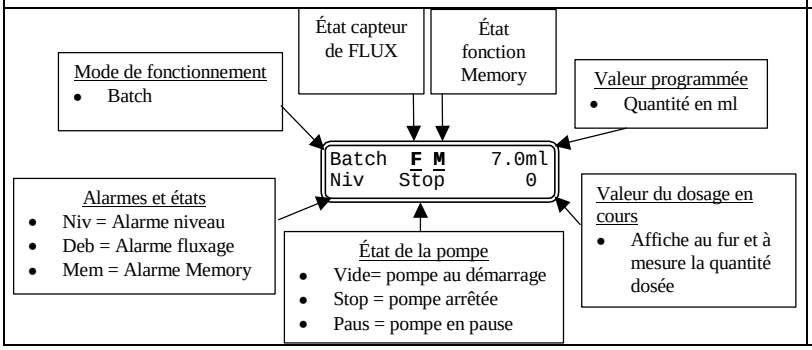
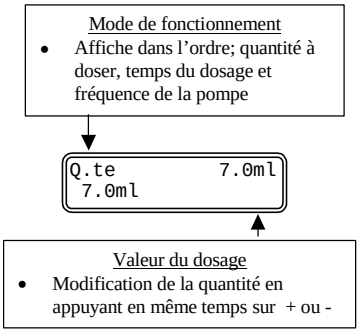
Paragraphe 5 – Proportionnel à impulsions extérieures (division)

Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex. : compteur de lacement d'impulsions). À chaque "n" signaux reçus, la pompe exécute un coup. Programmer la valeur de "n". En programmant la valeur de "n" on programme le % de dosage maximal, durant la phase de fonctionnement, il est possible de modifier cette valeur en appuyant simultanément sur les touches mode enter pour l'augmenter ou sur les touches mode enter pour la réduire.

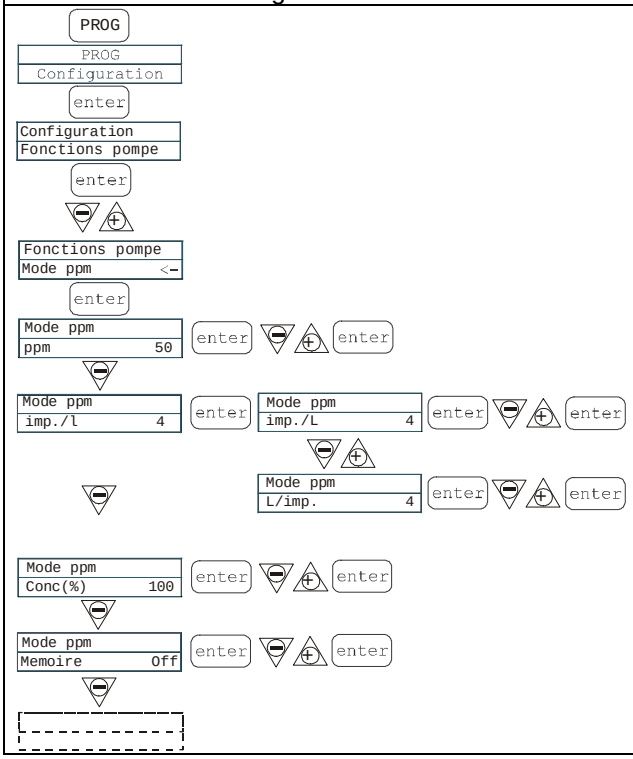
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)
	

Paragraphe 6 – Proportionnel à impulsions extérieures (dosage Batch)

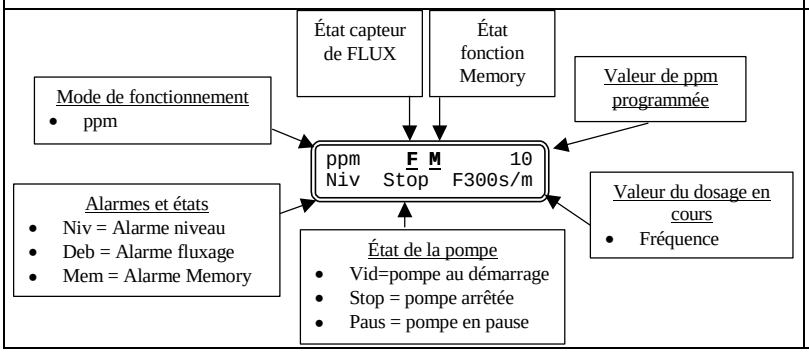
Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex : compteur de lancement d'impulsions). Dans ce cas, il est possible de programmer la quantité à doser en ml et l'intervalle dans les limites duquel compléter le dosage. Il est possible d'activer manuellement le dosage par la pression de la touche, ou à l'aide d'une commande déportée. La touche start stop, interrompt le dosage qui peut être remis à zéro en appuyant sur , ou redémarré en appuyant de nouveau sur start stop. La quantité à doser est modifiable durant la phase de fonctionnement en appuyant simultanément sur mode enter pour augmenter le débit ou sur les touches mode enter pour le réduire.

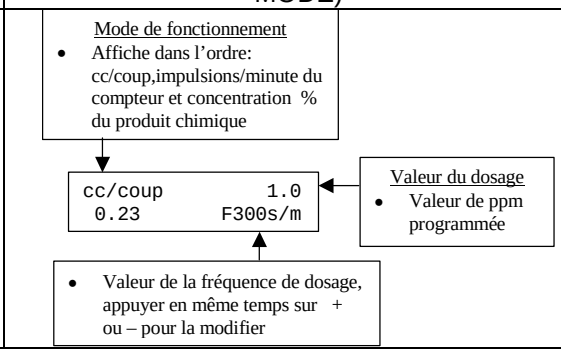
Affichage pendant le fonctionnement	Affichage lors de la programmation (Touche MODE)
	

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

Programmation	Fonctionnement
	La pompe dose proportionnellement à un signal extérieur (ex.: compteur de lancement d'impulsions) en calculant automatiquement le rapport entre les signaux entrant et les coups de la pompe en fonction de la valeur de ppm programmée. Les données à insérer sont la valeur de ppm., le rapport impulsions/litre (ou litres/impulsion) du compteur et la concentration du produit à doser. Durant la phase de fonctionnement il est possible de modifier la fréquence de dosage en appuyant simultanément sur mode enter pour l'augmenter ou sur mode enter pour la réduire.

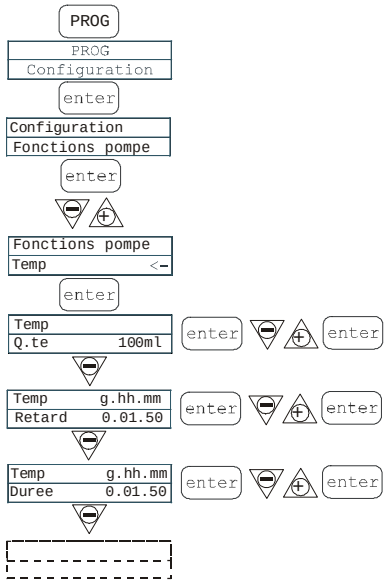
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)



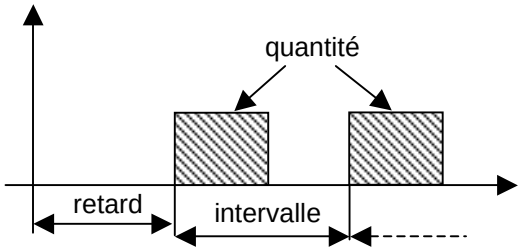


Paragraphe 8 – Dosage temporisé

Programmation	Fonctionnement

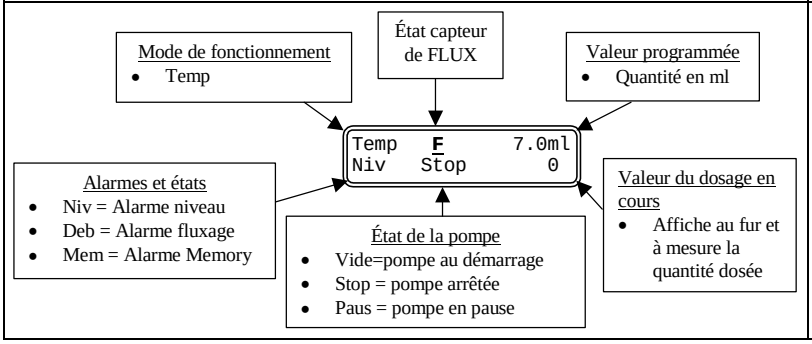


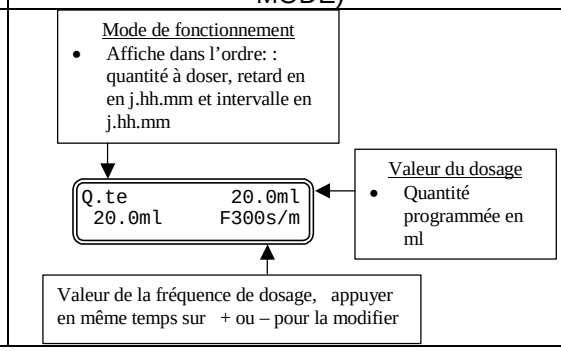
La pompe dose une quantité programmable en ml, il est donc possible de programmer un temps de retard du démarrage de la pompe (Retard) et la distance entre deux interventions successives (Plage) comme sur le schéma :



Les temps de retard et d'intervalle sont en jj.hh.mm (jours-heures-minutes)
Pendant la phase de fonctionnement de la pompe, il est possible de modifier la fréquence de dosage pour décider le temps de dosage de la quantité programmée en appuyant simultanément sur les touches mode enter + pour augmenter la fréquence ou sur les touches mode enter + pour la réduire.

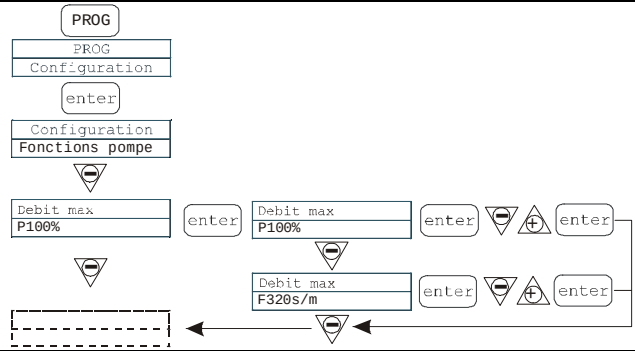
Affichage pendant le fonctionnement	Affichage lors de la programmation (touche MODE)





Paragraphe 9 – Programmation débit maximal

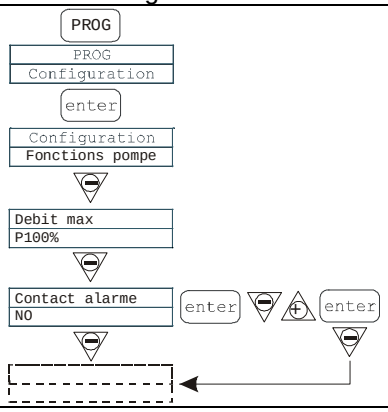
Programmation	Fonctionnement



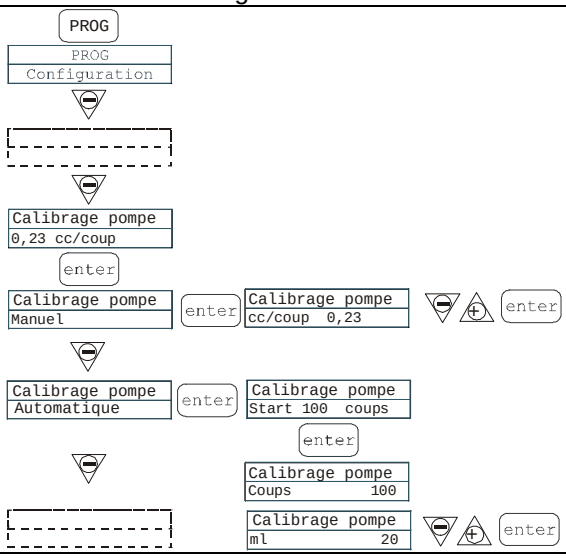
Permet de programmer le débit maximal pouvant être atteint par la pompe et le mode programmé (% ou fréquence) devient l'affichage du débit dans l'unité de mesure standard.

Appuyer sur mode enter pour accéder à la modification puis sur les touches + – pour programmer la valeur- Avec mode enter confirmer et retourner au menu principal.

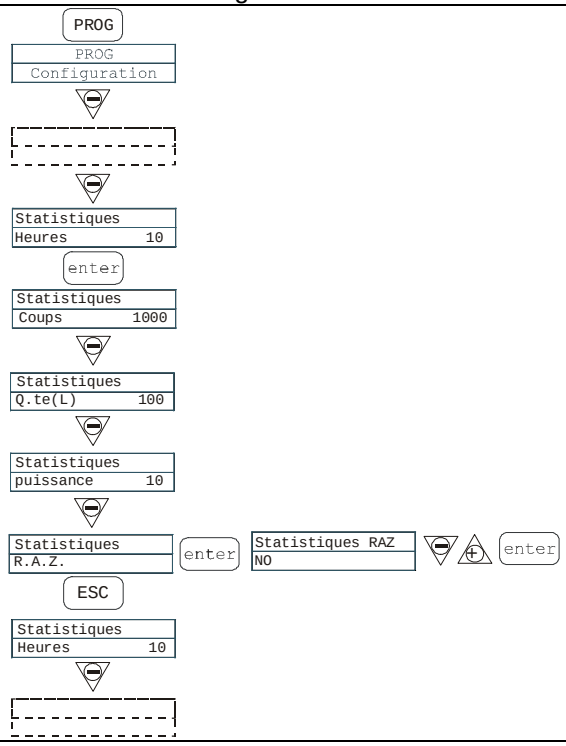
Paragraphe 10 – Programmation du relais d'alarme

Programmation	Fonctionnement
	En l'absence d'une situation d'alarme, il peut être programmé ouvert (usine) ou fermé. Appuyer sur mode enter pour accéder à la modification puis avec les touches programmer la valeur. Avec mode enter confirmer et retourner au menu principal.

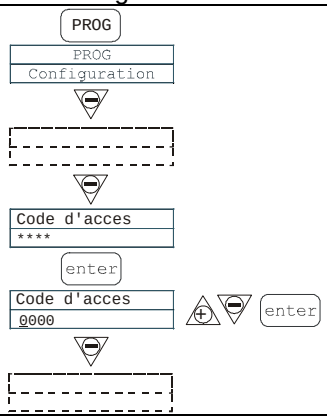
Paragraphe 11 – Calibrage du débit

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

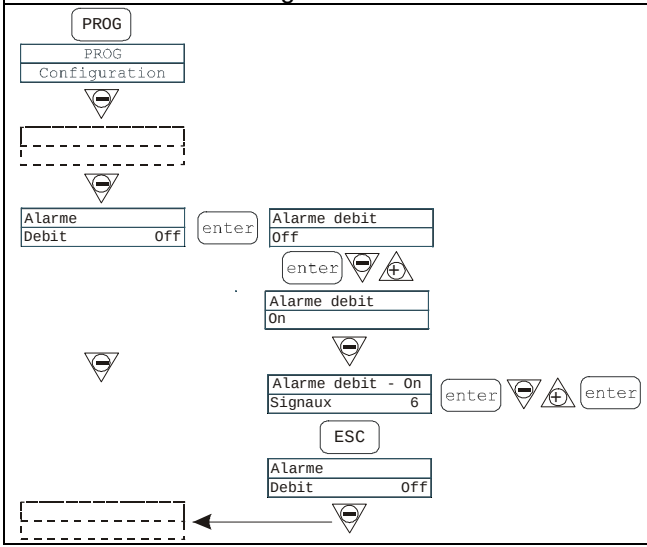
Paragraphe 12 – Statistiques

Programmation	Fonctionnement
	Le menu principal affiche les heures de fonctionnement de la pompe, appuyer sur mode enter pour accéder aux autres statistiques. - Strokes = nombre de coups exécutés par la pompe - Q.ty(L) = quantité dosée par la pompe exprimée en litres; cette donnée est calculée d'après la valeur cc/stroke en mémoire - Power = nombre de démarrages de la pompe - Reset = les touches permettent de réinitialiser les compteurs (YES) ou non (NO), appuyer sur mode enter pour confirmer. La pression de ESC permet de retourner au menu principal.

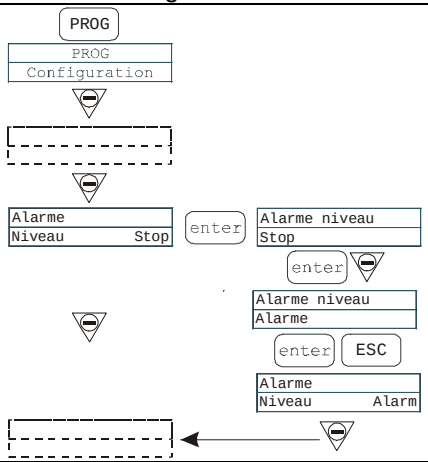
Paragraphe 13 – Password

Programmation	Fonctionnement
	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 La ligne clignotante indique le nombre modifiable, avec la touche sélectionner le nombre (de 1à 9), avec la touche sélectionner le nombre à modifier puis avec la touche confirmer. En programmant “0000” (défaut), le mot de passe est exclu.

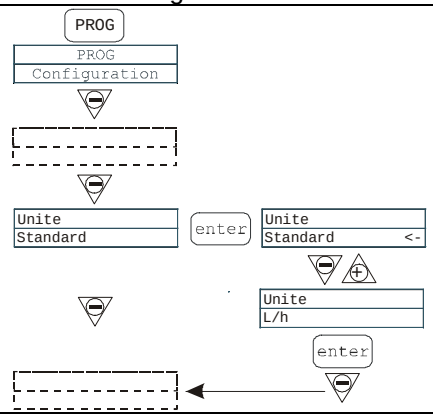
Paragraphe 14 – Alarme de flux

Programmation	Fonctionnement
	Permet d’activer (Désactiver) le capteur de flux. 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 le nombre clignote, puis avec les touches programmer la valeur. Avec confirmer. Appuyer sur pour retourner au menu principal

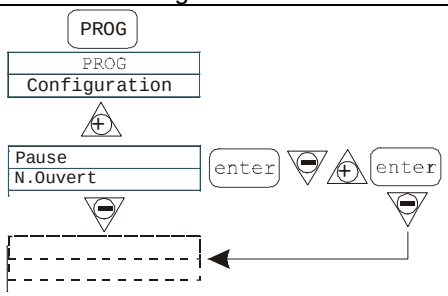
Paragraphe 15 – Alarme de niveau

Programmation	Fonctionnement
	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. Appuyer sur pour accéder à la modification. Puis avec les touches programmer le type d’alarme. Avec confirmer. Appuyer sur pour retourner au menu principal.

Paragraphe 16 – Unité affichage débit

Programmation	Fonctionnement
	Permet de programmer l'unité de mesure du dosage sur l'afficheur. Appuyer sur mode enter pour accéder à la modification, puis appuyer sur 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 mode enter pour confirmer et retourner au menu principal

Paragraphe 17 - Programmation Pause

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

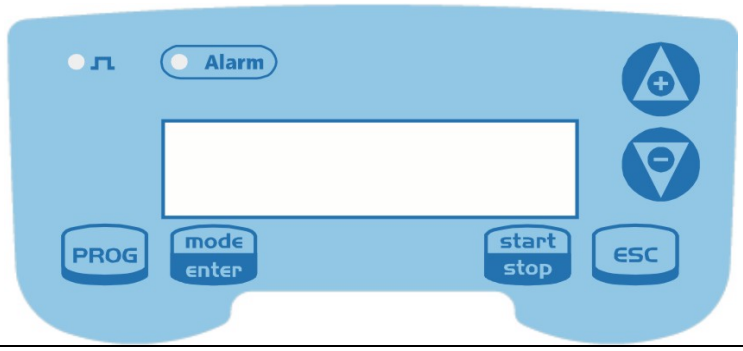
Régulation contraste affichage

Pour la régulation du contraste de l'affichage tenir appuyée la touche ESC et dans 5 secondes appuyer sur les touches ou pour augmenter ou diminuer le contraste.

Alarmes

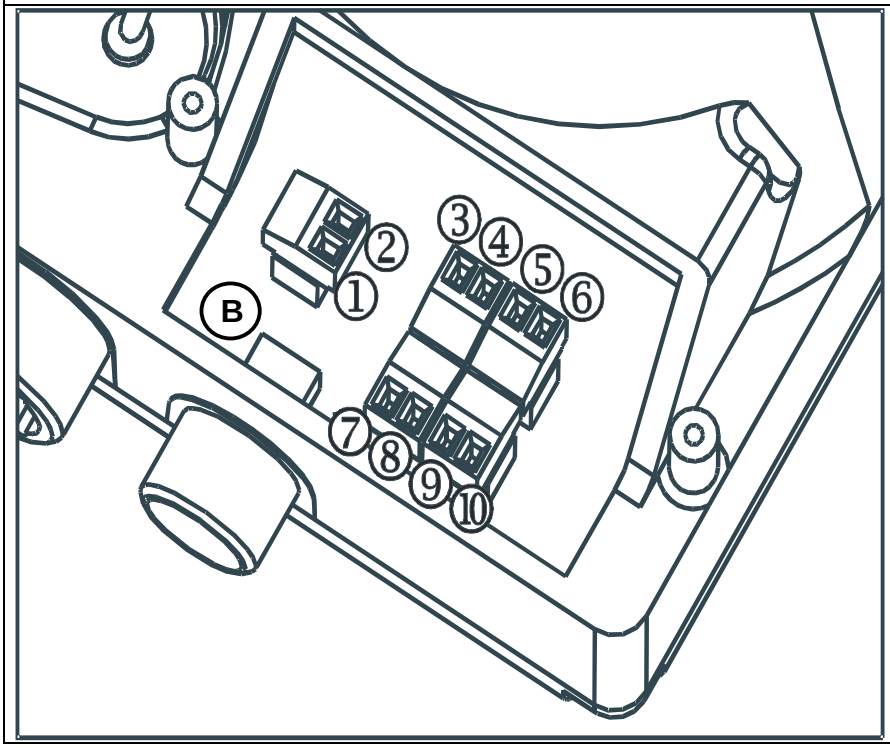
Affichage	Cause	Interruption
Led Alarme fixe Message lev clignotant Ex: Man Lev P100%	Alarme fin de niveau, sans interruption du fonctionnement de la pompe	Rétablissement du niveau du liquide
Led Alarme fixe Message lev et stop clignotant Ex: Man Lev Stop P100%	Alarme fin de niveau, avec interruption du fonctionnement de la pompe	Rétablissement du niveau du liquide
Message Mem clignotant Ex: 1:n 6 Mem	La pompe reçoit une ou plusieurs impulsions durant le dosage avec la fonction Mémoire sur Off	Pression de la touche start stop
Message Mem clignotant Ex: 1:n **M** 6 Mem	La pompe reçoit une ou plusieurs impulsions durant le dosage avec la fonction Mémoire sur On	Lorsque la pompe cesse de recevoir les impulsions extérieures, elle rend les coups mémorisés.
Led Alarme fixe Message Flw clignotant Ex: Man **F** Flw P100%	Alarme de flux active, la pompe n'a pas reçu le nombre de signaux programmés par le capteur de flux.	Pression de la touche start stop
Ex: Parameter Error PROG to default	Erreur de communication interne de l'UC.	Pression de la touche PROG pour rétablir les paramètres de défaut.

Pannello di controllo – TEKNA TPG



PROG	Accesso al menu di programmazione.
mode enter	Durante la fase di funzionamento della pompa: premuto visualizza ciclicamente sul display i valori programmati; Premuto contemporaneamente ai pulsanti + e − 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.
start stop	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.
ESC	Per “uscire” dai vari livelli di menu. Prima di uscire definitivamente dalla programmazione si accede alla richiesta di salvataggio delle modifiche.
+	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.
Alarm	Led rosso che si accende nelle varie situazioni d’allarme.

Connessioni elettriche



1	Relè d’allarme	
2		
3	Polo +	Ingresso 4-20 mA Impedenza d’ingresso: 200 ohm
4	Polo −	
5	Ingresso controllo remoto (start-stop)	
6		
7	Ingressi segnale in frequenza (contatore lancia-impulsi)	
8		
9	Ingressi sensore di flusso	
10		
B	Ingresso sonda controllo livello	

Menu di Programmazione Tekna TPG

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.

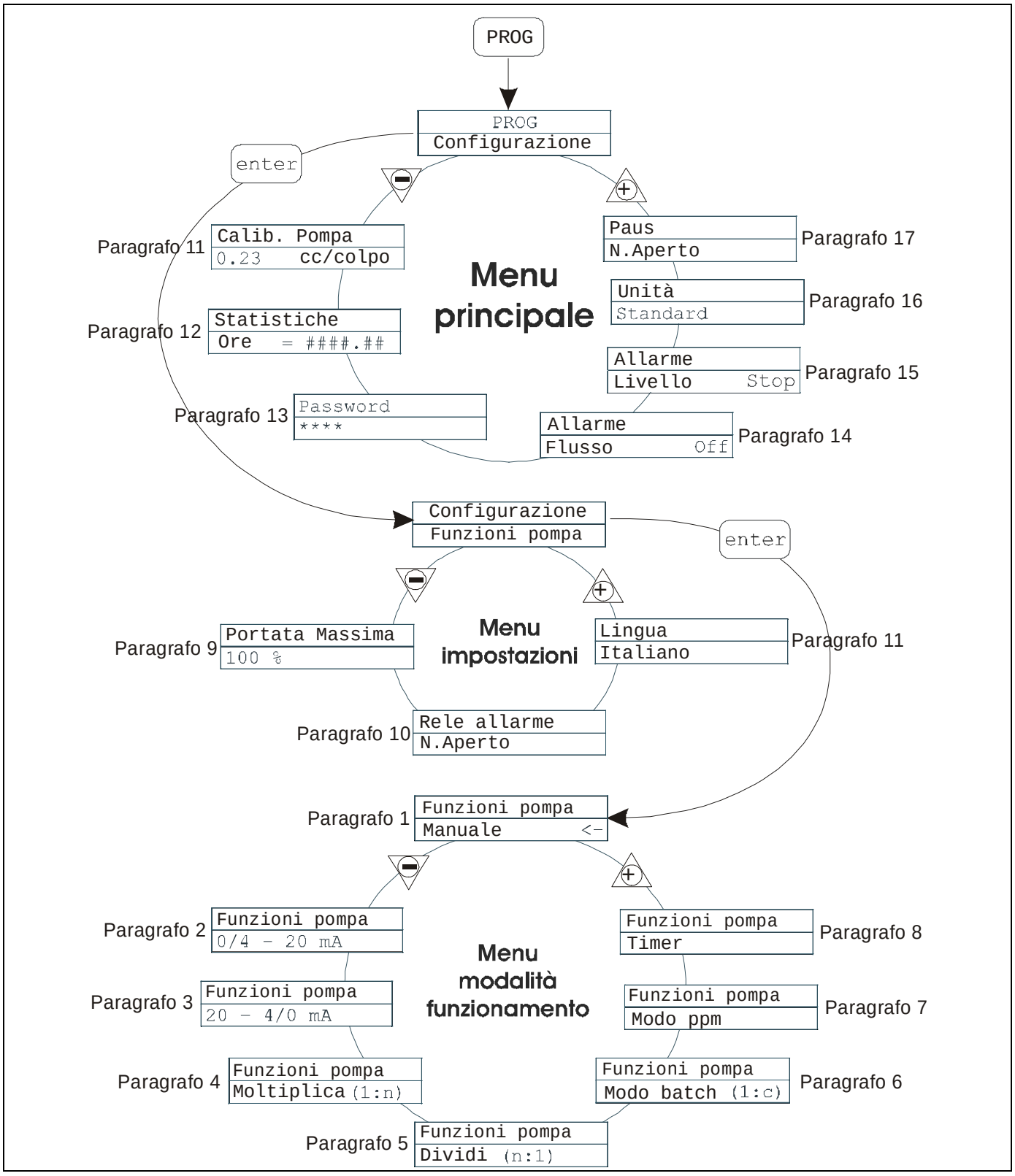
Con il pulsante ESC si esce dai livelli della programmazione. All'uscita dalla programmazione il display visualizza:

Exit
No Save

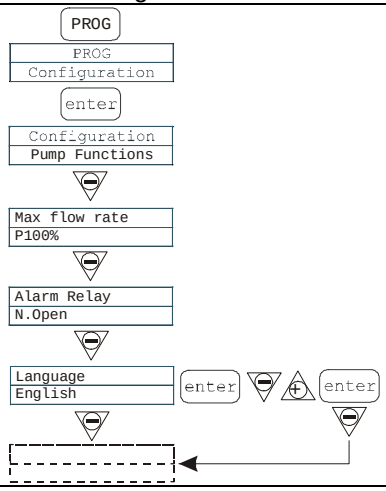
∇ Δ

Exit
Save

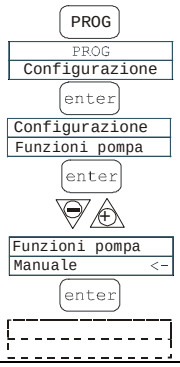
mode enter per confermare la scelta

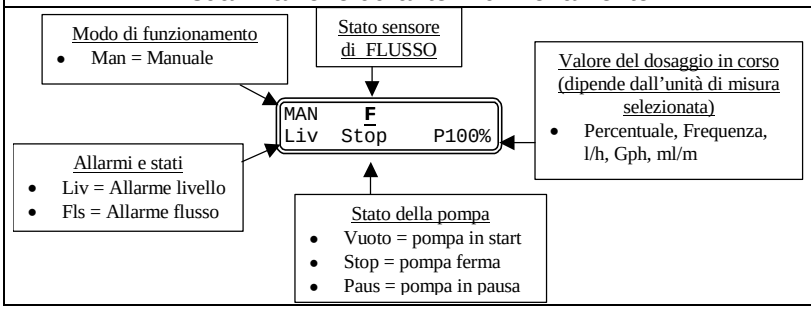
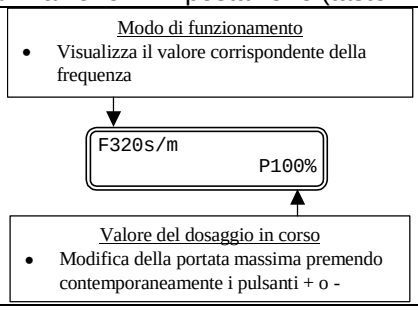


Impostazione lingua

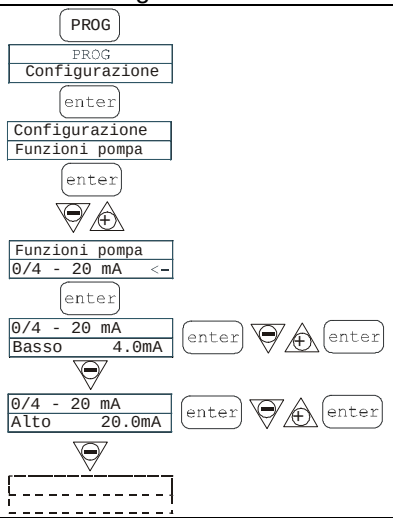
Programmazione	Funzionamento
	Permette di selezionare la lingua, di fabbrica la pompa è impostata in inglese. Premendo mode enter si accede alla modifica, quindi con i tasti ⊕ ⊖ imposto il valore. Con mode enter confermo e torno al menu principale

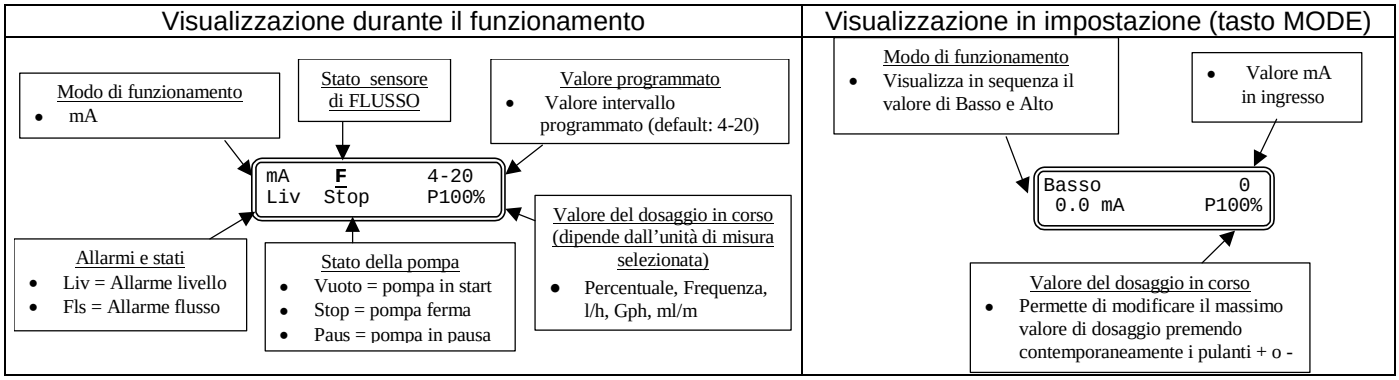
Paragrafo 1 –Dosaggio manuale

Programmazione	Funzionamento
	La pompa lavora in modalità costante. La portata è regolata manualmente premendo contemporaneamente i pulsanti mode enter ⊕ per aumentare il valore della portata, oppure i pulsanti mode enter ⊖ per diminuirlo.

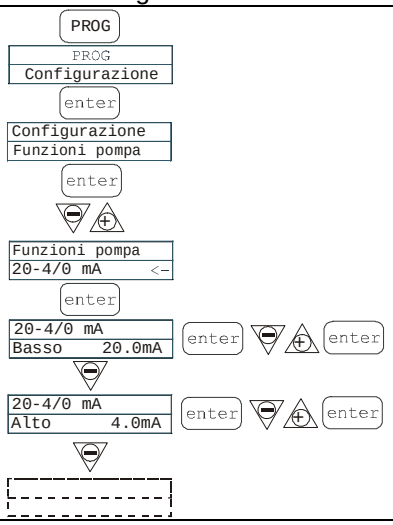
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

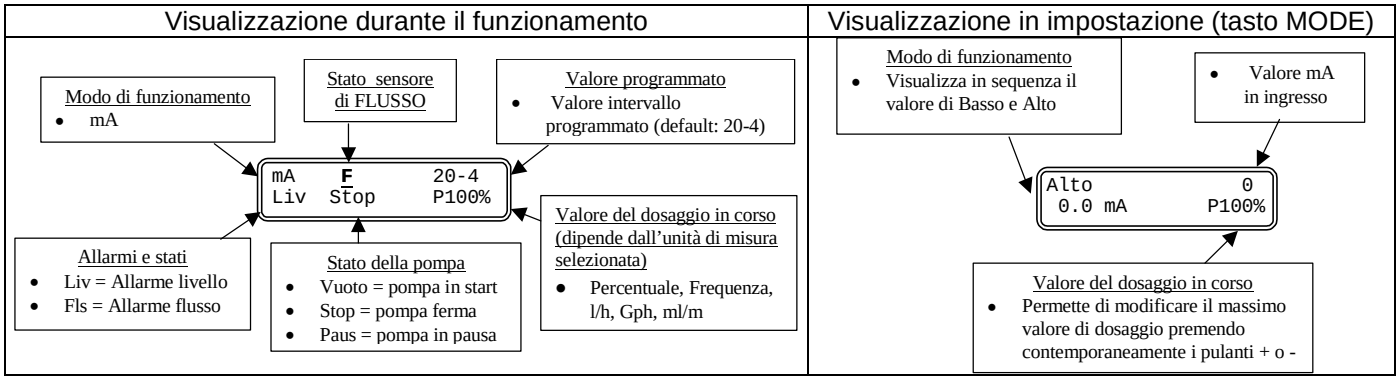
Paragrafo 2 – Dosaggio Proporzionale a segnale 0/4-20 mA

Programmazione	Funzionamento
	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 mode enter ⊕ per aumentare la portata, oppure i pulsanti mode enter ⊖ per diminuirla.

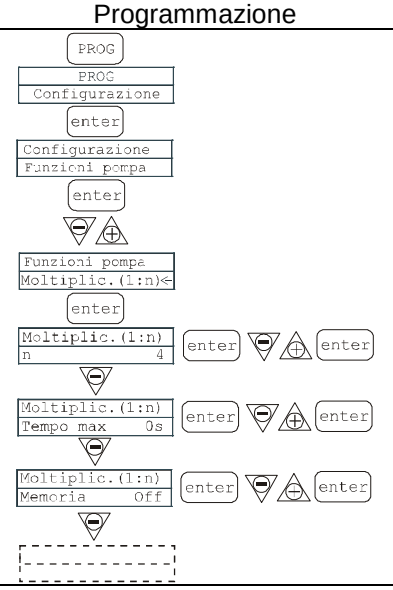


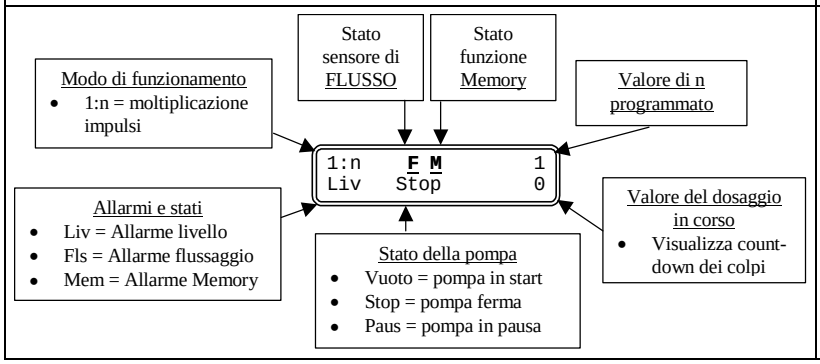
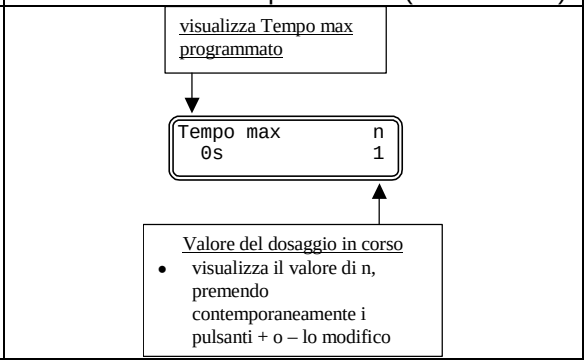
Paragrafo 3 – Dosaggio Proporzionale a segnale 20-4/0 mA

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale 20-4(0) mA. Di fabbrica la pompa interrompe il dosaggio a 20 mA e dosa alla massima frequenza impostata quando riceve 4 mA. In programmazione è possibile modificare questi due valori. La frequenza massima è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti mode enter per aumentare la portata, oppure i pulsanti mode enter per diminuirla.

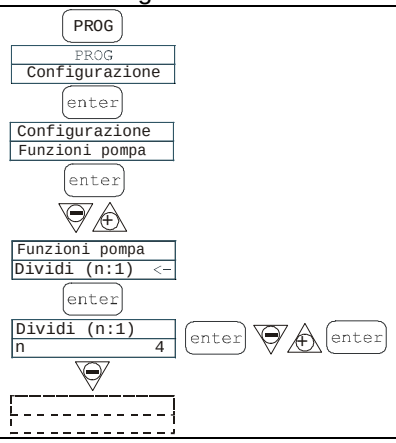


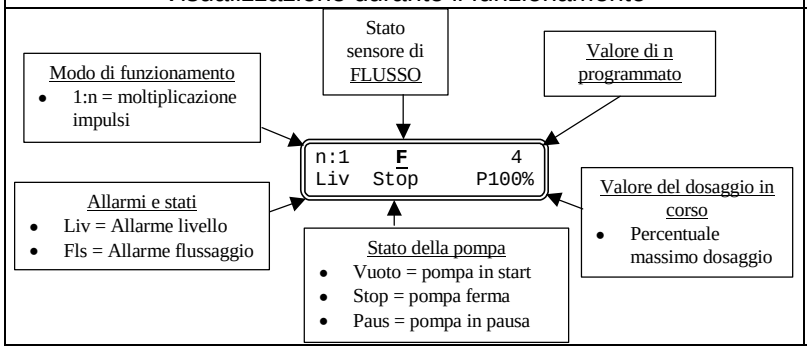
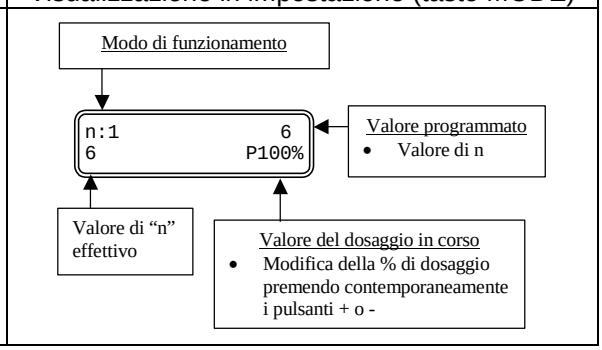
Paragrafo 4 – Proporzionale ad impulsi esterni (moltiplicazione)

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi). Ad ogni segnale ricevuto la pompa effettua gli "n" colpi programmati. La pompa imposta automaticamente la frequenza di dosaggio, adattandola al tempo che intercorre fra due segnali successivi. È possibile programmare in secondi il tempo (timeout) oltre il quale la pompa azzera il conteggio dell'intervallo, per evitare dosaggi in tempi troppo lunghi. La pompa dispone della funzione memory, che segnala il ricevimento di un segnale durante il dosaggio. Se impostata in Off si limita a segnalare, se in On segnala e memorizza gli impulsi, quindi li esegue quando smette di ricevere segnali. Il valore di "n" è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti mode enter per incrementare il valore della portata, oppure i pulsanti mode enter per decrementarlo.

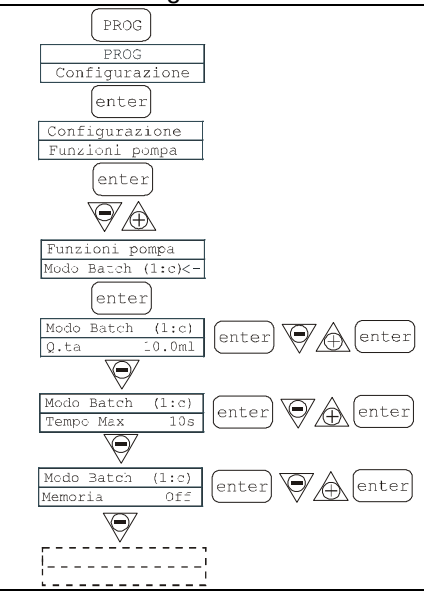
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

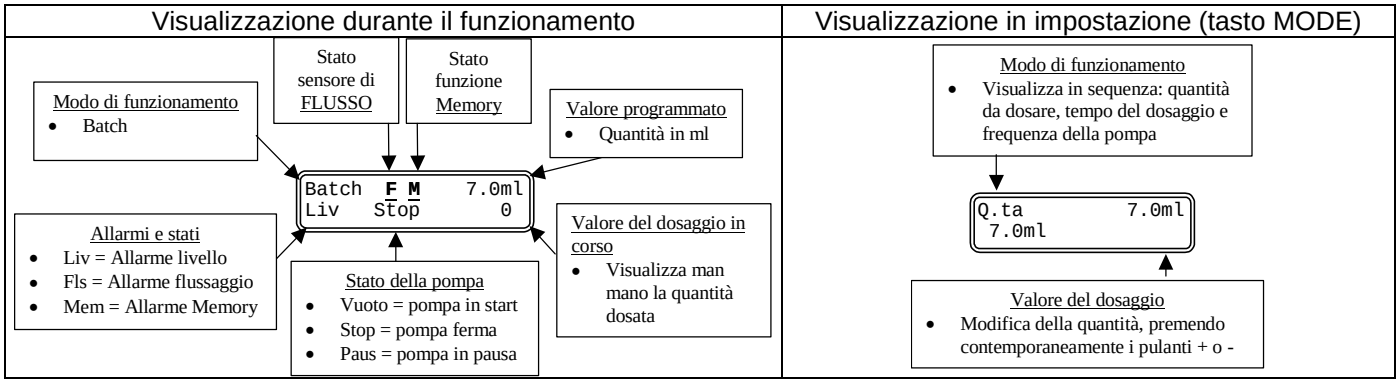
Paragrafo 5 – Proporzionale ad impulsi esterni (divisione)

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi). Ad ogni “n” segnali ricevuti la pompa effettua un colpo. In programmazione imposto il valore di “n”. Programmando il valore di “n” si imposta la % di dosaggio massima, durante la fase di funzionamento posso modificare questo valore premendo contemporaneamente i tasti mode enter + + per aumentarlo, oppure i pulsanti mode enter + per diminuirlo.

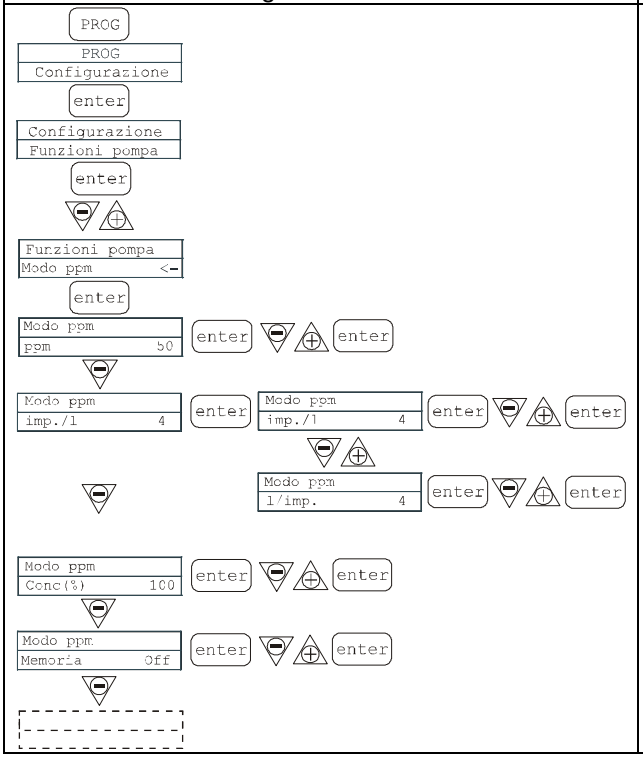
Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

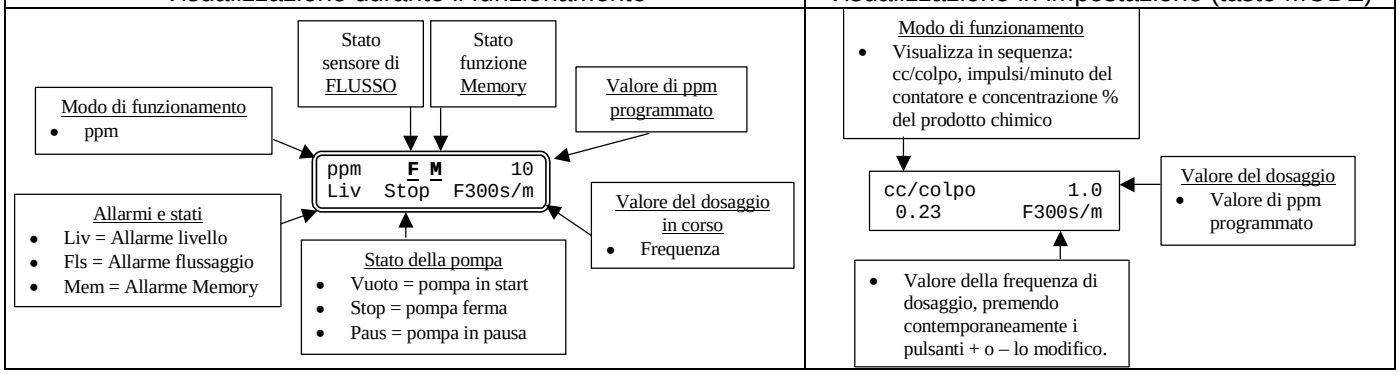
Paragrafo 6 – Proporzionale ad impulsi esterni (dosaggio batch)

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi). In questo caso posso programmare la quantità da dosare in ml ed il tempo entro il quale completare il dosaggio. È possibile avviare il dosaggio manualmente tramite la pressione del pulsante +, oppure tramite un comando remoto. Il pulsante start stop, interrompe il dosaggio, che può essere azzerato premendo il tasto +, oppure riavviato premendo nuovamente start stop. La quantità da dosare è modificabile durante la fase di funzionamento premendo contemporaneamente i tasti mode enter + per aumentare la portata, oppure i pulsanti mode enter + per diminuirla.

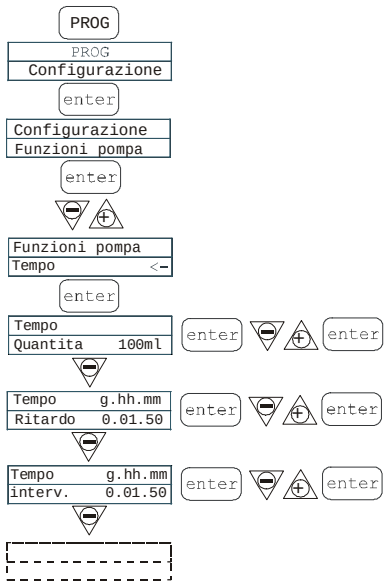
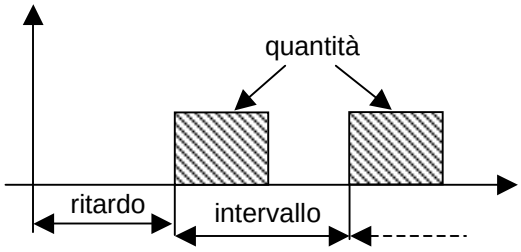


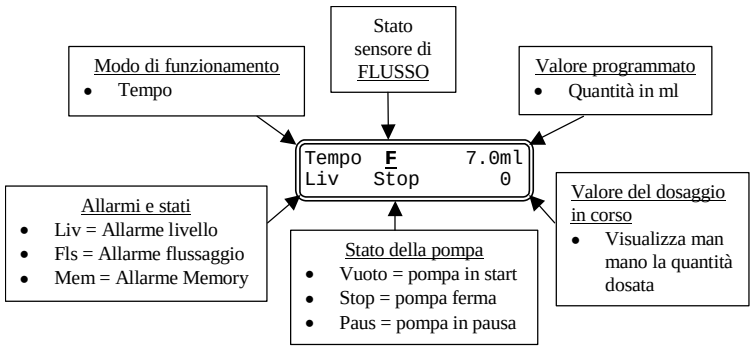
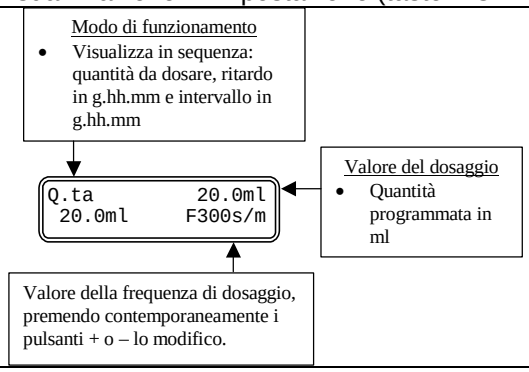
Paragrafo 7 – Proporzionale ad impulsi esterni (dosaggio in ppm)

Programmazione	Funzionamento
	La pompa dosa proporzionalmente ad un segnale esterno (es.: contatore lanciaimpulsi) calcolando automaticamente il rapporto tra segnali in ingresso e colpi della pompa in funzione del valore di ppm programmato. I dati da inserire sono il valore di ppm, il rapporto impulsi/litro (oppure litri/impulso) del contatore e la concentrazione del prodotto da dosare. Durante la fase di funzionamento posso modificare la frequenza di dosaggio, premendo contemporaneamente i tasti per aumentarla, oppure i pulsanti per diminuirla.

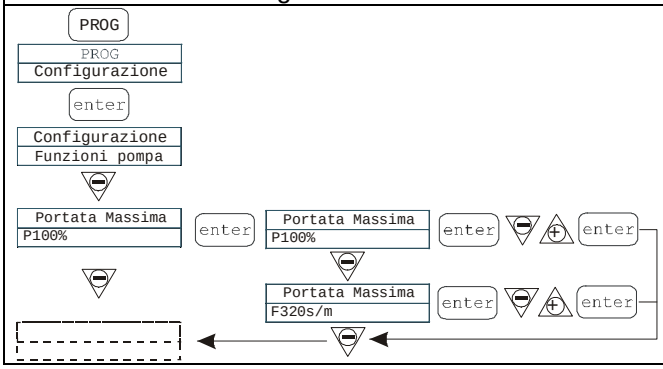


Paragrafo 8 – Dosaggio temporizzato

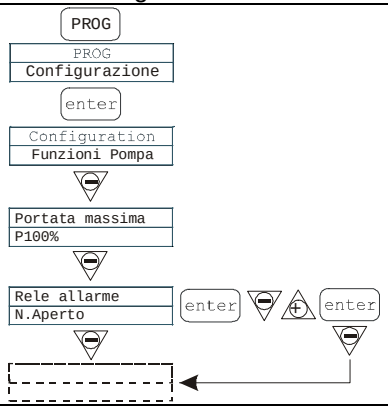
Programmazione	Funzionamento
	La pompa dosa una quantità programmabile in ml, quindi posso impostare un tempo di ritardo all'avvio della pompa (Retard) e la distanza tra due interventi successivi (Range), come nello schema:  I tempi di ritardo e intervallo sono in gg.hh.mm (giorni.ore.minuti) Durante la fase di funzionamento della pompa è possibile modificare la frequenza di dosaggio, in modo decidere il tempo di dosaggio della quantità programmata, premendo contemporaneamente i tasti mode enter per aumentare la frequenza, oppure i pulsanti mode enter per diminuirla.

Visualizzazione durante il funzionamento	Visualizzazione in impostazione (tasto MODE)
	

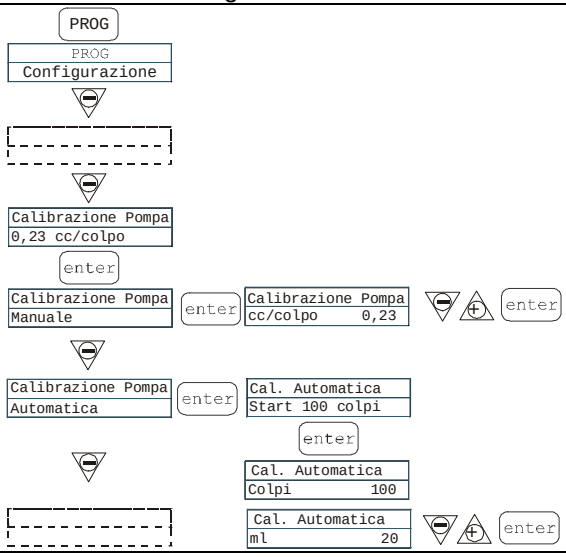
Paragrafo 9 – Impostazione massima portata

Programmazione	Funzionamento
	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 mode enter si accede alla modifica, quindi con i tasti imposto il valore. Con mode enter confermo e torno al menu principale

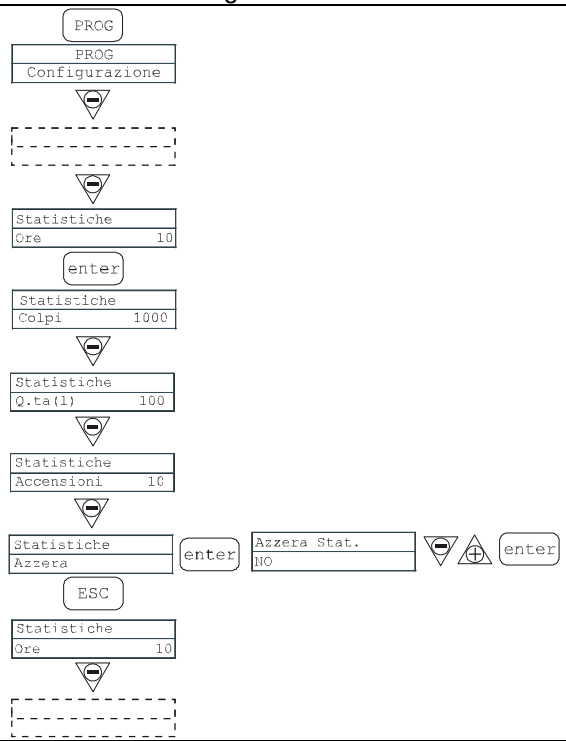
Paragrafo 10 – Impostazione relé d'allarme

Programmazione	Funzionamento
	In assenza di situazione d'allarme può essere impostato aperto (fabbrica) oppure chiuso. Premendo mode enter si accede alla modifica, quindi con i tasti ⊕ ⊖ imposto il valore. Con mode enter confermo e torno al menu principale

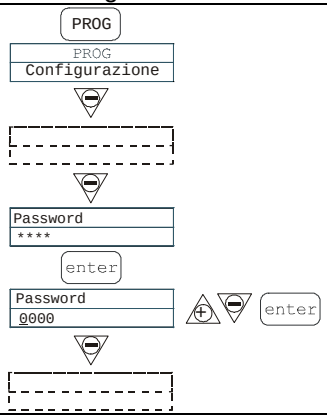
Paragrafo 11 – Calibrazione portata

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

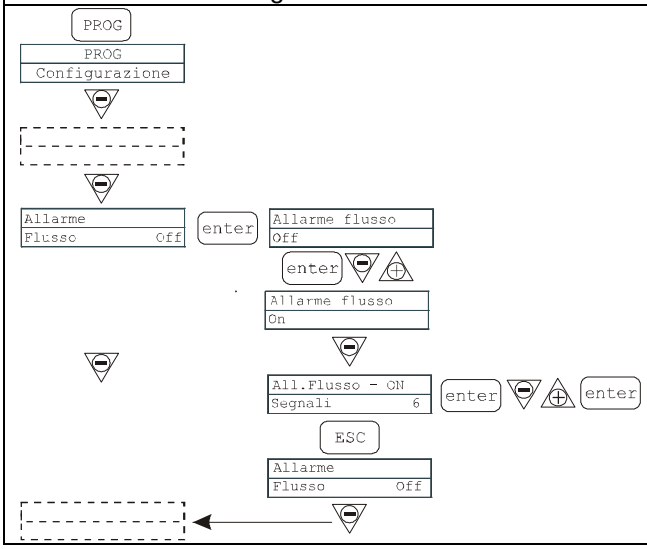
Paragrafo 12 – Statistiche

Programmazione	Funzionamento
	Nel menu principale visualizza le ore di funzionamento della pompa, premendo il tasto mode enter accedo alle altre statistiche: - Strokes = numero di colpi eseguito dalla pompa - Q.ty(L) = quantità dosata dalla pompa espressa in litri; questo dato viene calcolato in base al valore cc/stroke in memoria - Power = numero di avviamenti della pompa - Reset = i tasti ⊕ ⊖ decido se azzerare i contatori (YES) oppure no (NO), con mode enter confermo. La pressione di ESC permette di tornare al menu principale.

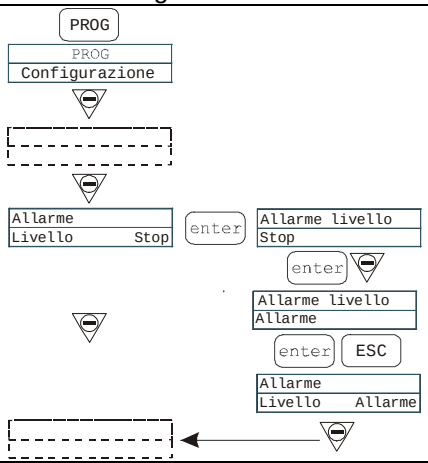
Paragrafo 13 – Password

Programmazione	Funzionamento
	Inserendo la password, potrò entrare in programmazione e vedere tutti i valori impostati, ma ogni volta che cercherò di modificarli verrà richiesta la password. La linea lampeggiante indica il numero modificabile, con il 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.

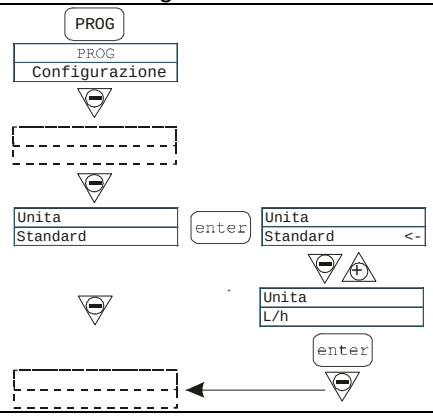
Paragrafo 14 – Allarme di flusso

Programmazione	Funzionamento
	Permette di attivare (disattivare) il sensore di flusso. 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

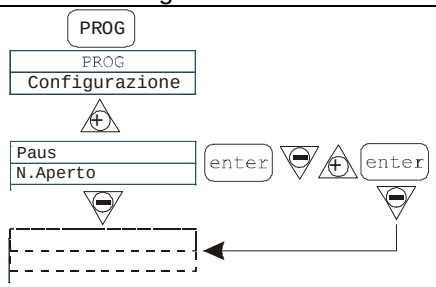
Paragrafo 15 – Allarme di livello

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

Paragrafo 16 – Unità visualizzazione portata

Programmazione	Funzionamento
	Permette di impostare l'unità di misura del dosaggio a display in visualizzazione. Premendo mode enter 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 mode enter confermo e torno al menu principale

Paragrafo 17 –Impostazione Pausa

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

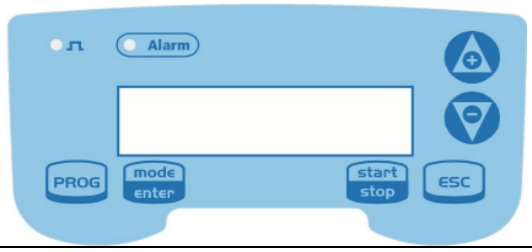
Regolazione contrasto display

Per la regolazione del contrasto del display tenere premuto il tasto ESC e entro 5 secondi premere i tasti o per incrementare o meno il contrasto.

Allarmi

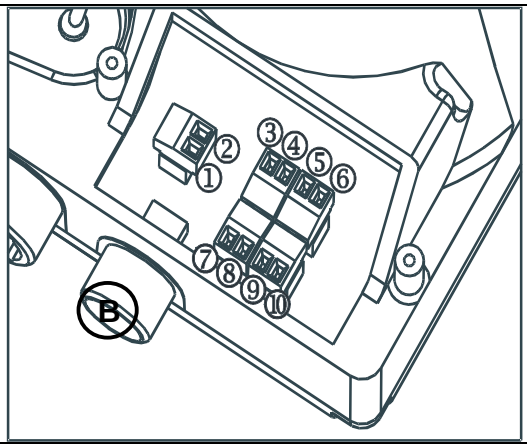
Visualizzazione	Causa	Interruzione
Led Alarm fisso Scritta lev lampeggiante Es: Man / Lev P100%	Allarme fine di livello, senza interruzione del funzionamento della pompa	Ripristino del livello del liquido.
Led Alarm fisso Scritta lev e stop lampeggiante Es: Man / Lev Stop P100%	Allarme fine di livello, con interruzione del funzionamento della pompa	Ripristino del livello del liquido
Scritta Mem lampeggiante Es: 1:n 6 / Mem	La pompa riceve uno o più impulsi durante il dosaggio con funzione memory in Off	Pressione del tasto start stop
Scritta Mem lampeggiante Es: 1:n **M** 6 / Mem	La pompa riceve uno o più impulsi durante il dosaggio con funzione memory in On	Quando la pompa finisce di ricevere gli impulsi esterni restituisce i colpi memorizzati
Led Alarm fisso Scritta Flw lampeggiante Es: Man **F** / Flw P100%	Allarme di flusso attivo, la pompa non ha ricevuto il numero di segnali programmati dal sensore di flusso.	Pressione del tasto start stop
Es: Parameter Error / PROG to default	Errore di comunicazione interna della CPU.	Pressione del tasto PROG per ripristinare i parametri di default.

Painel de Controle - TEKNA TPG



PROG	Acesso ao menu de programação
mode enter	Durante a fase de funcionamento da bomba: acionado visualiza ciclicamente no display os valores programados; Acionando simultaneamente às teclas aumenta ou reduz um valor dependente da modalidade de funcionamento pré-escolhida. Na programação desenvolve a função "enter", isto é, confirma a entrada nos vários níveis de menu e as modificações no interior dos mesmos.
start stop	Liga ou desliga a bomba. Nas condições de alarme de nível (só função alarme), de fluxo e memory ativas, desativa a sinalazação no display.
ESC	Para "sair" dos vários níveis de menu. Antes de sair definitivamente da programação se acessa a requisição de salvar modificações.
	Percorre os menus para cima, ou ainda, aumenta os valores numéricos a modificar. Na modalidade Batch pode iniciar a dosagem.
	Percorre os menús para baixo, ou ainda, reduz os valores numéricos a modificar.
	Led verde lampejante durante a dosagem.
Alarm	Led vermelho que ascende nas varias situações de alarme.

Conexões Elétricas



1	Relê de alarme	
2		
3	Polo +	Entrada 4-20 mA Impedância de entrada: 200 ohm
4	Polo –	
5	Entrada do controle remoto (start-stop)	
6		
7	Entradas de sinal em frequência (contador lança-impulsos)	
8		
9	Entradas do sensor de fluxo	
10		
B	Entrada da sonda de controle de nível	

Menu de Programação Tekna TPG

Acionando a tecla PROG por mais de três segundos se acessa a programação. Com as teclas é possível percorrer os itens do menu, com a tecla mode enter se acessam as modificações.
De fábrica a bomba vem programada na modalidade constante. A bomba volta automaticamente na modalidade de funcionamento depois de 1 minuto de inatividade. Neste caso dados eventualmente inseridos não serão salvos.

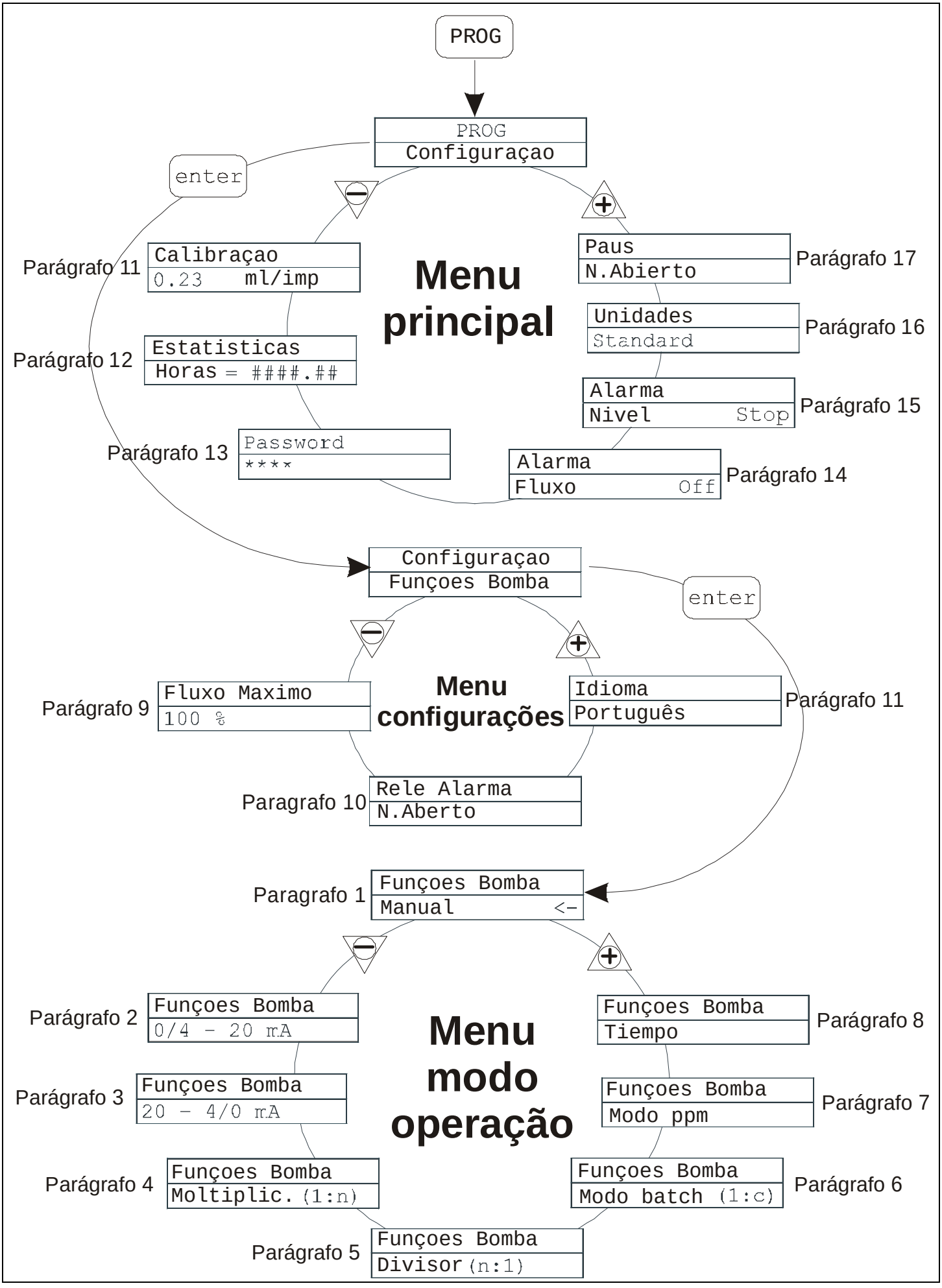
Com a tecla ESC se sai dos níveis da programação. Na saida da programação o display mostra:

Saída
Não Salva

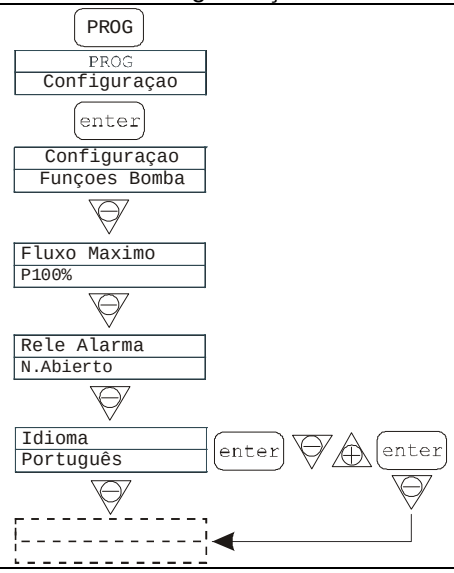
∇ Δ

Saída
Salva

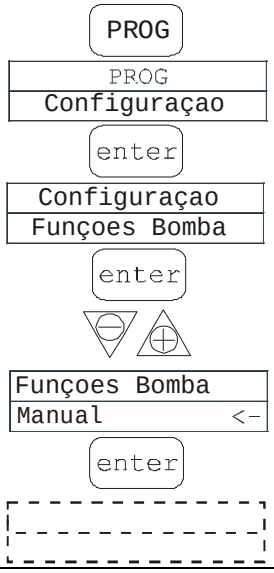
mode enter para confirmar a escolha

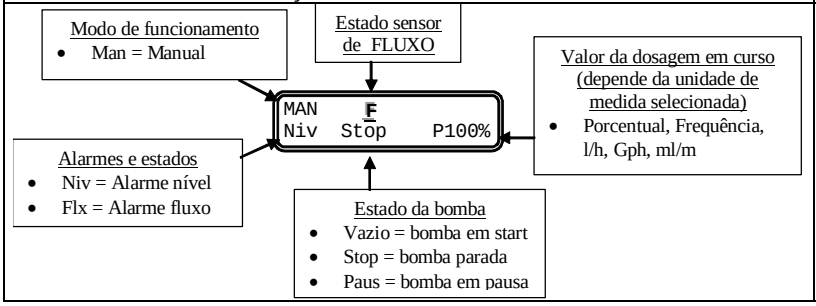
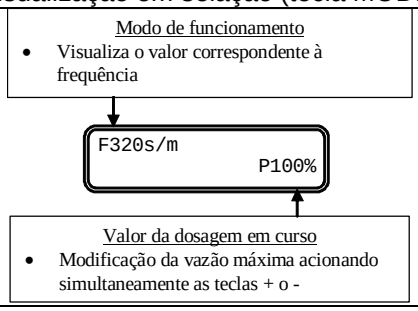

PROG
PROG
Configuraçao
enter
Menu principal
Parágrafo 11
Calibraçao
0.23 ml/imp
Parágrafo 12
Estatisticas
Horas = ####.##
Parágrafo 13
Password
****
Parágrafo 14
Alarma
Fluxo Off
Parágrafo 15
Alarma
Nivel Stop
Parágrafo 16
Unidades
Standard
Parágrafo 17
Paus
N.Abierto
Configuraçao
Funçoes Bomba
enter
Menu configurações
Parágrafo 9
Fluxo Maximo
100 %
Paragrafo 10
Rele Alarma
N.Aberto
Parágrafo 11
Idioma
Português
Paragrafo 1
Funçoes Bomba
Manual <-
Menu modo operação
Parágrafo 2
Funçoes Bomba
0/4 - 20 mA
Parágrafo 3
Funçoes Bomba
20 - 4/0 mA
Parágrafo 4
Funçoes Bomba
Moltiplic. (1:n)
Parágrafo 5
Funçoes Bomba
Divisor (n:1)
Parágrafo 6
Funçoes Bomba
Modo batch (1:c)
Parágrafo 7
Funçoes Bomba
Modo ppm
Parágrafo 8
Funçoes Bomba
Tiempo

Seleção do Idioma

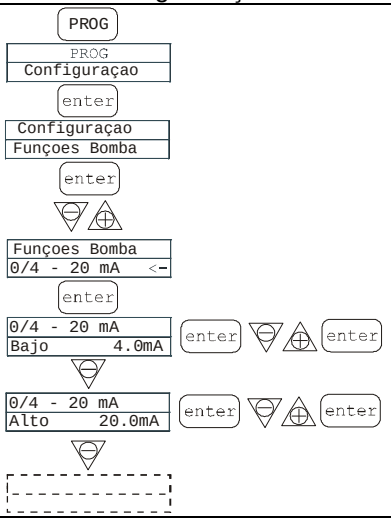
Programação	Funcionamento
	Permite selecionar o idioma, de fábrica a bomba vem programada em inglês. Acionando mode enter se acessa a modificação, a seguir, com as teclas ⊕ ⊖ seleciono o valor. Com mode enter confirmo e volto ao menu principal

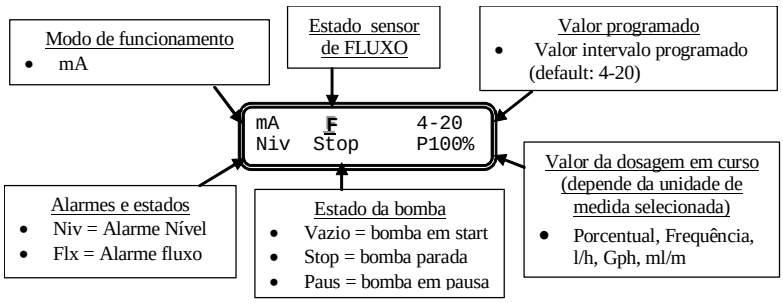
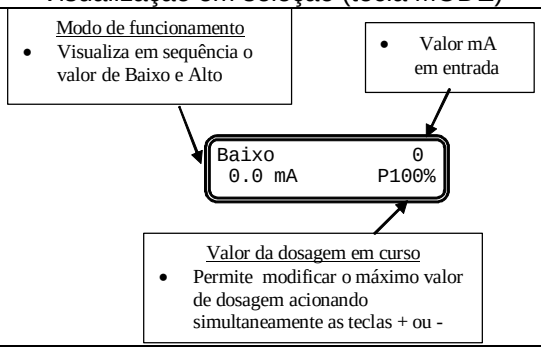
Parágrafo 1 - Dosagem Manual

Programação	Funcionamento
	A bomba trabalha na modalidade constante. A vazão é controlada e manualmente acionando simultaneamente as teclas mode enter ⊕ para aumentar o valor da vazão, ou ainda as teclas mode enter ⊖ para diminuí-lo.

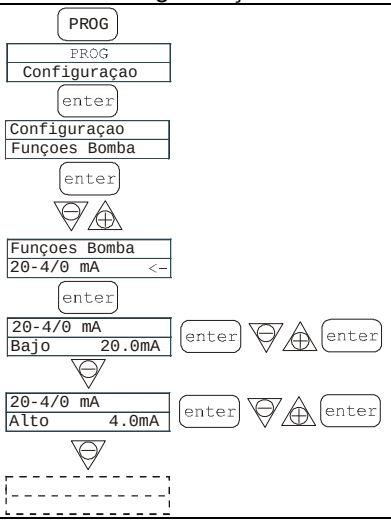
Visualização durante o funcionamento	Visualização em selação (tecla MODE)
	

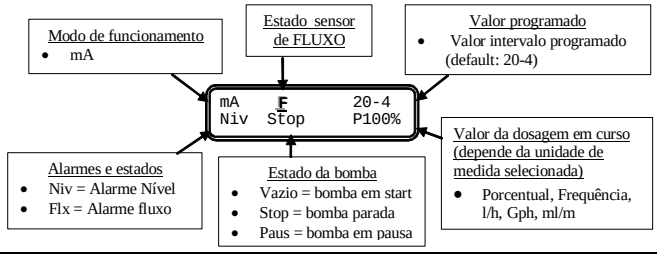
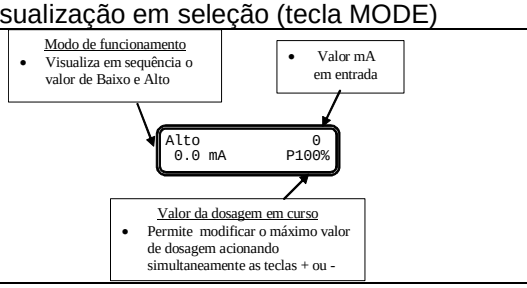
Parágrafo 2 - Dosagem Proporcional a Sinal 0/4-20 mA

Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal (0)4-20 mA. De fábrica a bomba interrompe a dosagem a 4 mA e dosa na máxima frequência selecionada quando recebe 20 mA. Em programação é possível modificar estes due valores. A freqüência máxima é modificável durante o funcionamento, acionando simultaneamente as teclas mode enter para aumentar a vazão, ou ainda, as teclas mode enter para diminuí-la.

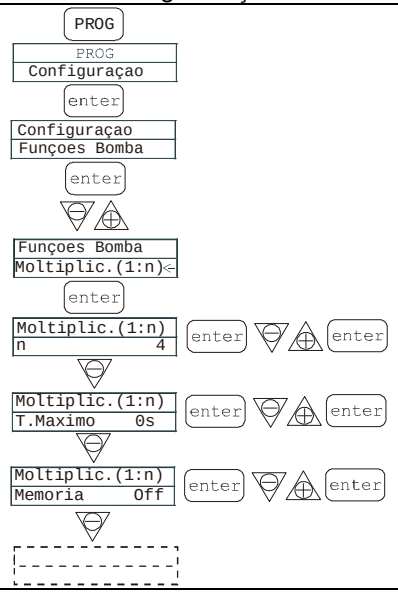
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

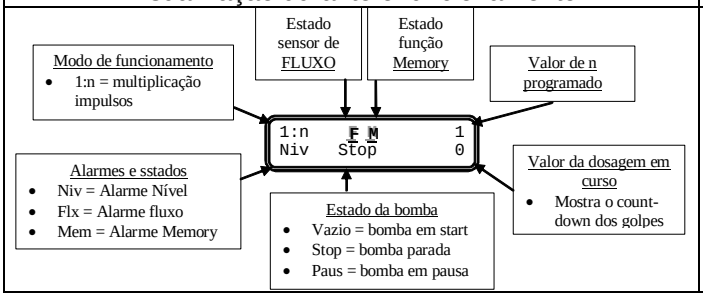
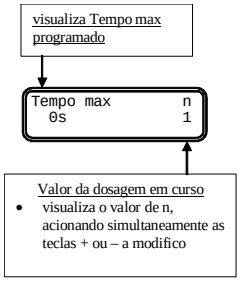
Parágrafo 3 - Dosagem Proporcional a Sinal 20-4/0 mA

Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal 20-4(0) mA. De fabrica bomba interrompe a dosagem a 20 mA e dosa na máxima frequência selecionada quando recebe 4 mA. Em programação é possível modificar estes dois valores. A freqüência máxima é modificável durante a fase de funcionamento acionando simultaneamente as teclas mode enter para aumentar a vazão, ou ainda, as teclas mode enter para diminuí-la.

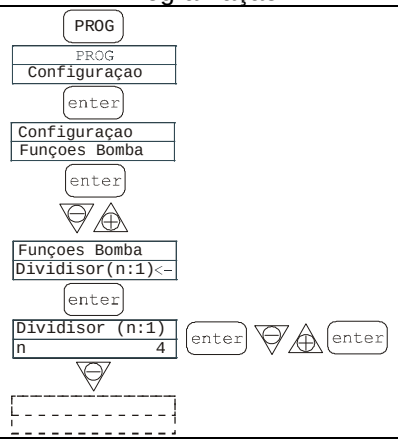
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

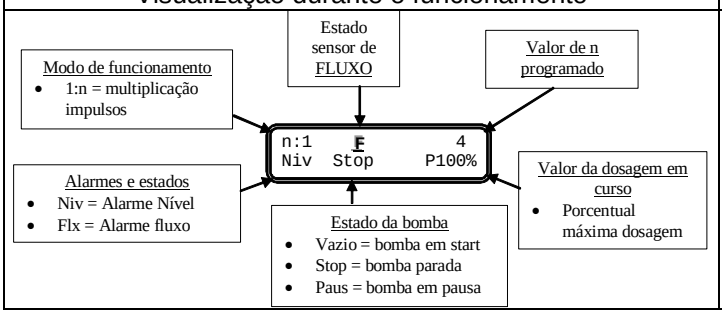
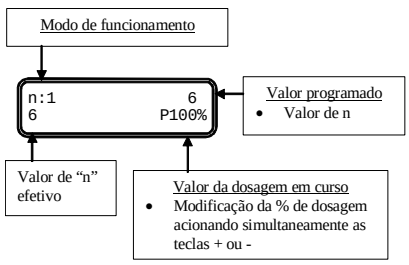
Parágrafo 4 - Proporcional a impulsos externos (multiplicação)

Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulsos). A cada sinal recebido a bomba efetua os "n" golpes programados. A bomba seleciona automaticamente a frequência de dosagem, adaptando-a ao tempo que intercorre entre dois sinais sucessivos. É possível programar em segundos o tempo (time/out) além do qual a bomba zera a contagem do intervalo, para evitar dosagens em tempos muito longos. A bomba dispõe da função memory, que assinala o recebimento de um sinal durante a dosagem. Se selecionada em Off se limita a assinalar, se em On assinala e memoriza os impulsos, a seguir os executa quando para de receber sinais. O valor de "n" é modificável durante a fase de funcionamento acionando simultaneamente as teclas mode enter para aumentar o valor da vazão, ou ainda, as teclas mode enter para reduzi-lo.

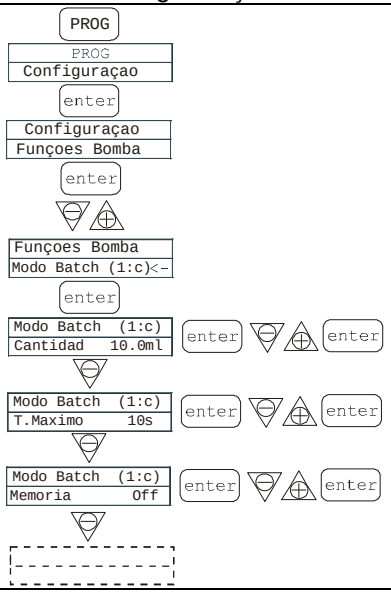
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

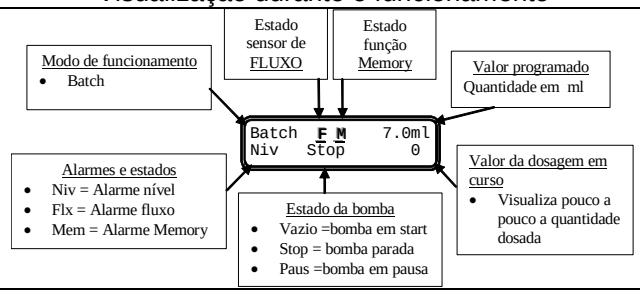
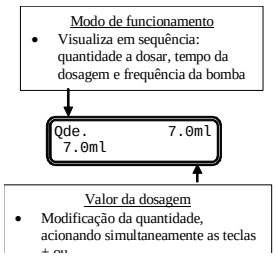
Parágrafo 5 - Proporcional a impulsos externos (divisão)

Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulsos). A cada "n" sinais recebidos a bomba efetua um golpe. Em programação seleciono o valor de "n". Programando o valor de "n" se seleciona a % de dosagem máxima, durante a fase de funcionamento posso modificar este valor acionando simultaneamente as teclas mode enter para aumentá-lo, ou ainda as teclas mode enter para diminuí-lo.

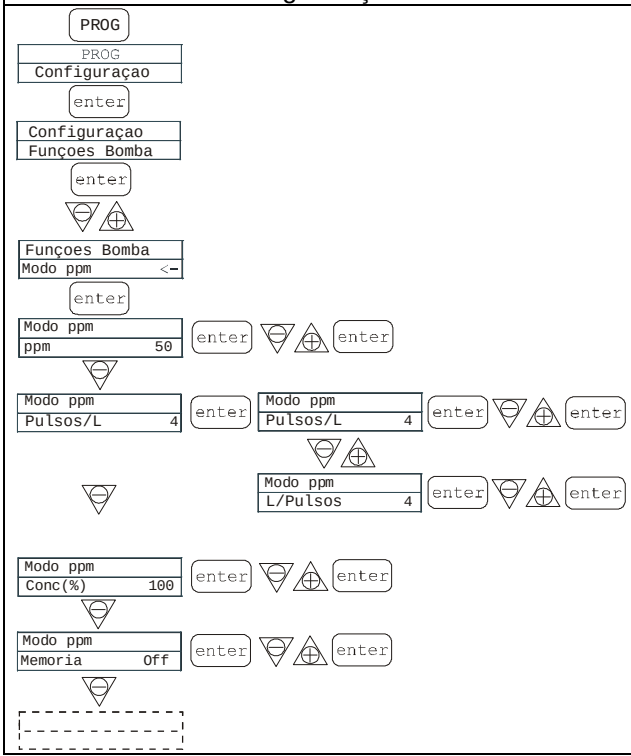
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

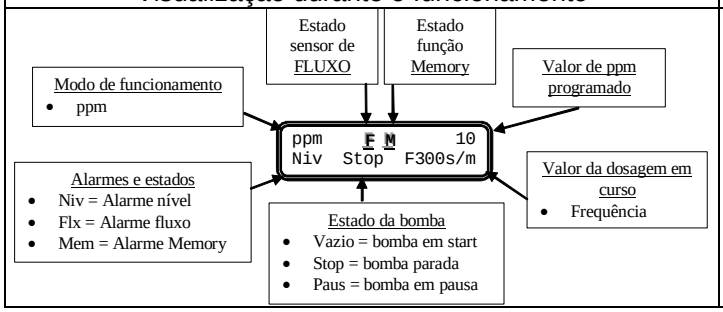
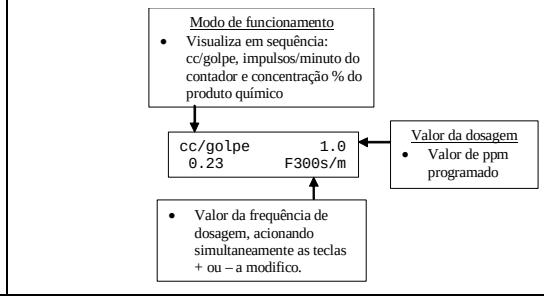
Parágrafo 6 - Proporcional a impulsos externos (dosagem batch)

Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulos). Neste caso posso programar a quantidade a dosar em ml e o tempo no qual completar a dosagem. É possível fazer a dosagem manualmente através da pressão da tecla , ou ainda, através de um comando remoto. A tecla , interrompe a dosagem, que pode ser zerada acionando a tecla , ou ainda, reiniciada acionando novamente . A quantidade a dosar é modificável durante a fase de funcionamento acionando simultaneamente as teclas para aumentar a vazão, ou ainda, as teclas para diminuí-la.

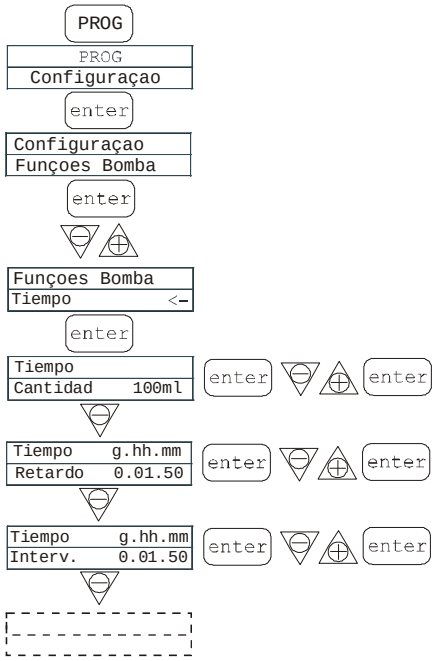
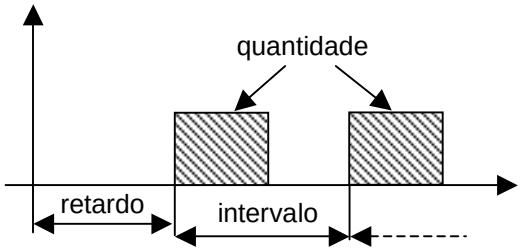
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

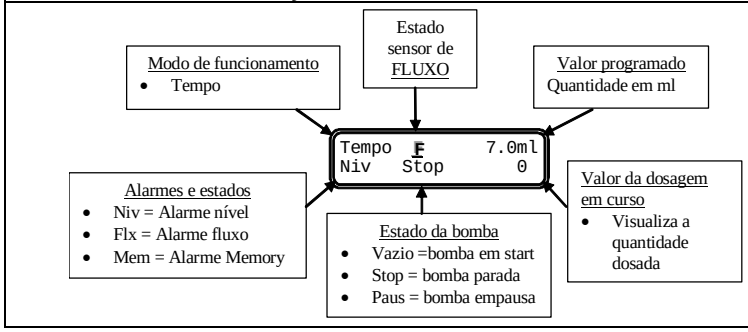
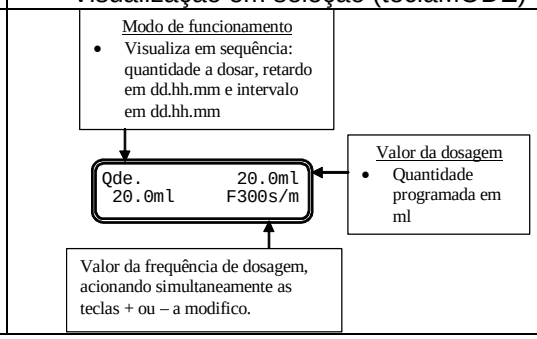
Parágrafo 7 - Proporcional a impulsos externos (dosagem em PPM)

Programação	Funcionamento
	A bomba dosa proporcionalmente a um sinal externo (ex.: contador lança-impulsos) calculando automaticamente a relação entre sinais em entrada e golpes da bomba em função do valor de ppm programado. Os dados a inserir são o valor de ppm, a relação impulsos/litro (ou ainda litros/impulso) do contador e a concentração do produto a dosar. Durante a fase de funcionamento posso modificar a freqüência de dosagem, acionando simultaneamente as teclas para aumentá-la, ou ainda as teclas para diminuí-la.

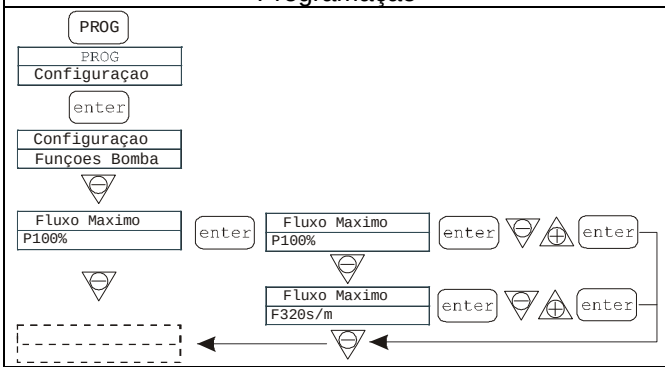
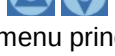
Visualização durante o funcionamento	Visualização em seleção (tecla MODE)
	

Parágrafo 8 - Dosagem Temporizada

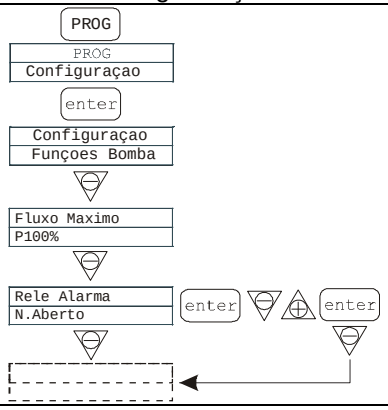
Programação	Funcionamento
	A bomba dosa uma quantidade programável em ml, portanto posso selecionar um tempo de retardo à ligação da bomba (Retard) e a distância entre duas intervenções successivas (Range), como no esquema:  Os tempos de retardo e intervalo são em dd.hh.mm (dias.horas. minutos) Durante a fase de funcionamento da bomba é possível modificar a frequência de dosagem, de modo a decidir o tempo de dosagem da quantidade programada, acionando simultaneamente as teclas mode enter e para aumentar a frequência, ou ainda as teclas mode enter e para diminui-la.

Visualização durante o funcionamento	Visualização em seleção (teclaMODE)
	

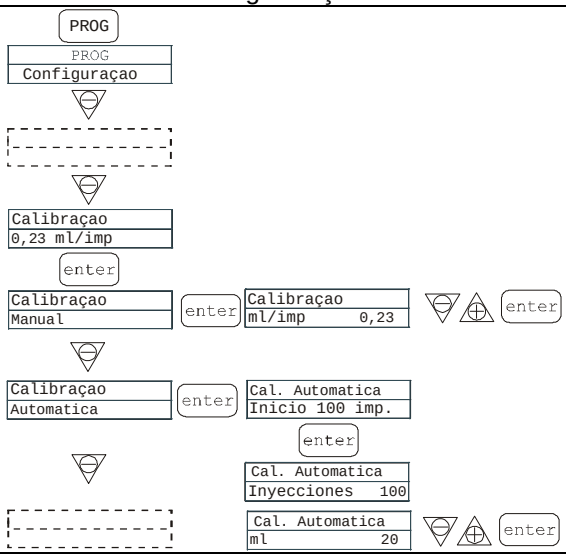
Parágrafo 9 - seleção máxima vasão

Programação	Funcionamento
	Permite selecionar a máxima vazão alcançável pela bomba e a modalidade programada (% ou freqüência) fica a visualização da vazão na unidade de medida Standard. Acionando mode enter se acessa a modificação, e a seguir com as teclas  seleciono o valor. Com mode enter confirmo e volto ao menu principal

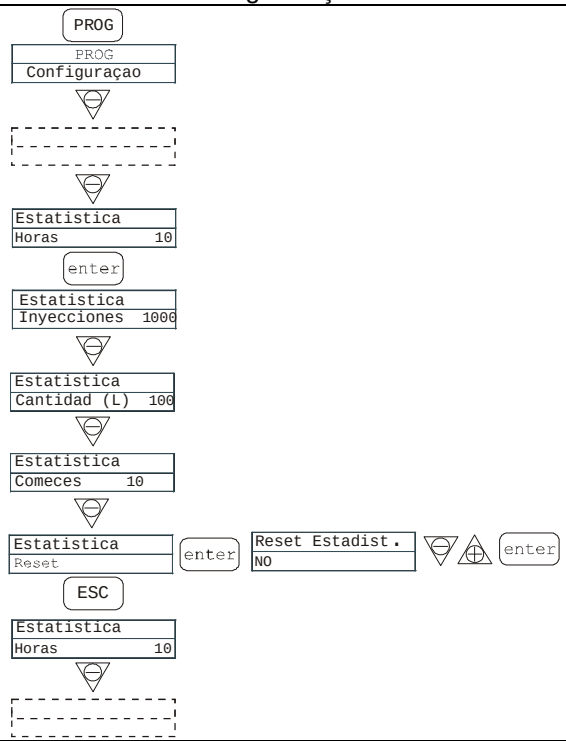
Parágrafo 10 - Seleção do Relê de Alarme

Programação	Funcionamento
	Na ausência de situação de alarme pode ser selecionado aberto (de fábrica) ou ainda, fechado. Acionando mode enter se acessa a modificação, a seguir com as teclas ⊕ ⊖ seleciono o valor. Com mode enter confirmo e volto ao menu principal

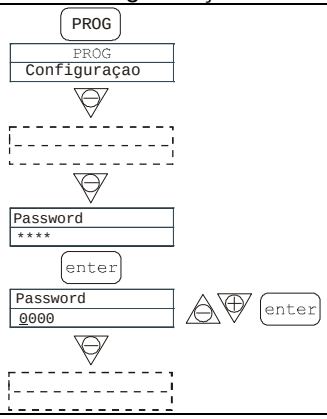
Parágrafo 11 – Calibração da vasão

Programação	Funcionamento
	No menu principal aparece o valor de cc por golpe em memória. É possível calibrar em duas modalidades: MANUAL - insiro manualmente o valor de cc por golpe com as teclas ⊕ ⊖ e confirmo com mode enter AUTOMÁTICA - a bomba executa 100 golpes, que são iniciados com a tecla e confirmo com mode enter, no final dos quais insiro a quantidade aspirada pela bomba com as teclas ⊕ ⊖ e confirmo com mode enter. O dado inserido será utilizado nos cálculos das vazões.

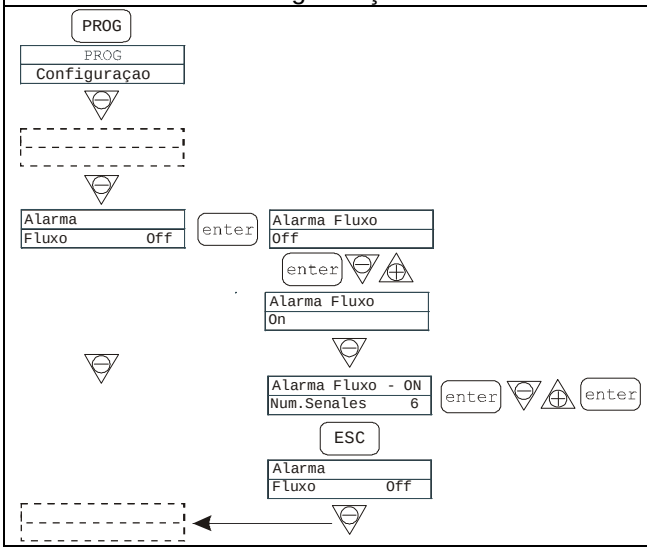
Parágrafo 12 - Estatísticas

Programação	Funcionamento
	No menu principal visualiza as horas de funcionamento da bomba, acionando a tecla mode enter acesso as outras estatísticas: - Strokes = número de golpes executados pela bomba - Q.ty(L) = quantidade dosada pela bomba expressa em litros; este dado é calculado com base no valor cc/stroke na memória - Power = número de acionamentos da bomba Reset = as teclas ⊕ ⊖ decido se zerar os contadores (YES) ou ainda não (NO), com mode enter confirmo. A pressão de ESC permite voltar ao menú principal.

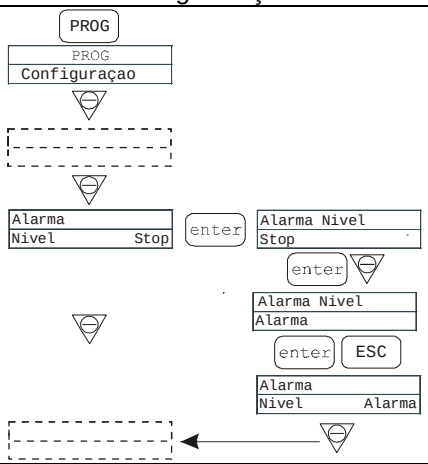
Parágrafo 13 - Senha

Programação	Funcionamento
	Inserindo a senha, poderei entrar em programação e ver todos os valores selecionados, mas cada vez que tentar modifica-los será pedida a senha. A linha lampejante indica o número modificável, com a tecla seleciono o número (de 1 a 9), com a tecla seleciono o número a modificar, a seguir com confirmo. Selecionando “0000” (fábrica), a senha será excluída.

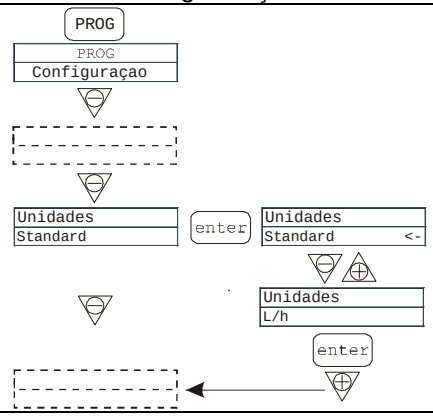
Parágrafo 14 - Alarme de Fluxo

Programação	Funcionamento
	Permite ativar (desativar) o sensor de fluxo. Uma vez ativado (On) acionando a tecla se acessa a requisição de quantos sinais a bomba espera antes de entrar em alarme. Acionando lampeja o número, a seguir, com as teclas seleciono o valor. Com confirmo. Acionando volto ao menu principal

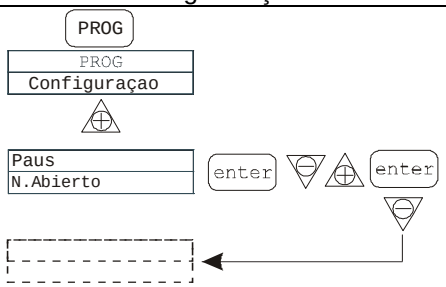
Parágrafo 15 - Alarme de Nível

Programação	Funcionamento
	Permite selecionar a bomba quando se ativa o alarme do sensor de nível, isto é ,se bloquear a dosagem (Stop), ou ainda se simplesmente ativar a sinalização de alarme sem bloquear a dosagem. Acionando se acessa a modificação, a seguir com as teclas seleciono o tipo de alarme. Com confirmo. Acionando volto ao menu principal

Parágrafo 16 - Unidade de visualização de vazão

Programação	Funcionamento
	Permite selecionar a unidade de medida da dosagem no display em visualização. Acionando mode enter se acessa a modificação, a seguir, com as teclas ⊕ ⊖ seleciono o tipo de unidade de medida, L/h (Litros/hora), Gph (Galões/hora), ml/m (mililitros/minuto) ou Standard (% ou freqüência, conforme foi selecionado). Com mode enter confirmo e volto ao menu principal

Parágrafo 17 – Ajuste Pausa

Programação	Funcionamento
	Entrada remota para colocar a bomba em pausa. Na fábrica o sistema é ajustado como Normalmente Aberto. Ao premir mode enter poderá ter acesso à alteração. Com as teclas ⊕ ⊖ poderá ajustar o valor (N. ABERTO ou N. FECHADO) Com mode enter poderá confirmar e voltar ao menu principal.

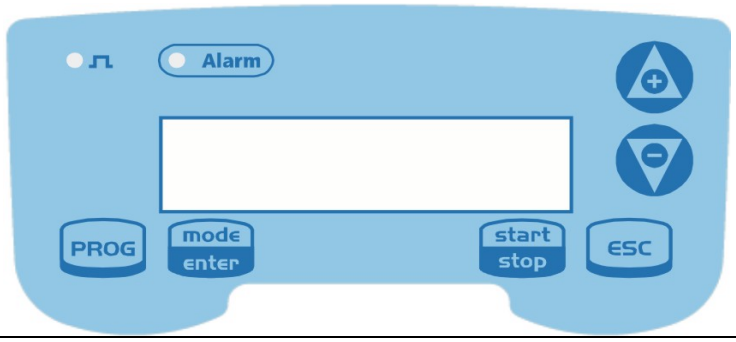
Ajuste do contraste do display.

Para ajustar o contraste o display manter apertou o ESC durante 5 segundos, apertar ⊕ o ⊖ para aumentar ou disminuir o contraste.

Alarmes

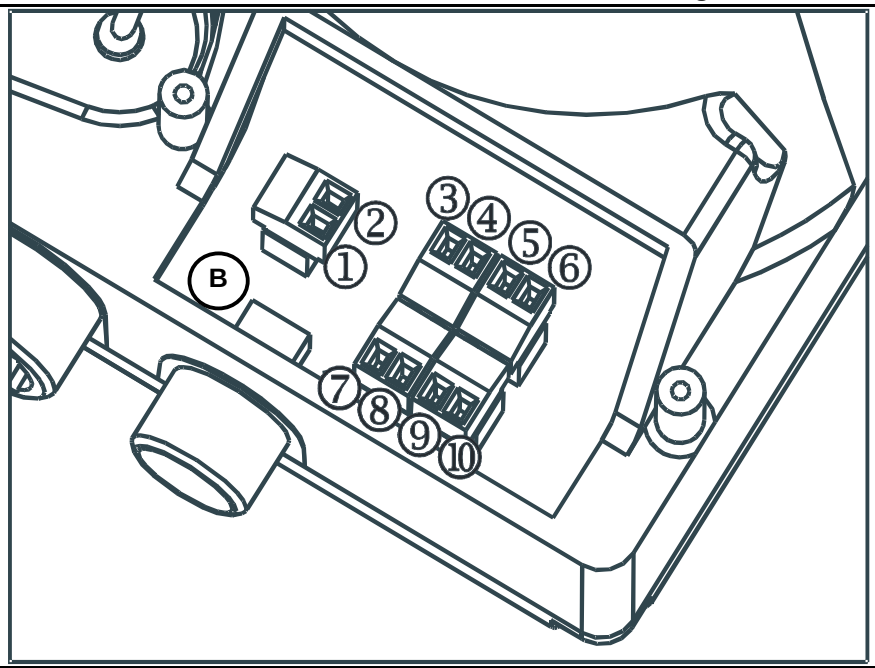
Visualização	Causa	Interrupção
Led Alarme fixo Escrita lev lampejante Ex: Man Lev P100%	Alarme de fim de nível, sem interrupção do funcionamento da bomba	Restauração do nível do líquido.
Led Alarme fixo Escrita lev e stop lampejante Ex: Man Lev Stop P100%	Alarme de fim de nível, com interrupção de funcionamento da bomba	Restauração do nível do líquido
Escrita Mem lampejante Ex: 1:n 6 Mem	A bomba recebe um ou mais impulsos durante a dosagem com função memory em Off	Pressionar al tecla start stop
Escrita Mem lampejante Ex: 1:n **M** 6 Mem	A bomba recebe um ou mais impulsos durante a dosagem com função memory em On	Quando a bomba acaba de receber os impulsos externos devolve os golpes memorizados
Led Alarme fixo Escrita Flw lampejante Ex: Man **F** Flw P100%	Alarme de fluxo ativo, a bomba não recebeu o número de sinais programados pelo sensor de fluxo.	Pressionar a tecla start stop
Ex: Parameter Error PROG to default	Erro de comunicação interna da CPU.	Pressionar a tecla PROG para restaurar os parâmetros de default.

Kumanda Paneli – TEKNA TPG



PROG	Programlama menüsüne erişim
mode enter	Pompa çalışırken basıldığında, programlanan değerleri ekranda sırayla gösterir; veya tuşlarıyla aynı anda basıldığında, seçilen çalışma moduna bağlı olarak bir değeri artırır veya azaltır. Programlama sırasında bir “Enter” tuşu işlevi görerek çeşitli menü düzeylerine girişi ve bu düzeylerdeki değişiklikleri onaylar.
start stop	Pompayı çalıştırır ve durdurur. Bir düzey alarmı (yalnızca alarm işlevi), debi alarmı ve etkin bellek alarmı meydana gelmesi durumunda, ekrandaki sinyali devre dışı bırakır.
ESC	Çeşitli menü düzeylerinden “çıkmak” için kullanılır. Programlama aşamasından tamamen çıkmadan önc değişiklikleri kaydetmek isteyip istemediğiniz sorulur.
	Menüde yukarı doğru hareket etmek veya değiştirilecek sayısal değerleri artırmak için kullanılır. Batch (Toplu işletim) modunda dozajlamayı başlatmak için kullanılabilir
	Menüde aşağı doğru hareket etmek veya değiştirilecek sayısal değerleri azaltmak için kullanılır.
	Dozajlama sırasında yeşil LED yanıp söner
Alarm	Çeşitli alarm durumlarında yanan kırmızı LED

Elektrik bağlantıları



1	Alarm rölesi	
2		
3	+ kutbu	4-20 mA giriş sinyali Giriş Empedansı: 200 ohm
4	- kutbu	
5	Uzaktan kumanda girişi (çalıştır-durdur)	
6		
7	Frekans sinyali girişi (su sayacı darbe göndericisi)	
8		
9	Debi sensörü girişi	
10		
B	Giriş düzeyi kontrolü	

Tekna TPG Programlama Menüsü

PROG tuşuna üç saniye kadar basarak programlama menüsüne erişebilirsiniz. Menü içinde gezinmek için tuşları, değişikliklere erişmek için mode enter tuşu kullanılabilir.
Pompa fabrikada sabit modda programlanmıştır. Pompa, 1 dakika herhangi bir işlem yapılmazsa otomatik olarak çalışma moduna döner. Bu durumda girilen veriler kaydedilmez.

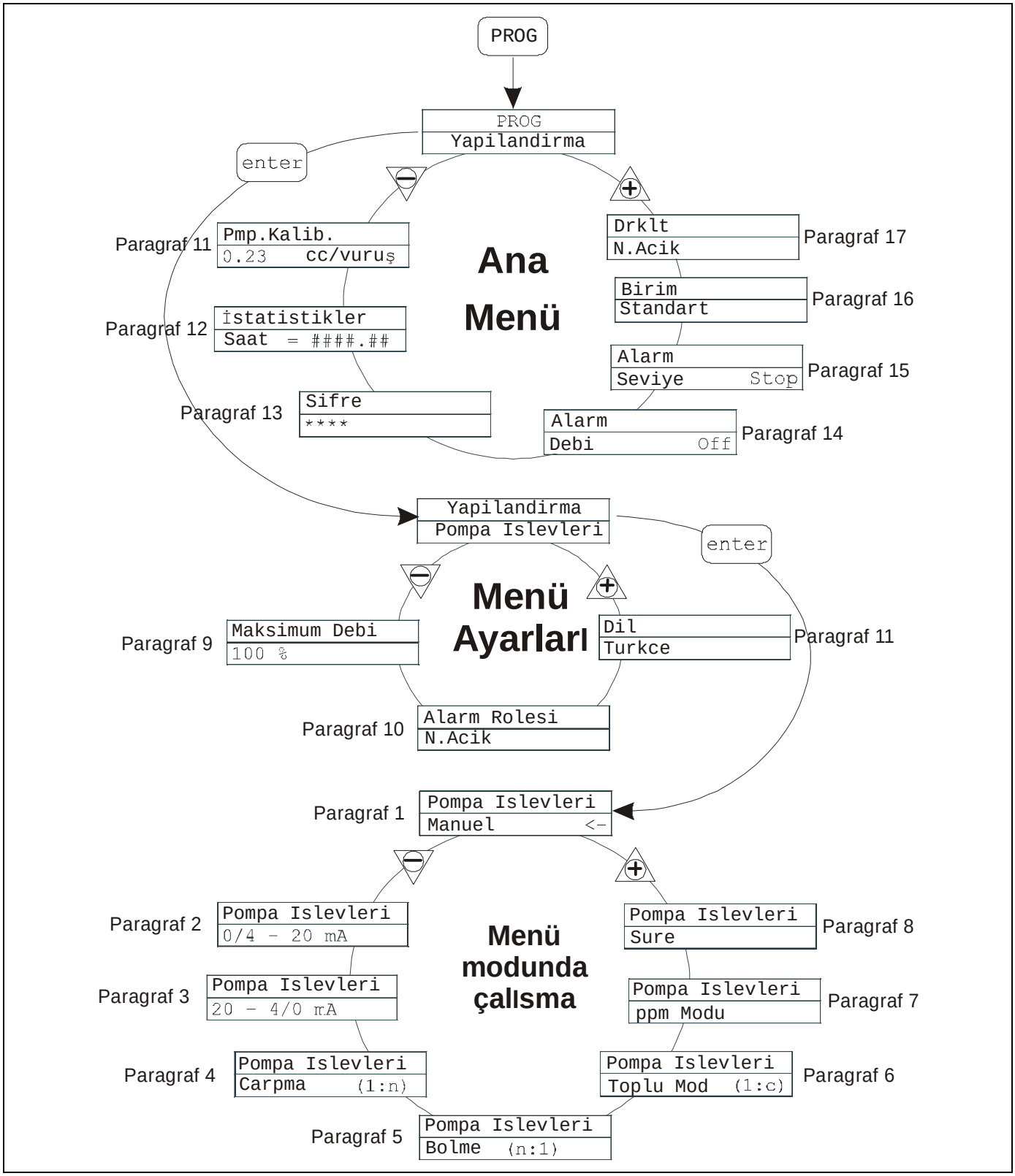
ESC tuşu çeşitli programlama düzeylerinden çıkmak için kullanılabilir. Programlamadan çıkıldıktan sonra, şu ekran görüntülenir:

Exit (Çık)
Don't Save

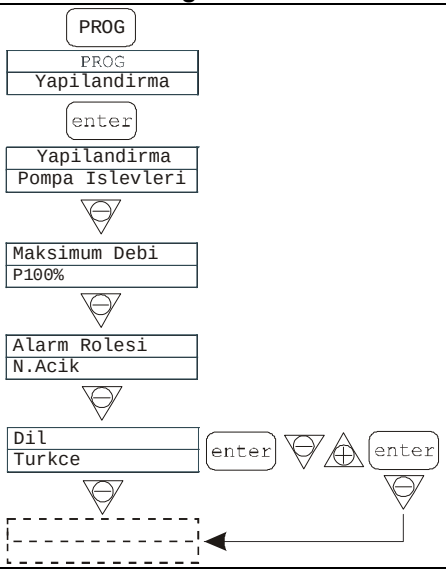
∇ Δ

Exit (Çık)
Save (Kaydet)

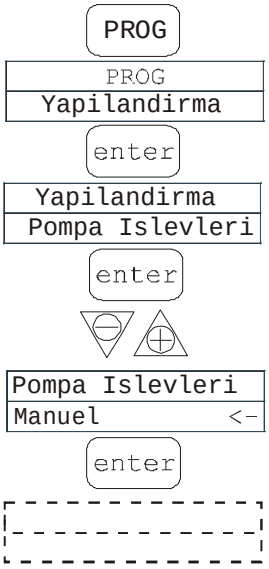
mode enter to confirm the selection (seçimi onaylamak için)

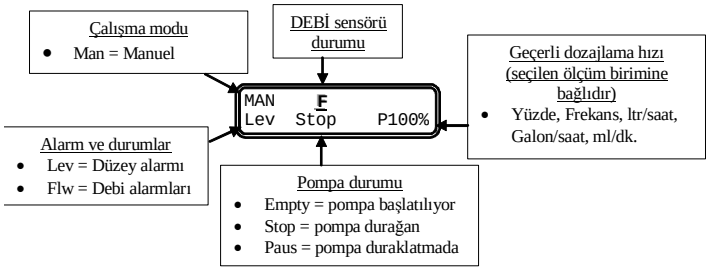
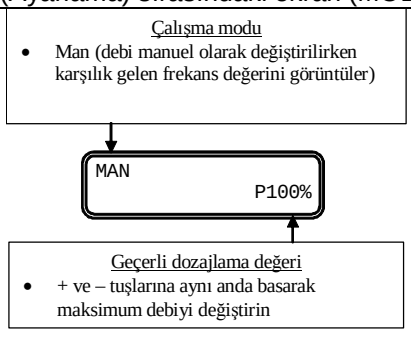


Dili Ayarlama

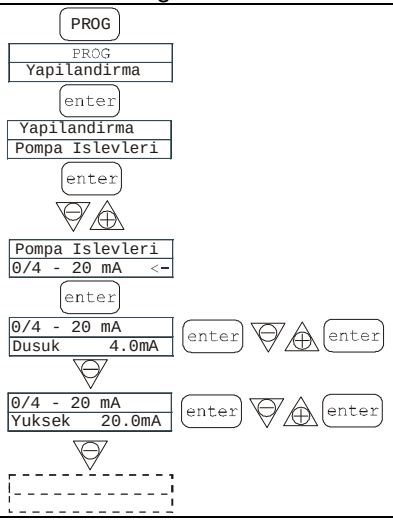
Programlama	İşlem
	Dili seçmenize olanak sağlar. Pompa menü dili fabrikada İngilizce'ye ayarlanmıştır. mode enter tuşuna basıp ardından yeni değeri girmek için ⊕ ⊖ tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için mode enter tuşuna basın

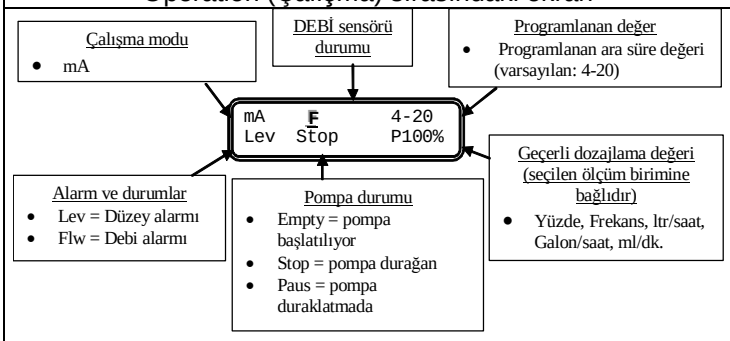
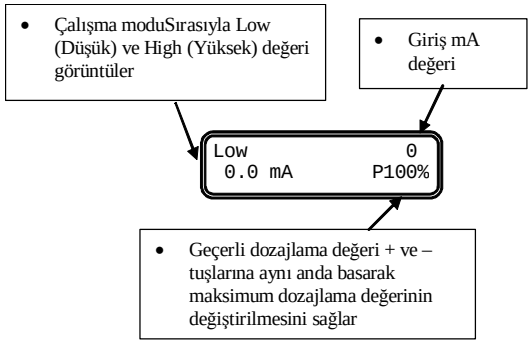
Paragraf 1 – Manual Dosage (Manuel Dozajlama)

Programlama	İşlem
	Pompa, sabit modda çalışır. Debi, mode enter ⊕ tuşlarına aynı anda basıp artırılarak veya mode enter ⊖ tuşlarına basıp azaltılarak yalnızca manuel olarak ayarlanabilir.

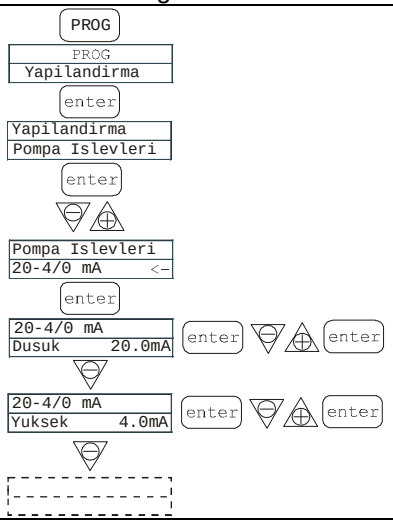
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

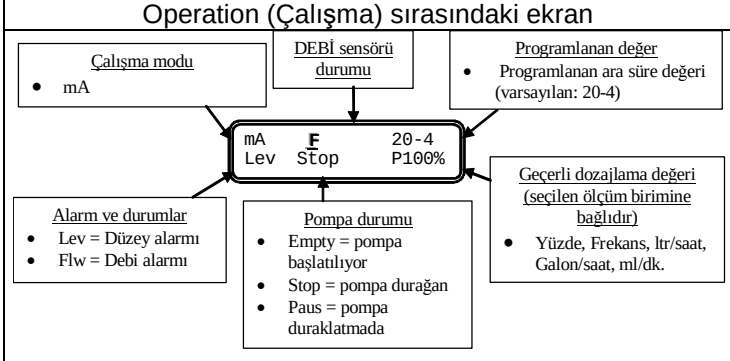
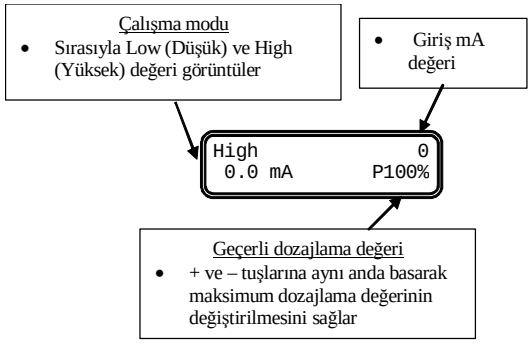
Paragraf 2 - Dosage Proportional to Signal 0/4-20 (0/4-20 Sinyaline Orantılı Dozajlama)

Programlama	İşlem
	Pompa (0)4-20 mA arasında bir sinyalde orantılı olarak dozajlama gerçekleştirir. Fabrika ayarlarına bağlı olarak, pompa dozajlamayı 4 mA sinyalinde durdurur ve 20 mA sinyal aldığında ayarlanan maksimum frekansla dozajlama gerçekleştirir. Bu iki değer, programlama sırasında değiştirilebilir. Maksimum frekans, mode enter tuşlarına aynı anda basıp artırılarak veya mode enter tuşlarına basıp azaltılarak pompa çalışırken değiştirilebilir.

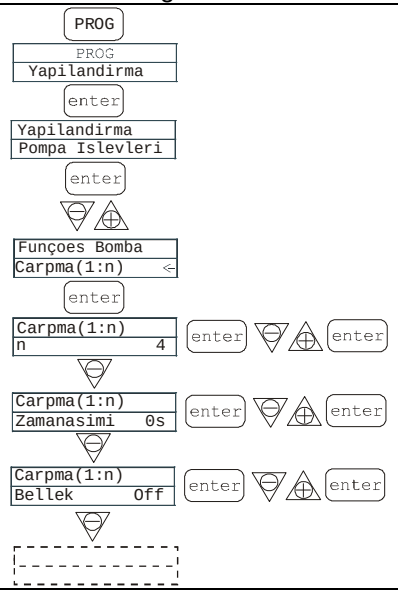
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

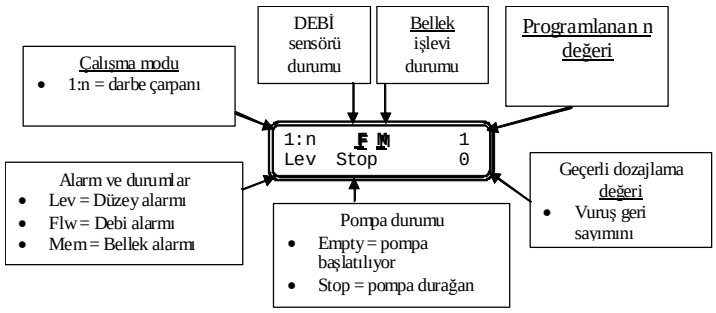
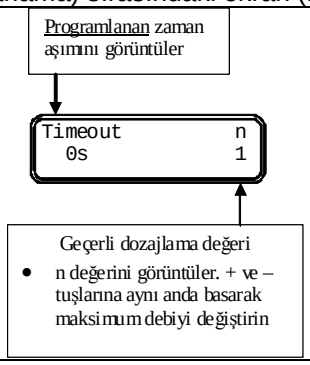
Paragraf 3 - Dosage Proportional to Signal 20-4/0 (20-4/0 Sinyaline Orantılı Dozajlama)

Programlama	İşlem
	Pompa 20-4(0) mA arasında bir sinyalde orantılı olarak dozajlama gerçekleştirir. Fabrika ayarlarına bağlı olarak, pompa dozajlamayı 20 mA sinyalinde durdurur ve 4 mA sinyal aldığında ayarlanan maksimum frekansla dozajlama gerçekleştirir. Bu iki değer, programlama sırasında değiştirilebilir. Maksimum frekans, mode enter tuşlarına aynı anda basıp artırılarak veya mode enter tuşlarına basıp azaltılarak pompa çalışırken değiştirilebilir.

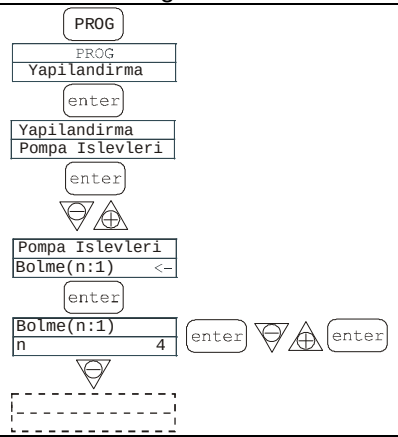
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

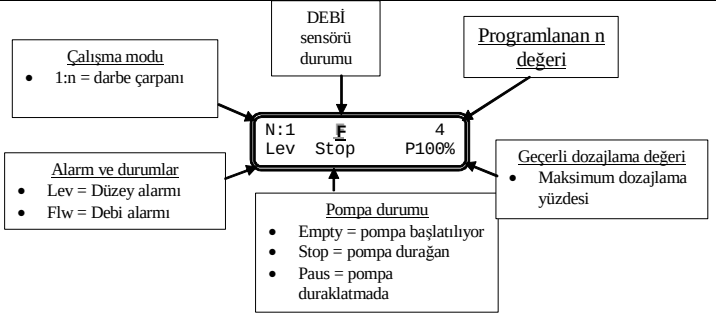
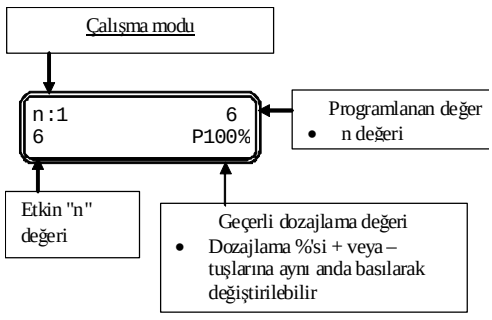
Paragraf 4 – Proportional to External Impulses (Harici Darbelere Orantılı) (çarpanlı)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. sinyal darbe sayacı) orantılı olarak dozajlama gerçekleştirir. Pompa, alınan her sinyalde programlanan “n” sayıda vuruş gerçekleştirir. Pompa, dozajlama frekansını ard arda iki sinyal arasında geçen süreye uyarlayarak otomatik olarak ayarlar. Süre (zaman aşımı) saniye cinsinden ayarlanabilir; bu, dozajlamanın çok uzun süreler boyunca yapılmasını önlemek için pompanın belirlenen değer aşıldıktan sonra ara süre sayacını sıfırladığı süredir. Pompa, dozajlama sırasında sinyal alımını gösteren bir bellek işlevine sahiptir. Off (Kapalı) olarak ayarlanırsa, yalnızca bir sinyal gönderir; On (Açık) olarak ayarlanırsa, bir sinyal gönderip darbeleri hafızaya alır ve sinyal alımı bittiğinde bu darbeleri yürütür. "n" değeri, mode enter tuşlarına aynı anda basıp artırılarak veya mode enter tuşlarına basıp azaltılarak pompa çalışırken değiştirilebilir.

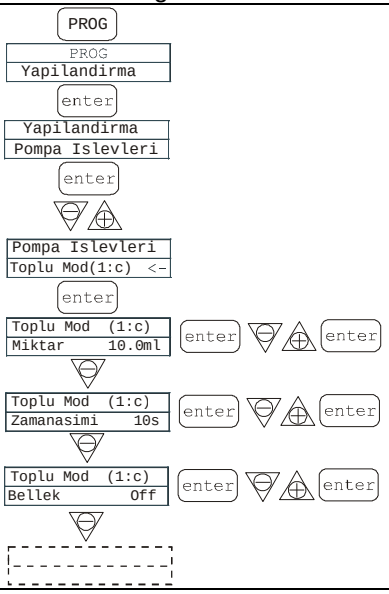
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

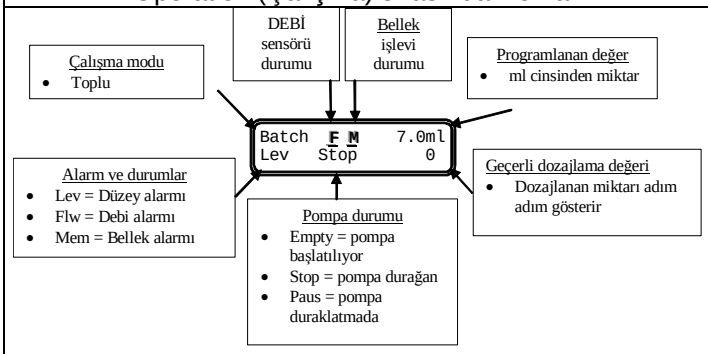
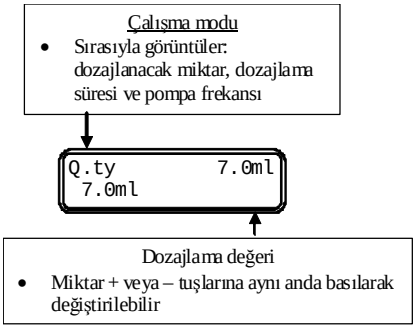
Paragraph 5 – Proportional to External Impulses (division)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. sinyal darbe sayacı) orantılı olarak dozajlama gerçekleştirir. Her “n” sinyalde, pompa bir vuruş gerçekleştirir. Programlama sırasında “n” değerini ayarlayabilirsiniz. “n” değerini programlayarak maksimum dozaj %'ni ayarlarsınız. Bu değer, mode enter tuşlarına aynı anda basıp debi artırılarak veya mode enter tuşlarına basıp debi azaltılarak pompa çalışırken değiştirilebilir.

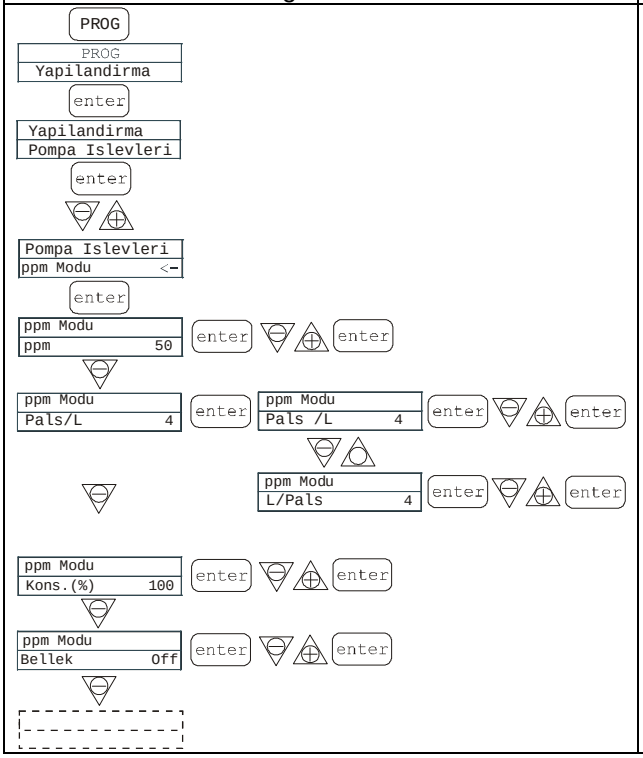
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

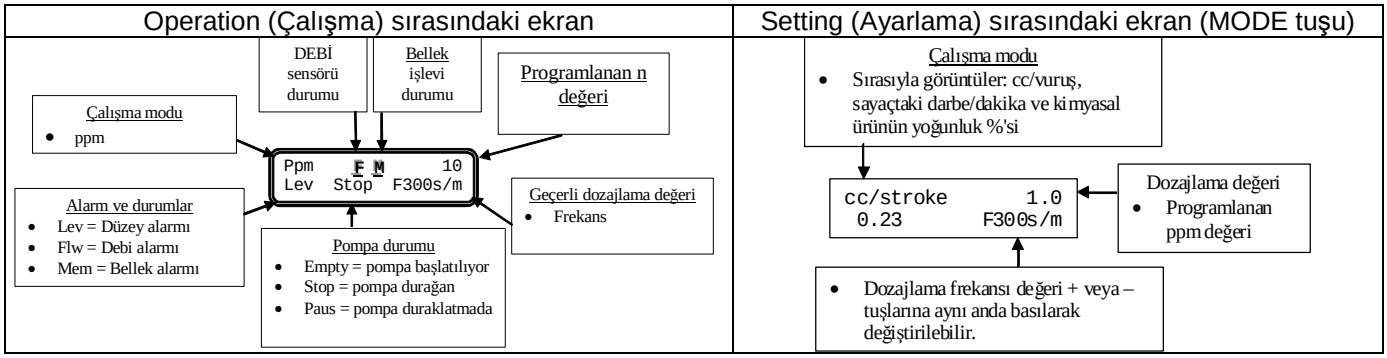
Paragraf 6 – Proportional to External Impulses (Harici Darbelere Orantılı) (toplu dozajlama)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. sinyal darbe sayacı) orantılı olarak dozajlama gerçekleştirir. Bu durumda, ml cinsinden dozajlanacak miktar ve dozajlamanın tamamlanacağı süre ayarlanabilir. Dozajlama tuşuna basılarak veya bir uzaktan kumanda sinyali kullanılarak manuel olarak başlatılabilir. start stop tuşu dozajlamayı duraklatır, daha sonra tuşuna basılarak dozajlama sıfırlanabilir veya start stop tuşuna yeniden basılarak tekrar başlatılabilir. Dozajlanacak miktar, mode enter tuşlarına aynı anda basıp debi artırılarak veya mode enter tuşlarına basıp debi azaltılarak pompa çalışırken değiştirilebilir.

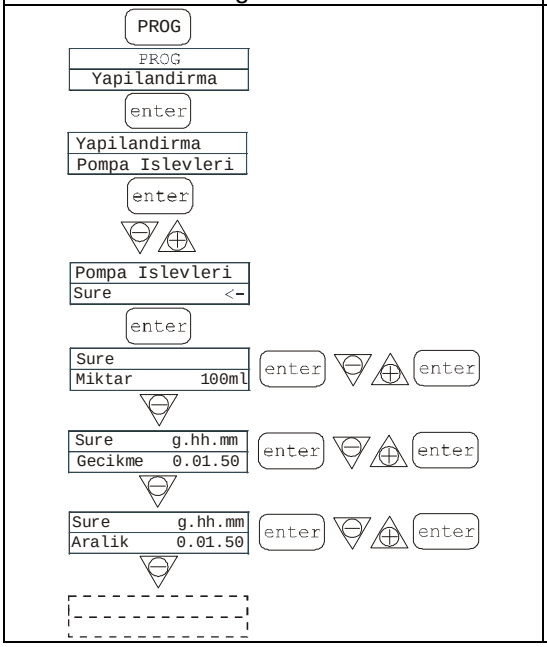
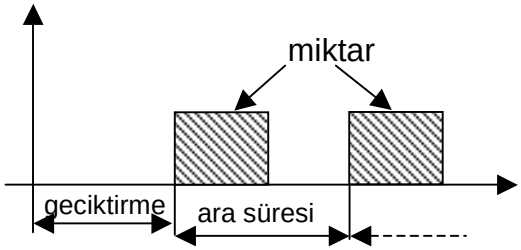
Operation (Çalışma) sırasındaki ekran	Setting (Ayarlama) sırasındaki ekran (MODE tuşu)
	

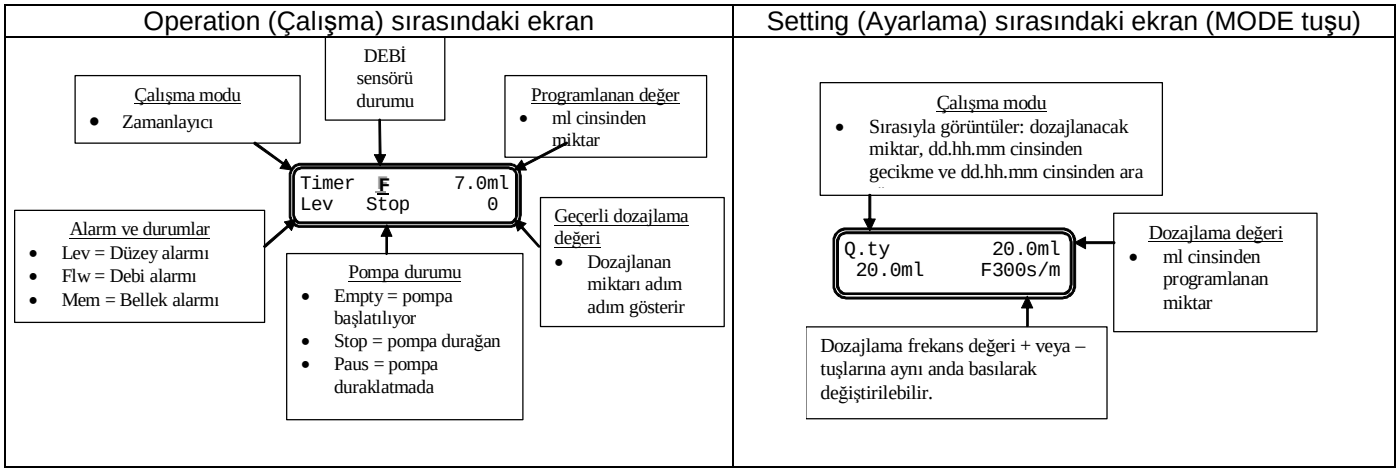
Paragraf 7 – Proportional to External Impulses (Harici Darbelere Orantılı) (ppm dozajlama)

Programlama	İşlem
	Pompa, harici bir sinyale (örn. darbe başlatma sayacı) orantılı olarak dozajlama gerçekleştirir; bunu, programlanan ppm değerini esas alarak gelen sinyaller ile pompa vuruşları arasındaki ilişkiyi otomatik olarak hesaplayarak yapar. Girilmesi gereken değerler ppm değeri, sayacın darbe/litre oranı (veya litre/darbe) ve dozajlanacak ürünün yoğunluğudur. Dozajlama frekansı, mode enter tuşlarına aynı anda debi basıp artırılarak veya mode enter tuşlarına basıp debi azaltılarak pompa çalışırken değiştirilebilir.

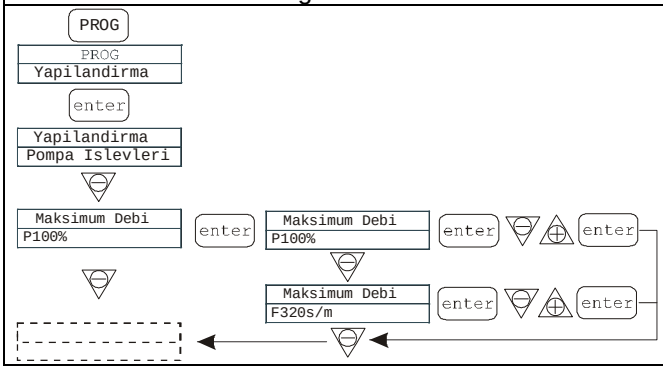


Paragraf 8 – Timed Dosage (Zamanlanmış Dozajlama)

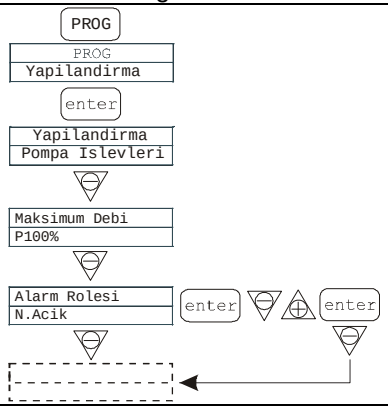
Programlama	İşlem
	Pompa, ml cinsinden programlanmış bir miktarı dozajlar. Şemada gösterildiği üzere bir pompa geciktirme süresi (Delay) ve iki ard arda işlem arasında bir ara süre (Range) ayarlanabilir:  Geciktirme süreleri ve ara süresi dd.hh.mm (gün, saat, dakika) biçimindedir Programlanan miktarın dozajlama süresini ayarlamak için frekansı mode enter tuşlarına aynı anda basıp artırılarak veya mode enter tuşlarına basıp azaltılarak pompa çalışırken dozajlama frekansı değiştirilebilir.



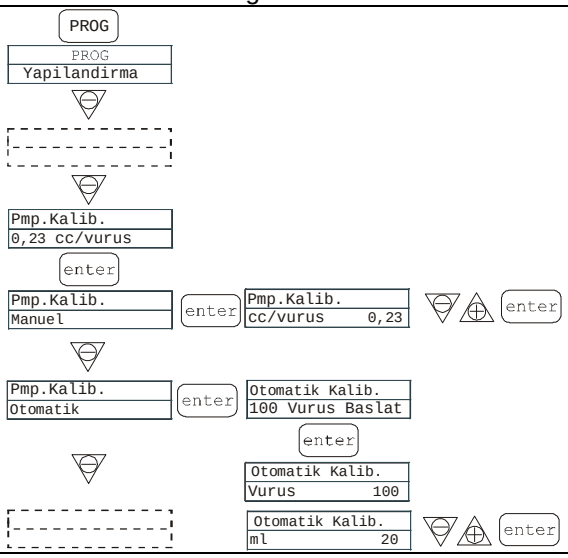
Paragraf 9 – Setting the Maximum Flow (Maksimum Debiyi Ayarlama)

Programlama	İşlem
	Bu özellik sayesinde, pompanın sağladığı maksimum debi ayarlanabilir ve debi görüntülenirken standart ölçü birimi olarak programlanan mod (% veya frekans) kullanılır. mode enter tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için mode enter tuşuna basın

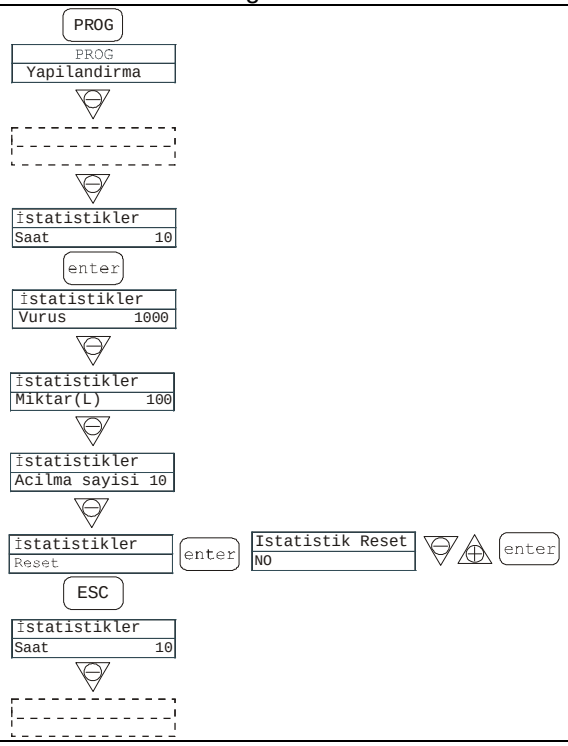
Paragraf 10 – Setting the Alarm Relay (Alarm Rölesini Ayarlama)

Programlama	İşlem
	Bir alarm durumu olmadığında, açık (varsayılan) veya kapalı olarak ayarlanabilir. mode enter tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için mode enter tuşuna basın

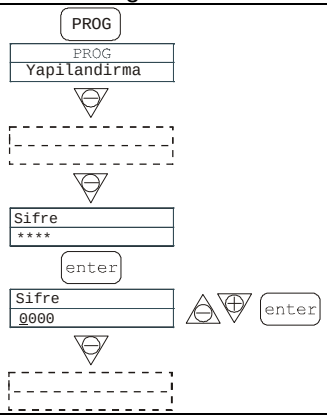
Paragraf 11 – Flow Calibration (Debi Kalibrasyonu)

Programlama	İşlem
	Ana menüde, hafızaya alınan vuruş başına cc değeri görünür. İki farklı şekilde kalibre edilebilir: MANUAL (MANUEL) – tuşlarını kullanarak vuruş başına cc değerini manuel olarak girin ve mode enter tuşuna basarak onaylayın AUTOMATIC (OTOMATİK)– pompa, mode enter tuşuna basılarak başlatılan 100 vuruş yapar. Bu işlemin sonunda, tuşlarını kullanarak pompa tarafından emilen miktarı girin ve mode enter tuşuna basarak onaylayın. Girilen sayı, debi hesaplamalarında kullanılacaktır.

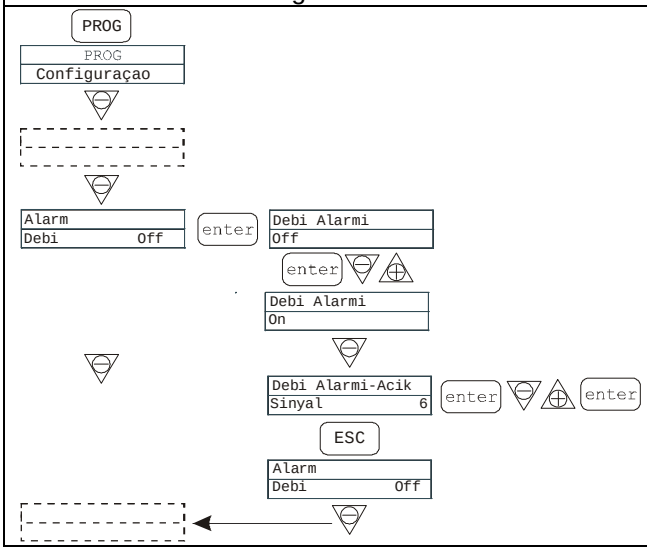
Paragraf 12 - Statistics (İstatistikler)

Programlama	İşlem
	Ana menüde pompanın çalışma süreleri görüntülenir. mode enter tuşuna basarak diğer istatistiklere erişebilirsiniz: - Strokes = pompa tarafından yapılan vuruş sayısı - Q.ty (L) = pompa tarafından yapılan litre cinsinden dozajlama miktarı; bu sayı, hafıza alınan cc/vuruş değeri esas alınarak hesaplanır - Power = pompanın başlatılma sayısı - Reset = tuşlarını kullanarak sayaçları sıfırlayın (YES) veya olduğu gibi bırakın (NO), ardından mode enter tuşuna basarak onaylayın. ESC tuşuna bastığınızda, ana menüye dönersiniz.

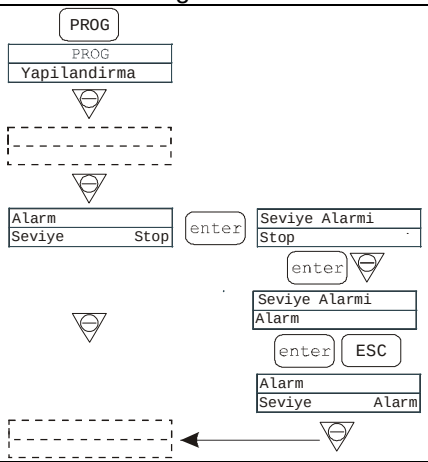
Paragraf 13 – Password (Parola)

Programlama	İşlem
	Parolayı girerek programlama menüsüne girebilir ve ayarlanan tüm değerleri görebilirsiniz. Bu ayarları değiştirmek istediğinizde her defasında parolayı girmeniz istenir. Yanıp sönen çizgi, değiştirilebilen rakamı gösterir. Rakamı (1 ila 9 arasında) seçmek için tuşunu ve değiştirilecek rakamı seçmek için tuşunu kullanın. mode enter tuşuna basarak onaylayın. “0000” (varsayılan) ayarlandığında, parola ortadan kaldırılır.

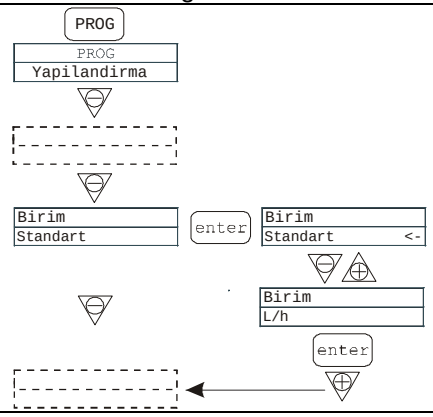
Paragraf 14 – Flow Alarm (Debi Alarmı)

Programlama	İşlem
	Bu ayar, debi sensörünü etkinleştirmeyi (devre dışı bırakmayı) mümkün kılar. Etkinleştirildiğinde (On), bir alarm tetiklenmeden önce pompanın beklediği sinyal sayısı isteğine erişmek için tuşuna basın. mode enter tuşuna basıldığında rakam yanıp sönmeye başlar, ardından tuşlarını kullanarak değer ayarlayabilirsiniz. mode enter tuşuna basarak onaylayın. Ana menüye dönmek için ESC tuşuna basın

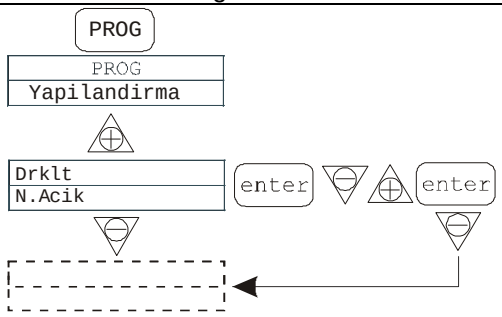
Paragraf 15 – Level Alarm (Düzey Alarmı)

Programlama	İşlem
	Bu ayar, düzey sensörü alarmı etkin durumdayken pompanın ayarlanmasına olanak sağlar. Başka bir deyişle, dozajlamayı durdurmayı (Stop) veya dozajlamayı durdurmadan yalnızca alarm sinyalini etkinleştirmeyi seçebilirsiniz. mode enter tuşuna basıp ardından yeni değeri girmek için tuşlarına basılarak değişiklik yapılabilir. mode enter tuşuna basarak onaylayın. Ana menüye dönmek için ESC tuşuna basın

Paragraf 16 – Flow Display Unit (Debi Görüntüleme Birimi)

Programlama	İşlem
	Bu ayar, ekranda görüntülenecek dozajlama ölçü biriminin ayarlanmasına olanak sağlar. Değişiklikler, mode enter tuşuna basıp ardından ölçü birimini ayarlamak için tuşları ile L/h (litre/saat), Gph (Galon/saat), ml/m (milimetre/dakika) veya standart (ayarlara bağlı olarak % veya frekans) seçenekleri arasından seçim yapıp ölçü birimi ayarlanarak yapılabilir. Onaylamak ve ana menüye dönmek için mode enter tuşuna basın

Paragraf 17 - Setting the Pause (Duraklamayı Ayarlama)

Programlama	İşlem
	Pompa, uzaktan giriş ile duraklatılabilir. Fabrika ayarı Normally Open (Normalde Açık) ayarıdır. mode enter tuşuna basıp ardından yeni değeri (N. OPEN (N. AÇIK) veya N. CLOSED (N. KAPALI)) girmek için tuşlarına basılarak değişiklik yapılabilir. Onaylamak ve ana menüye dönmek için mode enter tuşuna basın

Gosterge Kontrast Ayari

Gostergenin kontrast ayarini degistirmek icin ESC tusuna basili tutun ve 5 saniye icinde arttirmak yada azaltmak icin yada tuslarina basin.

Alarmlar

Ekran	Nedeni	Kesinti
Sabit alarm LED'i **Yanıp sönen "Lev" iletisi** **Örn.** Man Lev P100%	Pompa durdurulmadan düzey alarmının sonlandırılması	Sıvı seviyesini düzeltin.
Sabit alarm LED'i **Yanıp sönen "Lev" ve "stop" iletiler** **Örn.** Man Lev Stop P100%	Pompa durdurularak düzey alarmının sonlandırılması	Sıvı seviyesini düzeltin.
Yanıp sönen "Mem" iletisi **Örn.** 1:n 6 Mem	Bellek işlevi Off (Kapalı) durumdayken pompa bir veya birden çok darbe alır	start stop tuşuna basın
Yanıp sönen "Mem" iletisi **Örn.** 1:n M 6 Mem	Bellek işlevi On (Açık) durumdayken pompa bir veya birden çok darbe alır	Pompa harici darbe alımını bitirdiğinde, hafızaya alınan vuruşlara döner
Sabit alarm LED'i **Yanıp sönen "Flw" iletisi** **Örn.** Man F Flw P100%	Etkin debi alarmı. Pompa, debi sensöründen programlanan sayıda sinyal almamıştır.	start stop tuşuna basın
Örn. Parameter Error PROG to default	Dahili işlemci iletişim hatası.	Varsayılan parametreleri geri yüklemek için PROG tuşuna basın.