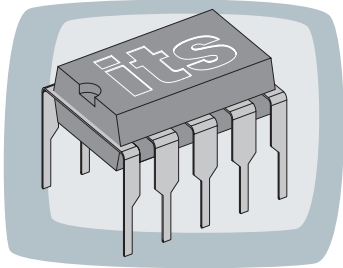


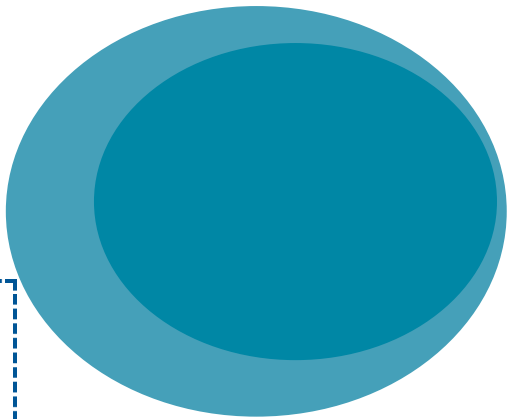


programmierung

FL8i Programmer Owner's Guide



Installer Stamp



ITS Intelligent Technology System

The new Lama programmer, FL8i, with intelligent technology presents a series of features which make it unique in the market.

When turning on the programmer, it starts a self checking sequence which verifies all the filtering stations and in case of finding any problems it is notified as an alarm system.

Once the checking is done, the programmer starts the filtering cycle. When the pressure difference P+ and P-, taken by the FL8i sensors exceeds the data previously stored in the memory, which may be modified by the user, the FL8i goes on to cleaning the filter, which has several phases controlled by a timer (also able to be modified by the user).

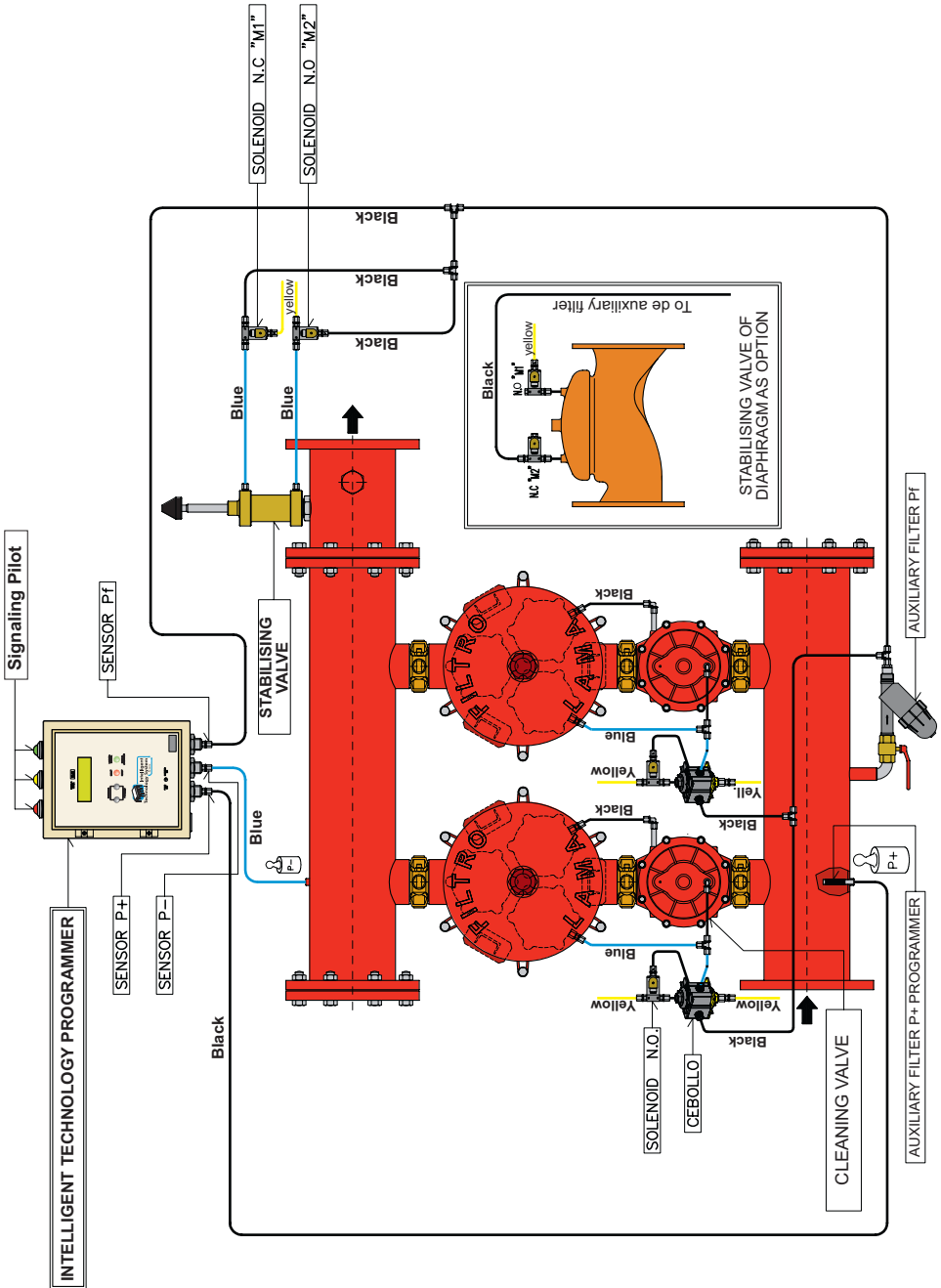
If the pressure is not enough to carry out the cleaning or filtering operations, the intelligent programmer can regulate the water flow by setting off the stabilising valve.

The parameters which control the programmer are delivered with a standard programme for the filter they are made for, although they may be shaped by the user in order to adapt the filtering and cleaning of the specific conditions of each installation.

index

Programmer FL8i Assembling Scheme	3
Introduction:	5
Techniques features:	5
Electrical connection:	5
Personalised Programming of the user:	6
Introducing data into the FL8i programmer:	6
Programming screens:	7
Pantallas de alarma:	8
Recommended standard programming according to the model.....	9
Guarantee:.....	10

This manual has been made by Fernando Lama S.L.
In la Puebla del Río, Sevilla. (Spain)
Fernando Lama S.L.© 2003
Updated The 04 de August of 2003
Versión 2.0





programmer FL8i

- P+: Is the inlet pressure in the filtration headers .
- P-: Is the outlet pressure in the filtration headers.
- PD: Is the Differential pressure, standard 0,5 Kg/cm².
- Medium Interval: Is the time measure in the last 99 cleaning.
- Last Interval: Is the time measure in the last 10 cleaning.
- CT: Total counter of cleaning (isn't able to be modified by the user).
- CP: Partial counter of cleaning (also able to be modified by the user).
- 00:00: Time since the last cleaning.

Introduction:

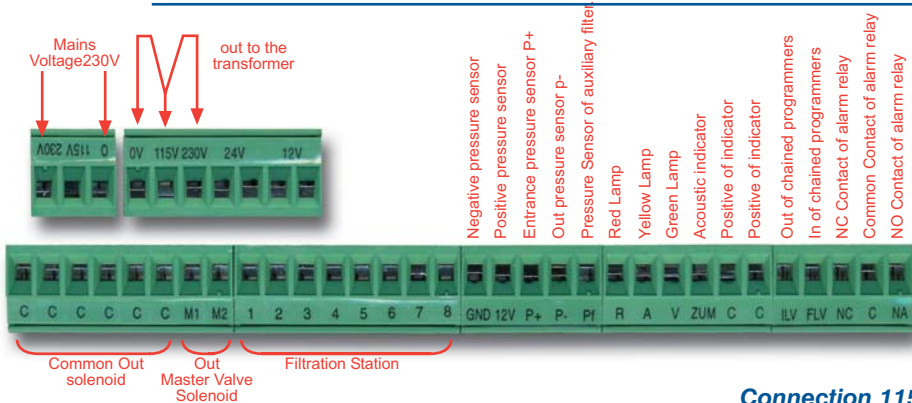
- The programmer is shaped at the factory with a set of Standard parameters.
- The following User's Guide deals with the modifiable options by the final user, for such cases where a change of said parameters are required.
- There are other options in the programmer, which can only be modified by the expert team of Lama for certain cases.
- Never try to modify the parameters which are not shown in this guide, as serious damage could be done and / or cancel the guarantee of the programmer.
- The colour flashing lights tell us about the state of the filters, Green light: normal, Yellow light: Precaution (revision required. See page 6), Red + Acoustic sign: Danger (user's aid is required. See page 6)
- Even though the programmer alarm is set off, it continues working.
- Language, standard in Spanish, in English by changing the language chip.

Technical features:

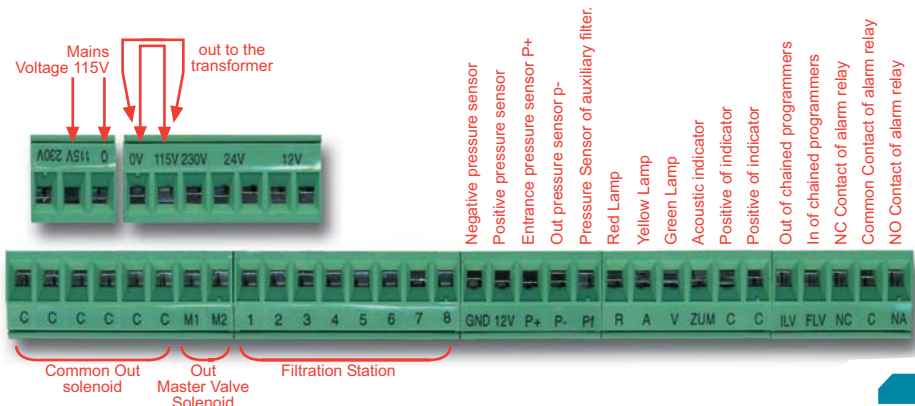
- Self checking.
- Inlet tension: 115V / 230V.
- No. Of outlets: From 1 to 8.
- Outlet tension at solenoid: 24V.
- Watertight security chamber.
- Language selection: Spanish / English.
- Selection of Measures: BAR / PSI.
- Pressure rank between 0.1 and 10 Kg/cm².
- Automatic rearmament fuse.

Electrical connection:

Connection 230V AC

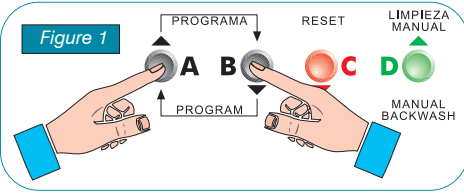


Connection 115V AC



Personalised programming of the user:

In order to have access to the menu of the user's programming, press the two black buttons (A and B) simultaneously (Figure 1)



To go from one menu to another press the first black button (A) of the control panel (Figure 2). The position of the cursor indicates the chosen option in the menu (Figures 3 and 4).

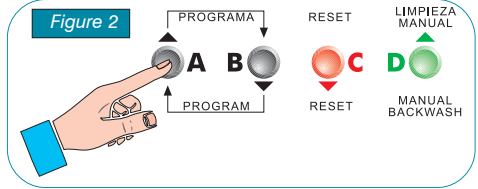


Figure 3

```

PERIODIC FLUSH  ███ 024
BACKWASH TIME   015
BETW. CLEANINGS 005
FILTR. STATIONS 004
    
```

Figure 4

```

PERIODIC FLUSH  024
BACKWASH TIME  ███ 015
BETW. CLEANINGS 005
FILTR. STATIONS 004
    
```

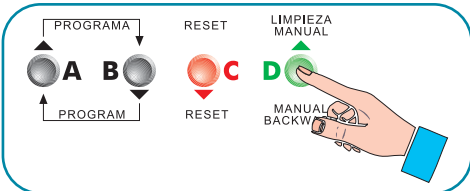
Introducing data into the FL8i programmer

In general, data is introduced into the programmer by pressing the green button (D) which increases a unit (figure 5), and by pressing the red button (C), a unit of the chosen option is reduced (figure 6)

Figure 5

```

PERIODIC FLUSH  024
BACKWASH TIME  ███ 015
BETW. CLEANINGS 005
FILTR. STATIONS 004
    
```



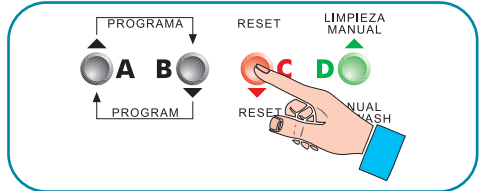
```

PERIODIC FLUSH  024
BACKWASH TIME  ███ 016
BETW. CLEANINGS 005
FILTR. STATIONS 004
    
```

Figure 6

```

PERIODIC FLUSH  024
BACKWASH TIME  ███ 016
BETW. CLEANINGS 005
FILTR. STATIONS 004
    
```



```

PERIODIC FLUSH  024
BACKWASH TIME  ███ 015
BETW. CLEANINGS 005
FILTR. STATIONS 004
    
```

Cleaning programmer FL8i

The decimal data (Differential pressure) is modified by the green button (D) in creasing the decimals a unit (figure 7) and by pressing the red button (C) the decimals are reduced a unit (figure 8), whole data can not be modified.

Figure 7

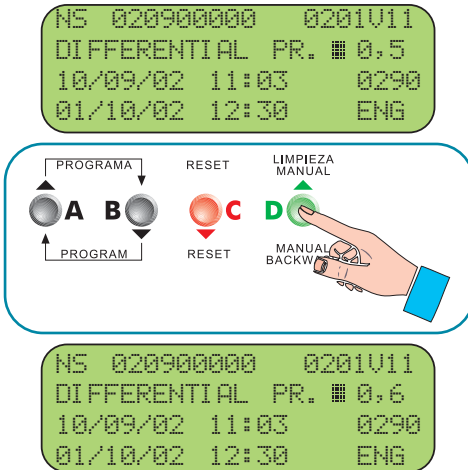
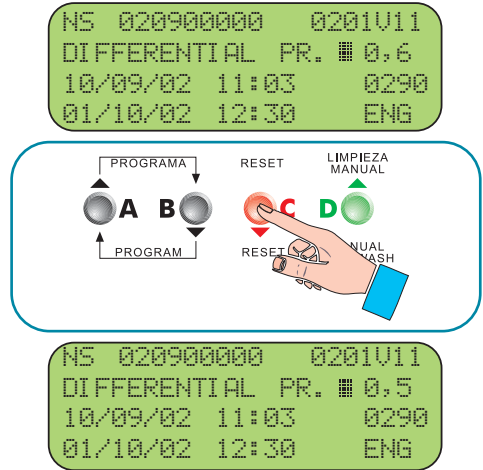


Figure 8



Programming Screens

```

PERIODIC FLUSH      024
BACKWASH TIME      015
BETW. CLEANINGS    005
FILTR. STATIONS    004
    
```

- LIMPIEZA HORARIA (*cleaning time*): It establishes the time taken between two cleaning cycles, programmed by a clock.

- DURACION LAVADOS (*duration cleaning proceses*): Period of time between the beginning and the end of a filter cleaning process, it can be programmed between 0 and 255 seconds.

- T. ENTRE LAVADOS (*time between cleaning proceses*): Time between cleaning processes, period of time between the end of a cleaning process and the beginning of the next, it can be programmed between 0 and 255 seconds.

- ESTAC. FILTRADO (*filtering station*): The Filtering station indicates the number of filters the pad has.

- TIEMPO P.D. (*P.D time*) : Differential Pressure Time. It is the time of delay from the moment the pressure difference is detected to the beginning of the cleaning cycle. It can be programmed between 0 and 255 seconds

```

P.D. TIME          015
START MAST. TIME   005
END MASTER TIME    006
MEASURING UNIT     bar
    
```

- TIEMPO INICIO M. (*initial time M*): Initial time of the master valve. It specifies the delay time of the master valve until the beginning of the cleaning cycle. It can be programmed between 0 y 255 seconds.

- TIEMPO FINAL M. (*final time M*): Time for ending the setting off of the master valve, in order to avoid lower pressures at the end of the cleaning cycle. It can be programmed between 0 a 255 seconds.

- UNIDAD DE MEDIDA (*measuring unit*): It specifies the type of unit the pressure is measured with, it may be BAR or PSI.

```

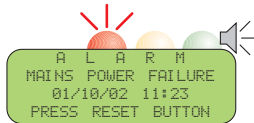
NS 0000000000 0201V11
DIFFERENTIAL PR. # 0,5
10/09/02 11:03 0000
01/10/02 12:30 ENG
    
```

- NS: Series Number of the programmer
- PR.DIFERENCIAL (*Differential PR*): Differential pressure, it is the difference between the inlet pressure (P+) and the outlet pressure (P-) to start the cleaning cycles. It can be programmed between 0.1 and 0.9 BAR or 1.4 and 13 PSI

• 10/09/02 11:30 0290: It shows the date and time of the last setting to zero of the partial counter of the cleanings and the number of cleanings of the partial counter. In order to set the counter to zero, place the cursor on this option and press the green button (D).

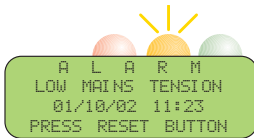
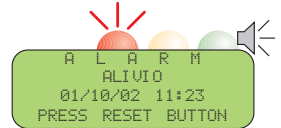
• 01/10/02 12:30 ESP: It shows the current time and date and the language of the programmer ESP for Spanish and ING for English.

Alarm screens:



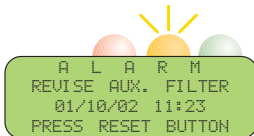
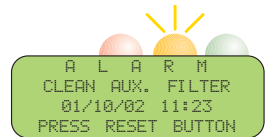
Fallo de Alimentación (Supply failure): It indicates failure of electricity supply of the board, a red light goes on and a sound of alarm is set off. Revise tensions of the board.

Presión de Alivio (relief pressure): It indicates over pressure in the filtering system, the red light shows, a sound is set off and a relief valve is opened to atmosphere for a few seconds.



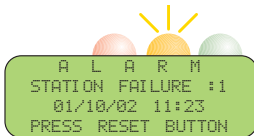
Tensión de red baja (low mains tension): It warns of low tension in the Mains, a permanent yellow light is shown.

Limpiar Filtro Auxiliar (clean auxiliar filter): It warns of the necessity to clean the auxiliar filter after collapsing because of dirt, a flashing yellow light is shown.



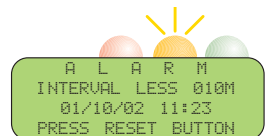
Revisar Filtro Auxiliar (revise auxiliar filter): It indicates that the auxiliary filter has to be periodically checked in order to avoid its collapse by dirt. A flashing yellow light is shown.

Baja Presión de Lavado (low pressure of cleaning): It indicates that there is not enough pressure to carry out the cleaning process. A flashing yellow light is shown.



Fallo Estación X (failure in X station): It indicates that a failure in the Cleaning station X has been produced. A flashing yellow light is shown.

Intervalo Menor 010M (minor interval 010M): It indicates that the intervals between cleaning processes have changed and are not stable, and therefore the dirt in the water is higher. A flashing yellow light is shown (Minimum standard of 10 minutes).



RotaSenior and Rotativo Models

- Cleaning time: minimum 24 hours.
- Duration of cleaning processes: minimum 20 seconds.
- Time between cleaning processes: minimum 10 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 10 seconds
- Final Time master valve: minimum 5 seconds
- Differential pressure: 0,5 kg/cm²

RotaSenior Vip and Vip Rotativo Models.

- Cleaning time: minimum 24 hours.
- Duration of cleaning processes: minimum 45 seconds.
- Time between cleaning processes: minimum 25 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 10 seconds
- Final time master valve: minimum 5 seconds
- Differential pressure: 0,5 kg/cm²

MasterMegadisc 4" Models .

- Cleaning time: minimum 24 hours.
- Duration of cleaning process: minimum 45 seconds.
- Time between cleaning processes: minimum 25 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 10 seconds
- Final time master valve: minimum 5 seconds
- Differential pressure: 0,5 kg/cm²

MasterMegadisc 6" Models .

- Cleaning time: minimum 24 hours.
- Duration of the cleaning process: minimum 60 seconds.
- Time between cleaning processes: minimum 35 seconds.
- PD Time: minimum 30 seconds.
- Initial time master valve: minimum 15 seconds
- Final time master valve: minimum 15 seconds
- Differential pressure: 0,5 kg/cm²

Calados, Carballinos and Sand Headers

- Consult.



Product guarantee

- Lama guarantees all its products for 1 year.
- This product has passed factory testing according to the relevant standards.
- The period of guarantee against perforation by corrosion is 2 years.
- The maximum and minimum working pressures, minimum backwash pressure and filtering and backwashing flow rates are specific to each product type. This data is contained in the technical literature for each product.
- Lama will, at its option, repair or replace any goods that are defective due to faulty workmanship or use of poor quality materials subject to testing by our qualified personnel, but will not be liable to repair or replace goods in any other circumstances. Replacement goods will be exchanged for the faulty goods.
- The filter is guaranteed to block the passage of particles larger than the micron rating of the filter element being used.

THE GUARANTEE DOES NOT COVER THE FOLLOWING

- Maintenance and periodical cleaning.
- Mesh screens perforated by sharp elements and stones.
- Wear caused by overuse of the materials, abrasion or high temperatures.
- Higher or lower voltages than specified for electric controllers.
- Differential presostat, solenoids or controllers affected by moisture.
- Hydrocyclone wear by sand and stone abrasion.
- Higher or lower pressures than those indicated in the specifications of each product.
- Acid environments or waters, decantings, precipitations, algae or bacterial agglutinations.
- Damage due to water hammer or external impacts.
- Incorrect or inadequate assembly or operating below minimum pressures.
- Both valves and solenoids if flow from drainage tubes is restricted.
- Third party damage, theft or vandalism.

CLAIMS TO GUARANTEE

- This product has passed factory tests and has met quality standards. Nevertheless, should you find any fault, please contact your point of purchase, quoting the product and reference codes on this guarantee or on the filter itself.
- For any claim it is obligatory the presentation of this document or the article codes and reference that appear here

Product:

Reference/Lot:

Date: of in 200.....

Signature:

