

IRRIFILTROS

INSTRUCTION MANUAL

PRESENTATION

We wish to take this opportunity to thank you for the confidence in us which you have demonstrated in expressing interest or acquiring IRRIFILTROS.

This confidence, for our part, stimulates our efforts to meet and surpass the expectations of our clients to justify the traditional quality of our products.

This Manual will allow you to see the capacity of the unit as well as its installation and use.

However, if after reading this you still have any doubts, contact us and we will happily answer them.



INTRODUCTION

Irrifiltros is a small programmer for automatic control of filter washing. The power supply is with batteries (optional to 12 Vdc). The outlets allow the activation of two-wired latch solenoids.

The programmer has a screen and three keys which are used for the configuration, consultation and programming.

The main characteristics of the unit are:

- Outlets for 6 filters or 5 filters plus a general outlet.
- Three inputs for breakdown, flow detector or counter and differential pressure gauge.
- Independent cleaning time for every filter and pause between filters.
- Time or volume units between cleaning sequences.
- Manual start and stop of cleanings.
- Power is supplied by a 9Vdc battery (3 batteries optional). There is a model with power supply of 12 Vdc battery.
- Indicator of low battery (it needs to be replaced).

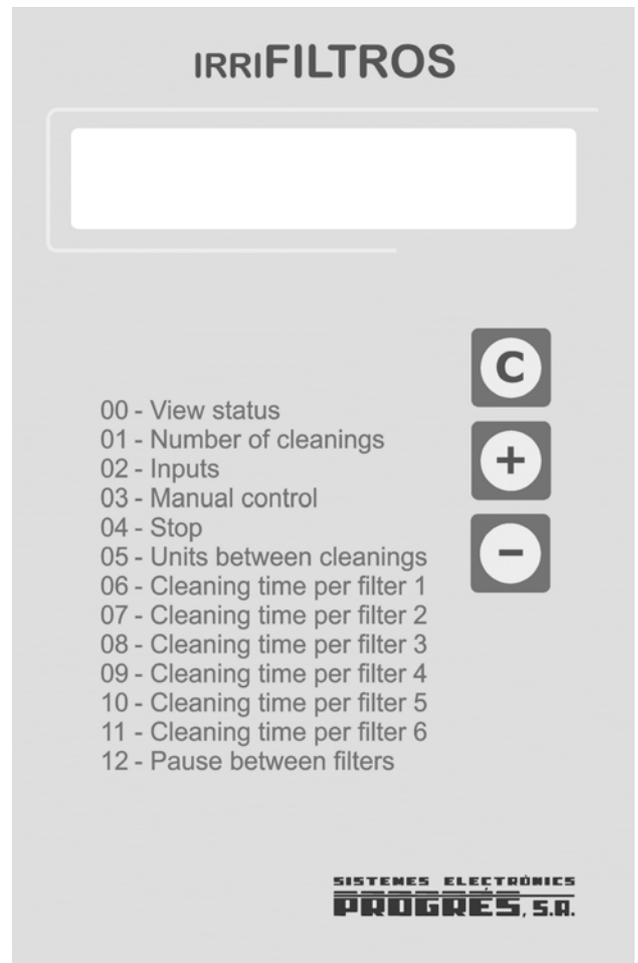
Irrifiltros meets all the norms set by the **CE**.

CONFIGURATION CODES:

- C0 Breakdown input delay
- C1 Differential pressure gauge input delay
- C2 Number of filters to be used
- C3 Whether there is general outlet or not
- C4 Work by time or by volume
- C5 Erase cleaning counter

For the *consultation, manual workings and programming*, every piece of information to be displayed or entered has a code that informs about its meaning. This code is displayed in the last two digits of the left side of the screen. Use the “**C**” key to change from one code to another. The meaning of the 12 codes used in *consultation and programming* is shown at the frontal part of the unit.

The “+” and “-” keys are used to modify the values of the manual workings, programming and configuration. These keys increase or decrease the value which is displayed on the screen in that moment. If the key is pressed longer than two seconds the value increases or decreases faster.



CONSULTATION

The first three codes of the unit correspond to *consultation* (codes from 0 to 2). All the necessary information about the state of the unit is displayed on this screen.

- **Code 00:** Corresponds to *view status* and it reflects the state of the unit at any moment.

If a cleaning is being carried out, the letters “LF” and the number of the filter, which is being cleaned, are displayed.

If it is between two cleanings, the time (in hours: minutes) or the volume units left until the next cleaning are displayed.

If it has been manually stopped, “STOP” is shown.

If it is stopped due to the activation of the breakdown input, “SP A” is displayed.

The upper line of the sixth digit of the screen is switched on when the battery is low and it needs to be replaced. The battery is tested after each deactivation by the controller.

- **Code 01:** This code shows the *number of cleanings* carried out by the unit. When the cleaning counter reaches number 9999, it starts again at 0. In *configuration* it has to be set at 0 manually.
- **Code 02:** The state of the three digital *inputs* of the unit is shown here. From left to right, they correspond to the breakdown (input 1), flow detector or volume counter (input 2) and differential pressure gauge (input 3). A “0” indicates that the input is not activated and a “1” indicates that it is activated.

MANUAL WORKINGS

Codes 3 and 4 correspond to *manual control*. They allow us to start the cleaning, stop the unit, etc., manually.

- **Code 03:** This code allows us to activate or stop a cleaning manually. If a “0” is displayed on the screen, it indicates that the unit is not carrying out a cleaning. If a “1” is displayed, it indicates that a cleaning is being carried out.

To start a cleaning: press the “+” key and it will change from “0” to “1” on the screen. Then press “C” to validate the cleaning start and change the code.

To stop a cleaning: press the “-” key and it will change from “1” to “0” on the screen. Then press “C” to validate the cleaning stop and change the code.

- **Code 04:** The unit can be stopped or reactivated with this code. If the unit is at STOP or SP A (manual stop or stop due to breakdown input) a “1” will be displayed, and when the unit is available a “0” will be shown. No cleaning is started while the unit is at stop position.

To set the unit at STOP: Press the “+” key and it will change from “0” to “1”. Then press “C” to validate and change the code.

To set the unit out of STOP: Press the “-” key and it will change from “1” to “0”. Then press “C” to validate and change the code.

PROGRAMMING

Codes 5 to 12 correspond to the programming values of the unit, units between cleanings, cleaning time per filter, etc.

- **Code 05:** The units that have to go by between two cleanings are to be entered here. If the unit is configured to *work by time*, the units will be in hours: minutes, up to 99 hours 59 minutes. The cleaning time between filters will only be decreased when the contact of input 2 (flow detector) is activated. If it is configured *by volume*, the units correspond to pulses received from the volume counter. The maximum number of volume units is 99999.
- **Code 06:** The cleaning time per filter 1 have to be indicated here. The maximum cleaning time is 999 seconds.
- **Code 07:** Cleaning time per filter 2.
- **Code 08:** Cleaning time per filter 3.
- **Code 09:** Cleaning time per filter 4.
- **Code 10:** Cleaning time per filter 5.
- **Code 11:** Cleaning time per filter 6.
- **Code 12:** *Pause between filters*. The pause seconds to be left between filters are programmed here.

CONFIGURATION

The parameters needed to adapt the unit to the necessities of the installation are to be entered in configuration. These parameters are: number of filters, whether we want to work by time or by volume, whether there is general outlet, delays in the input detection, etc.

The section of configuration is separated from the others and we access it by a combination of keys. A code is displayed on the last two digits on the left in order to relate the values shown on the screen with their meaning. This code is formed by a “C” and a number. In configuration there are six codes.

Press “C” and “+” keys at the same time to access configuration. The “C” key is used to change the code. The “+” and “-” keys are used to change the values of the different parameters. Press “C” and “-” at the same time to go back to consultation.

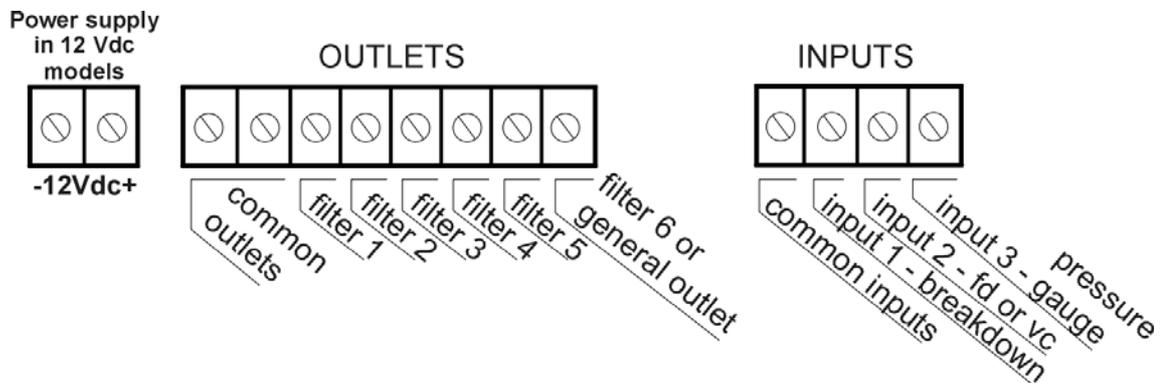
The meaning of everyone of the codes is the following:

- Code C0: The desired delay for the breakdown input is entered here. This is the minimum time that the signal has to appear to be considered valid. The time is in seconds. This delay may be increased by a maximum of 15 seconds because of the internal working of the unit.
- Code C1: The desired delay for the input of the differential pressure gauge is entered here. The time is in seconds. This delay may be increased by a maximum of 15 seconds because of the internal working of the unit.
- Code C2: The number entered here indicates the quantity of filters that exist in the unit. The ma-

ximum number will be 6, if a general outlet is not configured, or 5 if there is one.

- Code C3: A "0" in this code indicates that the unit does not have a general outlet. A "1" indicates that outlet 6 is going to be the general outlet.
- Code C4: A "0" in this code indicates that the unit is going to work by time. A "1" indicates that it is going to work by volume.
- Code C5: It is used to erase the cleaning counter. A "1" is to be set in this section to erase it (by means of the "+" key) and the "C" key is pressed to validate and change the code.

INPUTS AND OUTLETS



INPUTS

The unit has three digital inputs which are used to stop the cleaning when there is a *breakdown*, as *flow detector* or *volume counter* and to start cleanings by *differential pressure gauge*. The state of the inputs can be seen at code 02 which corresponds to *consultations*.

Input 1: This input corresponds to BREAKDOWN. If the input is active longer than it was programmed at "configuration - code C0", it produces the immediate stop of the cleaning and the letters "SP A" are displayed on the screen. When a breakdown has taken place, no other cleaning is started until the unit is activated manually with the code 04. This input is only taken into account while the filter cleaning is being carried out, if the input is activated in the period *between cleanings*, it would not be taken into account.

Input 2: This input changes its function according to the configuration of the unit, either by time or by volume. In the first case, the input is connected to the FLOW DETECTOR, in the second case to the VOLUME COUNTER.

When the unit works by time, the time between cleanings will not be decreased unless this input is connected. If it is disconnected while a cleaning is being carried out, this one will continue until it finishes. When the unit works by volume, the counter impulses must have a minimum time of 30 seconds between them. The impulse must persist a minimum of 15 seconds, otherwise the unit could not be recognized.

Input 3: Corresponds to the DIFFERENTIAL PRESSURE GAUGE. If the input is active longer than it was programmed at "configuration - code C1", the unit starts a cleaning cycle (as long as the unit is not at stop or breakdown).

OUTLETS

The unit has 6 outlets to activate the two-wired "latch" solenoids. Every one of these outlets will correspond to a filter. If the unit is configured to have a *general outlet*, this one will be number 6. This outlet will be activated while the filter cleaning is taking place. The distance between the "latch" solenoids and the controller can not be superior to 1.5 m.

CHARACTERISTICS OF THE UNIT

Power supply			
	Power source	9 Vdc alkaline battery	12 Vdc
	Energy consume	Average consume: 0,7 mW	Average consume: 0,7 mW

Outlets		
	Number	6
	Type	By relay contact, with 15 Vac potential

Inputs		
	Number	3
	Type	To connect to free potential contacts

Environment	
Temperature	0° C to 45° C
Humidity	< 85 %
Height	2000 m.
Pollution	Grade II

Weight (approximate)	
Battery included	0,5 Kg

Memory backup	
Parameters, programs	It can not be erased

DECLARATION OF CONFORMITY

It follows the 89/336/CEE Guidelines for the Electromagnetic compatibility and the 73/23/CEE Guidelines of Low Tension for the Fulfillment of the Product Security. The fulfillment of the following specifications was demonstrated as indicated in the Official Diary of the European Communities.



AUTONOMY

The following table shows the approximate autonomy of the different batteries that may be found on the market:

Manufacturer	Model	Maximum capacity (mAh)	Without activation or connected input	1 input plus 5 filters and 2 washes per day	2 inputs plus 5 filters and 5 washes per day
Varta	4022-8022-4922-4822	550	10 months	9 months	8 months
Duracell	Ultra	580	10 months	9 months	8 months
Panasonic	PowerMax	680	12 months	11 months	10 months
Panasonic	PowerMax3	700	12 months	11 months	10 months
Energizer	EN22	640	11 months	10 months	9 months
Rayovac	A1604	565	10 months	9 months	8 months

The calculations of the table have been calculated considering the following parameters:

- ✓ IrriFiltros consumption at rest: 78 μ A
- ✓ Consumption by each connected input: 6 μ A
- ✓ Activation and deactivation of valve per day: 3 μ A

Considerations of use: Given that the 9V batteries have +/- poles next to each other, they must be handled carefully so they do not create short circuits. Auto-discharge may be 20% over 5 years.

Elimination: Deposit used batteries in battery recycling containers. Alkaline batteries respect the environment, as they are mercury-free.

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