CONTROLLER 3000

ENGLISH

INDEX

1. DESCRIPTION CONTROLLER 3000.

1.1 DESCRIPTION

Controller 3000 is a Fertigation Controller for the dosage of 6 different Products and on-line Control of the most important Parameters to adjust for each area in an Irrigation System: Flow, pH, Conductivity and Pressure.

Inputs:
-Flow meter: Reading of the instantaneous Water Flow in the System.
-Electrical Conductivity (EC): Reading of the Water Conductivity in the System.
-pH: Reading of the Water pH in the System.
-Pressure: Reading of the Pressure in the System.
-Inputs of Remote Control Channels A/B.
-Fertigation Programme Inputs (Controller 3000-6/12): Information Inputs about the enabled Irrigation Area: By the signal of a simple Irrigation Programmer, Controller 3000 identifies the enabled Irrigation Area and will carry out the previously programmed Treatment for this Area.

Outputs:
-6 analogue Outputs for Metering Pumps.
-Independent Alarms Outputs for Flow, EC, pH and Pressure.
-USB1 Port for a USB Memory Device (pen drive): it allows storing Records, Configuration and Programming of the Controller 3000, and to load a new Configuration and Programming previously executed by the Fertigation SCADA installed in the PC.
-USB2 Port for the connection to PC. It allows connecting the Controller to a computer with the Organic Irrigation SCADA installed, so you can visualize in real time the development of the Sensors Readings and Dosing Pumps Adjustment.

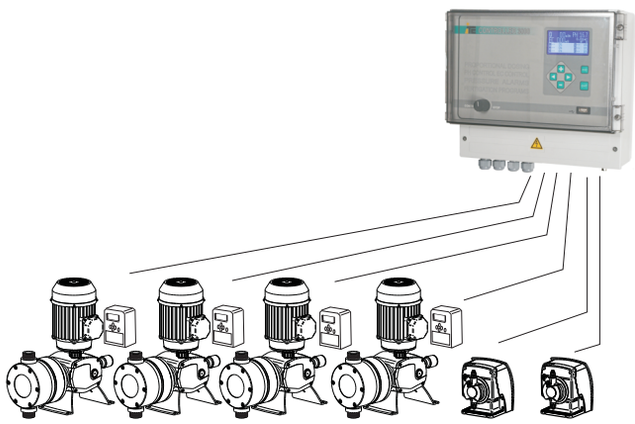
Fertigation SCADA:

PC Software for Data Supervision, Control and Acquisition:
-Graphic Visualization in real time of all the variables executed by Controller 3000.
-Graphs about the Development of Readings with maximum and minimum Values.
-Table with Records exportable to a Spreadsheet.
-Incidences List: Date, Time and Alarm type.
-Traceability Document for each Irrigation Area: Consumption of Water, Fertilizer, Acids and Additives. Medium, maximum and minimum Values of pH, EC, Flow and Pressure. Alarms during the selected time.

1.2CONFIGURATION OPTIONS

INDEPENDENT DOSING PUMPS

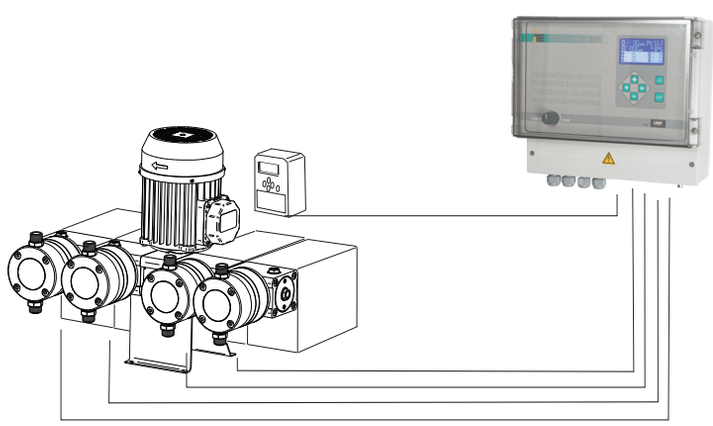
Independent Flow Control for up to 6 different Dosing Pumps, with Frequency Variators or analogue Control Dosing Pumps. Each dosing pump can be programmed for a fixed Flow dependent on each Programme, a Flow proportional to the instantaneous Irrigation Flow, Conductivity or pH Set Point.



MODULAR DOSING PUMPS WITH FREQUENCY VARIATORS AND SERVOMOTOR

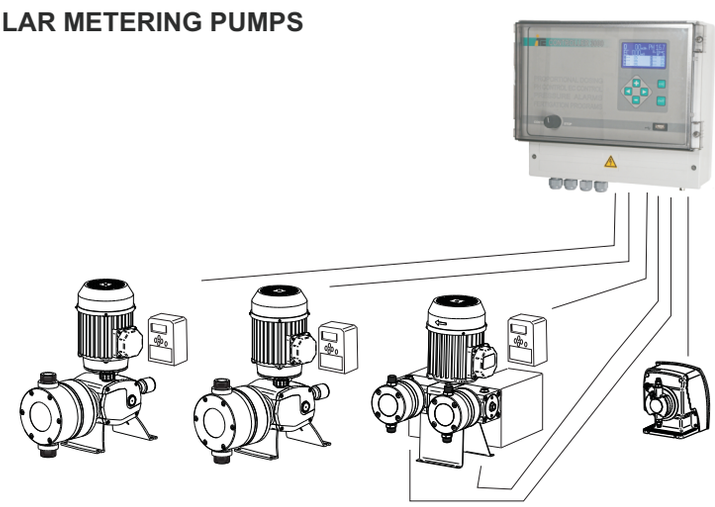
Flow Control for up to 5 different Products by a simultaneous Adjustment of a Frequency Variator and some Servomotors. Controller 3000 calculates the Flow according to the Frequency Variation of the Injections and the Location of each Servomotor.

Controller 3000 optimizes the Performance of MULTIFERTIC Dosing Pumps, obtaining the maximum Performance level by combining both Adjustment Systems, and with the chance of applying from 1% to 120% of the rated Flow of each module, by combining ideally the Frequency and Stroke in each moment.



MIXED EQUIPMENT WITH INDEPENDENT AND MODULAR METERING PUMPS

Flow Control for up to 5 different Products, some of them with independent Dosing Pumps, and some with modularDosing Pumps with Frequency Variator and a Servomotor for each module.

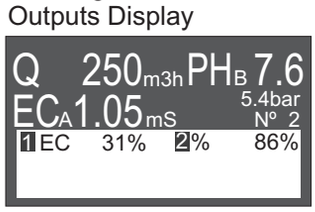


1.3. EQUIPMENT DESCRIPTION

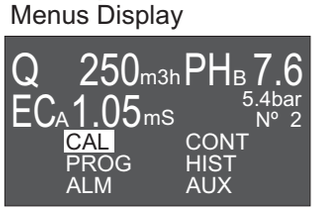
1. CONTROL/STOP Switch:
   STOP: for the Control, allows the Calibration
2. Wiring Plate
3. LCD Screen
4. Keyboard: ENT to validate, ESC to quit without validating, +/- to increase/decrease Value, </> to scroll to left/right.
5. USB1: USB Port to connect a flash drive.

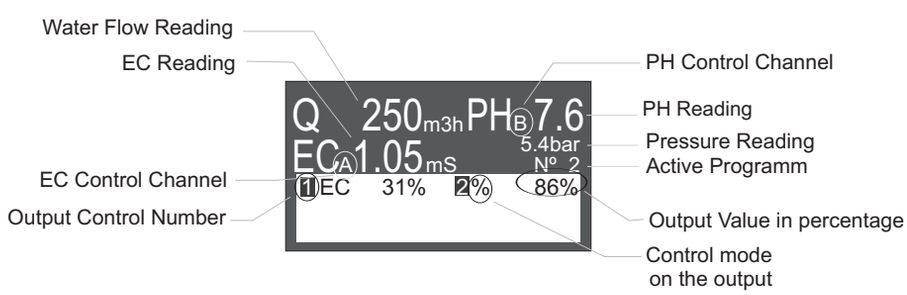
LCD SCREEN DESCRIPTION

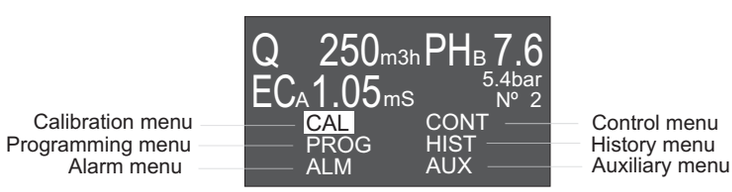
Readings Screen with Outputs Display



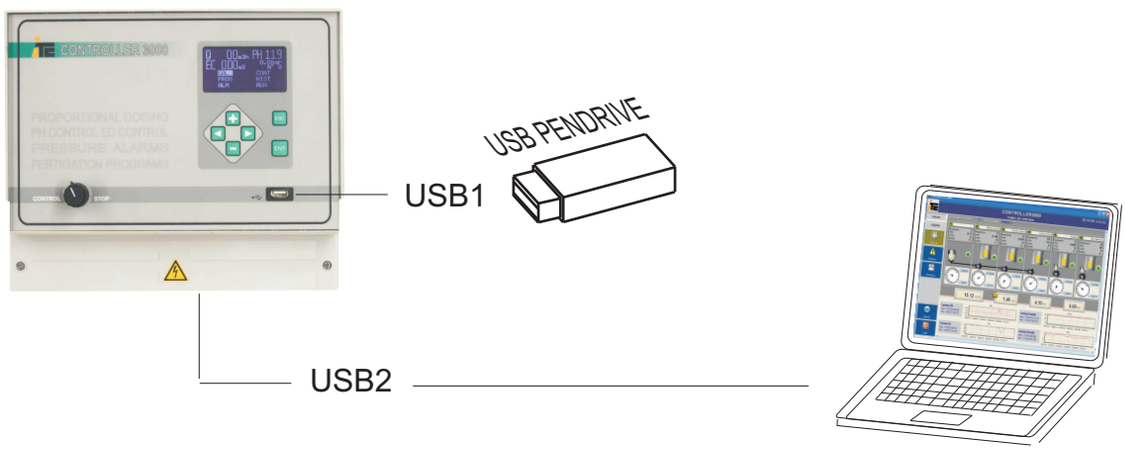
Readings Screen with Menus Display







1.4. USB COMMUNICATION PORTS

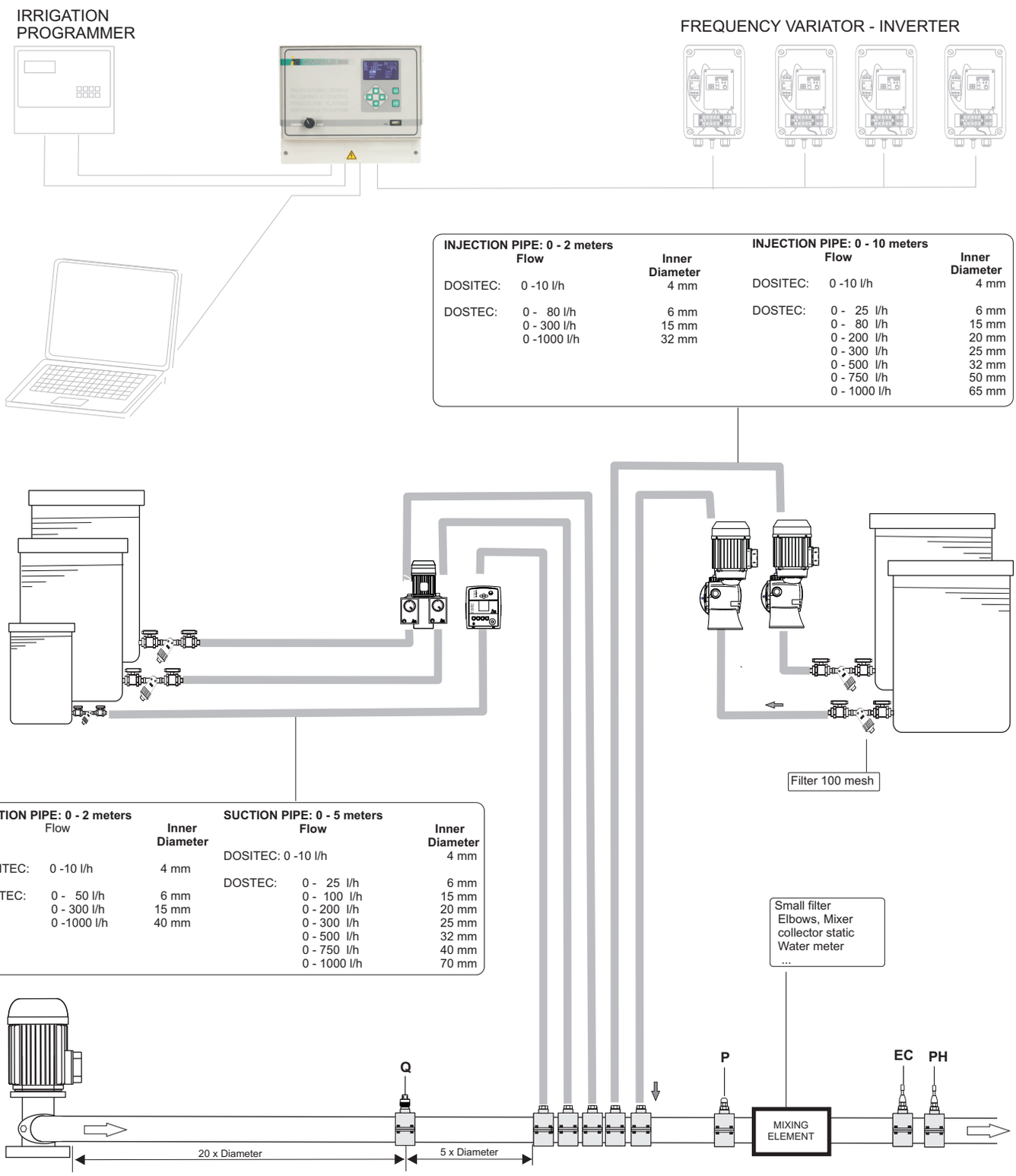


USB1 port
For USB memory (pendrive): It allows to save historical data, configuration and programming of Controller 3000, as well as to load a new configuration and programming made previously with the Fertirrigation SCADA installed in a PC.

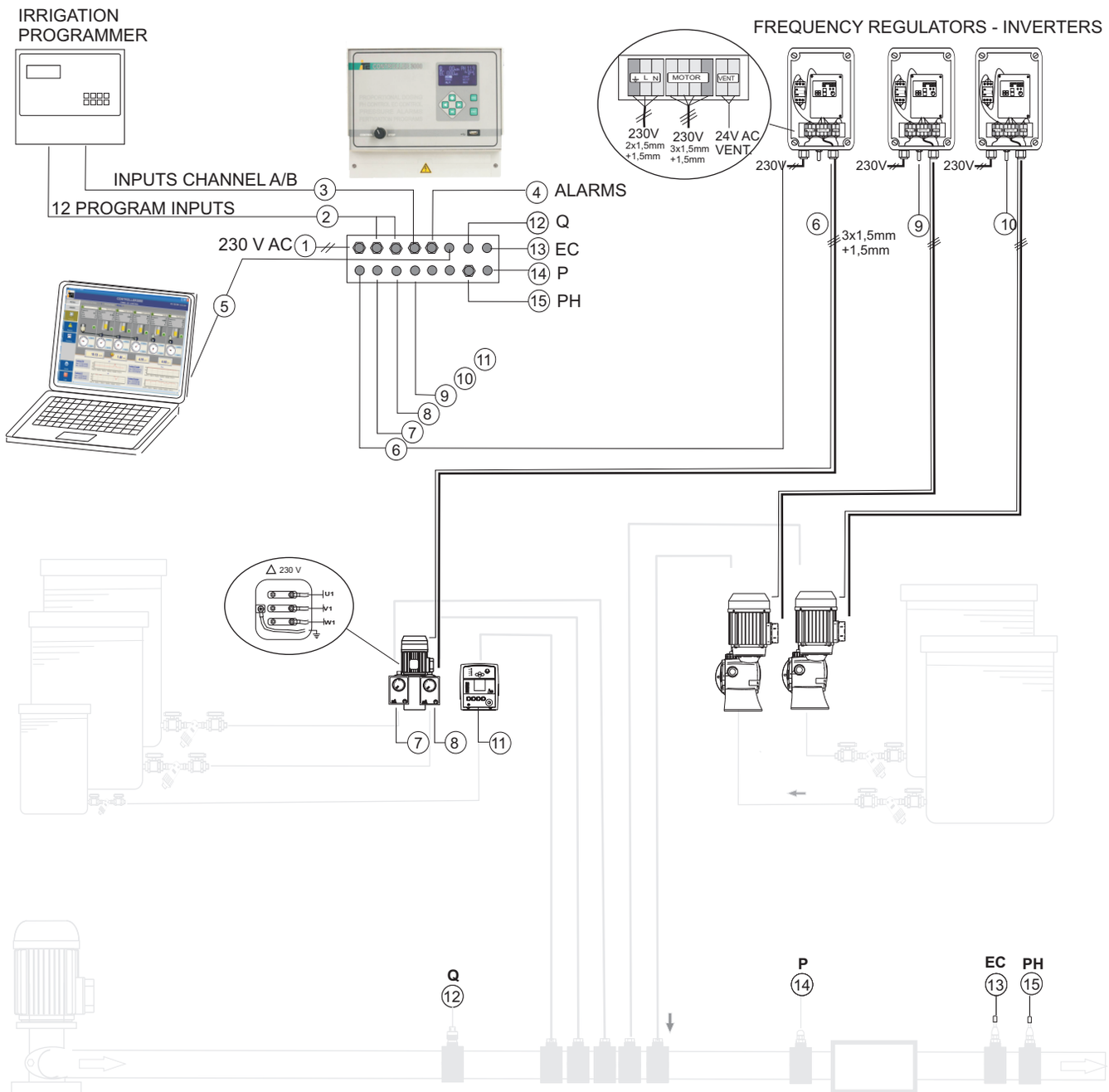
USB2 port
For PC connection. It allows to connect the controller to a computer that it has the fertirrigation SCADA installed and thus to view the evolution of the readings of the sensors and the regulation of the dosing pumps in real time.

> ⚠ Do not use simultaneously port USB1 and USB2.
>
> Desconect port USB2 before connecting a pendrive in port USB 1.

2.1 HYDRAULIC SCHEME



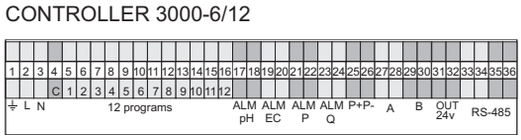
2.2 ELECTRICAL SCHEME



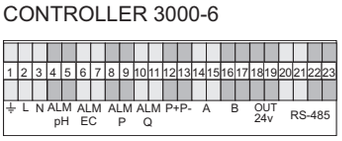
① Power 230 V AC +/- 20%, 50/60Hz
② Program input: digital input of 12-24V AC/DC
③ Remote activation input selection, channel A/B. 24V AC.
④ Alarm outputs. Relay outputs NA, 24V AC-1A máx
⑤ Port output USB2, for connection to PC
⑥ Output 4-20 mA, nº1 (5 pins connector)
⑦ Output 4-20 mA, nº2 (5 pins connector)
⑧ Output 4-20 mA, nº3 (5 pins connector)
⑨ Output 4-20 mA, nº4 (5 pins connector)
⑩ Output 4-20 mA, nº5 (5 pins connector)
⑪ Output 4-20 mA, nº6 (5 pins connector)
⑫ Input for flowmeter (3 pins connector)
⑬ Input for sensor of EC (4 pins connector)
⑭ Input for pressure transmitter
⑮ Input for sensor of pH (connector BNC)

TERMINAL CONNECTION

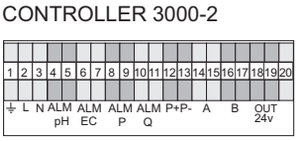
CONTROLLER 3000-6/12



CONTROLLER 3000-6



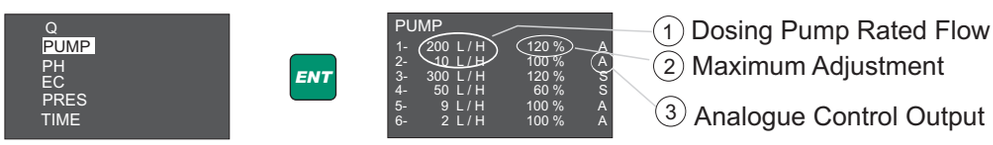
CONTROLLER 3000-2



3.1 CONFIGURATION: “CAL” MENU

> To Calibrate, set the switch to **STOP**

3.1.1 DOSING PUMPS CONFIGURATION



Change Values by pressing +/-, press <> to scroll on the Menu, and validate the Configuration of the 2 Outputs by pressing ENT.

① **Rated Flow**:
Introduce the Rated Flow at 50 Hz of the dosing pump.
Leave “--“ when the Output is V.

② **Maximum flow in %**
%<100: Introduce a percentage lower than 100 to limit the 4-20mA Output to a value lower than 20mA, for example due to an over sized pump or when an acid too concentrated is dosed.

%>100: Only for dosing pumps with frequency variator, when this is programmed to work at frequency higher than 50Hz. For maximum Frequency of 60 Hz the maximum Adjustment will be 120%.

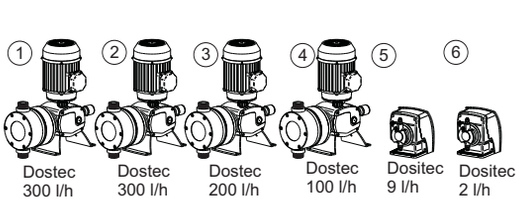
③ **Type of output:**
A: Analogue independent Output: for Electromagnetic Pumps (Dositec) and Pumps with Electric Motor and Frequency Variator (Dostec).

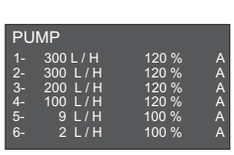
V: Analogue Master Output for a Variator in multihead Pump with Servos: to control the Output that regulates the speed of the Motor of a multihead Pump (MF-Multifertic) provided with Servos for the independent Adjustment of each Head.
Only one V-type Output can be configured, and there should be an Output configured as S.

S: Analogue Output for Servos in multihead Pump, with Adjustment of the Motor by Frequency Variator (V Output)

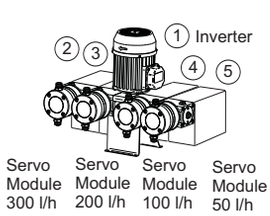
EXAMPLES OF DOSING PUMPS CONFIGURATION

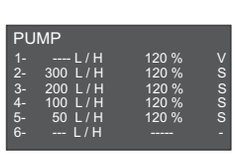
4 Dostec with frequency inverter
2 Dositec.



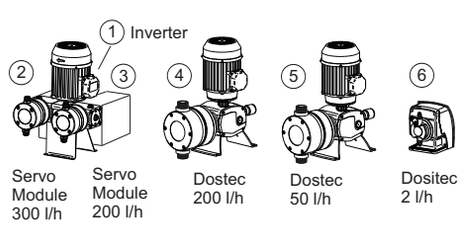


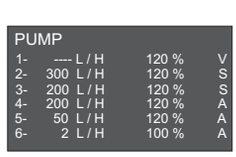
Multifertic 4 heads with
Servos in each module.





Multifertic 2 heads with servos
2 Dostec 1 Dositec.



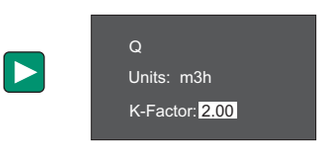


3.1.2 FLOWMETER CALIBRATION

> To Calibrate, set the switch to **STOP**

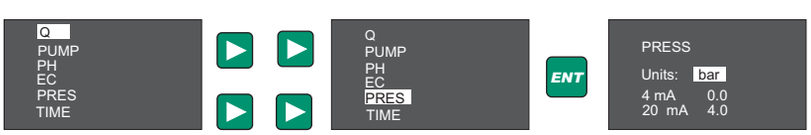
Change Units by pressing +/- and validate by ENT:
m3h: Water Flow in m3/h
Dosage Flow in l/h

gal: Water Flow in GPM
Dosage Flow in GPH



K-Factor (pulses/litre or pulses/gallon):
Please refer to Manual Instructions of Flow Meter in accordance with the type and size of the pipes where it is installed.
Change Value by pressing +/- and validate by ENT

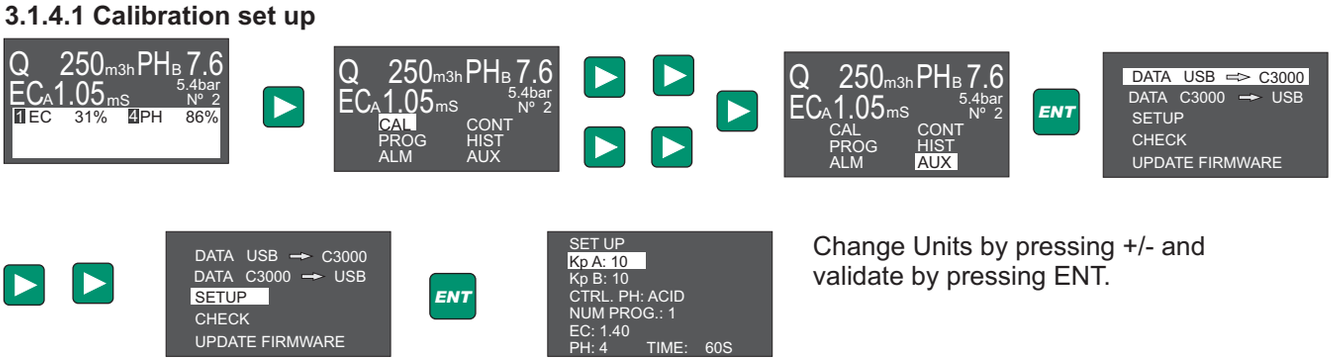
3.1.3PRESSURE TRANSMITTER CALIBRATION



Change Units by pressing +/-. Press > to scroll on the Menu and introduce the Pressure corresponding to 4mA and 20mA. Validate values pressing ENT.

3.1.4 EC AND PH CALIBRATION

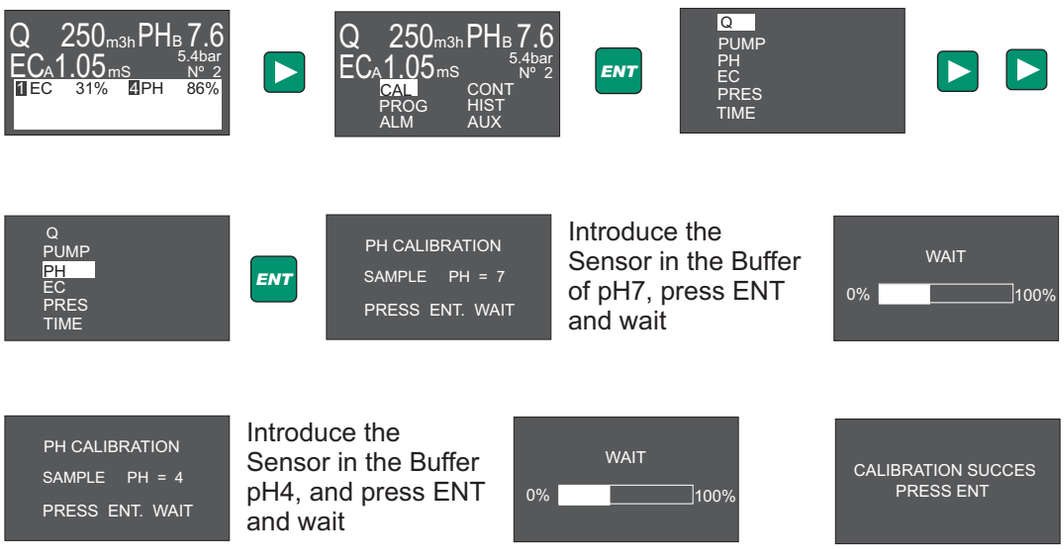
3.1.4.1 Calibration set up



Change Units by pressing +/- and validate by pressing ENT.

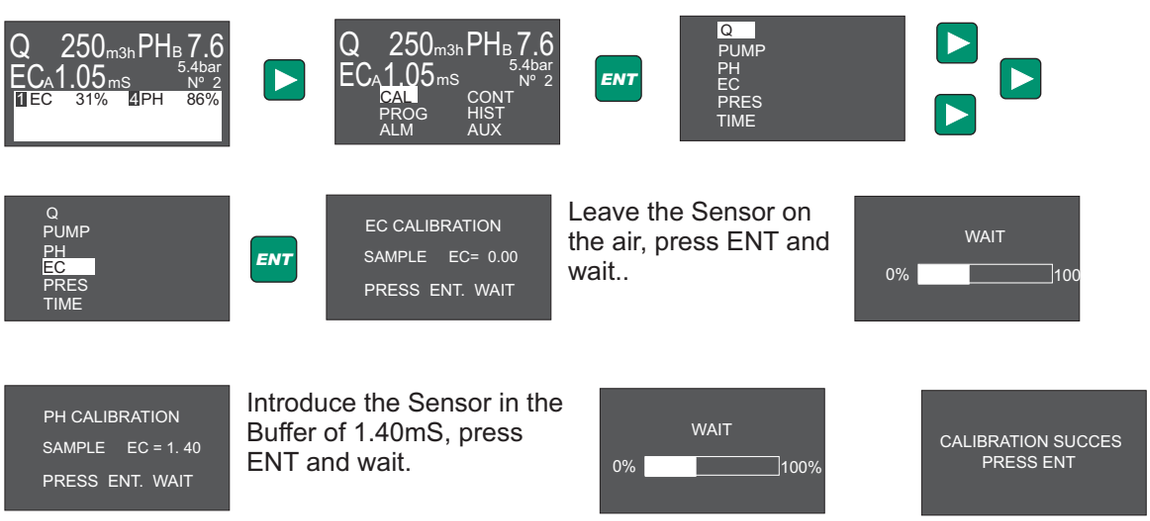
CTRL. PH: ACID/ALKALINE: defines if the pH Control is executed by adding Acid (ACID) or Base (ALKALINE)
EC:1.40: defines the EC buffer used. It can be modified by pressing +/-
PH: 4 Time 60s: defines the pH Buffer and the Stabilization Time for the Sensor Calibration.

3.1.4.2. PH SENSOR CALIBRATION .



Validate the pH Calibration by pressing ENTER.

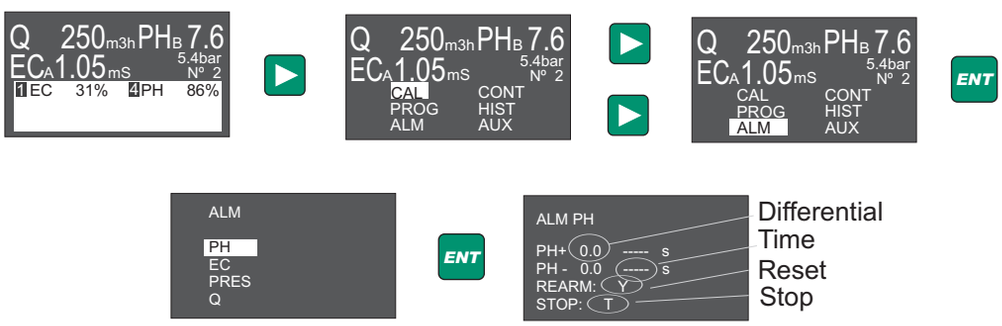
3.1.4.3 EC SENSOR CALIBRATION.



Validate the EC Calibration by pressing ENTER.

3.2. ALARMS

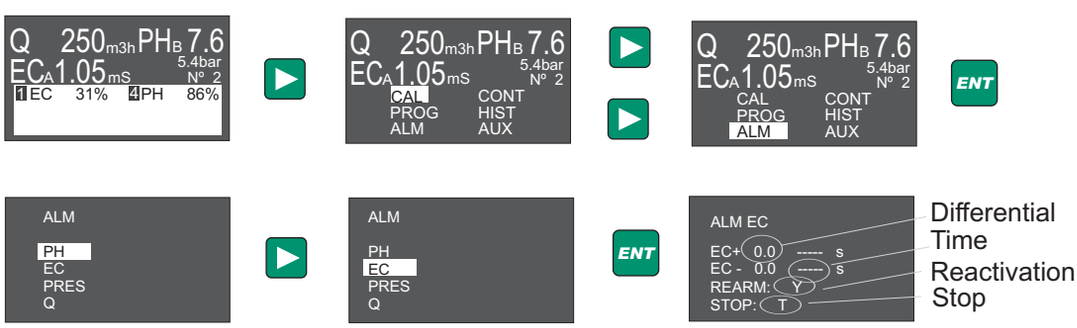
3.2.1 PH ALARM



Change Units by pressing +/- and validate with ENT:

Differential: Value to add/ subtract from the Set Point, from which the Alarm is activated
Time: Time required for activating the Alarm
Reset: automatic Reset of the Alarm when the Reading returns to correct Values.
Y: Reset activated
N: There is no Reset. Press ESC to deactivate the Alarm
STOP: in case of Alarm it stops the Control of:
T: Everything
A: Pumps in Channel A
B: Pumps in Channel B
N: Nothing

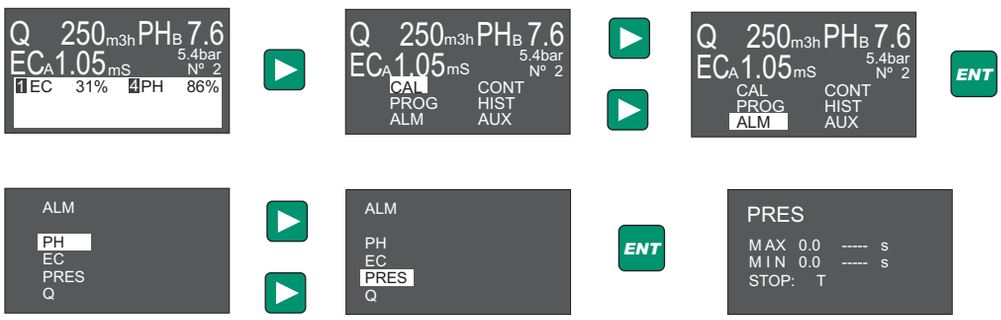
3.2.2 EC ALARM



Change Units by pressing +/- and validate by ENT.

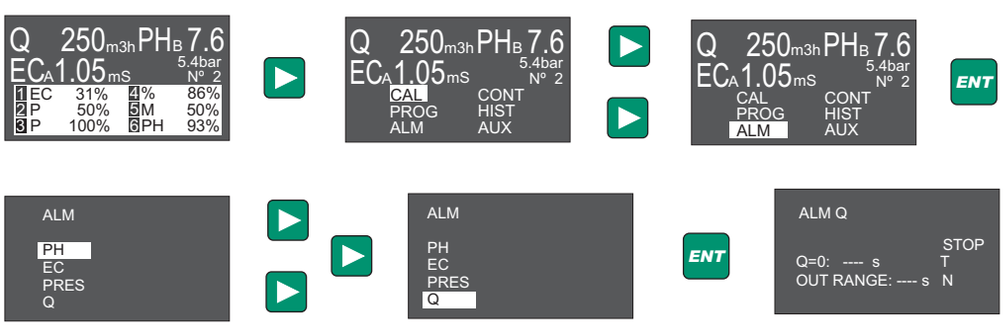
Differential: Value to add/ subtract from the Set Point, from which the Alarm is activated
Time: Time required for activating the Alarm
Reset: automatic Reset of the Alarm when the Reading returns to correct Values.
Y: Reset activated
N: There is no Reset. Press ESC to deactivate the Alarm
STOP: in case of Alarm it stops the Control of:
T: Everything
A: Pumps in Channel A
B: Pumps in Channel B
N: Nothing

3.2.3 PRESSURE ALARM



Change Units by pressing +/- and validate by ENT:
MAX: Maximum Pressure
MIN: Minimum Pressure
Time: Time required for activating the Alarm
STOP: in case of Alarm stops:
T: Everything
N: Nothing

3.2.4 FLOW ALARM



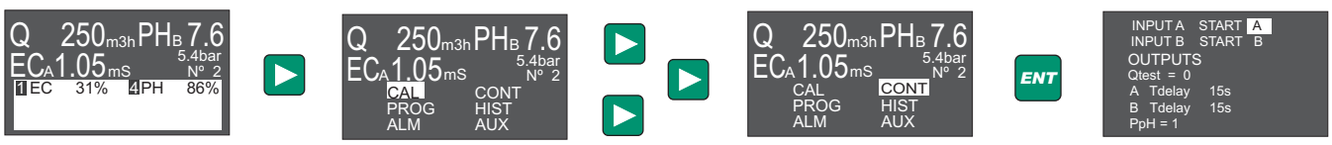
Change Units by pressing +/- and validate by ENT.

Q=0: Alarm when there is no Flow and the Control is activated.
OUT RANGE: Alarm of Dosing Flow out of the capacity of the Pump.
Time: time required for activating the Alarm
STOP: in case of Alarm stops:
T: Everything
A: Pumps in Channel A
B: Pumps in Channel B
N: Nothing

3.3 ADVANCED CONTROL OPTIONS.

3.3.1. REMOTE CONTROL: CONFIGURATION CHANNELS A/B.

Configuration from channels A and B.

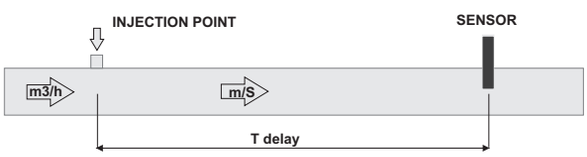


Change Units by pressing +/- and validate by ENT.

INPUTS: Configuration of the Remote Control Inputs in Channels A and B. It allows configuring each Input with its Channel, and activating both Channels just by one Input.
A START: A. Activates pumps programmed A when 24Vac are used at the terminals of channel A.
A+B. Activates pumps programmed A or B when 24Vac are used at the terminals of channel A.
B START: A. Activates pumps programmed A when 24Vac are used at the terminals of channel A.
A+B. Activates pumps programmed A or B when 24Vac are used at the terminals of channel A.

3.3.2. PI CONTROL PARAMETERS

OUTPUTS:
Delay Time Configuration in the System for Channels A and B, corresponding to the Time passed between two consecutive Orders from the Controller (see System Start-Up).



A fixed Delay Time can be defined (Q Test=0) or proportionally inverse to the Flow.
Q Test=0: it allows establishing a Flow as Reference for defining the Delay Time (Tdelay) changeable by the Flow. If Q Test =0 Delay Time is constant.
A Tdelay: 15s Delay Time in Channel A
B Tdelay: 15s Delay Time in Channel B

Example:
For 8" Pipe, Flow 100m3/h, water Speed is approximately 1m/s. If the distance between the Injection and Sensor Point is 10m, the Delay Time of the System will be 10 seconds.

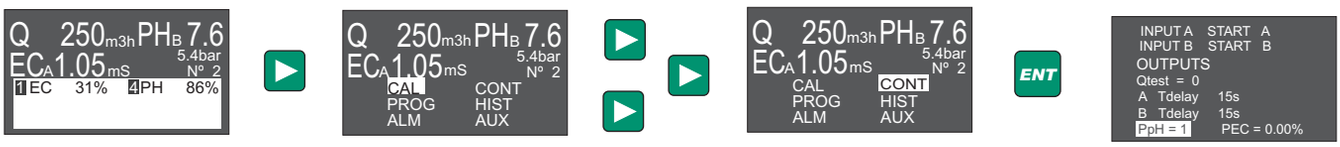
The Sensor will have a Reaction Time (approximately 10 seconds for the pH Sensor), which should be added to the Delay Time of the System. Therefore, we should set a Tdelay = 20 seconds.

If there is a Filter between the Injection and Sensor Point, the Calculation of 10metersx1m/s = 10 seconds is no more valid.

Therefore, **TDelay** changes when the Flow of the System change. To optimize the Adjustment, the TDelay can be associated with a certain Flow (Q Test), so Controller 3000 changes **TDelay** according to Water Flow. **TDelay** is limited from 5 to 120 seconds.

How to find Tdelay
1.-Start the irrigation make sure that there is no dosage of products.
2.-Wait until the readings of the sensors are stable.
3.-Start manually a dosing pump, for example fertilizer. In the same moment start a chronometer.
4.-After some time the reading of the sensor will start increasing up until its stable. In this moment the chronometer will stop, and Tdelay is found.

3.3.3 CONFIGURATION FOR A pH CONTROL IN PIQ MODE (PPH)



Change Units by pressing +/- and validate by ENT.

PIQ control mode for the pH adjustment is a PI algirithm conditioned by the water flow. By means of the PpH parameter the system set an initial proportional dosage. Later on the controller modifies the dosing flow following a standard PI adjustment.
PpH can only be activated by independent pumps (outputs type A to dosify acid). It gives a better stability of pH even with very variable flow and gives a better answer of the system to reach and keep readings at Set Point value.

PARAMETERS OF CONTROL PIQ:
PpH=0: PIQ disabled

PpH = 1-200 The variable PpH corresponds to the initial concentration of applied reagent, expressed in parts for 100.000.

Example: For a flow of 200.000 l/h of water and a PpH = 1, the proportional dosage of acid corresponds to: (1 / 100.000) x

The necessary proportion of reagent to reach a certain pH will depend not only on his nature and concentration, but also on the nature of the water to treat and of the rest of dosed products that they could influence this parameter. Next we detail the status of values PpH advised for a fast answer and stability in the pH.

The following table for different acids is an approach of the value PpH for these acids according to the correction of necessary pH (1 or 2 points of pH).

Table for nitric acid.

A	1point	2 points
60%	4-10	10-20
40%	8-15	15-30
10%	30-60	60-120
5%	60-110	120-200

Table for phosphoric acid.

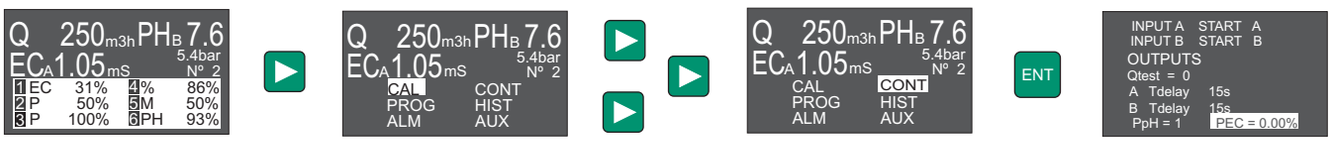
A	1point	2 points
80%	3-8	8-15
50%	6-15	15-25
10%	30-60	60-120
5%	60-110	120-200

Table for sulphuric acid.

A	1point	2 points
95%	1-3	2-5
50%	2-5	4-10
10%	10-25	20-50
5%	20-50	40-100

Note: The A column corresponds to the concentration of acid.

3.3.4 CONFIGURATION FOR A EC CONTROL IN PIQ MODE (PEC)

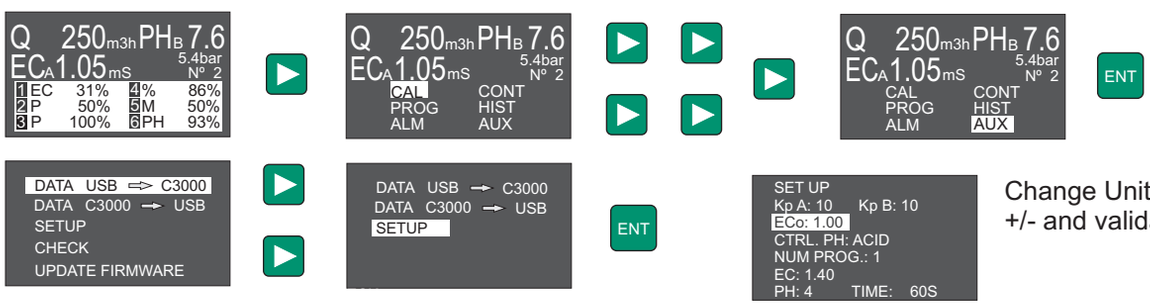


Change Units by pressing +/- and validate by ENT.

PIQ control mode for the EC adjustment is a PI algirithm conditioned by the water flow. By means of the PEC parameter the system set an initial proportional dosage. Later on the controller modifies the dosing flow following a standard PI adjustment.

PEC=0 Control PI. PIQ disabled.
PEC= 0.01 - 2% Initial proportional flow in %.

It is necessary to define the clean water EC value (ECo)in the Set UP menu.



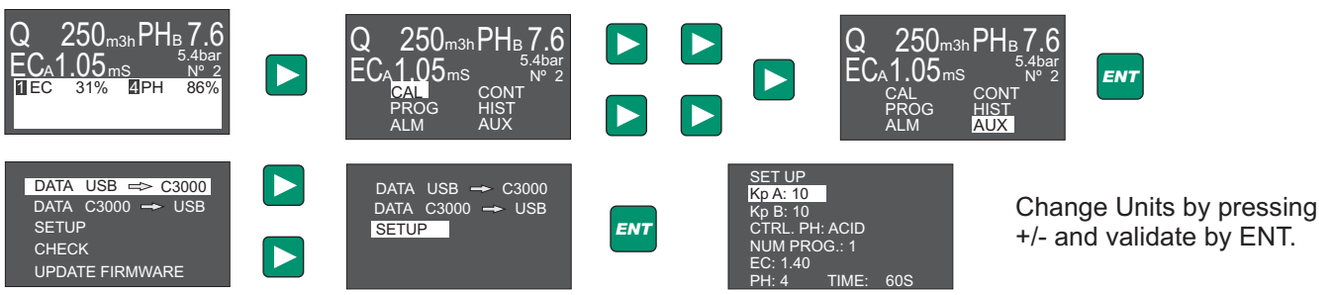
Change Units by pressing +/- and validate by ENT.

The initial proportional value PEC must be introduced for the fertigation program with lower EC set point (The set points lower han ECo are not considered).

The initial proportional value for the other fertigation programs is odified proportionally to the difference between Set Point and ECo.

3.4. ADVANCED SET UP OPTIONS.

3.4.1. ADVANCED CONFIGURATION OF PI CONTROL PARAMETERS



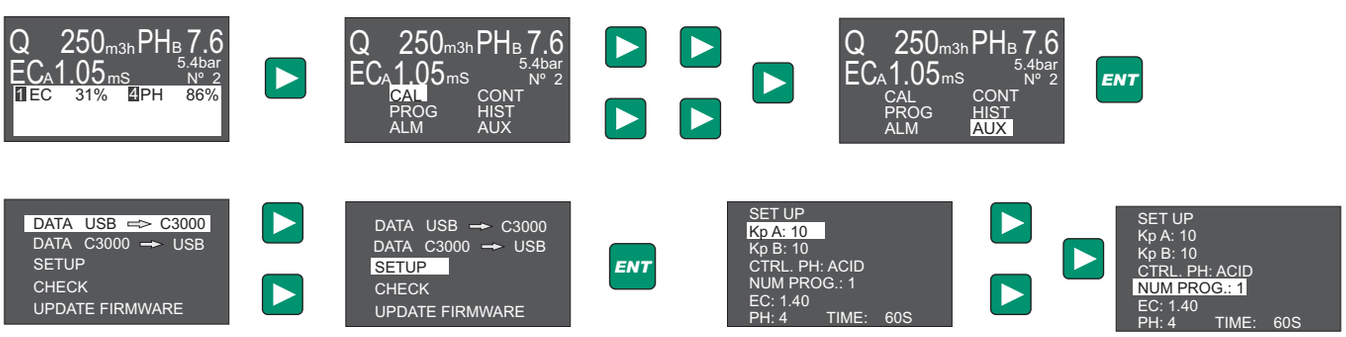
Change Units by pressing +/- and validate by ENT.

Constant Kp of channel A: it is recommended to maintain the value of 10. A higher value, it will get to the Set Point quicker, but it will not be stable quickly, if the value is too high it can unstabilize the dosage.
Constant Kp of channel B: it is recommended to maintain the value of 10. A higher value, it will get to the Set Point quicker, but it will not be stable quickly, if the value is too high it can unstabilize the dosage.

3.4.2. CONFIGURATION OF NUMBER OF FERTIGATION PROGRAMS.

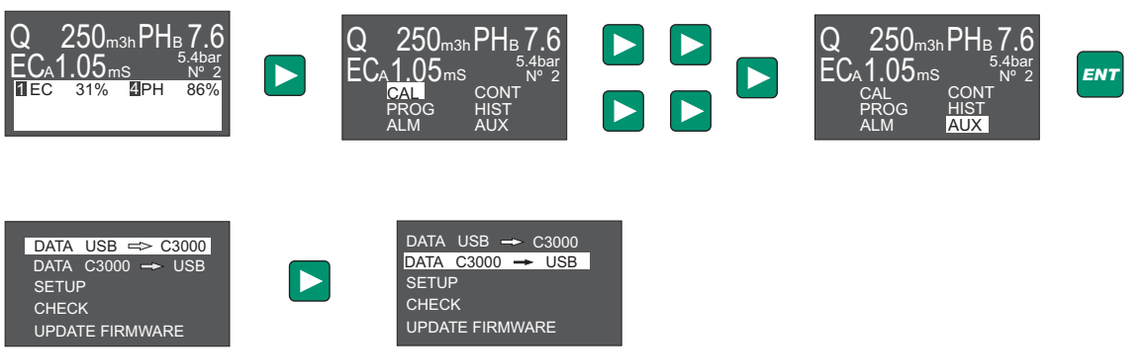
Number of programs: According to the installed equipment it is possible to have 1, 12, 24, 36, or 48 programs. It is necessary to indicate the number of programs to use, which will be lower or equal to the available programs in the equipment.

Exemple: Controller has 12 programs, and just 5 programs are required. Number of programs will be from 5 to 12.



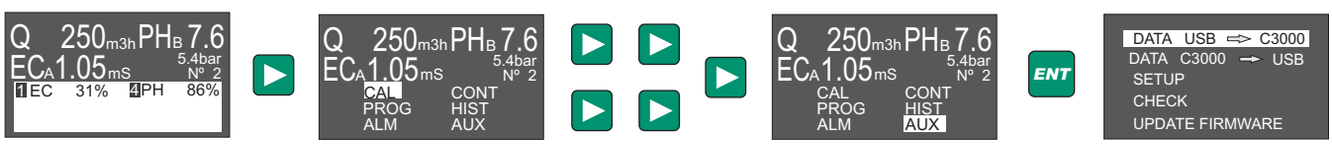
3.4.3. CONFIGURATION FILE

GENERATE CONFIGURATION FILE FROM THE CONTROLLER 3000. PORT USB1.



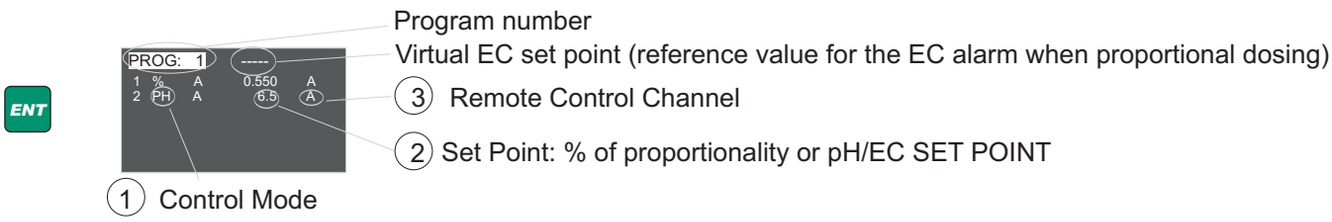
Option of downloading the Configuration and Programming to a pendrive.

LOAD CONFIGURATION FILE IN THE CONTROLLER 3000. PORT USB1.



Option to load the Configuration and Programming from a pendrive.

4.1. CONTROL MODES



Change the program to edit by pressing +/- and validate by ENT.
Use <> to scroll on the Menu and validate the Program by ENT

(1) CONTROL MODE

M - Manual: Manual Adjustment of the Dosage, in %.

% - PROPORTIONAL: Proportional Dosage of the Irrigation Flow, in %.

EC - EC Set Point: Dosage of one or some Products to reach a certain EC Value (Set Point).

P - Dosify more than one Product by EC Set Point, a Proportion (P) between these Products must be established. In this case, **Virtual EC Set Point** must be used to introduce the EC Set Point, and specify a Proportion of Relation between the Outputs configured as P.

PH - PH Set Point: Dosage of one or some Products to reach a certain pH Value (Set Point).

(2) SET POINT OR DOSE IN % :

When the Outputs are configured as EC or pH, the Value for this field corresponds to the Set Point Value.
For Outputs configured as %, the Value of this Field corresponds to the Proportion Value.
For Outputs configured in manual Mode, the Value of this field corresponds directly to the % of Dosage Adjustment.

(3) CONTROL CHANNEL A/B:

It is possible to select two different Remote Control Channels: A and B. Each Channel has an independent Activation Input, which allows to start-up the Pumps programmed for a Channel and keep the Pumps of the other Channel stopped.

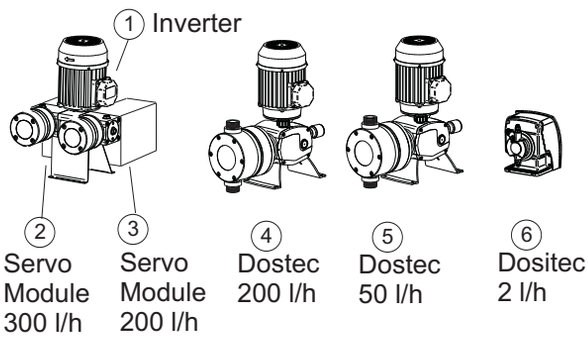
Each Control Channel has its PI Control Parameters (see Control Menu), to see each adjustment, pH and EC.

> If an intermitent value appears when validating by ENT, it indicates the Program is not correct. Check for errors.

Errors of programming are available in section 4.3 Errors of programming.

4.2. PROGRAMMING EXAMPLES

1x Multifertic 2 heads with 2 servos, 2x Dostec, 1xDositec.



Pumps configurationss

PUMP				
1-	----	L / H	120 %	V
2-	300	L / H	120 %	S
3-	200	L / H	120 %	S
4-	200	L / H	120 %	A
5-	50	L / H	120 %	A
6-	2.0	L / H	100 %	A

Example 1:
Outs 1,2,3: Modular pump for a proportional addition of 2 products (out 2 and 3)
Proportionality out 2: 0.200%
Proportionality out 3: 0.300%
Out 4: Dosing pump for and addition of a product acording to an EC set point.
EC set point out 5: 2.50mS
Out 5: Dosing pump for a proportional addition of one product
Proportionality out 5: 0.100%
Out 6: Dosing pump for a pH control.
pH set point out 6: 6.5

Programming

PROG: 1			------	
1	%	V	0.500	A
2	%	S	0. 200	A
3	%	S	0. 300	A
4	EC	S	2.50	A
5	%	A	0.100	A
6	PH	A	6.50	B

Remote control
The fertilizer outputs are linked to the A channel and the acid control to the B channel. Then the fertilizer can be switch on / off independently to the acid, and the PI parameters too.

Alarm:
The refrence value for the EC alarm is the EC set point.

Example **2:**
Outs 1,2,3: Modular pump for a proportional addition of 2 products (out 2 and 3) according to an EC set point. aporportion between both products is required.
Proportionality out 2: 2 parts
Proportionality out 3: 3parts
Out 4: Dosing pump for a proportional addition of one product
Proportionality out 4: 0.100%
Out 5: Dosing pump for a proportional addition of one product
Proportionality out 5: 0.150%
Out 6: Dosing pump for a pH control.
Consigna de pH de la salida 6: 6.5

Programming

PROG: 1			-----	
1	EC	V	2.40	A
2	P	S	2	A
3	P	S	3	A
4	%	S	0. 100	A
5	%	A	0.150	A
6	PH	A	6.50	B

Remote control
The fertilizer outputs are linked to the A channel and the acid control to the B channel. Then the fertilizer can be switch on / off independently to the acid, and the PI parameters too.

Alarm:
The refrence value for the EC alarm is the EC set point.

4.3 . ERRORS REGARDING THE PROGRAMMING.

Errors referred to EC Programming:

-Only one EC Set Point is possible

-If there is any Output configured as P (Proportion), an Ec Set Point must have been introduced.

If Control Outputs configured as P (Proportion) are Servo Outputs (S) the EC Set Point must be introduced in the V Output.

If Control Outputs configured as P (Proportion) are independent analogue Outputs (A) the EC Set Point must be introduced as Virtual EC Set Point. It is not possible to assign EC Set Point to an Output between 1 and 6.

-To establish a Relation between some Products that regulate to get the EC Set Point, each output of these products must be programmed with P. Therefore, it is necessary at least two Outputs configured as P.

-An Output configured as V (Variator for Multifertic on Servos) programmed to work with EC Set Point, allows only the Servos Outputs (S) to be programmed as P (Proportion), PH, or M (manual), but not as %.

-Only one pH Set Point is possible.

Errors referred to pH Programming:

-Only one pH Set Point is possible.

Errors referred to % Programming (Proportionality)

-When there is a Control Output configured as V, and it is programmed by Proportionality (%), Servos Outputs (S) must be programmed as % (Proportionality), PH, M (manual) or also a Servo Output as EC, but never as P (Relation of Proportion).

Errors referred to manual Programming (M)

-When there is a Control Output configured as V, and it is programmed as manual (M), Servo Outputs (S) must be programmed as M (manual) or PH.

DATA LOGGER

Controller 3000 has 1Mb of storage memory, which can store sensor values and products dosed.
Options in History menu can configure Sample Frequency, download Data to a USB Memory Device (pendrive), and check the Records of each Fertigation Programm on the Screen.

5.1 SAMPLE FREQUENCY

Change the Sample Frequency by pressing +/-.
In saving Period, the maximum Time stored for the introduced Sample Frequency is showed.
Validate pressing ENT.

5.2 SAMPLE DOWNLOAD IN PENDRIVE

Insert the pendrive in the USB1 Port and press ENT to start the Download. Some minutes are required.

> Internal memory will keep latest values. When the memory is full, the oldest Value will be overwritten.
>
> There is the option to download just data not transferred previously.

5.3 HISTORICS DATA CHECK

To change program number, press +/- and the information of the selected program will be displayed:
Accumulated volum of water and each product in m3.
PH and EC from last reset.
Maximum pressure reached from last reset.

Shows the last 5 registered Alarms: Date, Time, Parameter and Program Number.

Power supply: 230VAC (+/-20%) 50/60Hz
Protection: IP55
Working temperature: 0 -45ºC
Max relative humidity: 95% (without condensation)

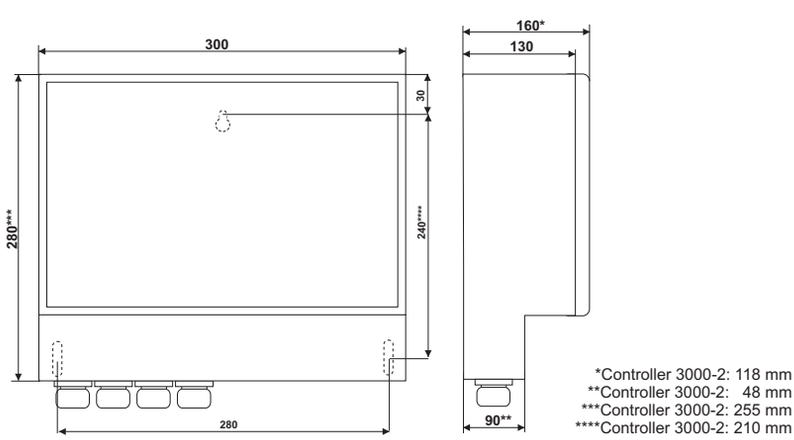
Inputs:
-Pulse input flow optically insulated for high-frequency flowmeters (pallets or electromagnetic)
- EC: Input optically insulated for ITC conductivity sensor
- PH: Input optically insulated for connecting a pH sensor
- Pressure: 4-20mA analogue input for a pressure transmitter
- Activated area inputs (Controller 3000-6/12): 12-24 V AC/DC digital inputs

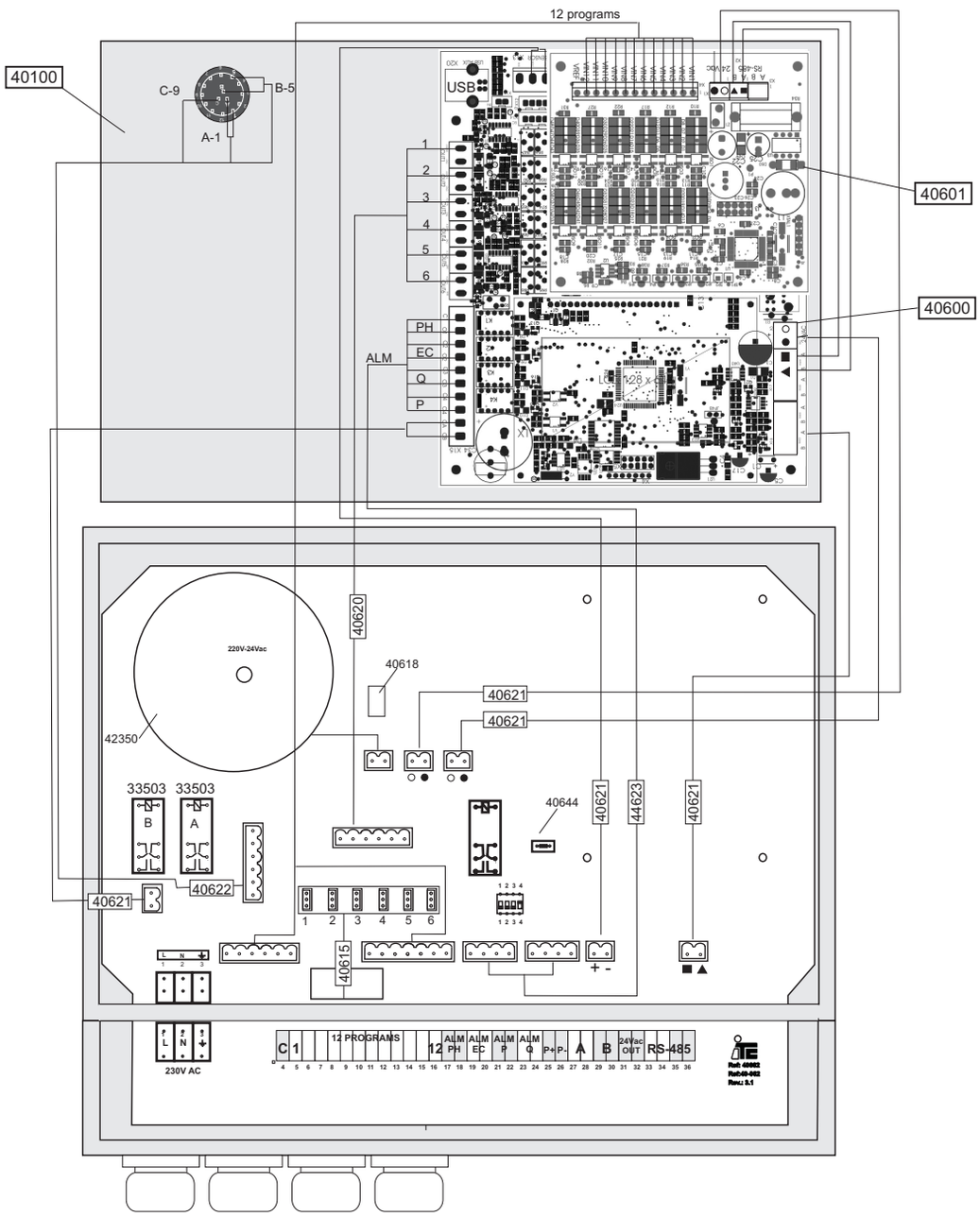
Outputs:
- 6 outputs 4-20mA for dosing pump.
- Flow alarm output: Relay output NO. 24 VAC -1A max
- EC alarm output: Relay output NO. 24 VAC -1A max
- PH alarm output: Relay output NO. 24 VAC -1A max
- Pressure alarm output: Relay output NO. 24 VAC -1A max

Communications:
-USB1: for USB Memory Device (pendrive).
-USB2: for permanent connection to PC.

Do not use simultaneously the USB1 and USB2 Ports. Before connecting a pen drive to USB1 Port, disconnect USB2 port.

DIMENSIONS





CODE	DESCRIPCTION	UNITS
33503	Relay 24 v ac two circuits	2
33516	Rotative switch	1
40100	Frontal Controller 3000	1
40600	C3000 electronic board	1
40601	Electronic board 12 input module C3000	-/1
40615	Cable C3000 4-20 c-c5p	2/6
40618	Fuse 3A autoreset	1
40620	Cable 6 wire female connector	1
40621	Cable manguera 2 hilos regleta hembra acodada	5
40622	Cable manguera C3000 6x0,25x150 conmutador	1
40644	Fusible 0.65A rearmable	1
42350	Transformador toroidal 220-24v 80va	1
44623	Cable manguera WTRpro 4x0,25x240 r	1
Assembly		
40-050	Conjunto placa C3000 completa	0
40-051	Conjunto placa C3000 + módulo 12 entradAs comp	-/1
40-052	Conjunto placa conexiones C3000 completa	1

EC DECLARATION OF CONFORMITY

I.T.C S.L..
Mar Adràtic, 1
Polígono Torre del Rector
08130 Santa Perpètua de Mogoda

Declares that all the Models of the Controller 3000 Products identified with the Serial Number and Year of Manufacture fulfil the Low Voltage Directive 2006/95/EC and the Electromagnetic Compatibility Directive 2004/108/EC, as long as the Installation, the Use and the Maintenance will be executed in accordance with the current rules and following the instructions of the Manual.

Josep Segura
Manager

WARRANTY

***ITC** warranties the Product specified in this Document for 1 year period from the Purchase Date, against any manufacture or material Defect, and as long as the Installation, Use and Maintenance have been correct.*

The Equipment must be sent, all inclusive charge, to our workshop or to the authorized ITC Technical Service, and its Return will be executed carriage forward.

The Equipment must be accompanied by the Warranty Document with the Purchase Date and the stamp of the Seller's Establishment, or a copy of the Account of goods purchased.

MODEL

_____

SERIAL NUMBER

_____

Purchase Date and Stamp of the Seller's Establishmentr

DATE:

_____

Ed:08.05.12-An

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