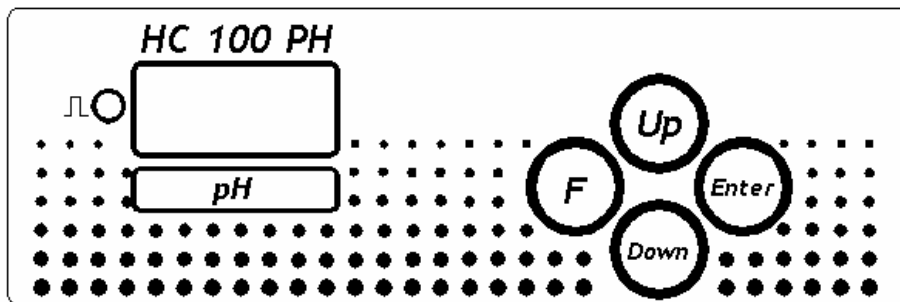


PROGRAMMING INSTRUCTIONS
FOR DOSING PUMP

HC 100 PH



ENGLISH

MOD. HC 100 PH

The pump series HC 100 PH is an electromagnetic proportional pump with an integral meter which can be directly connected to a pH probe. The programming and the calibration (Zero and Gain) are very simple. The pump can be run in manual mode too at maximum frequency of 105 pulses/minute. On the front panel there is a GREEN LED to indicate that the pump is switched on.

DESCRIPTION OF FUNCTIONS

F1 Manual Mode:

The pump runs at a constant rate just like a manual pump. The display shows the number of injections per minute which can be set by programming any number from 0-105 pulses/min. This function is useful when priming the pump from new at the time of the installation.

F2 Maximum number of injection per minute in proportional mode:

The pump runs in proportional mode. The display shows the maximum number of injections per minute in proportional mode. This frequency can be set by programming from 000 to 105 pulses/min.

L1 Proportional Mode:

The pump runs proportionally according the difference between the measured reading and the PH setpoint set in L1.

CA1 Calibration of the Zero:

the pump is ready for the calibration of the Zero (7 pH).

CA2 Calibration of the Gain:

the pump is ready for the calibration of the Gain.

SET Set-point Adjustment:

The pump is ready for setpoint to be adjusted.

PROGRAMMING

The Enter button allows to stop the pump (stand by state) and to start it

Manual functioning:

Press the **F** button until the display reads **F1** – manual.

Press the **Enter** button to confirm the choice. The display will show the number of pulses per minute blinking. This can be changed by pressing the **UP** and **DOWN** buttons to the desired reading and pressing the **Enter** to confirm. The pump runs at the desired number of pulses.

Proportional functioning:

Once the calibration and setpoints have been adjusted read point 1), otherwise read the point 2)

1) Press the **F** button until the **L1** function– proportional function will appear.
Press the **Enter** button to confirm the choice and then press again **Enter**.

The pump starts to work in proportional mode.

2) CALIBRATION of the ZERO: Immerse the pH probe into the 7pH buffer solution. Wait few seconds. Press the **F** button until the **CA1** function – calibration function of the Zero- will appear.
Press **Enter** .

CALIBRATION of the GAIN: Immerse the pH probe into the buffer solution (for ex. 9 pH). Wait few seconds. Press the **F** button until the **CA2** function – calibration function of Gain- will appear. Press **Enter** to confirm the choice.
Wait until the measure is stable and then modify the reading by the buttons **UP** and **DOWN** until the value of the buffer solution (in the ex. 9 pH). Press **Enter** to confirm

SETPOINT: Press the **F** button until the **Set** function – set-point function- will appear. Press **Enter** to confirm the choice. Modify the reading by pressing the **UP** and **DOWN** buttons until the desired value. Press **Enter** to confirm the choice.

MAXIMUM NUMBER OF INJECTIONS PER MINUTE IN PROPORTIONAL MODE: Press **F** button until the **F2** function – maximum number of injections per minute - will appear. Press **Enter** to confirm the choice. The value of the maximum frequency (000-105 pulses/minute) blinks showing that it is possible to modify it. Set the desired value by pressing the **UP** and **DOWN** buttons. Confirm the choice by **Enter**.

EXTREME VALUE OF THE INTERVAL OF PROPORTIONALITY: Press **F** button until the **L1** function – proportional function- will appear. Press **Enter** to confirm the choice. The value of pH measure to which the pump must work at the maximum frequency (**F2**) blinks showing that it is possible to modify it. Set the desired maximum or minimum pH value by pressing the **UP** and **DOWN** buttons. Confirm the choice by **Enter**.

The pump starts to work in proportional mode.

EXAMPLES OF PROGRAMMATION

- **MANUAL 100 pulse/min**

Press the **F** button and select the **F1** function. Press **Enter** and while the display is blinking select 100 by pressing **Up** e **Down**, press **Enter** to confirm, the green Led will light up and the pump will work.

- **PROPORTIONAL to the pH measure** with a set-point of 7,4pH, maximum flow for an pH value of 9pH and maximum number of injection per minute 80.

After having calibrated the probe, choose the pH set-point, the extreme value (L1) of the proportional interval and the maximum number of injections per minute as follows:

Press the **F** button until the function **Set** – set-point function.

Press the **Enter** button to confirm the choice. Modify the reading pressing the **UP** and **DOWN** buttons until the value of 7,4 pH and then press **Enter** to confirm.

Press the **F** button until the function **L1** – proportional function- will appear.

Press **Enter** to confirm the choice. Set the value 9 pH by pressing the **UP** and **DOWN** buttons and confirm by **Enter**.

Press the **F** button until the function **F2** – maximum proportional flow function- will appear.

Press **Enter** to confirm the choice. Set the value 80 by pressing the **UP** and **DOWN** buttons and confirm by **Enter**.

The green Led will light up and the pump will work.