OPL Mini L
MAINTENANCE AND INSTRUCTION MANUAL

Peristaltic pump regulated through time control.
Automatically accepts AC voltage range as follows:

Power supply: 100 ÷ 240VAC
Max suction height: 5 ft.

1.0 TECHNICAL CHARACTERISTICS

Consumption: 5 Watts
Fuses: 400mA 250 VAC
Pump flow rate: 8 oz/min.

2.0 OPERATION

This pump is timed and provides easy user-friendly operation:
The pump is equipped with 2 cables:

Cable 1 power supply (100÷240 VAC).
Cable 2 trigger signal for enabling the dosing cycle (20÷240 VAC or 70÷240 VAC).

Programming takes place through the keyboard and the display on the pump's front panel.

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN PERSONAL INJURY OR DAMAGE TO THE EQUIPMENT LEADING TO IMPROPER OPERATION OR PRODUCT FAILURE.

IMPORTANT
Before carrying out any operation on the pump, disconnect the power supply !!

2.1 ELECTRICAL CONNECTIONS

Power the pump using cable with the plug. When this cable is powered, the pump is ON.
Connect cable 2, identified by the word SIGNAL, to the signal that must start dosing.
Proceed with programming using the keyboard, as described in chapter 3.

3.0 PROGRAMMING

When the pump is powered, the display shows the message: on and the signal is active on the SIGNAL cable, the pump doses according to the cycle set with the keyboard. The dosing cycle consists of 3 phases:

1. Filter time (5 seconds) fixed. The display shows a mobile "**-**" 4 digits long.
2. Programmable delay time (0÷999 seconds). The display shows the message "**deL**"
3. Programmable dosing time (0÷999 seconds). The display shows "**run**".
4. Programmable lock-out time (0÷999 minutes). The display shows the countdown, which starts from the programmed time and goes to zero. The pump does not dose during the lock-out time, even if it receives another signal on the SIGNAL cable.

3.1 PROGRAMMING THE DELAY, DOSING AND LOCK-OUT TIMES

3.1.1 Enter to programming mode

- Press the PRG key until the display shows "**P---**".
- Press the PRG key. The red display's first digit begins to blink.
- Press the ▲ key until the blinking digit displays the desired value of access code.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value of access code.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value of access code.
- Press the PRG key. The next digit blinks.
- The green display shows "**1**".

3.1.2 Programming the delay time

- Enter to programming mode (see par. 3.1.1).
- The green display shows "**1**".
- Press the PRG key. The red display's first digit begins to blink.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. All of the display's digits stop blinking.
- To save the settings, while none of the display's digits are blinking, scroll the menu using the ▲ key until "**Hld**" appears on the display and then press PRG key. The pump returns to standby mode and "**on**" appears on the display.

3.1.3 Programming the dosing time

- Enter to programming mode (see par. 3.1.1).
- Press the ▲ key until the green display shows "**2**".
- Press the PRG key. The red display's first digit begins to blink.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. All of the display's digits stop blinking.
- To save the settings, while none of the display's digits are blinking, scroll the menu using the ▲ key until "**Hld**" appears on the display and then press PRG key. The pump returns to standby mode and "**on**" appears on the display.

3.1.4 Programming the lock-out time

- Enter to programming mode (see par. 3.1.1).
- Press the ▲ key until the green display shows "**3**".
- Press the PRG key. The red display's first digit begins to blink.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. All of the display's digits stop blinking.
- To save the settings, while none of the display's digits are blinking, scroll the menu using the ▲ key until "**Hld**" appears on the display and then press PRG key. The pump returns to standby mode and "**on**" appears on the display.

3.1.5 Calibration mode

- Enter to programming mode (see par. 3.1.1).
- Press the ▲ key until the display shows "**5CAL**".
- Press the PRG key, CAL begins blinking.
- While holding a measuring cup or flask under the outlet of the pump, press the ▲ key and release when the pump starts *(display increases the timer)*. Let the pump runs until desired amount of chemical is dispensed then press the ▲ key again to stop. (display shows the dosing time). The **OPL Mini** run time is now programmed. Repeat these steps if new volume is required.
- Press the PRG key the display shows "**5CAL**".
- To save the settings, scroll the menu using the ▲ key until "**Hld**" appears on the display and then press PRG key. The pump returns to standby mode and "**on**" appears on the display.

3.1.6 Changing access code

- Enter to programming mode (see par. 3.1.1).
- Press the ▲ key until the display shows "**o+*old access code***".
- Press the PRG key the display shows "**n+*old access code***" and the red display's first digit begins to blink.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. The next digit blinks.
- Press the ▲ key until the blinking digit displays the desired value.
- Press the PRG key. All of the display's digits stop blinking.
- To save the settings, while none of the display's digits are blinking, scroll the menu using the ▲ key until "**Hld**" appears on the display and then press PRG key. The pump returns to standby mode and "**on**" appears on the display.

3.2 SETUP TRIGGER HI-LO

- Enter to programming mode (see par. 3.1.1).
- Press the ▲ key until the display shows "**4 HI**" or "**4 LO**".
- Press the PRG key and "HI" or "LO" readout will blink.
- Press ▲ key to select if a signal is "**LO**" **(20÷240 VAC)** or "**HI**" **(70÷240 VAC)**.
- Press PRG key and the display stops blink
- To save the settings, while none of the display's digits are blinking, scroll the menu using the ▲ key until "**Hld**" appears on the display and then press PRG key.

ⓘ ***The signal trigger has a filter of 5 seconds.***

3.3 EXITING FROM PROGRAMMING

To exit programming and return to the main menu, scroll the menu using the ▲ key until "**ESC**" appears on the display. Now press PRG key. The pump returns to standby mode and "**on**" appears on the display. None of the modified settings are saved.

3.4 PRIMING MODE

On the standby mode (the display shows the message: on) push the ▲ key the pump starts dosing for one minute and the display shows "**Pri**". To stop the pump before the priming time is elapsed, press ▲ key to stop.

3.5 MOTOR STOPPING

In case the motor is excessively overloaded (for ex. a tubing breaks) the pump executes stop/restart motor cycles (the stop time increases at every STOP: 0.5 sec . → 10 sec.) to avoid the overheating of the same pump.
During the motor stop the display visualizes: "**1Alr**"

4.0 DISPLAY

As soon as the pump is powered, the display shows "**8888**" for approximately 0.3 seconds, during which the pump runs a check:
If the parameters cannot be read properly from EEPROM, the display shows "**FAIL**" and the pump remains on standby.
The default parameters can be reset using the ▲ key (pressed for 4 seconds). The default parameters are:

Delay time = 005
Dosing time = 055
Lock-out time = 000
Trigger signal = HI
Calibration = CAL
Old password = 000

After the default parameters have been reset, these parameters can be modified from the programming menu (see chap. 3).

5.0 ACCESSORY

Available a remote control, the code is 9900700097.