

LONGER

# FK-1C DISPENSING CONTROLLER OPERATING MANUAL

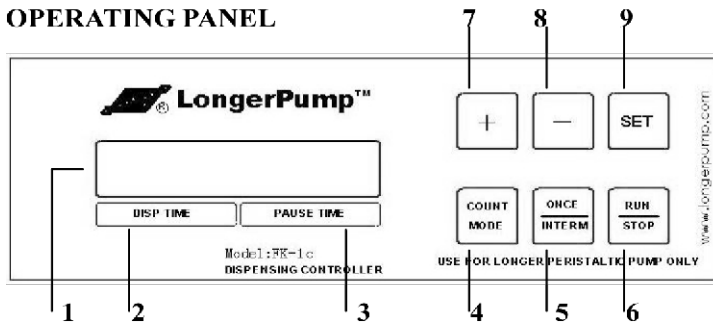
LONGER

**Baoding Longer Precision Pump Co., Ltd.**

Add: 3rd/4th Floor, Building 6B, University Science Park  
Baoding National, High - Tech Industrial Development Zone  
Baoding, Hebei, China 071051  
Tel: 86 - 312 - 3110087 3138553  
Fax: 86 - 312 - 3168553  
E - mail: [longer@longerpump.com](mailto:longer@longerpump.com)  
[Http://www.longerpump.com](http://www.longerpump.com)

**MAIN FUNCTION**

Fk-1c is designed specially for some longer peristaltic pumps to realize automatic dispensing by time.

**OPERATING PANEL**

- 1 LCD display
- 2 **DISP TIME**  
Dispensing time (0.01s to 99.9s)
- 3 **PAUSE TIME**  
Pause time for intermittent dispensing (0.01s to 99.9 s) or “once”
- 4 **COUNT MODE KEY**  
Changes between count-up (from 0 to 999) and

count-down (from 999 to 0) during intermittent dispensing mode.

5 **ONCE/INTERM KEY**

- Changes between once and intermittent dispensing mode.

- Once dispensing mode: presses down **RUN/STOP KEY**, finishing one time dispensing according to the dispensing time

- Intermittent dispensing mode: once **RUN/STOP** pressed down, dispensing cycles begin according to dispensing time and pause time until **RUN/STOP KEY** is pressed down again.

6 **RUN/STOP KEY**

- Starts and stops a dispensing process

- The function start can also be triggered by external device such as a foot switch or photoelectric sampler.

7 **+ KEY**

Increase value

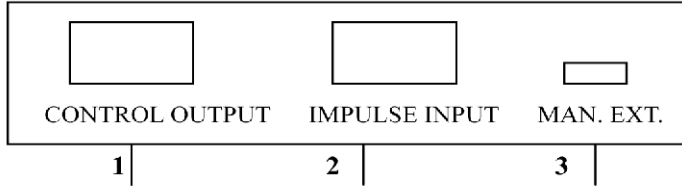
8 **- KEY**

Reduce value

9 **SET KEY**

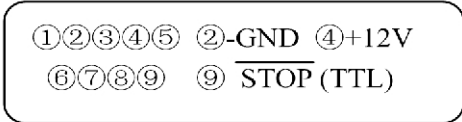
Changes between setting dispensing time and pause time

**REAR PANEL**



1 **CONTROL OUTPUT PORT**

A db9 port connected to the pump through an exclusively original cord.



**PIN 2, GND (GROUND)**

Reference potential for all other pins

**PIN 4, +12V**

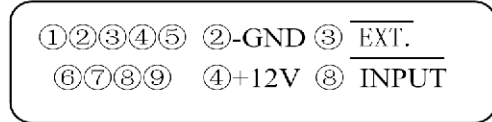
+12V input from the pump

**PIN 9, STOP (TTL)**

- Starts and stops the pump
- Stops the pump when connected to pin 2

2 **IMPULSE INPUT PORT**

A DB9 port connected to the foot switch or photoelectric sampler through an exclusively cord.



**PIN 2, GND (GROUND)**

Reference potential for all other pins

**PIN 3, EXT. (TTL)**

Changes between external and manual control .for activating external control, it must be connected to **pin 2**.

**PIN 4, +12V**

+12V dc is available (max. current 20ma).

**PIN 8, INPUT (TTL)**

For external start control input

## 2 MAN. EXT. SWITCH

- External/manual control switch
- Changes between external and manual control mode

## STARTING THE DISPENSING SYSTEM

- 1 Preparing the pump:
  - Insert the tubing
  - Connect the pump to the mains
- 2 Connect fk-1c to the pump
- 3 Connect the foot switch or photoelectric sampler to fk-1b if necessary
- 4 Switch the dispensing system on with the mains switch of the pump

## OPERATING MODE

### ● ONCE/INTERMITTENT MODE

- 1 Switch **MAN. EXT. switch** to **MAN.** (manual)
- 2 Change to once or intermittent mode with **ONCE/INTERM key**.
  - In once mode,

LCD displays “**99.99 sec once**”.

-In intermittent mode,

LCD displays “**99.99 sec 99.99 sec**”.

- 3 Entering the required dispensing time or pause time with+, — **key** and **SET key**.
  - 4 Start the dispensing process with **RUN/STOP**.
    - In once mode, the pump stops automatically after the dispensing time has elapsed.
    - In intermittent mode, the pump dispenses at intervals.
    - The dispensing process can be stopped by pressing **RUN/STOP**.
    - The dispensing or pause time can only be changed after the dispensing process has been stopped.
- ### ● COUNT MODE
- 1 Switch **MAN.EXT. switch** to **MAN** (manual)
  - 2 Change to intermittent mode
  - 3 Entering the required dispensing time and pause time
  - 5 Change to count-up or count-down mode with

**COUNT MODE key.**

- In count-up mode, count value increases, LCD displays “999 time→run 0”.

-In count-down mode, count value drops, LCD displays “999 time←run999”.

- 4 Entering the required count value of the dispensing cycles with + and — key.
  - 5 Start the dispensing process with **RUN/STOP**.
    - The dispensing process can be stopped by pressing **RUN/STOP**.
    - The dispensing time, pause time and count value can only be changed after the dispensing process has been stopped.
- **EXTERNAL CONTROL MODE**
    - 1 Switch **MAN.EXT switch** to **EXT.** (external), LCD displays “ 0 TIME EXT ”.
    - 2 Operate foot switch or photoelectric sampler to start the dispensing process.
      - The pump stops automatically after the dispensing time has elapsed
      - counting up the dispensing process

- During external control mode, all the keys are out of action

- The dispensing time can only be changed during manual control mode and the dispensing process has been stopped.

**TECHNICAL SPECIFICATIONS**

- Dispensing time 0.01s to 99.9s
- Pause time 0.01s to 99.9s
- Count range 1 to 999
- Operating voltage +12v dc
- Operating current ≤50ma
- Operating conditions
  - Temperature 0- 40°C
  - Relative humidity <80%

**FOOT SWITCH**

Jk-2 foot switch is designed for fk-1c dispensing controller specially. It serves as a start device, which is very useful when using the pump as a dispenser for filling tubes, bottles, etc. Both hands are free for handling bottles and tubes.