

Multi-Channel Independent Peristaltic Pump

Model No: LabSmart

Flow Rate: 0.02uL/min(0.13*0.86)-48.379mL/min(3*1)



Product Features

- 5" HD Color Touchscreen: Proprietary anti-shake algorithm ensures ultra-responsive control and crystal-clear visuals.
- 10-Roller Pump Head: Significantly reduces fluid fluctuation for smooth flow; custom high-strength polymer extend service life.
- Supports four operating modes: Flow Rate Mode, Timed&Volume, Time&Speed, and Volume&Speed. Multi-channel and multi-mode support, with multi-group recipe storage for complex scenarios.
- High-performance main control chip with mode-specific algorithms for unmatched stability and precision.
- 0.001 rpm Resolution: Custom high-microstep motor with optimized drive logic for delicate and precise micro-volume control.
- Wide-Voltage Design: Robust anti-interference capability ensures stable, continuous operation in harsh environments.
- Spring-Loaded Mechanism: Infinitely adjustable tubing gaps to maximize tubing longevity and dosing accuracy.
- Optional leak detection sensor with a pre-programmed leak response procedure to protect equipment safety.

Product Introduction

Model	Rollers number	Speed	Channel Number	Tubing	Flow rate ($\mu\text{L}/\text{min}$ - mL/min)	Tubing maximum pressure (Mpa)	
						Continuous	Intermittent
LabSmart	10 rollers	0.01-150 rpm	4 Channel	1 $\times$ 1	0.503-7.549	0.1	0.1
				2 $\times$ 1	1.835-27.519		
				2.4 $\times$ 0.8	2.542-38.130		
				3 $\times$ 1	3.226-48.379		
				0.13 $\times$ 0.86	0.02-0.289		
				0.19 $\times$ 0.86	0.03-0.439		
				0.25 $\times$ 0.86	0.051-0.759		
				0.51 $\times$ 0.86	0.134-1.999		
				0.89 $\times$ 0.86	0.298-4.470		
				1.14 $\times$ 0.86	0.611-9.159		
				1.42 $\times$ 0.86	1.250-18.750		
				1.52 $\times$ 0.86	1.44-21.599		
				2.06 $\times$ 0.86	1.974-29.599		
				2.79 $\times$ 0.86	2.858-42.859		

OSD



The diagram illustrates the OSD (On-Screen Display) interface for the LabSmart device, showing four channels (CH1, CH2, CH3, CH4) at the top. Each channel displays its flow rate: CH1 (6.000 mL/min), CH2 (10.000 $\mu\text{L}/\text{min}$), CH3 (3.000 mL/min), and CH4 (8.000 rpm). Below the channels, the date and time are displayed as 2025-04-10 12:00:00. The main display area shows the selected channel (CH3) with a large flow rate of 88.50 $\mu\text{L}/\text{min}$. Below this, detailed parameters are listed: Mode (Fixed Volume&Speed), Total vol (500.000 μL), Total speed (3.000mL/min), Total time (1.77sec), and Repeat (0000/0002). At the bottom, there is a Unit Control Area with icons for stop, play/pause, reset, and forward. A Function Panel at the very bottom contains icons for home, play, settings, calibration, lock, and exit. Labels with leader lines point to various parts of the interface: 'Operational Status' points to the channel headers, 'Date & Time' points to the clock display, 'Unit ID Display' points to the 'CH3' header, 'Detailed Parameters' points to the list of settings, 'Unit Control Area' points to the control icons, and 'Function Panel' points to the bottom row of icons.

Technical Specifications

Flow rate resolution	0.001uL/min
Speed range	0.01-150rpm
Operation method	Touch screen
Flow rate range	0.02uL/min(0.13*0.86)-48.379mL/min(3*1)
Temperature	0-40°C
Power-off memory	Retains pre-power-loss data and parameters upon re-energization
Communication interface	RS232/RS485
Back suction angel	0-360°
Power supply	AC100-240V/100W
Speed resolution	0.01rpm
Common modes	Up to 10 common modes can be saved
External control signals	Passive switch signal: such as a foot pedal switch Active switch signal: compatible with 5-24 V DC input
Relative humidity	<80%
Motor type	Stepper motor
Output interface	Outputs the motor running status and rotation direction (open-collector output)
IP	IP31

Dimension (Unit : mm)

