

LSP01-1A/2A, LSP04-1A Syringe Pump



Functions and Features

Syringe selection: The syringe can be selected in the manufacturer table which includes manufacturer, material and size or input the inner diameter of the syringe barrel directly

Easy to operate: Combining big screen LCD display with rotary encoded switch and membrane keypad makes the operation simple and prompt

Working mode: Infusion

Memory function:

1. The parameters are saved in EEPROM. The parameters don't need to be reset when power returns after an interruption
2. In flow rates mode, the pump remains running or stop according to the setting parameters when power returns after an interruption

Protection function: The pump will stall and give an alarm when the drive structure of the pump is blocked

Communication function: Realize computer control through RS485 communication interface

External control function: Input/output control

Calibration function: Acquire accurate volume through calibration

Syringe protection: Adjust syringe rest to prevent syringe from damaging

Infusion only syringe pumps. The acceptable syringe specification for LSP01-1A/2A is from 10 μ L to 60 mL and for LSP04-1A is from 10 μ L to 10 mL. Suitable for high accuracy and small flow rates liquid transferring.

Specifications Comparison Table

Syringe Pump	LSP01 - 1A	LSP01 - 2A	LSP04 - 1A
Advance per microstep	1/16step: 0.156 μ m	1/16step: 0.03125 μ m	1/16step: 0.156 μ m
Infusion volume per microstep	0.13 μ L (60mLSyringe)	0.026 μ L (60mLSyringe)	0.026 μ L (10mLSyringe)
Max. linear rate	65mm/min	13mm/min	130mm/min
Min. linear rate	5 μ m/min	1 μ m/min	5 μ m/min
Flow rates	0.831nL/min - 54.155mL/min	0.166nL/min - 10.83mL/min	0.831nL/min - 21.675mL/min
Working mode	Infusion		
Max. No. of syringes	1		4
Syringe size	10 μ L - 60 mL		10 μ L - 10mL
Linear force	> 9kgf		
Max. step rate	6933 (1/16step) / sec		13867 (1/16step) /sec
Min. step rate	16 (1/16 step) /30 sec		
Accuracy	\leq 0.5% error in the condition of > 30% of max. infusion distance		
Setting mode	Rotary encoded switch and membrane keypad		
Display	128 x 64 graphic LCD		
Power	AC 100 - 240 V		
Operating condition	Temperature 5 $^{\circ}$ C - 40 $^{\circ}$ C Relative humidity < 80 %		
Dimensions	280 \times 210 \times 140 mm		280 \times 250 \times 140 (mm)
Weight	3.6 kg		4.5kg

Syringe Pump	Syringe	I.D. (mm)	Flow Rates (μ L/min - mL/min)	Linear Rate	Part Number
LSP01 - 1A	50 μ L	1.03	0.004 - 0.054	5 μ m/min - 65mm/min	0503401
	10mL	14.57	0.834 - 10.837		
	60mL	32.57	4.166 - 54.155		
LSP01 - 2A	50 μ L	1.03	0.001 - 0.011	1 μ m/min - 13mm/min	0503411
	10mL	14.57	0.167 - 2.167		
	60mL	32.57	0.833 - 10.831		
LSP04 - 1A	50 μ L	1.03	0.004 - 0.108	5 μ m/min - 130mm/min	0503451
	1mL	4.61	0.083 - 2.170		
	10mL	14.57	0.834 - 21.675		

Note: Flow rates = Linear rate \times Section area of the barrel