

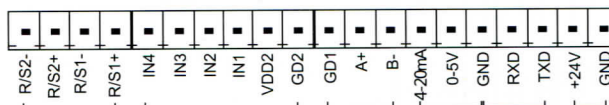
SHENCHEN SP-MiniPump



Features

- 304 stainless steel housing, resisting corrosion, small space.
- Digital knob control speed, toggle switch control direction and start/stop.
- RS485 standard MODBUS protocol, more convenient to connect with PLC.
- Standard connection terminals, various external control function, more suitable for equipment.

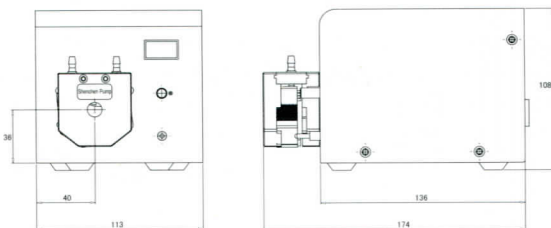
SP-MiniPump External Control Schematic



Product Introduction

SP-MiniPump series peristaltic pump, 304 stainless steel housing, stepper motor drive. OLED screen, display the current motor speed, direction and working status. Digital knob and toggle switch control speed and direction separately. External control with standard terminal, multiple external interface, support RS485 (MODBUS protocol, RTU mode).

Installation Sizes Drawing (Unit: mm)



Technical Specifications

Flow rate range	0.0024~190 mL/min
Speed range	0.1~300 rpm, reversible.
Speed resolution	0.1rpm
Speed control	Digital knob control speed
Motor type	Stepper motor
Display	OLED display
External control	Start/stop,direction control (switch signal)
	Speed control 0-5V, 0-10V, 4-20mA for option(Analog signal)
Communication	RS485 communication (MODBUS protocol, RTU mode)
Power supply	24V/1A DC power
Drive dimension	136 × 113 × 108mmmm (L×W×H)
Weight	1.64 kg
Power consumption	< 15 W
Condition temperature	0~40℃
Relative humidity	< 80%
IP rate	IP31

EM-MiniPump and SP-MiniPump speed/flow rates reference

Rotation speed (rpm)	Flow rates (mL/min) and tubing (1 mm wall thickness, dual channel)			
	ID 1 mm	ID 2 mm	ID 2.5 mm	ID 3 mm
5	0.25	0.90	1.28	1.78
10	0.49	1.84	2.59	3.52
15	0.74	2.76	3.85	5.30
25	1.25	4.57	6.43	8.80
40	2.00	7.31	10.25	14.02
50	2.52	9.14	12.78	17.47
75	3.76	13.64	19.04	26.12
100	5.03	18.17	25.42	35.34
200	10.12	36.45	51.27	71.44
250	12.63	45.75	64.34	88.35
300	15.01	54.63	76.84	108.39

Rotation speed (rpm)	Flow rates (mL/min) and tubing (1.6 mm wall thickness, single channel)			
	13# Tubing ID 0.8 mm	14# Tubing ID 1.6 mm	16# Tubing ID 3.1 mm	25# Tubing ID 4.8 mm
5	0.12	0.56	1.97	3.26
10	0.26	1.15	3.90	6.41
15	0.39	1.74	5.80	9.52
25	0.66	2.88	9.59	15.74
40	1.08	4.59	15.29	25.15
50	1.34	5.69	18.96	31.14
75	2.00	8.54	28.36	46.55
100	2.73	11.37	37.66	61.98
200	5.46	22.76	76.02	124.14
250	6.81	28.40	95.08	153.63
300	8.28	33.88	114.31	190.00