◄◄◄ Laboratory Syringe Pump

Intelligent Syringe Pump

ISPLab Series

Model No.

ISPLab01

Introduction

The intelligent syringe pump with infusion/withdrawal mode, stainless steel body, and 4.3" color LCD screen is easy to operate. It can install and fix different types of injectors or syringes in the same time, and it is suitable for transferring micro flow rates with high precision (non-medical).

Features

| Online flow rate modification function:
The pump is running, without stopping, adjust the flow rate at any time to meet complex application.

| Colorful LCD display:
Friendly interface, 4.3 inch LCD display every technical parameter in real time.

| Input syringe inner diameter function:
Can choose the injector from the list or input the injector inner diameter directly.

| Two measurement mode for selection:
Infusion volume --- Infusion flow rate, Infusion volume --- Infusion time.

| 4 different working modes:
Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion. The parameters of each working mode saving separately. Each working mode can be changed to continuous mode by setting repeat parameters.

| Alarm function:
The pump will stall and give an alarm when the drive structure of the pump is blocked.
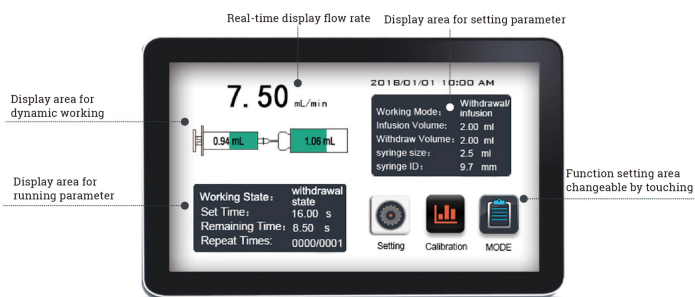
Syringe Pump External Control Schematic

1-Foot pedal connector: Connect with foot pedal switch
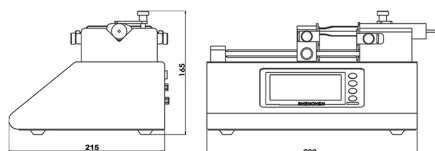2-15 Pin connector: External input and output
3-9 pin connector: RS232 and RS485

Interface display

Real-time display flow rate   Display area for setting parameter

Display area for dynamic working

Display area for running parameter

2018/01/01 10:00 AM

7.50 mL/min

0.94 mL   1.06 mL

Working Mode: Withdrawal/infusion
Infusion Volume: 2.00 ml
Withdraw Volume: 2.00 ml
syringe size: 2.5 ml
syringe ID: 9.7 mm

Working State: withdrawal state
Set Time: 16.00 s
Remaining Time: 8.50 s
Repeat Times: 0000/0001

Setting   Calibration   MODE

Function setting area changeable by touching

Technical Specifications

Working mode	Infusion, withdrawal, infusion/withdrawal, withdrawal/infusion
Channel number	1
Syringe size	10µL-140mL
Syringe selection	Syringe size and customized diameter
Linear speed range	1µm/min-132mm/min(Flow rate=Linear speed* syringe inner cut area)
Min. linear rate	1µm/min
Linear force	8-20kgf, online adjust
Max. stroke	140mm
Stoke resolution	0.078µm/µstep
Accuracy	Error ≤±0.3% (Stoke ≥30% of maximum stroke)
Back distance	0.01-10mm
Stored modes	Can save at most 60 common modes
Display	Industrial grade 4.3"LCD color display
Control method	Touch screen and Mechanical keypad
Power-off memory	Display the previous data parameter after power supply again
Output	OC gate signal output,used to indicate running status and direction
External control	Start/stop signal, withdrawal and infusion signal, active switch signal: (5-24V)
	Start/stop signal, passive switch signal, such as foot pedal switch
Communication interface	RS232/RS485, Modbus protocol(RTU mode)
Power supply	AC90-264V/64W
Condition temperature	0-40
Relative humidity	<80%
IP rate	IP31

Syringe	Inside Diameter (mm)	Flow Rate(uL/min-mL/min)	
		ISPLab01/SPLab02	ISPLab04-SPLab12
1mL	4.70	0.087~2.290	0.087~2.290
2.5mL	9.70	0.370~9.755	0.370~9.755
5mL	12.48	0.612~16.147	0.612~16.147
10mL	15.89	0.992~26.177	0.992~26.177
20mL	20.00	1.571~41.469	————
30mL	22.50	1.988~52.484	————
50mL	28.90	3.280~86.588	————

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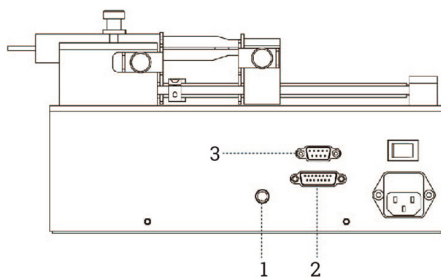Infusion volume --- Infusion flow rate, Infusion volume --- Infusion time.

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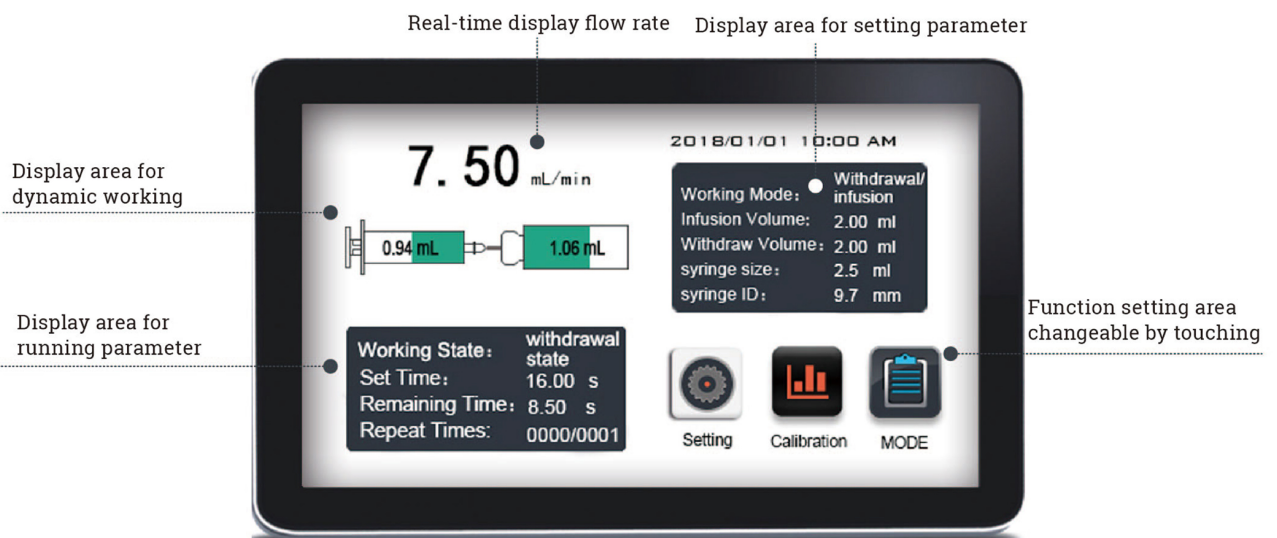### Syringe Pump External Control Schematic

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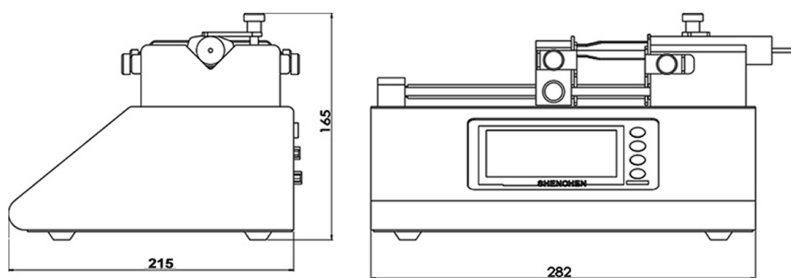
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