Digital Split-type Syringe Pump

dLSP 501S/ dLSP 501L



- Remote pump drive unit with compact structure and small footprint, ideal for hand-held or clamping devices
- High precision and pulseless delivery, suitable for small liquid volume transfer and handling
- 7 inch touch screen with intuitive graphic interface for fantastic interactive experience
- Dedicated PC software for parameter programming, enabling complex flow profiles for four drive units

Product model	Drive unit	dLSP 501S	dLSP 501L
	Controller	dLSP uC	
Work mode		Infusion only, withdrawal only, infusion/withdrawal, withdrawal/infusion, programming (on PC software)	
Display		7 inch HD LCD	
Control mode	Touch screen controller	Control 1-4 separated drive units with preset parameters through touch screen controller	
	PLC/ Computer	RS485 communication interface, Modbus RTU, 1 group consists of up to 8 drive units, 1 computer can independently control up to 5 groups	
Stroke of the drive unit		70mm	
Pusher advance per microstep		0.095um/ustep	0.099um/ustep
Linear speed		0.6096um/min-182.88mm/min	0.635um/min-190.5mm/min
Linear speed resolution		0.6096um/min	0.635um/min
Linear travel accuracy		⩽±0.35% (when travel⩾30% of the stroke)	
Linear travel CV		0.03% (rated travel)	
Linear force (Rated)		15N (the force can be set 20%-100%)	30N (the force can be set 20%-100%)
Syringe		0.5uL-250uL (built-in manufacturer, or user-defined)	0.5uL-1000uL (built-in manufacturer, or user-defined)
Flow rate calibrate		Calibrate the user-defined syringe for better flow rate /dispensing volume accuracy and precision	
Parameter method		Up to 100 parameter methods can be stored on the controller and can be imported/exported to USB flash drive	
Programming function		Parameter configured based on work flow on PC software: infusion, withdrawal, delay, repeat, up to 16 steps	
Screen lock		Prevent misoperation	
User access control		Three levels of user access (administrator, developer, operator), each user can have an exclusive password	
Log record		Record the pump operation history, and can be exported to a USB flash drive	
Electronic signature		There are electronic signature on the log record for FDA 21CFR Part11 compliance	
Pump state when power up		The default state is stop, can be set to continue to run through communication commands	
Fast forward/backward		Infuse or withdraw liquid at full speed	
Controller dimensions (L X W X H)		187mm*123mm*39mm	
Controller weight		0.6kg	
Drive unit dimensions (L X W X H)		170mm*35mm*58mm	180mm*45mm*74mm
Drive unit weight		0.31kg	0.51kg
Power Supply		AC 90V-260V/10W	

Product model		dLSP 501S	dLSP 501L
Syringe (uL)	Syringe ID(mm)	Flow rate for reference	
0.5	0.10	0.0048nL/min-1.435uL/min	0.0050nL/min-1.495uL/min
1	0.15	0.0108nL/min-3.230uL/min	0.0112nL/min-3.365uL/min
2	0.20	0.0191nL/min-5.742uL/min	0.0199nL/min-5.982uL/min
5	0.35	0.0586nL/min-17.586uL/min	0.0611nL/min-18.319uL/min
10	0.50	0.1196nL/min-35.890uL/min	0.1246nL/min-37.386uL/min
25	0.80	0.3063nL/min-91.879uL/min	0.3190nL/min-95.707uL/min
50	1.10	0.5790nL/min-173.709uL/min	0.6032nL/min-180.946uL/min
100	1.46	1.0200nL/min-306.014uL/min	1.0625nL/min-318.765uL/min
250	2.30	2.5315nL/min-759.437uL/min	2.6369nL/min-791.080uL/min
500	3.25	-	5.2651nL/min-1579.543uL/min
1000	4.61	-	10.5936nL/min-3178.092uL/min

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