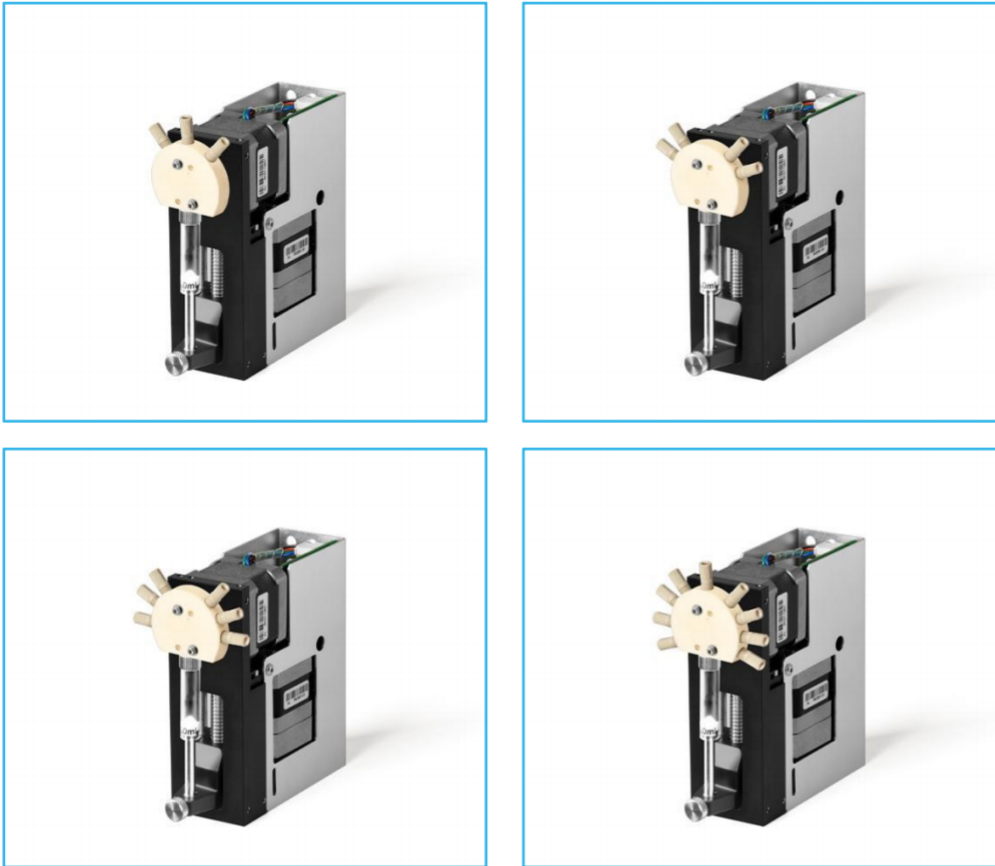


OEM Syringe Pump

SP30-1A(Multi-port Ceramic Distribution Valve)



■ Introduction

SP30-1A syringe pump is a programmable liquid handling pump module, rated stroke: 30mm. The pump can be controlled by external computer or microcontroller, to realize high precision liquid handling.

■ Features

- Application flexibility: Programmable, controlled by external computer or microcontroller, suitable for a wide range of sizes syringe and valves.
- Reliable performance: Photoelectric encoder detects out of step; controllable start speed, maximum speed and stop speed; Programmable acceleration and deceleration slopes; Can realize planned maintenance and replacement of syringes and valves.
- Simple way to integrate: Support RS232/RS485/CAN communication; Up to 15 sets of SP30-1A syringe pumps can be connected together; Two digital inputs and three outputs for TTL level signals; Used for synchronization with other external devices.

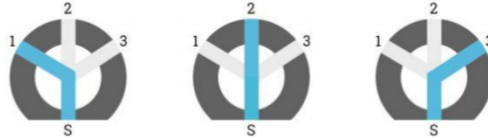
■ Technical Parameter

Liquid Volume Accuracy	Error <1.0% (full stroke, deionized water)
Liquid Volume Precision	Repeatability error <0.2% (full stroke, deionized water)
Plunger drive	Stepper motor drives ball screw, quadrature encoder detects out-of-step and returns to zero
Max. stroke(Steps)	30mm(3000 steps or 24000 steps)
Run time per stroke	1.25s-100min
Speed resolution	0.05mm/s
Stroke resolution	0.01mm or 0.00125mm
Valve switch time	≤250ms between adjacent ports
Valves type	3/4/6/9-way ceramic distribution valve
Valve material	Alumina ceramics
Tubing fittings	1/4-28UNF
Syringe fittings	1/4-28UNF
Power supply	DC24V ±10%/1.25A (Peak value)
Communication interface	RS232/RS485/CAN
Syringes	50μL, 100μL, 250μL, 500μL, 1.0mL, 2.5mL, 5.0mL, 12.5mL(SP30-1A12_5)
Syringe material	Barrel material: Borosilicate glass; Plunger rod material: Stainless steel; Plunger seal material: PTFE
Baud rate	9600 or 38400(RS232/RS485); 100K, 125K, 250K, 500K, 1M(CAN)
Addressing	UP to 15 individual addresses available(BCD switch)
Input	Two TTL level signal inputs, for restart the paused instruct
Output	Three TTL level signal outputs, for synchronous external devices
Valve body rated pressure	0.68MPa(High pressure above 0.68MPa, please contact us)
Condition temperature	15°C~40°C(Low temperature operation requires a low temperature syringe)
Storage temperature	-20°C~65°C
Dimension(L*W*H)	139.2×44.5×127(mm)

■ Working Principle

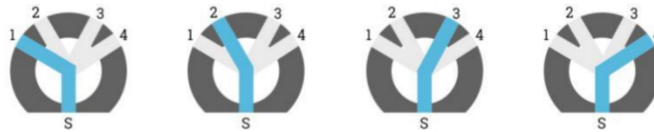
3-way ceramic distribution valve
(S-1, S-2, S-3)

HXF3F2



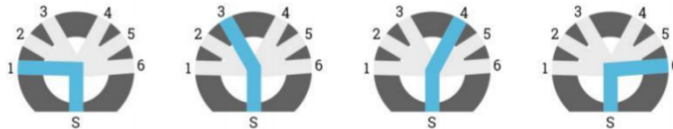
4-way ceramic distribution valve
(S-1, S-2, S-3, S-4)

HXF4F2



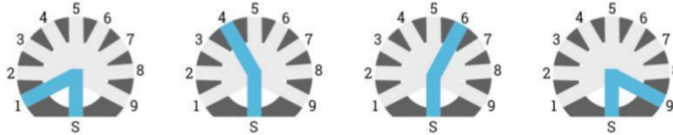
6-way ceramic distribution valve
(S-1, S-3, S-4, S-6)

HXF6F2



9-way ceramic distribution valve
(S-1, S-4, S-6, S-9)

HXF9F2



■ Dimension Drawing (Unit:mm)

