

SV690C3 & SV690C24

Precision 3,000/24,000 and 24,000/192,000 Step Syringe Pump Modules
Direct Drive Stepper Motor Driven
Syringe Volumes of 50 Microliters to 12.5 Milliliters

Valcor Dispensing / Metering Series



DESCRIPTION

The SV690 series syringe pump module is a direct-drive stepper motor-driven pump that accurately and precisely delivers a wide range of liquids. With dispensing ranges from a few microliters to 12.5 milliliters, the SV690C utilizes standard communication protocols and mounting configurations used by other compact syringe pump designs. The SV690C is perfectly suited for analytical and medical applications where precision dispensing reagents, buffers, diluents, and gradients are critical to the performance of the instrument. The SV690 is also well suited for single-point aspiration and dispense of samples.

APPLICATION

The SV690 series is a versatile pump module that provides all typical aspiration and dispensing operations expected from an OEM syringe pump. The SV690C is also ideal for the researcher looking for a complete desktop syringe pump system that can be set up and running in less than 15 minutes. Fully interchangeable syringes provide for a wide range of dispensing volumes with minimal investment.

FEATURES

- Complete precision dispensing system, ready for use out of the box
- Proprietary software provides easy to use prompt-based programming
- Extremely precise: <.01% Cv per dispense
- High resolution options available up to 192,000 steps/full-stroke
- High efficiency, maintenance free direct drive design (no belts)
- Long life rotary shear valves - up to 24 times longer verses competitive valves
- Easily interchangeable syringe sizes from 50uL to 12.5mL



VALCOR SV690C3 & SV690C24 SERIES SPECIFICATIONS

Specifications

Drive Design	SV690C3: Direct drive stepper motor/lead screw with 30 mm of travel. Manually moveable for “power off” syringe removal. Maintenance free design. SV690C24: Direct drive stepper motor/lead screw with 30 mm of travel. Maintenance free design.
Stroke Speed	SV690C3: 1.2 seconds to 100 minutes per stroke. (800 minutes in microstep mode) SV690C24: 4.2 seconds to 800 minutes per stroke. (3200 minutes in microstep mode)
Resolution	SV690C3: Standard mode 3,000 steps. Hi-res mode 24,000 steps SV690C24: Standard mode 24,000 steps. Hi-Res mode 192,000 steps
Available Volumes	500 µl, 100 cccccc, 250 µl, 500 µl, 1mL, 2.5mL, 5 mL, 12.5mL
Precision	≤ 0.1% CV at 50 µl to 100 µl, ≤ 0.05% CV at 250 µl to 12.5 µl
Accuracy (Full Stroke)	≤ 1% syringe volume
Dimensions	1.75” w x 5.00” h x 4.50” d (44.5 mm x 127 mm x 114.3 mm)
Fluid Contact Materials	Syringe: Borosilicate Glass and UHMWPE or PTFE (seal) Pressure to 80 PSI Valve: PCTFE or PEEK (body) and PTFE or UHMWPE (plug) Pressures to 100 psi
Environmental	Operating: Temperature: 15°C to 40°C (59°F to 104°F) Humidity: 20-95% RH at 40°C (104°F)
Regulatory Compliance	SV690C Series pumps are general laboratory components subject to FDA regulatory approval and do not carry independent CE markings. Applicable safety markings typically meet the needs of system designers. ISO 13485 registered manufacturing facility
Valve Drive	Stepper motor with position sensors ≤ 250 ms between neighboring ports
Power	Requirement: 24VDC +/- 10% Rating: ≤ 1.5 Amp (peak)
Interface	Type: RS232, RS485, or CAN Communication: 9600 or 38400 baud (RS232/ RS485) Rates: 100 or 125 kbits (CAN) Format: (RS232 / RS 485) Data Bits - 8, Parity - None, Stop Bit - 1
Valve Drive	Stepper motor with position sensors ≤ 250 ms between neighboring ports
Addressing	Maximum of 15 pumps addressed individually

VALCOR SV690C3 & SV690C24 SPECIFICATIONS

Part Number Configurator

Example Part Number: **SV690C3-10010** (SV690C with 120° 3-port valve PEEK/UHMWPE)

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Series	Valve Selection		Series	Valve Selection	
SV690C3	10010	120° 3-port valve PEEK/UHMWPE	SV690C24	10018	120° 3-port valve PEEK/UHMWPE
	10011	120° 3-port valve PEEK/PTFE		10019	120° 3-port valve PCTFE/UHMWPE
	10012	120° 3-port valve PCTFE/UHMWPE		10028	120° 3-port valve PEEK/PTFE
	10013	120° 3-port valve PCTFE/PTFE		10029	120° 3-port valve PCTFE/PTFE
	10030	90° 4-port valve PEEK/UHMWPE		10038	90° 4-port valve PEEK/UHMWPE
	10031	90° 4-port valve PEEK/PTFE		10039	90° 4-port valve PCTFE/UHMWPE
	10032	90° 4-port valve PCTFE/UHMWPE		10048	90° 4-port valve PEEK/PTFE
	10033	90° 3-port valve PCTFE/PTFE		10049	90° 4-port valve PCTFE/PTFE
	10052	Distribution 4-port valve PCTFE/UHMWPE		10059	Distribution 4-port valve PCTFE/UHMWPE
	10053	Distribution 4-port valve PCTFE/PTFE		10069	Distribution 4-port valve PCTFE/PTFE
	10010	T 3-Port valve PEEK/UHMWPE			
	10120	T 4-Port valve PEEK/UHMWPE			

Replacement Valves

SV690C-10020	120° 3-port valve, ¼-28, PEEK/UHMWPE
SV690C-10021	120° 3-port valve, ¼-28, PEEK/PTFE
SV690C-10022	120° 3-port valve, ¼-28, PCTFE/UHMWPE
SV690C-10023	120° 3-port valve, ¼-28, PCTFE/PTFE
SV690C-10040	90° 4-port valve, ¼-28, PEEK/UHMWPE
SV690C-10041	90° 4-port valve, ¼-28, PEEK/PTFE
SV690C-10042	90° 4-port valve, ¼-28, PCTFE/UHMWPE
SV690C-10043	90° 4-port valve, ¼-28, PCTFE/PTFE
SV690C-10062	Distribution 4-port, ¼-28, PCTFE/UHMWPE
SV690C-10063	Distribution 4-port, ¼-28, PCTFE/PTFE
SV690C-10015	T 3-port, ¼-28, PEEK/UHMWPE
SV690C-10025	T 4-port, ¼-28, PEEK/UHMWPE

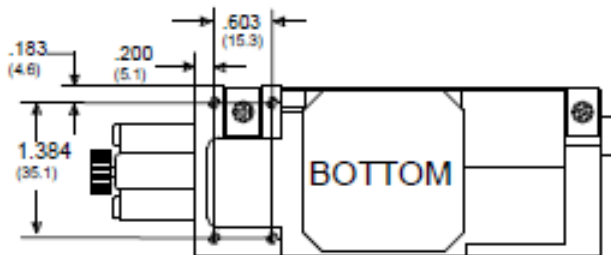
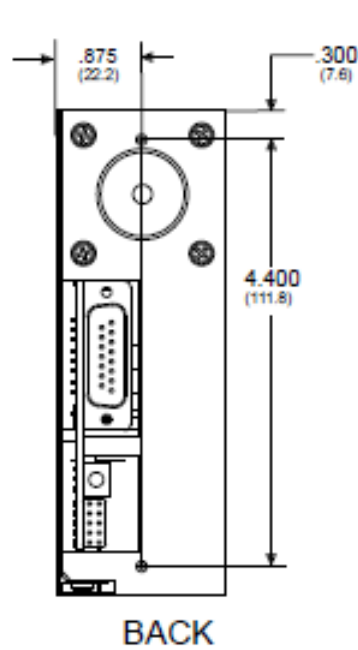
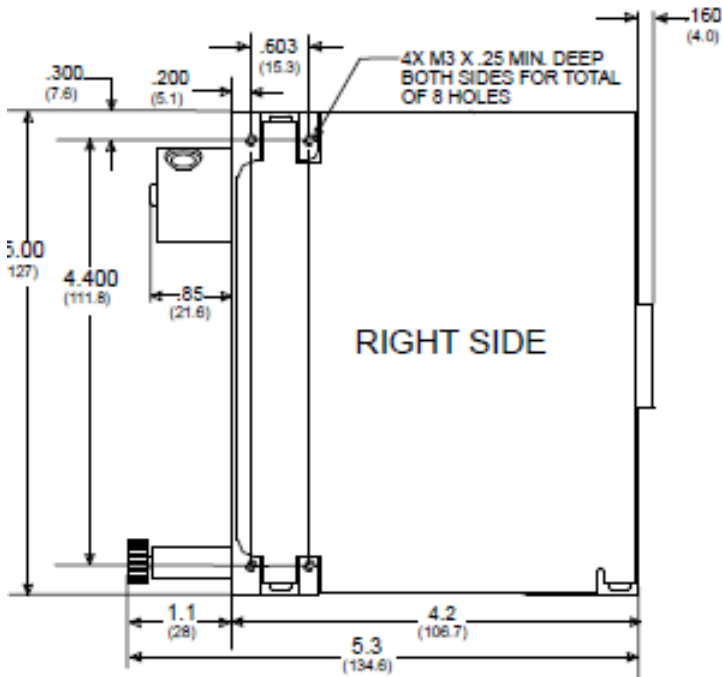
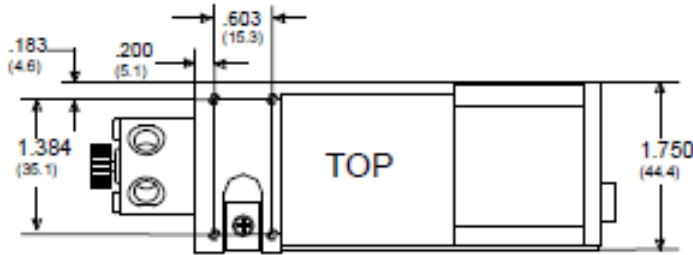
Syringes

SV690C-10070	50 µL UHMWPE
SV690C-10071	100 µL UHMWPE
SV690C-10072	250 µL UHMWPE
SV690C-10073	500 µL UHMWPE
SV690C-10074	1 mL UHMWPE
SV690C-10075	2.5 mL UHMWPE
SV690C-10076	5 mL UHMWPE
SV690C-10080	50 µL PTFE
SV690C-10081	100 µL PTFE
SV690C-10082	250 µL PTFE
SV690C-10083	500 µL PTFE
SV690C-10084	1 mL PTFE
SV690C-10085	2.5 mL PTFE
SV690C-10086	5 mL PTFE
SV690C-10088	12.5 mL PTFE

Accessories

SV690C-10171	SV690C Series Evaluation Kit. Includes Power Supply, Tubing Kit, USB Converter/Cable and Guide
SV690C-10172	Cable, RS232 to Pump
SV690C-8152-09	Universal Power Supply
SV690C-8246-71	Cable, Interface Converter to Pump
SV690C-8698-03	Cable, USB-A/USB-B, 2 meter

Specifications



ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED
 .XXX ±.008 (.02mm)
 (MILLIMETERS SHOWN IN BRACKETS)

ALL MOUNTING HOLES ARE
 M3 X .5mm X 6.3mm DEEP MIN.