



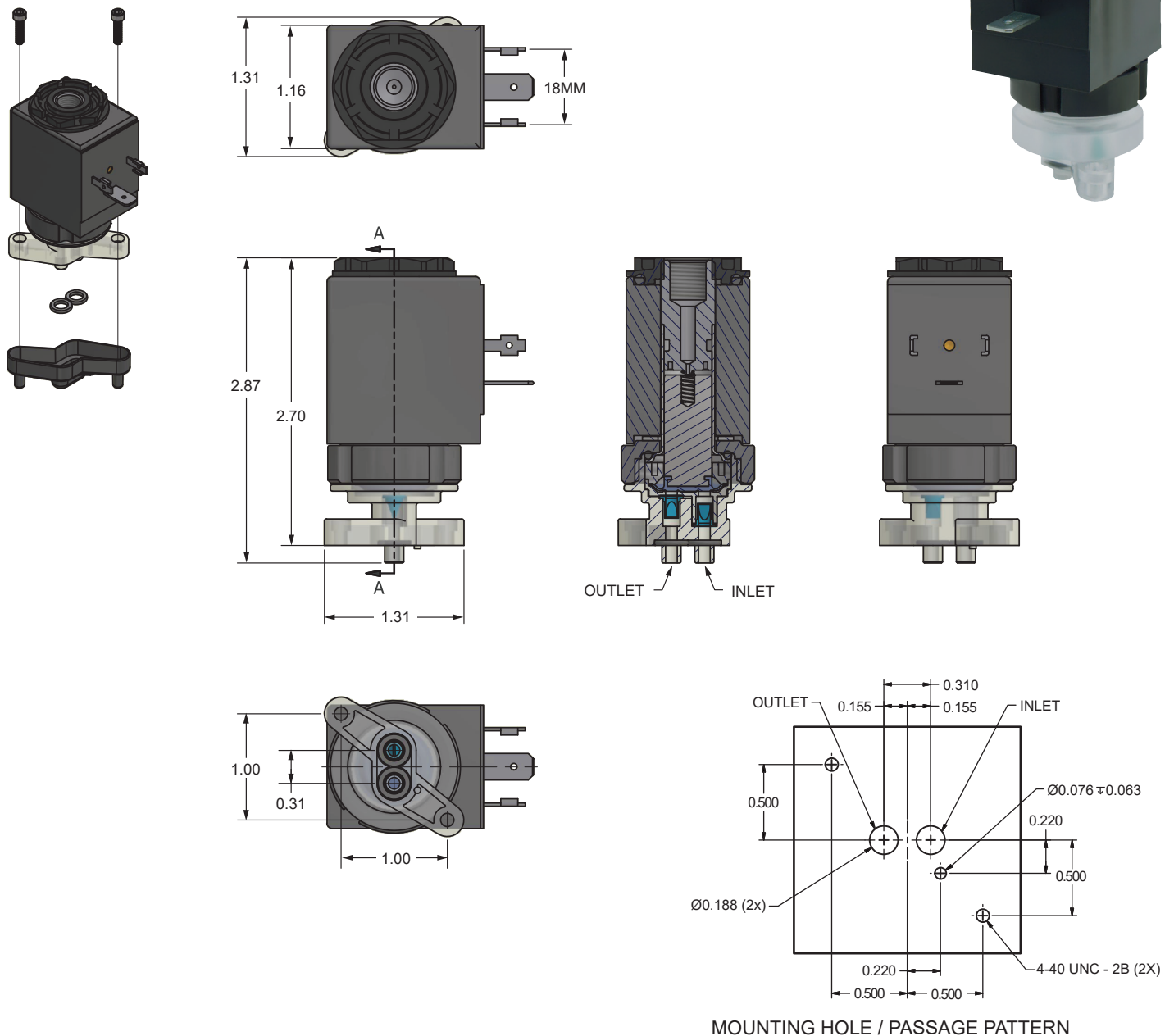
Series SSDP60

Electro-Fluidic Miniature Fixed Displacement Solenoid Pump

The Spartan Scientific Series SSDP60 high precision, fixed volume, fluidic diaphragm solenoid pump is an inert miniaturized pump in an environmentally resistant package that features a fully encapsulated solenoid coil offering flying leads, 1/4" Faston, and DIN 43650 form A with wire grip or 1/2" conduit as options. The SSDP60 features a flexible-use form factor interface for a manifold with O-ring static seals or single use models using 1/8" ID tubing. This self-priming pump draws a low 10 watts and is available in 6, 12, and 24 VDC. The SSDP60 can dispense up to 50 mL/min continuous duty cycling at 5 Hz. The maximum cycle rate is 5 Hz and is designed for 10 million cycles of service. It has been designed from the ground up to work within the rigorous environments of scientific and medical industries who employ the need for finite control of fluids.

Dimensional Data

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED





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Technical Data

Function: 2-Way, 2-Position; Solenoid Operated; Fixed Displacement Diaphragm Pump; Normally Closed

Fluidic Interface: 1/8" I.D. tube barb (2) or manifold mount Ø.185" holes with #4-40 SHCS (2)

Orifice Size: 0.110"

Dispensing Volume: 164µl / stroke ± 10µl

Temp. Range: Fluid Max.: +60°C
Dry Range: Ambient -10° to +50°C

Response Time: 5 Hz (water)
(Response time will vary depending on viscosity)

Media: Any liquid or gaseous media
(compactable with material in contact with fluid)

Environment Protection: IP65 (IEC 144), NEMA 4
Dust-tight and water resistant
(with electrical connector)

Wetted Materials: Elastomers: FKM, EPDM and PTFE (other materials available on request)
Valve Body: PEEK, Polycarbonate

Coil Data: Encapsulation: Glass-Filled Nylon
Insulation: Class F
Power Rating: 10 Watts
Voltage: 6, 12, 24 VDC
Voltage Tolerance: +/- 10% nominal
Winding: Class H

Connections: Spades: Accordance with DIN Style "A" EN175301-803
Flying Lead: PVC, 18 AWG, multi-strand copper wire, 300V, 12" minimum length

Packaged Weight: 0.50 lbs.

Self-Priming – The SSDP60 is capable of self-priming when located up to three meters above its fluid reservoir. The pump can produce an inlet suction of up to -7 psi and an outlet pressure of 4.5 psi*. Priming the pump can be achieved by cycling the pump rapidly until no bubbles are visible in the outlet tube.

No External Shut-Off Valves Needed – Once the SSDP60 is deactivated the internal diaphragm will close and seal against an internal orifice. This prevents any fluid flow through the pump with pressure spikes of up to 15 psi.

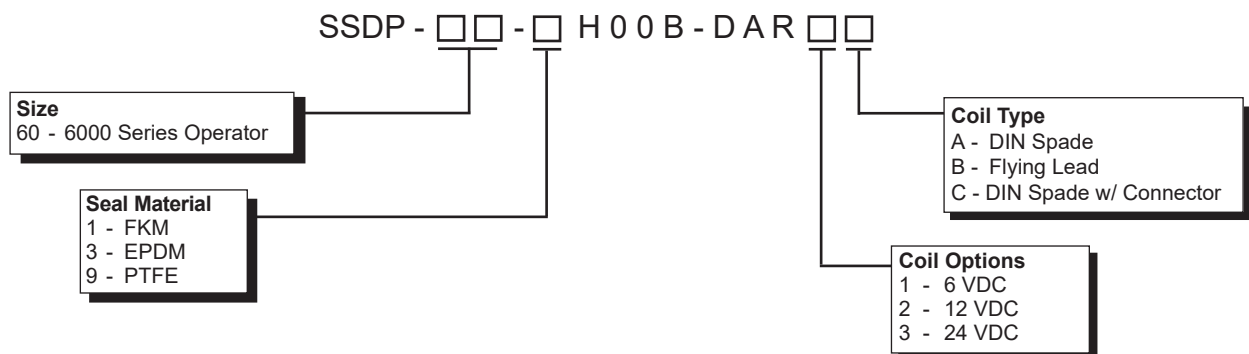
Repeatable Dose Volume – Once primed each valve should yield a consistent dose volume of ±1%* when compared to the previous dose.

Variable Volumetric Dose Rate – Operating frequency can be varied between less than 1 Hz up to 5Hz to affect the volumetric dose or "flow" rate of the pump. Please note that duty cycle may need to be adjusted for slower operating frequencies.

Pump Break-in – Each pump will gradually break in over its lifespan. A small increase in dose volume can be expected.

NOTE: All values were obtained under Spartan Scientific's test conditions. Pumps were operated at room temperature (25°C), with clean water, 50% duty cycle at 5Hz (100 msec ON, 100 msec OFF), and with negligible pressure on the inlet and outlet. Variations of tubing size, tubing length, manifold design, inlet and outlet restrictions, inlet and outlet pressures, ambient temperature, duty cycle, operating frequency, and fluid temperature and viscosity may all affect the dose volume.

How To Order



Order Example: SSDP-60-1H00B-DAR3A
6000 Series Operator, FKM,
24 VDC, DIN Spade