



Adaract Microhydraulic Valves

Ultra-compact sizes, weights below 70g

Controlled Pressures to 3,000 psi

Power Consumption below 5 watts

Electroportional Valve Overview

Adaract's electroportional valves utilize novel, highly integrated designs to reduce size, weight, and power consumption. The valves are smaller than a golf ball, and weigh only slightly more.



Custom Solutions

For applications requiring valves with alternate capabilities, Adaract is happy to provide custom valves as listed below:

In packaging similar to standard valves:

- Lower Pressure / Higher Flow Applications
- Higher Pressure / Lower Flow Applications

In smaller packaging:

- Lower Flow Applications
- Lower Pressure Applications

In manifold-style packaging:

- Valve Arrays (reduction in weight per valve)
- Integrated Micro Check & Relief Valves
- Integrated Pressure Sensors

Coming Soon!

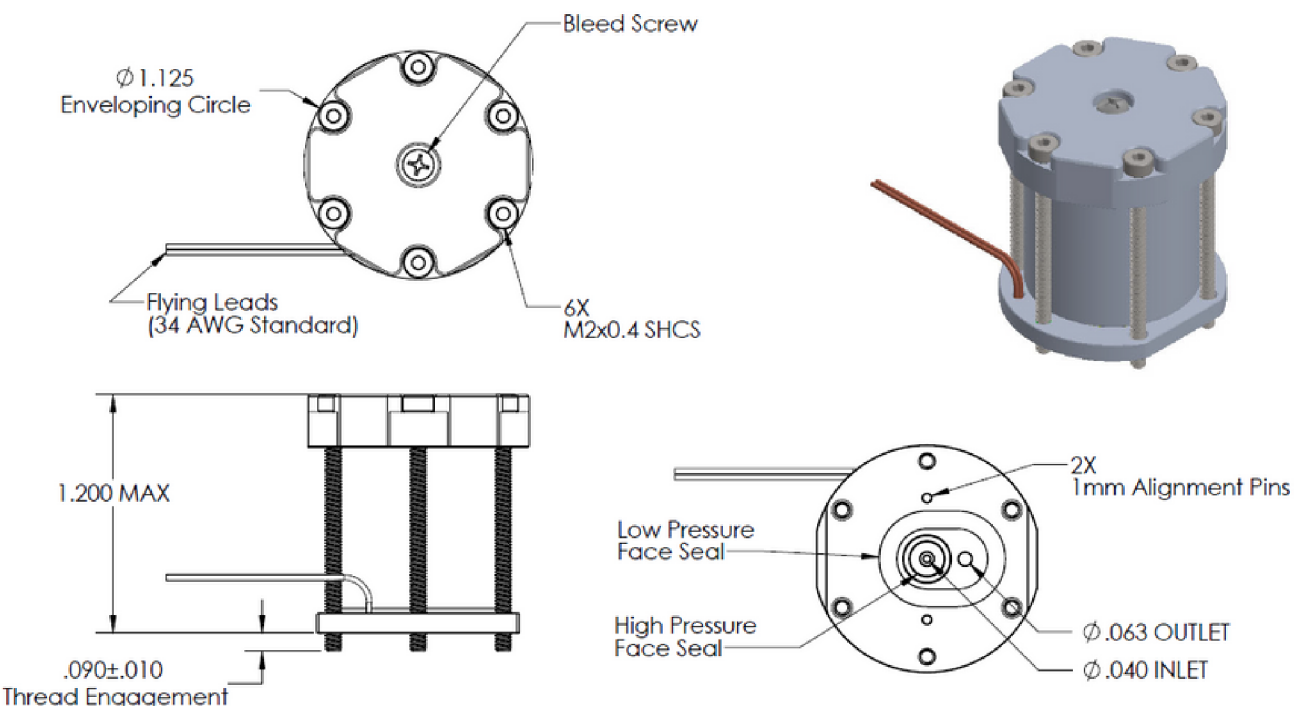
We intend to expand our selection of micro electroportional valves to include the following applications withing the later half of 2024:

- Direct acting Pressure Reducing/Relieving Valves (PRRVs)
- Pilot operated PRRVs
- Direct acting 3/2 and 2/2 valves.

Adaract Pressure Control Valve (APCV5)

Electroproportional Relief

Mounting interface and coil parameters are customizable. Please contact Adaract if you require smaller/lower flow or larger/higher flow valves.



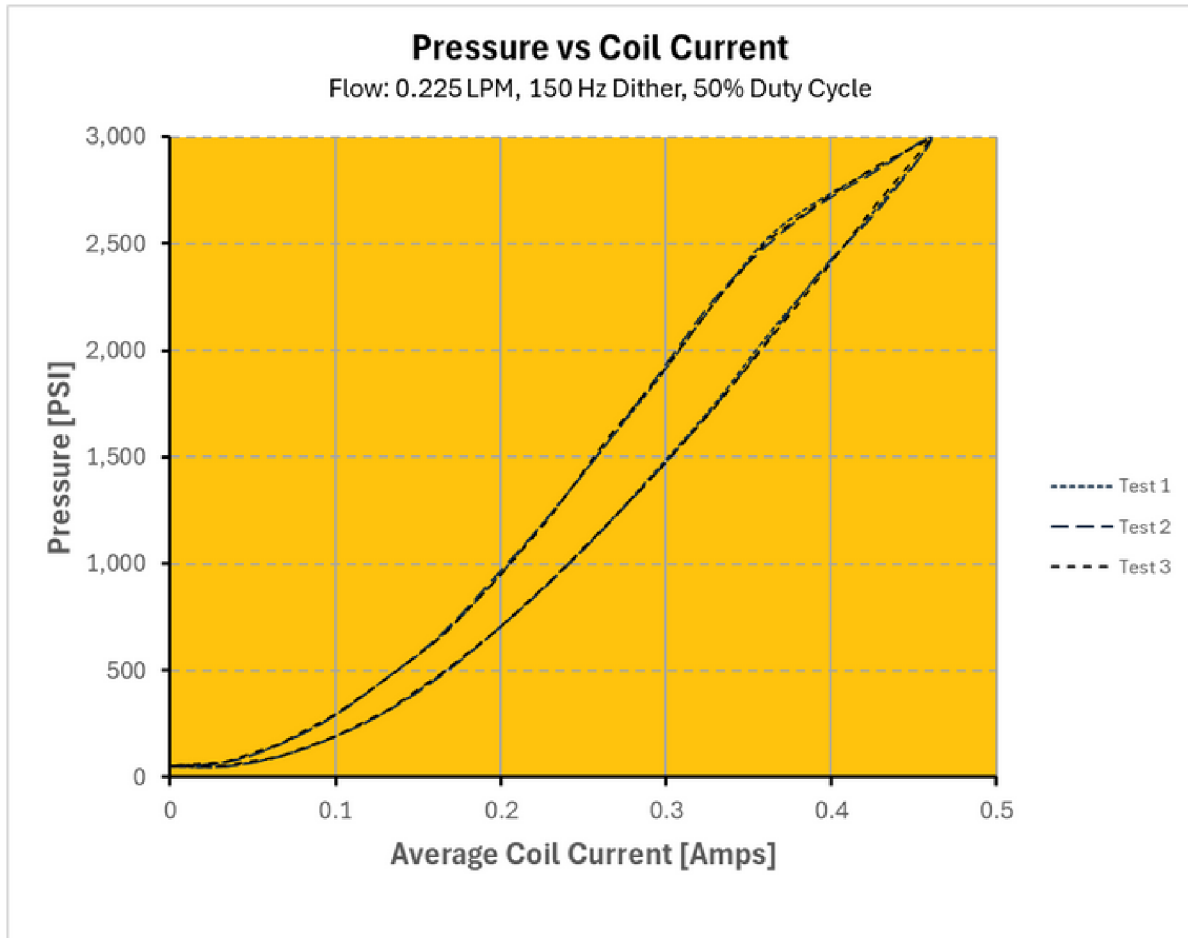
GENERAL SPECIFICATIONS	
Weight	67 g
Pressure Range	~30 - 3,000 psi
Response Time	25 ms
Hysteresis*	< 8%
Repeatability	< 2%
Reccomended Dither Frequency	150-200 Hz
Power Consumption @ 3,000 psi (50% Duty Cycle)	4.5 w
Standard Coil Resistance**	15.2 Ω
Rated Flow***	0.125 GPM

*Reduction to < 4% expected by mid 2024

** Alternate coil configurations available upon request

***Flow at which minimum differential pressure is 30 psi (1% of max)

Valve Performance



Test Notes:

- 50% duty cycle square wave applied to coil, (peak current is 2x average current)
- All tests completed with 32 cSt nominal water-glycol hydraulic fluid @ 25 °C
- Average power consumption was ~4.5 watts at 3,000 psi. Power consumption is reduced to ~2.3 watts at 100% duty cycle, although hysteresis and repeatability are adversely affected.

****the information disclosed herein does not constitute any form of warranty****

Please contact us for any technical or purchasing inquiries.

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