

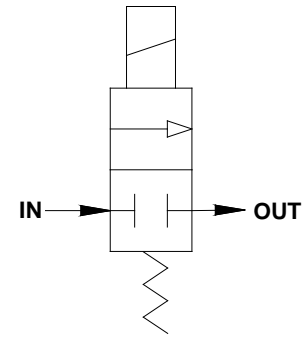
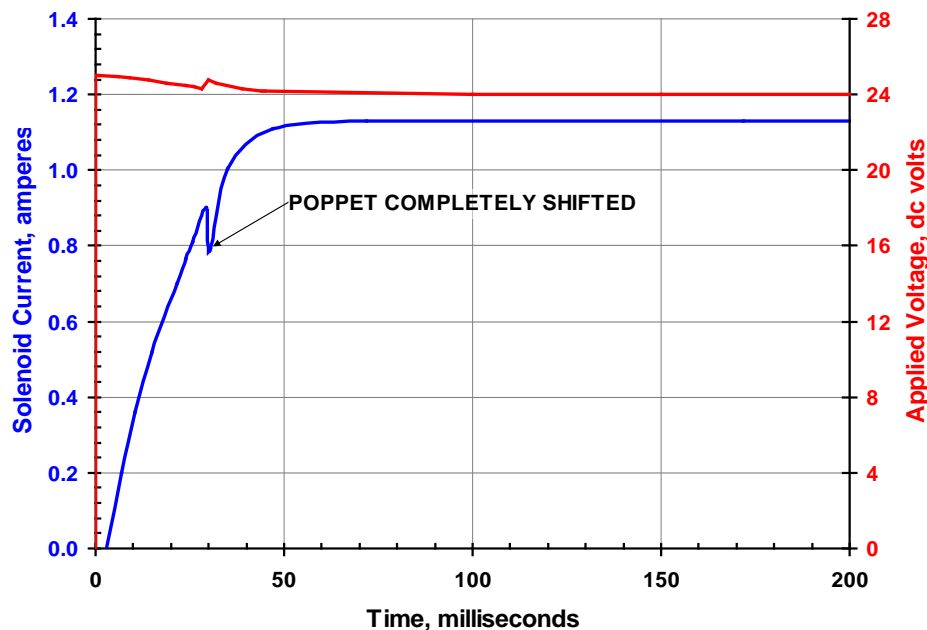
# PNEUMATIC SOLENOID VALVE

HIGH FLOW MANIFOLD MOUNT SOLENOID VALVE FOR COLD-GAS THRUST AND REACTION CONTROL SYSTEMS

## COMPONENT FEATURES

- Direct-Coupled operation with Fast Response < 30 msec
- Proprietary high-flow poppet provides bubble tight sealing
- Aerospace qualified for launch & defense applications
- Pressure balanced design is insensitive to system pressure
- Assembled, tested, & packaged in class 100,000 cleanroom
- Configurable to the special requirements of each system
- Compact & lightweight with porting, manifold & mounting flexibility

## TYPICAL RESPONSE



FLOW SCHEMATIC

## SPECIFICATIONS

1.0 Valve Type:	Normally Closed Solenoid-Operated Shut-Off Valve	7.0 Electrical	
2.0 Media:	Gaseous Nitrogen, Argon, etc.	7.1 Pull-In:	22 to 32 vdc
3.0 Pressure		7.2 Drop-Out:	2 vdc (max)
3.1 Operating:	575 psig [41 bar]	7.3 Current:	1.75 amperes @ 32 vdc
3.2 Proof:	900 psig [63 bar]	7.4 Insulation Resistance:	$1 \times 10^7 \Omega$ (min)
3.3 Burst:	1,485 psig [103 bar]	8.0 Response Time:	30 msec (max)
4.0 Temperature		9.0 Leakage:	Bubble Tight @ 575 psig (Internal & External)
4.1 Ambient:	-65°F to +200°F [-54°C to 93°C]	10.0 Weight:	0.75 Lb [0.34 Kg]
4.2 Media:	-65°F to +160°F [-54°C to 71°C]		
5.0 Flow Rate:	Greater than 0.6 lb/sec @ 270 psig [270 gram/sec @ 20 bar]		
6.0 Operating Life:	100,000 cycles		

SOUTH BEND CONTROLS

1237 NORTHSIDE BOULEVARD • SOUTH BEND, IN 46615  
TEL+1.574.234.3157 • FAX+1.574.234.3948 • WEB [WWW.SBCONTROLS.COM](http://WWW.SBCONTROLS.COM)

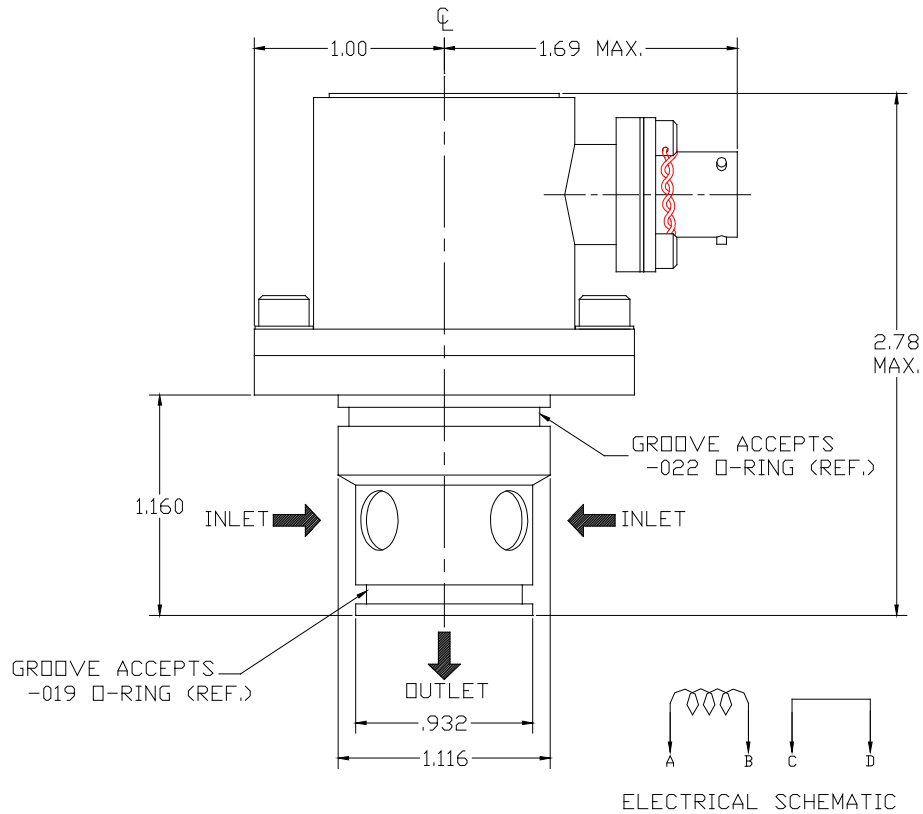
BULLETIN AV-505

## PNEUMATIC SOLENOID VALVE

This product is a single-stage, direct operated pneumatic solenoid valve for aerospace cold-gas thruster applications. The pressure balanced design minimizes power consumption for high flow with rapid response characteristics.

The pull-type solenoid operator is directly coupled to a dual seat poppet. The poppet's design incorporates a large flow area and pressure balancing. These allow extremely high flow in a small package with minimal power consumption. Bubble-tight sealing is provided through a precision poppet/seal assembly.

This valve's unique features allow this product to be used with pressurized gas systems primarily for attitude control in defense and space applications. This configuration is designed for manifold insertion where multiple attitude control vector solenoids are supplied by a common pressure regulator.



Related products: see tech data bulletins AV-501 for High Pressure Regulator and AV-502 for High Pressure Relief Valve.

