PROPORTIONAL FLOW CONTROL SOLENOID VALVE

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Proportional flow control valve, integral to the design of an inspiratory flow system, provides precision control for the flow of gas. Specialized proportional valves are available for application in ventilators and anesthesia machines and provide accurate and safe delivery of precise gases to patients.

APPLICATIONS

Ventilators Anesthesia Delivery & Monitor Insufflators Pressure and Flow Control

FEATURES

Low power consumption generates less heat Proven performance tested to 100 million life cycles Uses either DC current or pulse width modulation with closed loop feedback to deliver optimal system performance.

SPECIFICATIONS

Valve Type:	2 Way Proportional
Port:	1/8" BARB
Body Material:	Brass
Seal:	NBR Optional FKM
Media:	Air, Oxygen, Nitrous Oxide, Carbon Dioxide, Heliox & other medical gases
LPM:	6 LPM @ 10 psi Differential Pressure
Operating Environment:	32 to 132 F (0 to 55 C)
Storage Temperature:	-40 to 158 F (-40 to 70 C)
Dimensions:	L-17.6mm, W-16mm, H-45mm
Weight:	58 g

ELECTRICAL

Power:	9V DC (2 Watts)
Electric Termination:	15" Lead Wire

WETTED MATERIALS

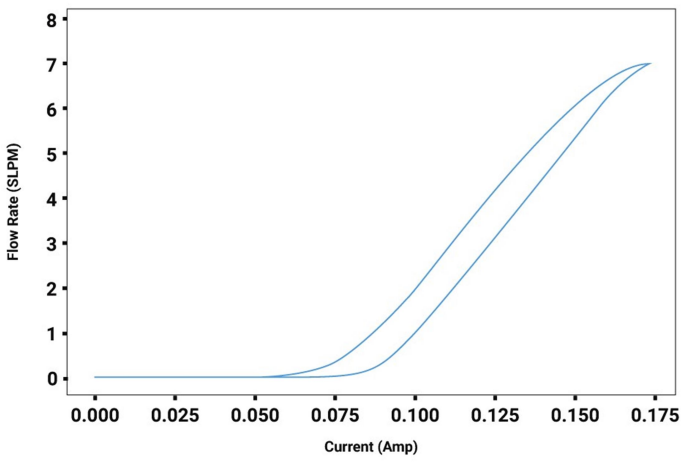
Body:	Brass
Stem Base:	430 FR Stainless steel
All Others:	NBR/FKM, 430 FR Stainless Steel, Stainless Steel, Aluminum(Manifold)

PERFORMANCE

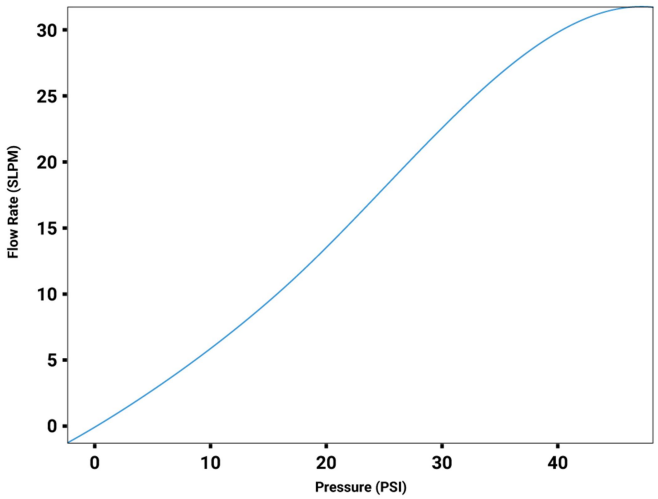
Leak Rate:	<0.2 sccm of helium (bubble tight)
Operating Pressure:	0 to 30 psi
Orifice Sizes:	0.8mm
Hysteresis:	7% of full scale current (Typical), 15% of full scale current (Max)
Response time:	10 ms Typical
Reliability:	100 Million Cycles, 0.95 Reliability Factor, 95% Confidence Interval

NOTE: Contact factory for customized configurtions: eg custom calibration and electrical connections.

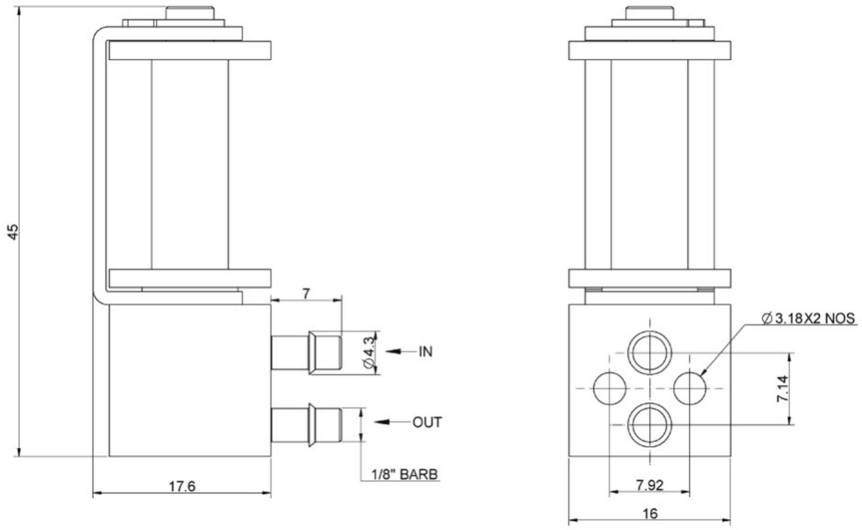
VALVE CURRENT VS FLOW WITH 9 VDC COIL@10 PSI



PRESSURE VS FLOW CURVE



BODY BASIC VALVE DIMENSIONS



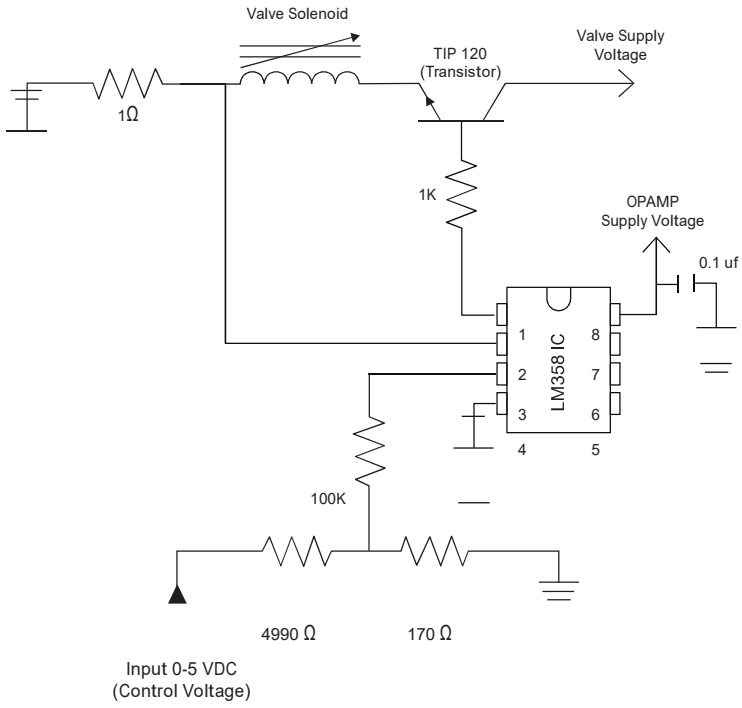
ELECTRICAL REQUIREMENTS

Nominal Supply Voltage(VDC)	Nominal Coil Resistance (Ohms)	Control Current at Maximum Flow (mA)
---9VDC	@ 20°C --- 55Ohms	--- 6 SLPM

BASIC CONTROL: proportional valve can be controlled by either voltage or current; however, it is highly recommended that current control be employed to ensure the most repeatable valve flow performance.

SUGGESTED PWM CONTROL: For PWM control, the signal applied to the valve should have a frequency of 5 kHz or greater. Optimal frequency will be application dependent.

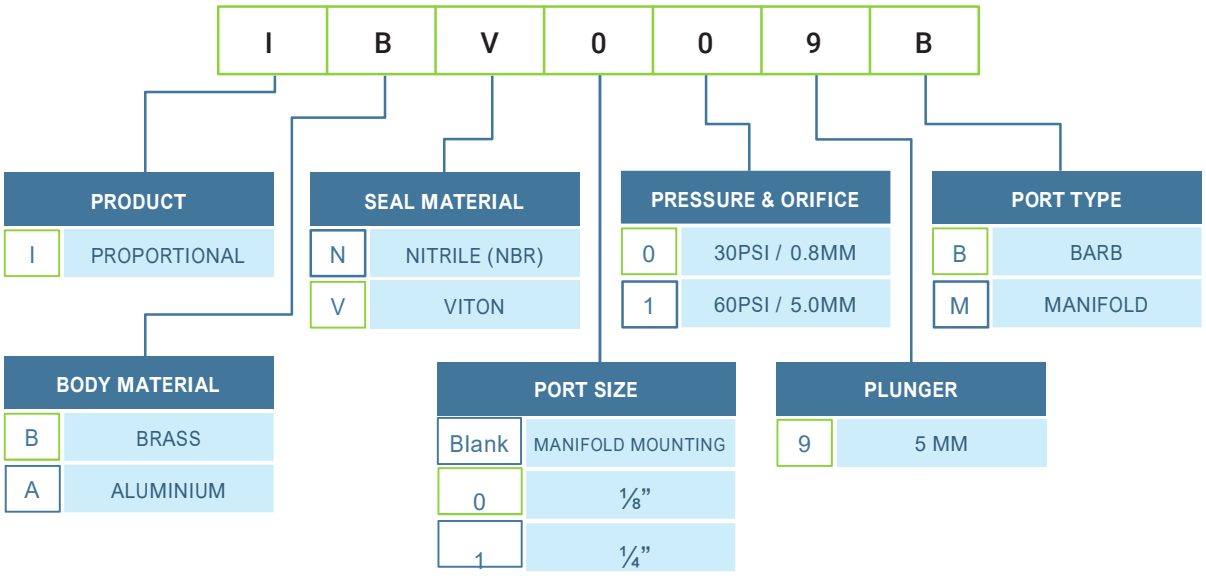
BODY BASIC VALVE DIMENSIONS



This simple current driver circuit draws only 1 mA at the input control (0-5VDC) and provides control for any configuration regardless of valve voltage or resistance.

NOTE: In order to provide the best possible solution for your application, please provide the following requirements when contacting Applications Engineering: Media, Inlet & Outlet Pressures, System Supply Voltage Minimum Required Flow Rate Media & Ambient Temperature Range

PROPORTIONAL FLOW CONTROL VALVE MODEL IDENTIFICATION CHART



Note: Above mentioned pressure is a differential pressure.

IBV009B

PROPORTIONAL FLOW CONTROL VALVE 30PSI / 0.8 MM ORIFICE ⅛" BARB PORT BRASS BODY (5MM)