



international polymer solutions

Miniature Solenoid Valves



Our **IPS Miniature Solenoid Valves** offer precision performance under extreme conditions. Offered as 2-Way and 3-Way Valves with six internal body configurations and three seat sealing methods, our IPS Miniature Solenoid Valves are suitable for a wide range of ultra clean to highly corrosive media applications.



Our all virgin PTFE wetted surface design is ideally suited for semiconductor, pharmaceutical, bio-medical and chemical process applications. Configurable with a PTFE Hard Seat, FKM-Viton O-Ring Seat or FFKM-Kalrez O-Ring Seat the IPS Miniature Series Solenoid Valve line provides unsurpassed chemical compatibility with a wide range of flow media. The all wetted PTFE body, valve stem and one piece diaphragm maintain a material inert boundary for ultra clean applications.

HIGHLIGHTS:

- PTFE design optimized for ultra clean and chemical compatibility.
- Configurations available for various DC & AC voltages.
- Fast, accurate and repeatable coil response time from proven technology.
- Continuous Duty Cycle Rated at controlled ambient temperatures.
- Valve seat and diaphragm designed for positive flushing and bubble-tight shut off.
- Non porous diaphragm configured to completely isolate solenoid coil from media.
- 100% coil driven – does not require energizing pressure or vacuum to operate.
- O-ring seat configurations for vacuum and complex media applications.
- Designed for aggressive media and elevated temperature.

General Valve Parameters	
1/8 Orifice Cv (2-Way / 3-Way)	0.35 / 0.18
1/4 Orifice Cv (2-Way / 3-Way)	0.70 / 0.45
3/8 Orifice Cv (2-Way / 3-Way)	0.90 / 0.60
Common Port Vacuum in-Hg (max)	25
Media Temperature (range)	0 - 100°C / 32 - 212°F
Ambient Temperature (range)	0 - 60°C / 32 - 140°F
Wattage Range: High Watt Coil (std)	10 - 13 W
Wattage Range: Low Watt Coil	5 - 6 W
Voltage Tolerance	+/-10%
Coil Lead Length (3 Wire) (Red is Hot / White is Neutral / Green is Ground)	24"



Maximum Port Pressure Rating (psi)	O-Ring Seat 3-Way		PTFE Seat 3-Way	
	Lo-Watt	Hi-Watt	Lo-Watt	Hi-Watt
Common Port	40	60	40	60
Normally Closed Port	30	35	20	30
Normally Open Port	40	60	40	60
	2-Way NC		2-Way NC	
	Lo-Watt	Hi-Watt	Lo-Watt	Hi-Watt
Inlet Port	40	60	40	60
Outlet Port	30	35	20	30
	2-Way NO		2-Way NO	
	Lo-Watt	Hi-Watt	Lo-Watt	Hi-Watt
Inlet Port	40	60	40	60
Outlet Port	40	60	40	60

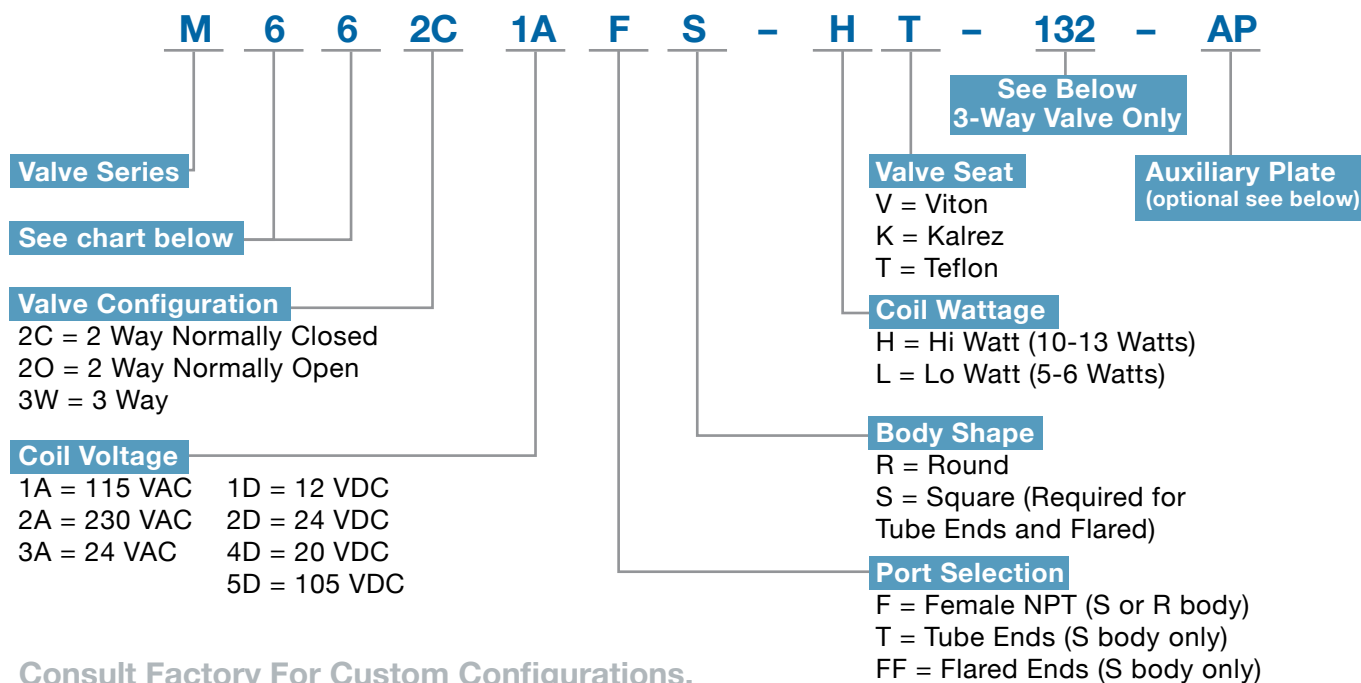


Other Options Available on Request:

- Valves with special port connections such as combinations of pipe, tube and flared ends.
- Extra long wire leads (36" or 48").
- Valves without mounting studs or valves with 4 mounting studs (2 are standard).
- Manifolded valve assemblies.



Solenoid Valves. ORDERING FORMAT



Porting w/ Max Orifice

PIPE	
22	1/8" FNPT & 0.125" Orifice
44	1/4" FNPT & 0.250" Orifice
66	3/8" FNPT & 0.375" Orifice
86	1/2" FNPT & 0.375" Orifice
TUBE	
21	1/8" TUBE & 0.063" Orifice
43	1/4" TUBE & 0.188" Orifice
65	3/8" TUBE & 0.313" Orifice
86	1/2" TUBE & 0.375" Orifice
FLARE	
42	1/4" FLARE & 0.125" Orifice
64	3/8" FLARE & 0.250" Orifice
86	1/2" FLARE & 0.375" Orifice

Port Arrangements

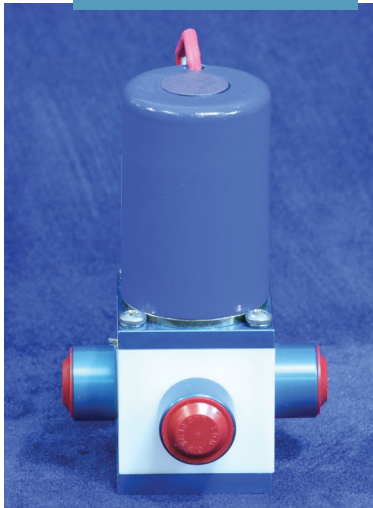
The port orientation can be arranged in six possible patterns on our 3-Way Solenoid Valves. Please select one of the six arrangements.

Looking Down at the Top of the Coil		
STD		
NC ● NO 132 C	NO ● NC 123 C	C ● NC 213 NO
C ● NO 231 NC	NC ● C 312 NO	NO ● C 321 NC

STD = 132 is our standard Port Arrangement.

Auxiliary Plate ("AP"): For highly corrosive or caustic gas applications, such as Chlorine Gas, our Auxiliary Plate Option ("-AP") give an extra line of protection. The valve is configured with an auxiliary plate between the upper diaphragm and solenoid coil. The AP (Auxiliary Plate) is O-Ring sealed on the Stem of the diaphragm and supported at the outer body-to-coil interface.

3/8" 3-Way FNPT



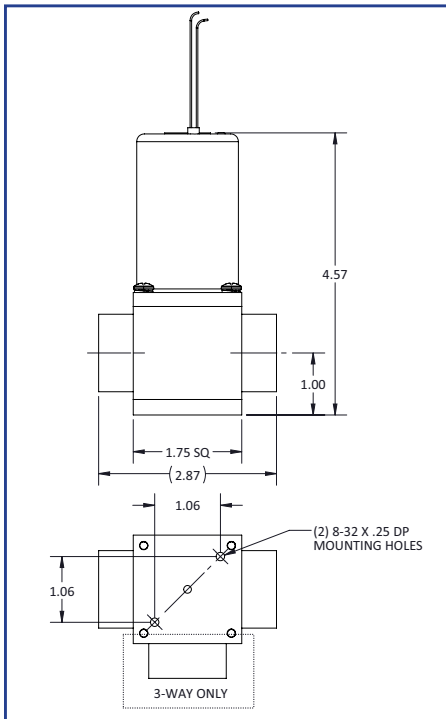
**1/8" 2-Way FNPT
(Round Body)**



1/8" 2-Way FNPT

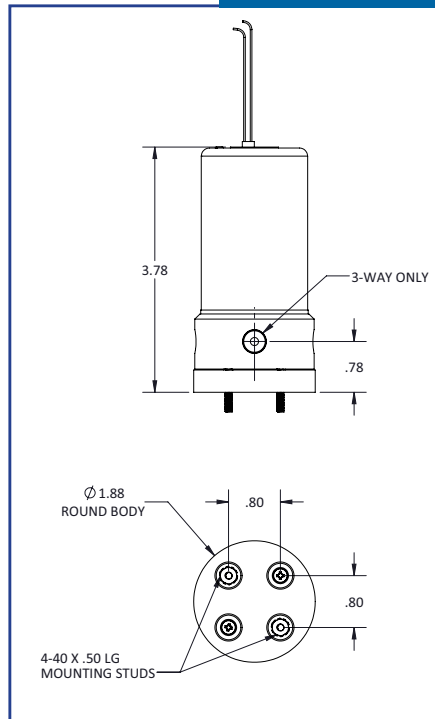


Typical for 3/8" and 1/2" Models

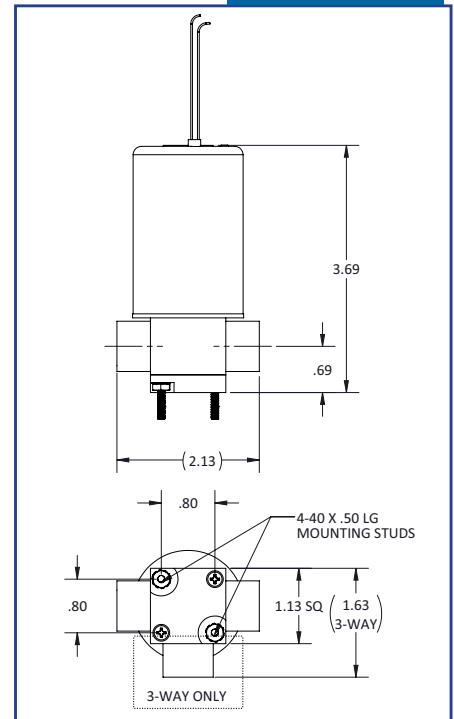


Typical for 1/8" and 1/4" Models

Round Body



Square Body



IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.



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Sub-miniature Solenoid Valves



Our **IPS Sub-miniature Solenoid Valves** offer precision performance under extreme conditions. Offered as 2-Way and 3-Way Valves with four internal body configurations and three seat sealing methods, our IPS Sub-miniature Solenoid Valves are suitable for a wide range of ultra clean to highly corrosive media applications.

Our PTFE wetted surface design is ideally suited for semiconductor, pharmaceutical, bio-medical and chemical process applications.

Configurable with a FKM-Viton Seat, FEPM-AFLAS Seat or FFKM-Kalrez Seat,

the Sub-mini Series Solenoid Valve line provides unsurpassed chemical compatibility with a wide range of flow media. The PTFE body, valve stem and one piece diaphragm maintain a material inert boundary for ultra-clean and harsh-caustic applications.



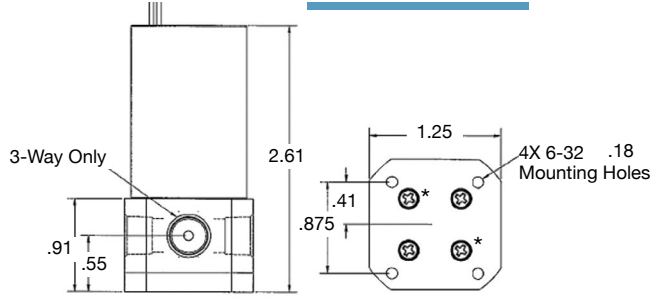
HIGHLIGHTS:

- PTFE design optimized for ultra clean and chemical compatibility.
- Configurations available for various DC & AC voltages.
- Fast, accurate and repeatable coil response time from proven technology.
- Valve seat and diaphragm designed for positive flushing and bubble-tight shut off.
- Non-porous diaphragm configured to completely isolate solenoid coil from media.
- 100% coil driven – does not require energizing pressure or vacuum to operate.
- Maximum recommended Duty Cycle 62%.
- Designed for aggressive media and elevated temperature.

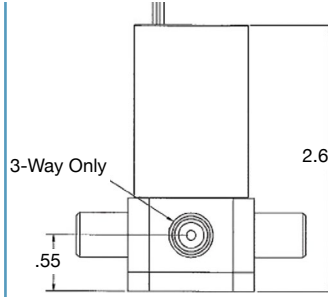
Maximum Port Pressure Rating (psi)	O-Ring Seat 3-Way
Common Port	80
Normally Closed Port	40
Normally Open Port	40
	2-Way NC
Inlet Port	80
Outlet Port	40
	2-Way NO
Inlet Port	80
Outlet Port	40



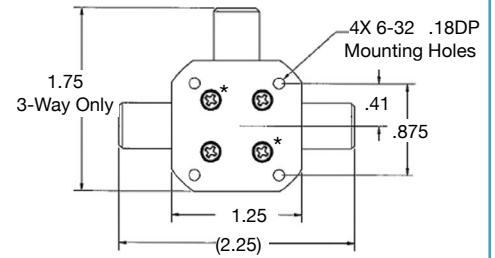
General Valve Parameters	
0.063" Orifice Cv (2-Way / 3-Way)	0.06 / 0.05
0.094" Orifice Cv (2-Way / 3-Way)	0.12 / 0.11
Common Port Vacuum in-Hg (max)	20
Media Temperature (range)	0 - 100°C / 32 - 212°F
Ambient Temperature (range)	0 - 60°C / 32 - 140°F
Wattage Range	10 -12 W
Voltage Tolerance	+/-10%
Coil Lead Length (2 Wire)	24"



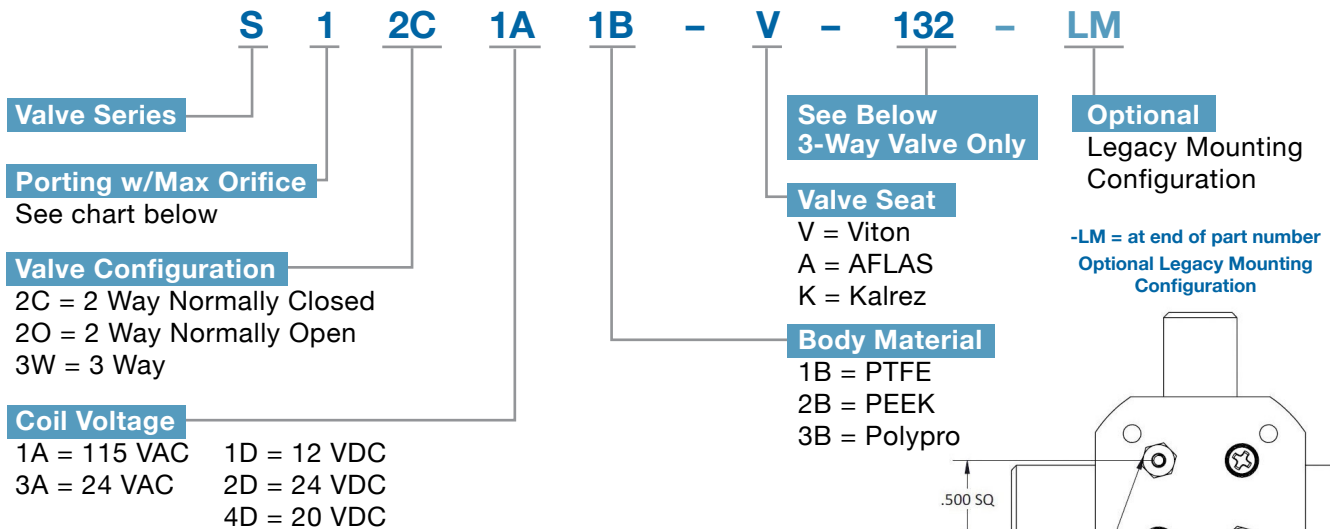
* (-M) Optional Legacy Mounting



* (-M) Optional Legacy Mounting



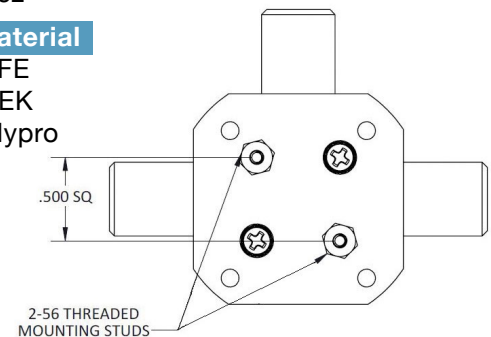
Solenoid Valves: ORDERING FORMAT



Consult Factory For Custom Configurations.

Porting w/ Max Orifice

Port Type/Size and Standard Orifice	
1	1/4"-28-UNF Female with 0.063" Orifice
2	1/8" FNPT with 0.094" Orifice
3	#10-32-UNF Female with 0.063" Orifice
4	1/4" FNPT with 0.094" Orifice
5	1/8" Tube with 0.094" Orifice
6	1/4" Tube with 0.094" Orifice
7	1/16" FNPT with 0.063" Orifice
8	1/16" Tube with 0.032" Orifice
9	1/4" Flare with 0.094" Orifice



Port Arrangements

The port orientation can be arranged in four possible patterns on our 3-Way Solenoid Valves.

Looking Down at the Top of the Coil			
STD			
NC ● NO	NO ● NC	C ● NC	NO ● C
132 C	123 C	213 NO	321 NC

STD = 132 is our standard Port Arrangement.

IPS Product Notes:

- Please email Customer Service at info@ipolymer.com.
- Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
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- Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.