

# M Series - Subminiature

▶ MOPD: 100 PSI

C<sub>v</sub> Range: 0.018 to 0.070
 As Low As 0.5 Watts

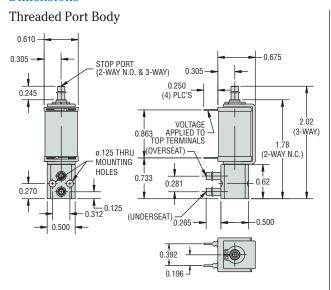
The M Series implements efficient power conservation in a solenoid valve that is specifically designed for sub-miniature two- and three-way pneumatic and select liquid applications. Field proven to exceed performance requirements in battery-powered applications, the M Series can be designed for extreme low wattage conditions. With a compact size, consistent high-speed response time, and reliable operation over 200 million cycles, the M Series delivers extended performance and precision flow control in a small lightweight environment.

# **Typical Applications**

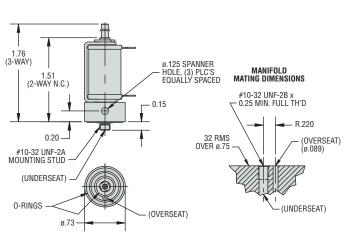
Ideal for inline PC interfacing and manifold assemblies:

- · Medical and Therapeutic Healthcare
- Clinical Chemistry and Analysis Equipment
- Drop-on-Demand Printing
- Environmental Instrumentation

# Dimensions

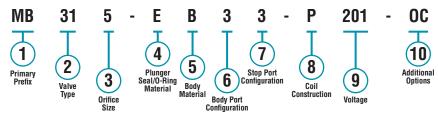


## Manifold Mount Body



#### How To Order

Use the **Bold** characters from the choices listed on the following page to construct a product code.



Note: After the Primary Prefix, any "-Code" may be blank when standard (blank) selections are specified.

#### Example:

MB315-EB33-P-201

1 Watt 3-Way N.C. solenoid valve with a 0.052% orifice, EPDM plunger seal/o-ring, brass body, 1/8% barb body and stop port, P.C. board mount (4-pin), operating at 5 VDC, and is cleaned for oxygen use.

# Part Prefix Table 1

Power Rating		Orifice	MOPD (psig)	C <sub>v</sub> Body	1 Primary Prefix
0.5 Watt	**	0.031	25	0.020	MA
		0.052	10	0.038	MA
1 Watt		0.031	50	0.020	MB
		0.052	25	0.038	MB
2 Watts		0.031	100	0.020	MC
	8	0.052	50	0.038	MC

- 2 Valve Type
  - 20 = 2-Way normally closed
  - 22 = 2-Way normally open
  - 30 = 3-Way normally closed (free vent)
  - **31** = 3-Way normally closed (line connection)
  - 32 = 3-Way normally open
  - 33 = 3-Way multi-purpose
  - 34 = 3-Way directional control
- (3) Orifice Size
  - **2** = 0.031"
  - **5** = 0.052"
- (4) Plunger Seal / O-Ring Material
  - V = Viton®
  - N = Nitrile
  - E = EPDM
- (5) Body Material
  - $\mathbf{B} = \text{Brass}$
  - $\mathbf{A} = Aluminum$
- (6) Body Port Configuration<sup>1</sup>
  - **0** = Face mount
  - 1 = 1/16'' barb
  - 2 = 5/64" or 3/32" barb
  - 3 = 1/8" barb
  - 4 = Manifold mount, #10-32 UNF-2A stud†
  - 5 = #10-32 UNF-2B female thread (180° apart only)
  - $6 = 1/8"-27 \text{ NPT ports } (180^\circ \text{ apart only})$

### 7 Stop Port Configuration<sup>1</sup>

- 0 = No barb (Standard for 2-way NC & 3-way free vent)<sup>23</sup>
- 1 = 1/16" barb (.031" orifice only)
- 2 = 5/64" or 3/32" barb
- 3 = 1/8" barb

#### (8) Coil Construction (Tape-Wrapped, 130°C Class B)

- **U** = P.C. board solderable (2-pin)
- $\mathbf{P} = P.C.$  board mount  $(4-pin)^4$
- Q = Quick connect 0.110 spade
- L = Lead-wires, #26 AWG, 18" long
- **W**\_\_ = Lead-wires (Specify length in inches)

### (9) Voltage

- **200** = 3 VDC
- **201** = 5 VDC
- **203** = 12 VDC
- **204** = 24 VDC
- \_\_\_VDC = DC (specify voltage)
- VAC = AC Rectified 2-watt coil only (specify voltage, lead-wires only)

#### 10 Additional Options

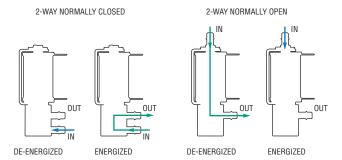
- **OC** = Cleaned for oxygen use
- **VAC** = Vacuum application (0 to 27" Hg)

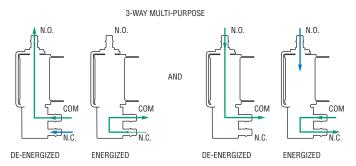
#### Notes

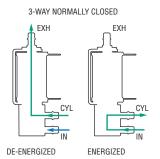
- 1 Barbs are brass
- 2. For Stop Port Configuration, must select "0" for valve type 20 (2-way NC) and for type 30 (3-way NC Free Vent).
- 3. For Stop Port Configuration, must select "1" or "2" or "3" for valve types 22 (2-way NO), 31 (3-way NC Line Connect), 32 (3-way NO), 33 (3-way MP), and 34 (3-way DC). Selection "0" can not be used.
- 4. 2 pins near stop are active.

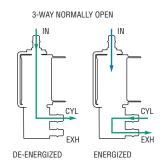
Gems specializes in the design and manufacturing of custom solenoid valves and fluidic systems. If you don't see what you're looking for, or have a question, contact us at 800-378-1600 or info@gemssensors.com.

#### Flow Schematic

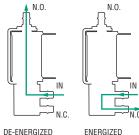








3-WAY DIRECTIONAL CONTROL



Flow Key

Blocked Flow
Free Flow

<sup>†</sup>Teflon® o-ring not suitable for manifold mount.