

# A Series

- ▶ MOPD: 1000 PSI
- ▶  $C_v$  Range: 0.019 to 0.3
- ▶ 6 Watts

The A Series gives you a highly adaptable design for practically all applications requiring flow between  $C_v$  0.019 and 0.300. This robust 2- or 3-way miniature solenoid utilizes a stainless steel body to resist corrosion for most acids, alkaline solutions, and harsh environments. Also available in plastic—from polypropylene to Delrin®—when specific inert or demanding requirements are needed. Available in numerous port configurations, orifice sizes, and material combinations, the A Series is a highly flexible valve that fulfills the requirements for most applications.



## Typical Applications

Stainless Steel Bodies:

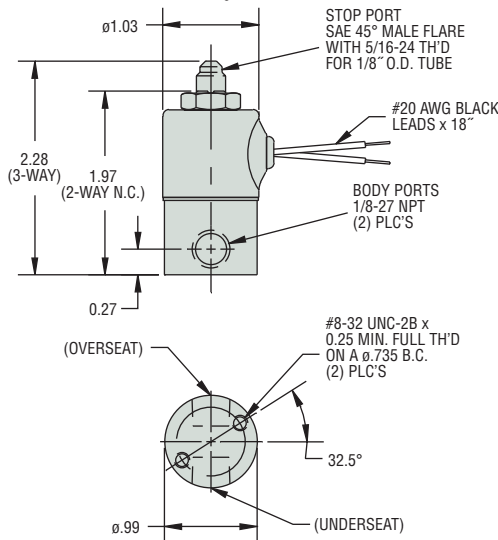
- Medical Equipment
- Laboratory Equipment
- Food Processing Equipment

Brass Bodies:

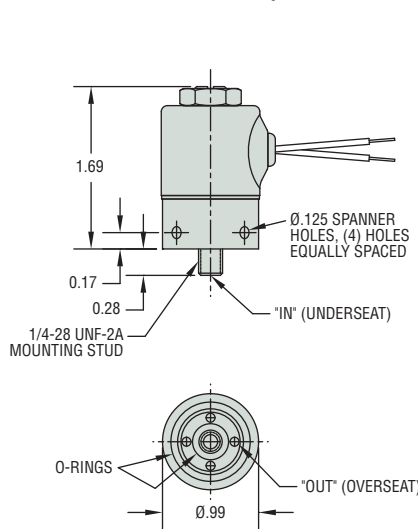
- Industrial Applications
- Automotive
- Water Transfer Systems

## Dimensions

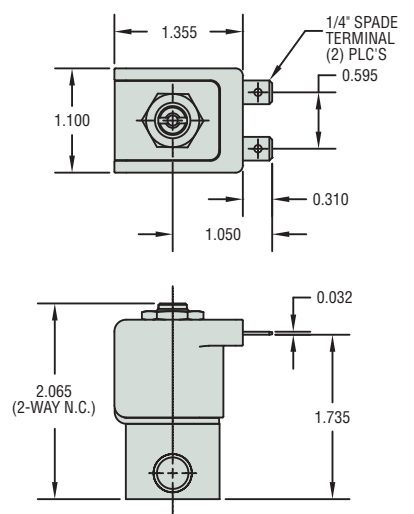
### Threaded Port Body



### Manifold Mount Body



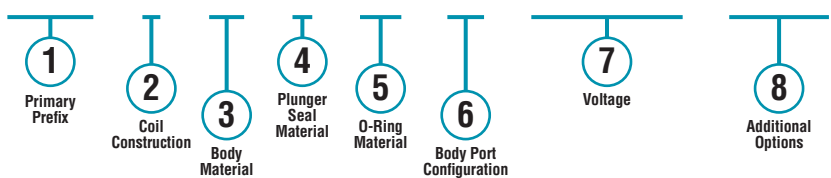
### Molded Coil



## How To Order

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

**A2213 - 3 - BB - N - NO - LB - 110/60VAC - WM-TP**



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

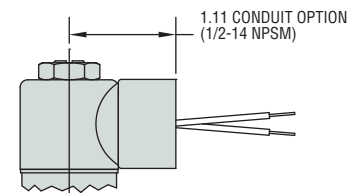
### Example:

A2213-3-BB-N-NO-LB-110/60VAC-WM-TP

2-Way N.O. (with 1/8"-27 NPT stop port adaptor) solenoid valve, with brass body, neoprene plunger seal, neoprene O-ring, 1/4"-18 FNPT body ports, operating at 110/60 VAC/Hz, and includes the mounting bracket and PTFE coated plunger options.

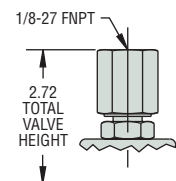
### Alternate 1/2" Conduit Housing

Available on all body configurations



### Stop Port

Standard on 2-way N.O.; Option "AD" on 3-Way.



Part Prefix Table ①

	Orifice		MOPD (psig)	C <sub>v</sub>		① Primary Prefix	
	Body	Stop		Body	Stop	Grommet Housing	Conduit Housing
2-WAY N.C.	1/32	—	1000	0.020	—	A2011	A2021
	3/64	—	500	0.035	—	A2012	A2022
	1/16	—	300	0.065	—	A2013	A2023
	5/64	—	200	0.090	—	A2014	A2024
	3/32	—	175	0.155	—	A2015	A2025
	1/8	—	100	0.240	—	A2016	A2026
	5/32	—	50	0.300	—	A2017	A2027
2-WAY N.O. (option AD standard)	—	1/32	200	—	0.019	A2211	A2221
	—	3/64	150	—	0.040	A2212	A2222
	—	1/16	100	—	0.075	A2213	A2223
3-WAY N.C. Free Vent	1/32	1/32	200	0.019	0.019	A3011	A3021
	3/64	3/64	150	0.040	0.040	A3012	A3022
	1/16	3/64	100	0.070	0.040	A3013	A3023
	1/16	1/16	75	0.070	0.070	A3014	A3024
	3/32	3/64	50	0.170	0.040	A3015	A3025
3-WAY N.C. Line Connection	1/32	1/32	200	0.019	0.019	A3111	A3121
	3/64	3/64	150	0.040	0.040	A3112	A3122
	1/16	3/64	100	0.070	0.040	A3113	A3123
	1/16	1/16	75	0.070	0.070	A3114	A3124
	3/32	3/64	50	0.170	0.040	A3115	A3125
3-WAY N.O.	1/32	1/32	150	0.019	0.019	A3211	A3221
	3/64	3/64	100	0.040	0.040	A3212	A3222
	1/16	3/64	90	0.070	0.040	A3213	A3223
	1/16	1/16	75	0.070	0.070	A3214	A3224
	3/32	3/64	50	0.170	0.040	A3215	A3225
3-WAY Multi Purpose	1/32	1/32	125	0.019	0.019	A3311	A3321
	3/64	3/64	100	0.040	0.040	A3312	A3322
	1/16	3/64	90	0.070	0.040	A3313	A3323
	1/16	1/16	75	0.070	0.070	A3314	A3324
	3/32	3/64	25	0.170	0.040	A3315	A3325
3-WAY Directional Control	1/32	1/32	225	0.019	0.019	A3411	A3421
	3/64	3/64	150	0.040	0.040	A3412	A3422
	1/16	3/64	100	0.070	0.040	A3413	A3423
	1/16	1/16	75	0.070	0.070	A3414	A3424
	3/32	3/64	50	0.155	0.040	A3415	A3425

② Coil Construction

- (blank) = Tape-wrapped, Class-B, with 18" lead wires\*
- W \_\_\_ = Tape-wrapped coil, lead-wires, non-standard length (specify length)
- 1M = Over molded coil, Class-B, lead-wires
- 2M = Over molded coil, Class-F, lead-wires
- 3M = Over molded coil, Class-H, lead-wires
- 4M = Over molded coil, Class-B, 1/4" spade terminals
- 5M = Over molded coil, Class F, 1/4" spade terminals
- 6M = Over molded coil Class H, 1/4" spade terminals
- 4 = Encapsulated coil, Class-B, 3/16" spade terminals
- 5 = Encapsulated coil, Class-B, 0.110" spade terminals
- 8 = Encapsulated coil, Class F, 3/16" spade terminals
- 10 = Externally rectified coil (lead wires only)
- 11 = Tape-wrapped coil, Class H, lead wires
- HC = molded coil, Class F, EN175301-803 Form B DIN, Industrial, 11mm, 2+1 poles
- HC2 = Encapsulated coil, Class B, EN175301-803 Form C DIN, Industrial, 9.4mm, 2+1 poles

③ Body Material

- (blank) = 303 Stainless Steel\*
- BB = Brass
- SB = 304 Stainless Steel
- SB5 = 316 Stainless Steel
- SBF = 430F Stainless Steel

④ Plunger Seal Material

- (blank) = Nitrile\*
- E = EPR
- GV = Gasoline Viton® (2-way valves only)
- N = Neoprene
- NS = Nitrile (NSF/FDA, 2-way valves only)
- PF = Perfluoroelastomer
- R = Rulon® (2-way valves only)
- T = PTFE
- V = Viton®

⑤ O-Ring Material

- (blank) = Nitrile\*
- EO = EPR
- NO = Neoprene
- NSO = Nitrile (NSF/FDA, 2-way valves only)
- PFO = Perfluoroelastomer
- TO = PTFE
- VO = Viton®

⑥ Body Port Configuration

- (blank) = 1/8-27 NPT female thread\*
- LB = 1/4-18 NPT female thread
- BD = #10-32 female straight thread (max. orifice = 1/8")
- LT = 1/8-28 BSPT female thread (2-way valves only)
- LU = 1/4-19 BSPT female thread (2-way valves only)
- MM = Manifold mount (1/4-28 UNF-2A mounting stud)†††
- MM3 = Manifold mount (5/16-24 UNF-2A mounting stud)†††
- OB = Omit body (operator style)
- MB = Bottom metering (max. orifice = 3/32")
- BI = Bottom over-seat port, female thread (max. orifice = 1/8")
- BIM = Bottom over-seat port, 1/8-27 NPT male thread (max orifice = 5/64") brass body only
- BO = Bottom under-seat port, female thread
- BOM = Bottom under-seat port, 1/8-27 NPT male thread (max orifice = 1/8") brass body only
- RL = 90° porting - left hand
- RR = 90° porting - right hand
- BS = Stop port, #10-32 female straight thread†

⑦ Voltage†† (see note below)

- \_\_\_ VDC = DC (specify DC voltage)
- \_\_\_ VAC = AC (specify AC voltage; includes copper shading ring)

⑧ Additional Options

- Y = Yoke
- WM = Mounting bracket
- TP = PTFE coated plunger
- AD = 1/8 - 27 NPT stop port adapter (3-way valves only)
- QO = Quiet operation (2-way valves only)
- S = Silver shading ring
- OC = Cleaned for oxygen use
- VAC = Vacuum application (0 to 29.5" Hg)
- G1 = One-piece 303 Stainless Steel guide assembly
- G5 = One piece 316 Stainless Steel guide assembly

\* Standard selection; will be used unless otherwise specified. Standard selections are not referenced in final part number.

† Plastic body available, contact Gems.  
 †† Can be AC rectified without shading ring. Use coil construction Code 10.  
 ††† Teflon® o-ring not suitable for manifold mount.

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.