

Table of Contents

Catalog Section	Product Description	In this Section	Page
How to Order			ii
2-Way	2-Way Miniature Direct Acting	20CCxxx, 20CFxxx	A1
	2-Way Direct Acting	7121KBNxx, 7122KBNxx, 71215SNxx, 71225SNxx, 71235SNxx, 71295SNxx, 02F2001xx, 04F20C1xx, 04F2001xx, 04F20C2xx, 04F2002xx, 06F20C2xx, 08F20C2xx, 08F2002xx, 12F20C2xx, 12F2002xx	A5
	2-Way Direct Lift, Pilot & Remote Operated	7221GBNxx, 7321GBNxx, 7322GBNxx, 72218BNxx, 72228BNxx, 7321KBNxx, 73212BNxx, 73222BNxx, 73218BNxx, 73222BNxx, 73228BNxx, 74232BNxx, 75232BNxx, 04F25C2xx, 04F2502xx, 06F22C2xx, 06F22C6xx, 06F23C2xx, 06F2302xx, 06F23C6xx, 06F2306xx, 06F2306xx, 06F25C2xx, 06F2502xx, 08F22C2xx, 08F22C6xx, 08F23C2xx, 08F2302xx, 08F23C6xx, 08F2306xx, 08F2306xx, 08F25C2xx, 08F2502xx, 12F22C2xx, 12F22C6xx, 12F23C2xx, 12F2302xx, 12F23C6xx, 12F2306xx, 12F24C2xx, 12F2402xx, 12F25C2xx, 12F2502xx, 16F24C2xx, 16F2402xx, 16F24C6xx, 16F2406xx, 16F25C2xx, 16F2502xx, 20F24C2xx, 20F2402xx, 24F24C2xx, 24F2402xx, 24F24C6xx, 24F2406xx	A27
	2-Way High Pressure Direct & Pilot Operated	7121KBNxxF, 7121KBNxxR, 7122KBNxxF, 7321HBNxxN, 7322HBNxxN, 7322HBNxxV, 71215SNxxF, 71216SNxxL, 71216SNxxT, 71216SNxxU, 71225SNxxF, 73216BNxxT, 04F28C1xx, 06F28C1xx, 08F28C1xx, 08F2801xx, 12F28C1xx, 12F2801xx	A61
	2-Way Anti-Water Hammer & Slow Closing	7221GBNxxxCO, 7321GBNxxxMC, 7321KBNxxxWO, 7322GBNxxxCO	A75
3-Way	3-Way Miniature Direct Acting	30CCxx, 30CFxx, 30CUxx	B1
	3-Way Direct Acting	7131KBNxx, 7131TBNxx, 7131TVNxx, 7132TBNxx, 7133KBNxx, 7133TBNxx, 7133TVNxx, 71315SNxx, 71335SNxx, 71385SNxx, 71395SNxx, A3LB2127, A3LB2177, A3LB2252, A36LB2126, A36LB2176, A36LB2251, A5LB2127, A5LB2177, A56LB2126, A56LB2176, 02F30C1xx, 02F30C3xx, 02F3001xx, 02F30U1xx, 02F30U3xx, 04F30C2xx, 04F30C3xx, 04F3002xx, 04F30U1xx, 04F3003xx, 04F30U3xx	B5
	3-Way Pilot & Remote Operated	73312BNxx, 73317BNxx, 73317VNxx, 73322BNxx, 73382BNxx, 74317BNxx, 74317VNxx, 74332BNxx, 75332BNxx	B25
	3-Way High Pressure	7131KBNxxF, 7131KBNxxR, 7133KBNxxV, 71335SNxxN	B41
	3-Way Quick Exhaust	7131EBNxx, 71313SNxx, 04F35C1xx, 04F3501xx, 04F38C1xx, 04F3801xx, 06F38C1xx, 06F3801xx	B45
4-Way	4-Way Direct Acting & Pilot Operated	71417BNxx, 71477BNxx, 7341LANxx, 73417BNxx, 73417VNxx, 73419ANxx, 73477BNxx, 73477VNxx, 74417BNxx, 74417VNxx, V933Lxxx, V935Lxxx, V955Lxx, 04F48S2xx	C1
	3-Way/4-way Direct Mount NAMUR	71315AKDKxx, 73417AKDKxx, 73417BKDPxx, 73417VKDKxx, 73477AKDKxx, 73477BKDPxx, 73477VKDKxx, 74417BKDPxx	C17
Specialty Valves	Manifold Mounted Miniature Cartridge Valves		D3
	MB 3-Way Miniature - Plastic		D9
	Dry Operator 2-Way		D13
	Hot Water & Steam		D17
	Intrinsically Safe Series		D35
	Manual Reset 3-Way		D53
	Hydraulic 2-Way & 3-Way		D57
	Magnelatch® Coil Option		D63
	Fuel Dispensing Valves		D67
	Fuel Selector Manifold		D71
CNG Valves		D73	
Timer Drain Valves		D75	
Coils	Coils and Enclosures	Coil Charts 1-12 as referenced in each Product Section of this Catalog	E1
	Coil Charts 1-6	Gold Ring™ brand (Includes Part Numbering Schematic)	E2-E9
	Coil Charts 7, 8	Skinner™ brand (Includes Part Numbering Schematic)	E10-E26
	Coil Chart 9	2-way/3-way Miniature and Manifold Mounted (Includes Part Numbering Schematic)	E27-E30
	Coil Charts 10-12	Skinner™ brand	E31
Technical	Technical Information	Key Technical Reference Information	F1
	Parker-FCD Safety Guide		F26
	Opportunity Data Sheet	Informational Form for New Application Inquiry	F28
Terms and Conditions			F29

2-Way

3-Way

4-Way

Specialty

Coil Reference

Technical Reference



How to order (see coil section for part numbering charts)

Valves using Coil Charts 1-6 (Gold Ring Series Valves)

Step 1: Select the pressure vessel catalog number based on the application requirements. The catalog number is specified in the individual catalog sections.

Step 2: Select one enclosure code, one coil termination code and one voltage code. Standard leads are 18-inches long with all enclosures, except splice box where six-inch leads are standard.

Step 3: When separate valve and solenoid, the last two digits of the valve must match the first two digits of the solenoid. **Example:** Valve: 04F20C1103AAF Solenoid: AF4C05

Step 4: Valves with enclosure Types 7 & 9 must be ordered factory assembled and not as modular.

Valves using Coil Charts 7, 8, 10, 11 & 12 (Skinner 7000 Series Valves)

Ordering items 1 and 2, fully assembled valves

Step 1: Select the pressure vessel catalog number based on the application requirements. The catalog number is specified in the individual catalog sections.

Step 3: Select the appropriate integrated coil, and enter (NO=Nut & Washer as the 13th/14th digits), or enclosure and conventional coil.

Step 2: Use the mechanical options table, if required, to write the option code in place of the last two pressure vessel digits - "00."

Step 4: Use the electrical options table, if required, to write the option code in place of the last two coil digits.

Step 5: Use the voltage code to specify the correct voltage for the valve.

Item	Description
1	Fully assembled valves with integrated coils
2	Fully assembled valves with conventional coils and enclosures

Pressure Vessels	Enclosure	Coil	Voltage Code
7121KBN2NV00 +	N0	+ C111 +	P3

Example: 7121KBN2NV00N0C111P3

Valves using Coil Chart 9 (Miniature 2-way/3-way valves and Miniature Manifold Mounted Cartridge Valves)

These valves can be ordered in two parts: pressure vessel and solenoid coil.

To order modular units, select the pressure vessel, then mix and match one of the three different coil styles to meet your application requirement.

The available modular coils consist of the following coils:

- C4 conduit coil
- B4 leaded coil
- D6 DIN coil

To order pressure vessel:

Choose your pressure vessel from the the technical specification pages. The pressure vessel will contain the required coil retainig nut.

To order coil:

- Select either the C4 (Conduit), B4 (leaded) or D6 (DIN) coil required.
- Select voltage code
- Add voltage code to end of the coil number
- The coil assembly will contain the O-ring seals.

Assembled Valve Units:

To order a complete valve follow these three easy steps:

Step 1: Choose your pressure vessel from the technical specification pages.

Step 2: Select either the encapsulated (Integrated) or conventional coil. Apply that two-digit code to the end of the pressure vessel part number.

Step 3: Lastly, go to the voltage code chart and select the one digit voltage code and add the code to the end of the coil code to create the final complete assembled valve part number.



2-Way Miniature

Direct Acting Valves
1/8" NPT



2-Way

General Description:

2-way Miniature Direct Acting valves are available in Normally Closed and Normally Open constructions with interchangeable AC/DC coils. Valves are standard with 303 stainless steel bodies and FKM seals. These compact valves are durable with the potential for long life. Under lab conditions, these valves have survived 20 million cycles.

Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

Standard Materials of Construction

Please refer to page A4

Compatible Fluids

Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and additional fluids compatible with materials of construction.

Use of non-lubricated gaseous media can affect valve life.

Electrical Characteristics:

Standard Voltages:

AC –24/60
120/60–110/50
240/60–220/50

DC –12, 24

For other voltages – consult factory



Coil Classification:

Class F standard/Class H available
AC & DC coils are interchangeable on the same pressure vessel.

Agency Approvals:

Standard valves with NEMA 4X are C-UL-US Listed or Recognized. For additional details, consult factory.

NSF Certification available on 2-way Normally Closed Valves. (Consult Factory)

Maximum Ambient Temperature

135°F (AC)/125°F (DC)

In absence of moisture, applications at temps as low as -20°F are possible. Please refer to page A4 for details.

Applications:

- Instrumentation equipment
- Analyzers and diagnostic equipment
- Gas analyzers
- Medical and dental equipment
- Portable welding equipment
- Spraying equipment
- Lubrication equipment
- Beverage dispensing & vending machines
- Oil burners
- Humidification and misting equipment
- Mobile fuel shut off
- Textile and dry cleaning equipment
- Air horns
- Pneumatic fan clutch
- Irrigation equipment



2-Way Miniature Direct Acting - Normally Closed - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

1/8	3/64	0.06	0	950	950	950	8.5	240	FKM	20CC02EV4	9	A1
1/8	1/16	0.10	0	625	625	625	8.5	240	FKM	20CC02GV4	9	A1
1/8	5/64	0.15	0	450	450	450	8.5	240	FKM	20CC02JV4	9	A1
1/8	3/32	0.22	0	320	320	320	8.5	240	FKM	20CC02LV4	9	A1
1/8	7/64	0.28	0	245	245	245	8.5	240	FKM	20CC02MV4	9	A1
1/8	1/8	0.32	0	175	175	175	8.5	240	FKM	20CC02PV4	9	A1
1/8	5/32	0.38	0	100	100	100	8.5	240	FKM	20CC02QV4	9	A1

DC TECHNICAL SPECIFICATIONS

1/8	3/64	0.06	0	390	390	390	8	240	FKM	20CC02EV4	9	A1
1/8	1/16	0.10	0	255	255	255	8	240	FKM	20CC02GV4	9	A1
1/8	5/64	0.15	0	180	180	180	8	240	FKM	20CC02JV4	9	A1
1/8	3/32	0.22	0	130	130	130	8	240	FKM	20CC02LV4	9	A1
1/8	7/64	0.28	0	100	100	100	8	240	FKM	20CC02MV4	9	A1
1/8	1/8	0.32	0	60	60	60	8	240	FKM	20CC02PV4	9	A1
1/8	5/32	0.38	0	30	30	30	8	240	FKM	20CC02QV4	9	A1

2-Way Miniature Direct Acting - Normally Open - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

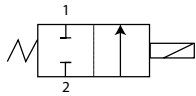
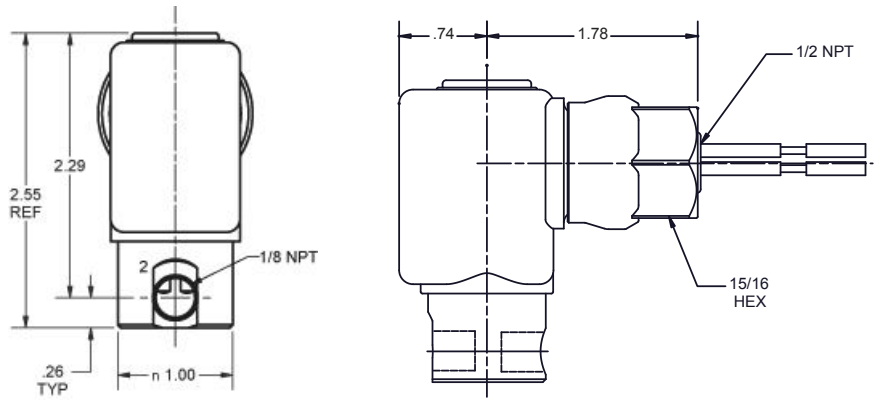
AC TECHNICAL SPECIFICATIONS

1/8	1/32	0.02	0	375	375	375	10	240	FKM	20CF02AV4	9	A2
1/8	3/64	0.06	0	230	230	230	10	240	FKM	20CF02EV4	9	A2
1/8	1/16	0.10	0	150	150	150	10	240	FKM	20CF02GV4	9	A2
1/8	5/64	0.14	0	105	105	105	10	240	FKM	20CF02JV4	9	A2
1/8	3/32	0.20	0	80	80	80	10	240	FKM	20CF02LV4	9	A2

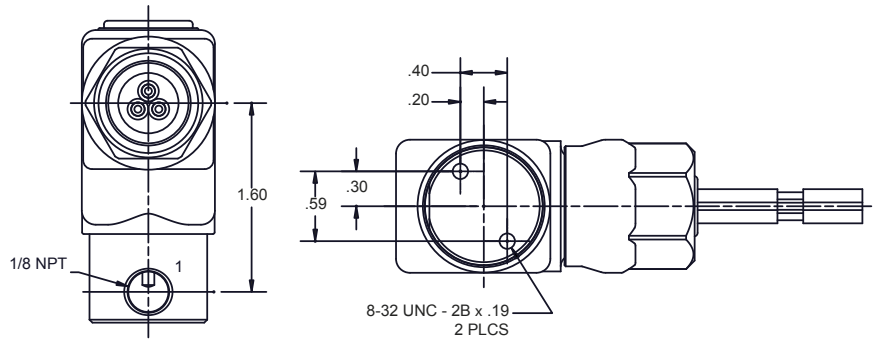
DC TECHNICAL SPECIFICATIONS

1/8	1/32	0.02	0	375	375	375	8	240	FKM	20CF02AV4	9	A2
1/8	3/64	0.06	0	230	230	230	8	240	FKM	20CF02EV4	9	A2
1/8	1/16	0.10	0	150	150	150	8	240	FKM	20CF02GV4	9	A2
1/8	5/64	0.14	0	105	105	105	8	240	FKM	20CF02JV4	9	A2
1/8	3/32	0.20	0	80	80	80	8	240	FKM	20CF02LV4	9	A2

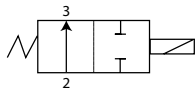
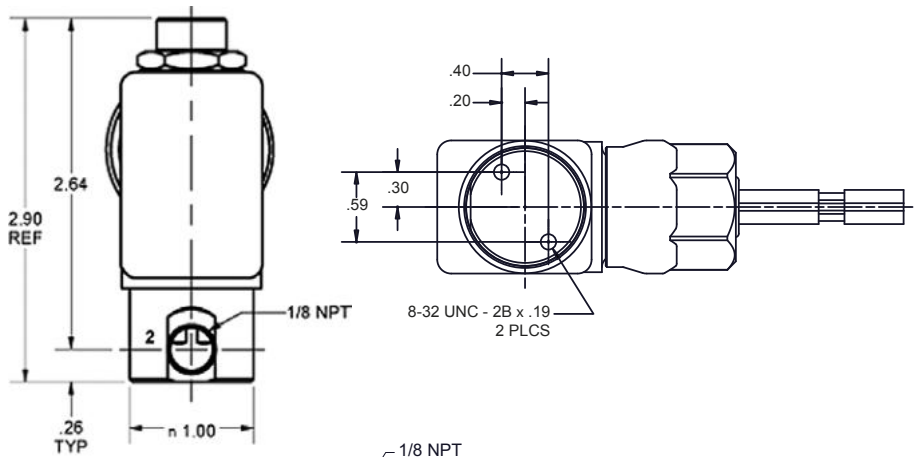
Valve Reference A1



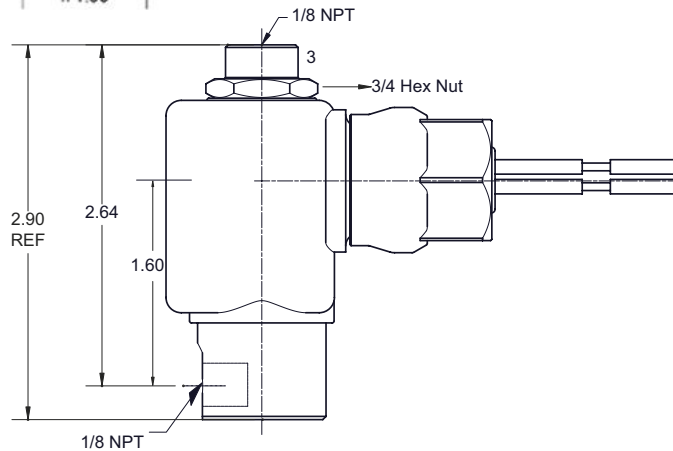
2-Way Normally Closed:
20CCxx
Port Identification:
2-In/1-Out



Valve Reference A2



2-Way Normally Open:
20CFxx
Port Identification:
2-In/3-Out



2-Way Miniature Direct Acting Materials of Construction**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
20CC02	8.5 (AC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
20CC02	8 (DC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F
20CF02	10 (AC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
20CF02	8 (DC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F

* Shows the first 6 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

Check out the 2-Way and 3-Way Manifold Mounted Miniature Cartridge valves in the Specialty Section of this catalog.



Product Features:

- Space saving approach
- Less manifold machining means lower overall manifold cost
- No manifold orifices to machine or press in
- Cartridge valves are 100% tested
- Easy to assemble & disassemble with a 5/32" hex wrench. (Torque = 25-35 in-lbs).
- No loose parts: sleeve, plunger, spring and orifice are pressed together as one unit
- Available with all coils and enclosures shown on Chart 9 in Coil Section of this catalog.

2-way

Direct Acting Valves
1/8" - 3/4" NPT



2-Way

General Description:

2-way Direct Acting valves are used in a wide variety of applications that require zero pressure differential and medium to high pressures and flow. These valves are available in a variety of elastomers as well as, brass and stainless construction.

Installation

Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

Standard Materials of Construction

Please refer to page A24

Compatible Fluids

Lubricated Air, Inert Gases, Water and Light Oil (300 SSU). Additional fluids compatible with alternate materials of construction (consult factory).

Use of non-lubricated gaseous media can affect valve life.

Electrical Characteristics:

Standard Voltages:

AC -24/60

120/60-110/50

240/60-220/50

DC -12, 24 & 120

For other Voltages - consult factory



Coil Classification:

Class F standard

Class H available

Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory.

Maximum Ambient Temperature

150°F

Please refer to page A24 for details.

Applications:

- Instrumentation equipment
- Analyzers and diagnostic equipment
- Medical and dental equipment
- Portable welding equipment
- Spraying equipment
- Lubrication equipment
- Beverage dispensing & vending machines
- Oil burners
- Humidification and misting equipment
- Mobile fuel shut off
- Textile and dry cleaning equipment
- Air horns
- Pneumatic fan clutch
- Irrigation equipment

2-Way Direct Acting - Normally Closed- Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	1/16	0.11	0	1000	1000	1000	10	165	PCTFE	7121KBN1GF00	7	A13
1/8	1/8	0.31	0	365	365	365	10	165	PCTFE	7121KBN1NF00	7	A13
1/4	3/64	0.06	0	750	750	500	6	180	NBR	04F20C1103AAF	1	A3
1/4	1/16	0.11	0	1000	1000	1000	10	165	PCTFE	7121KBN2GF00	7	A13
1/4	3/32	0.17	0	360	340	160	6	180	NBR	04F20C1106AAF	1	A3
1/4	1/8	0.31	0	365	365	365	10	165	PCTFE	7121KBN2NF00	7	A13
1/4	1/8	0.31	0	145	145	145	10	185	FKM	7121KBN2NV00	7	A13
1/4	1/8	0.35	0	300	300	200	11	180	NBR	04F20C1108ACF	4	A16
1/4	1/8	0.35	0	140	165	90	6	180	NBR	04F20C1108AAF	1	A3
1/4	5/32	0.50	0	180	200	145	11	180	NBR	04F20C2110ACF	4	A4
1/4	5/32	0.52	0	120	120	120	10	185	FKM	7121KBN2QV00	7	A13
1/4	7/32	0.72	0	100	100	100	16	180	NBR	04F20C2114BDF	5	A4
1/4	13/64	0.76	0	80	80	80	10	185	FKM	7121KBN2SV00	7	A13
1/4	9/32	0.88	0	90	100	90	16	200	NBR	04F20C2118BDF	5	A4
3/8	5/32	0.52	0	150	150	145	11	180	NBR	06F20C2110ACF	4	A7
3/8	7/32	0.72	0	100	100	100	16	200	NBR	06F20C2114BDF	5	A7
3/8	1/4	0.83	0	55	55	55	10	185	FKM	7121KBN3UV00	7	A13
3/8	9/32	0.85	0	90	80	80	16	200	NBR	06F20C2118BDF	5	A7
3/8	5/16	1.10	0	20	20	-	11	180	NBR	06F20C2120ACF	4	A7
3/8	5/16	1.10	0	15	12	-	6	180	NBR	06F20C2120AAF	1	A8
1/2	7/16	2.50	0	35	35	35	22	185	FKM	7121KBN44V00	8	A14
1/2	7/16	2.50	0	17.5	17.5	17.5	10	185	FKM	7121KBN44V00	7	A14
1/2	7/16	2.80	0	15	15	-	16	200	NBR	08F20C2128ADF	5	A9
3/4	3/4	5.00	0	4	4	-	16	200	NBR	12F20C2148ADF	5	A9

2-Way Direct Acting - Normally Closed- Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1/8	1/16	0.11	0	700	700	700	22	165	PCTFE	7121KBN1GF00	8	A13
1/8	1/16	0.11	0	435	435	435	10	165	PCTFE	7121KBN1GF00	7	A13
1/8	1/8	0.31	0	205	205	205	22	165	PCTFE	7121KBN1NF00	8	A13
1/8	1/8	0.31	0	125	125	125	10	165	PCTFE	7121KBN1NF00	7	A13
1/4	3/64	0.06	0	500	500	500	9.5	120	NBR	04F20C1103A1F	3	A3
1/4	1/16	0.11	0	700	700	700	22	165	PCTFE	7121KBN2GF00	8	A13
1/4	1/16	0.11	0	435	435	435	10	165	PCTFE	7121KBN2GF00	7	A13
1/4	3/32	0.17	0	150	125	125	9.5	120	NBR	04F20C1106A1F	3	A3
1/4	1/8	0.31	0	205	205	205	22	165	PCTFE	7121KBN2NF00	8	A13
1/4	1/8	0.31	0	125	125	125	10	185	FKM	7121KBN2NV00	7	A13
1/4	1/8	0.31	0	125	125	125	22	185	FKM	7121KBN2NV00	8	A13
1/4	1/8	0.31	0	125	125	125	10	165	PCTFE	7121KBN2NF00	7	A13
1/4	1/8	0.35	0	75	70	70	11.5	150	NBR	04F20C1108A3F	6	A16
1/4	1/8	0.35	0	65	60	60	9.5	120	NBR	04F20C1108A1F	3	A3
1/4	5/32	0.52	0	75	75	75	22	185	FKM	7121KBN2QV00	8	A13
1/4	5/32	0.52	0	60	60	60	10	185	FKM	7121KBN2QV00	7	A13
1/4	13/64	0.76	0	40	40	40	22	185	FKM	7121KBN2SV00	8	A13
1/4	13/64	0.76	0	30	30	30	10	185	FKM	7121KBN2SV00	7	A13

2-Way Direct Acting - Normally Closed- Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
3/8	7/32	0.72	0	25	25	25	11.5	150	NBR	06F20C2114A3F	6	A7
3/8	1/4	0.83	0	20	20	20	10	185	FKM	7121KBN3UV00	7	A13
3/8	1/4	0.83	0	20	20	20	22	185	FKM	7121KBN3UV00	8	A13
3/8	9/32	0.85	0	14	14	14	9.5	150	NBR	06F20C2118A1F	3	A8
3/8	5/16	1.10	0	9	9	-	11.5	150	NBR	06F20C2120A3F	6	A7
3/8	5/16	1.10	0	3	3	-	9.5	120	NBR	06F20C2120A1F	3	A8
1/2	7/16	2.50	0	5	5	5	10	185	FKM	7121KBN44V00	7	A14
1/2	7/16	2.50	0	10	10	10	22	185	FKM	7121KBN44V00	8	A14
1/2	7/16	2.80	0	3	3	-	11.5	180	NBR	08F20C2128A3F	6	A9

2-Way Direct Acting - Normally Closed- Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.06	0	1000	1000	1000	10	165	PCTFE	71215SN1EF00	7	A10
1/8	3/64	0.06	0	450	450	450	10	185	NBR	71215SN1EN00	7	A10
1/8	1/16	0.10	0	700	700	700	10	165	PCTFE	71215SN1GF00	7	A10
1/8	1/16	0.10	0	350	350	350	10	185	NBR	71215SN1GN00	7	A10
1/8	3/32	0.18	0	650	650	650	22	165	PCTFE	71215SN1KF00	8	A10
1/8	3/32	0.18	0	260	260	260	10	165	PCTFE	71215SN1KF00	7	A10
1/8	3/32	0.18	0	275	275	275	10	185	NBR	71215SN1KN00	7	A10
1/8	1/8	0.28	0	520	520	520	22	165	PCTFE	71215SN1MF00	8	A10
1/8	1/8	0.28	0	200	200	200	10	185	NBR	71215SN1MN00	7	A10
1/8	1/8	0.28	0	200	200	200	10	165	PCTFE	71215SN1MF00	7	A10
1/8	5/32	0.40	0	150	150	150	22	185	NBR	71215SN1QN00	8	A10
1/8	5/32	0.40	0	110	110	110	10	185	NBR	71215SN1QN00	7	A10
1/8	3/16	0.50	0	90	90	90	22	185	NBR	71215SN1SN00	8	A10
1/8	3/16	0.50	0	80	80	80	10	185	NBR	71215SN1SN00	7	A10
1/8	1/4	0.75	0	70	70	70	22	185	NBR	71215SN1VN00	8	A10
1/8	1/4	0.75	0	40	40	40	10	185	NBR	71215SN1VN00	7	A10

2-Way Direct Acting - Normally Closed- Stainless Steel (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/4	3/64	0.06	0	1000	1000	1000	10	165	PCTFE	71215SN2EF00	7	A10
1/4	3/64	0.06	0	450	450	450	10	185	NBR	71215SN2EN00	7	A10
1/4	1/16	0.10	0	700	700	700	10	165	PCTFE	71215SN2GF00	7	A10
1/4	1/16	0.10	0	350	350	350	10	185	NBR	71215SN2GN00	7	A10
1/4	3/32	0.18	0	650	650	650	22	165	PCTFE	71215SN2KF00	8	A10
1/4	3/32	0.18	0	275	275	275	10	185	NBR	71215SN2KN00	7	A10
1/4	3/32	0.18	0	260	260	260	10	165	PCTFE	71215SN2KF00	7	A10
1/4	1/8	0.28	0	520	520	520	22	165	PCTFE	71215SN2MF00	8	A10
1/4	1/8	0.28	0	200	200	200	10	165	PCTFE	71215SN2MF00	7	A10
1/4	1/8	0.28	0	200	200	200	22	185	NBR	71215SN2MN00	8	A10
1/4	5/32	0.40	0	150	150	150	22	185	NBR	71215SN2QN00	8	A10
1/4	5/32	0.40	0	110	110	110	10	185	NBR	71215SN2QN00	7	A10
1/4	3/16	0.50	0	90	90	90	22	185	NBR	71215SN2SN00	8	A10
1/4	3/16	0.50	0	80	80	80	10	185	NBR	71215SN2SN00	7	A10
1/4	1/4	0.75	0	70	70	70	22	185	NBR	71215SN2VN00	8	A10
1/4	1/4	0.75	0	40	40	40	10	185	NBR	71215SN2VN00	7	A10
1/4	5/16	1.10	0	55	55	55	22	185	NBR	71215SN21N00	8	A20
1/4	5/16	1.10	0	20	20	20	10	185	NBR	71215SN21N00	7	A20
<hr/>												
3/8	3/8	2.00	0	25	25	25	22	185	NBR	71215SN33N00	8	A15
3/8	3/8	2.00	0	6	6	6	10	185	NBR	71215SN33N00	7	A15
3/8	3/8	2.00	5	11	11	11	10	185	NBR	71215SN33NHP**	7	A15

** 71215SN33NHP: 5-11 PSI is the operating range for bubble tight sealing. Valves may leak slightly if pressure differential falls below 5 PSI.

2-Way Direct Acting - Normally Closed- Stainless Steel (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.06	0	1000	1000	1000	22	165	PCTFE	71215SN1EF00	8	A10
1/8	3/64	0.06	0	520	520	520	10	165	PCTFE	71215SN1EF00	7	A10
1/8	3/64	0.06	0	450	450	450	10	185	NBR	71215SN1EN00	7	A10
1/8	1/16	0.10	0	700	700	700	22	165	PCTFE	71215SN1GF00	8	A10
1/8	1/16	0.10	0	350	350	350	10	185	NBR	71215SN1GN00	7	A10
1/8	1/16	0.10	0	350	350	350	10	165	PCTFE	71215SN1GF00	7	A10
1/8	3/32	0.18	0	300	300	300	22	165	PCTFE	71215SN1KF00	8	A10
1/8	3/32	0.18	0	275	275	275	10	185	NBR	71215SN1KN00	7	A10
1/8	3/32	0.18	0	130	130	130	10	165	PCTFE	71215SN1KF00	7	A10
1/8	1/8	0.28	0	200	200	200	22	185	NBR	71215SN1MN00	8	A10
1/8	1/8	0.28	0	200	200	200	22	165	PCTFE	71215SN1MF00	8	A10
1/8	1/8	0.28	0	150	150	150	10	185	NBR	71215SN1MN00	7	A10
1/8	1/8	0.28	0	100	100	100	10	165	PCTFE	71215SN1MF00	7	A10
1/8	5/32	0.40	0	130	130	130	22	185	NBR	71215SN1QN00	8	A10
1/8	5/32	0.40	0	60	60	60	10	185	NBR	71215SN1QN00	7	A10
1/8	3/16	0.50	0	70	70	70	22	185	NBR	71215SN1SN00	8	A10
1/8	3/16	0.50	0	25	25	25	10	185	NBR	71215SN1SN00	7	A10
1/8	1/4	0.75	0	30	30	30	22	185	NBR	71215SN1VN00	8	A10
1/8	1/4	0.75	0	10	10	10	10	185	NBR	71215SN1VN00	7	A10
1/4	3/64	0.06	0	1000	1000	1000	22	165	PCTFE	71215SN2EF00	8	A10
1/4	3/64	0.06	0	520	520	520	10	165	PCTFE	71215SN2EF00	7	A10
1/4	3/64	0.06	0	450	450	450	10	185	NBR	71215SN2EN00	7	A10
1/4	1/16	0.10	0	700	700	700	22	165	PCTFE	71215SN2GF00	8	A10
1/4	1/16	0.10	0	350	350	350	10	165	PCTFE	71215SN2GF00	7	A10
1/4	1/16	0.10	0	350	350	350	10	185	NBR	71215SN2GN00	7	A10
1/4	3/32	0.18	0	300	300	300	22	165	PCTFE	71215SN2KF00	8	A10
1/4	3/32	0.18	0	275	275	275	10	185	NBR	71215SN2KN00	7	A10
1/4	3/32	0.18	0	130	130	130	10	165	PCTFE	71215SN2KF00	7	A10
1/4	1/8	0.28	0	200	200	200	22	165	PCTFE	71215SN2MF00	8	A10
1/4	1/8	0.28	0	200	200	200	22	185	NBR	71215SN2MN00	8	A10
1/4	1/8	0.28	0	150	150	150	10	185	NBR	71215SN2MN00	7	A10
1/4	1/8	0.28	0	100	100	100	10	165	PCTFE	71215SN2MF00	7	A10
1/4	5/32	0.40	0	60	60	60	10	185	NBR	71215SN2QN00	7	A10

2-Way Direct Acting - Normally Closed- Stainless Steel (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1/4	5/32	0.40	0	130	130	130	22	185	NBR	71215SN2QN00	8	A10
1/4	3/16	0.50	0	70	70	70	22	185	NBR	71215SN2SN00	8	A10
1/4	3/16	0.50	0	25	25	25	10	185	NBR	71215SN2SN00	7	A10
1/4	1/4	0.75	0	30	30	30	22	185	NBR	71215SN2VN00	8	A10
1/4	1/4	0.75	0	10	10	10	10	185	NBR	71215SN2VN00	7	A10
1/4	5/16	1.10	0	10	10	10	22	185	NBR	71215SN21N00	8	A20
1/4	5/16	1.10	0	3	3	3	10	185	NBR	71215SN21N00	7	A20
3/8	3/8	2.00	0	5	5	5	22	185	NBR	71215SN33N00	8	A15



2-Way Direct Acting - Normally Open- Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN1GF00	7	A13
1/8	3/32	0.15	0	275	200	150	6	180	NBR	02F2001106AAF	1	A17
1/8	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN1LF00	7	A13
1/8	1/8	0.21	0	125	100	85	6	180	NBR	02F2001108AAF	1	A17
1/4	3/64	0.06	0	750	700	700	11	180	NBR	04F2001103ACF	4	A5
1/4	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN2GF00	7	A13
1/4	3/32	0.17	0	300	250	230	11	180	NBR	04F2001106ACF	4	A5
1/4	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN2LF00	7	A13
1/4	1/8	0.35	0	130	110	100	11	180	NBR	04F2001108ACF	4	A5
1/4	5/32	0.49	0	85	75	60	11	180	NBR	04F2002110ACF	4	A6
1/4	9/32	0.96	0	30	25	20	11	180	NBR	04F2002118ACF	4	A6
1/2	7/16	2.20	0	15	15	-	16	200	NBR	08F2002128ADF	5	A18
3/4	3/4	5.50	0	2	2	-	11	180	NBR	12F2002148ACF	4	A18
DC TECHNICAL SPECIFICATIONS												
1/8	1/16	0.09	0	400	250	150	9.5	120	NBR	02F2001104A1F	3	A17
1/8	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN1GF00	7	A13
1/8	3/32	0.15	0	190	110	110	9.5	120	NBR	02F2001106A1F	3	A17
1/8	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN1LF00	7	A13
1/8	1/8	0.21	0	80	60	50	9.5	120	NBR	02F2001108A1F	3	A17
1/4	3/64	0.06	0	500	500	500	11.5	140	NBR	04F2001103A3F	6	A5
1/4	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN2GF00	7	A13
1/4	3/32	0.17	0	200	150	125	11.5	150	NBR	04F2001106A3F	6	A5
1/4	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN2LF00	7	A13
1/4	1/8	0.35	0	80	60	60	11.5	150	NBR	04F2001108A3F	6	A5
1/4	5/32	0.49	0	45	30	30	11.5	150	NBR	04F2002110A3F	6	A6
1/4	9/32	0.96	0	15	15	15	11.5	150	NBR	04F2002118A3F	6	A6

2-Way Direct Acting - Normally Open- Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN1EF00	7	A12
1/8	3/64	0.05	0	400	400	400	10	185	NBR	71295SN1ENJ1	7	A11
1/8	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN1GF00	7	A12
1/8	1/16	0.11	0	325	325	325	10	185	NBR	71295SN1GNJ1	7	A11
1/8	3/32	0.15	0	250	250	250	10	185	NBR	71295SN1KNJ1	7	A11
1/8	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN1KF00	7	A12
DC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN1EF00	7	A12
1/8	3/64	0.05	0	400	400	400	10	185	NBR	71295SN1ENJ1	7	A11
1/8	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN1GF00	7	A12
1/8	1/16	0.11	0	325	325	325	10	185	NBR	71295SN1GNJ1	7	A11
1/8	3/32	0.15	0	250	250	250	10	185	NBR	71295SN1KNJ1	7	A11
1/8	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN1KF00	7	A12
1/4	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN2EF00	7	A12
1/4	3/64	0.05	0	400	400	400	10	185	NBR	71295SN2ENJ1	7	A11
1/4	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN2GF00	7	A12
1/4	1/16	0.11	0	325	325	325	10	185	NBR	71295SN2GNJ1	7	A11
1/4	3/32	0.15	0	250	250	250	10	185	NBR	71295SN2KNJ1	7	A11
1/4	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN2KF00	7	A12

2-Way Direct Acting - Bi-Directional* - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

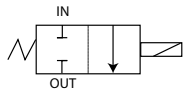
1/4	1/32	0.02	0	400	400	400	10	185	NBR	71235SN2AN00	7	A19
1/4	3/64	0.06	0	180	180	180	10	185	NBR	71235SN2EN00	7	A19
1/4	1/16	0.10	0	110	110	110	10	185	NBR	71235SN2GN00	7	A19
1/4	3/32	0.17	0	70	70	70	10	185	NBR	71235SN2KN00	7	A19
1/4	1/8	0.28	0	45	45	45	10	185	NBR	71235SN2MN00	7	A19

DC TECHNICAL SPECIFICATIONS

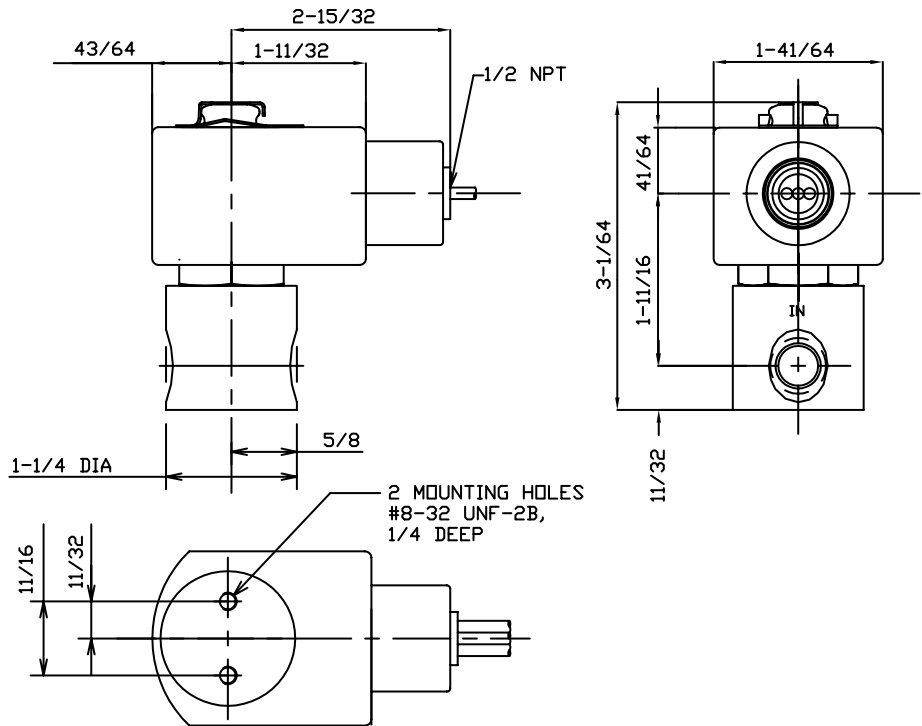
1/4	1/32	0.02	0	400	400	400	10	185	NBR	71235SN2AN00	7	A19
1/4	3/64	0.06	0	180	180	180	10	185	NBR	71235SN2EN00	7	A19
1/4	1/16	0.10	0	110	110	110	10	185	NBR	71235SN2GN00	7	A19
1/4	3/32	0.17	0	70	70	70	10	185	NBR	71235SN2KN00	7	A19
1/4	1/8	0.28	0	45	45	45	10	185	NBR	71235SN2MN00	7	A19

*Pressure can be applied to either inlet or outlet.

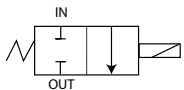
Valve Reference A3



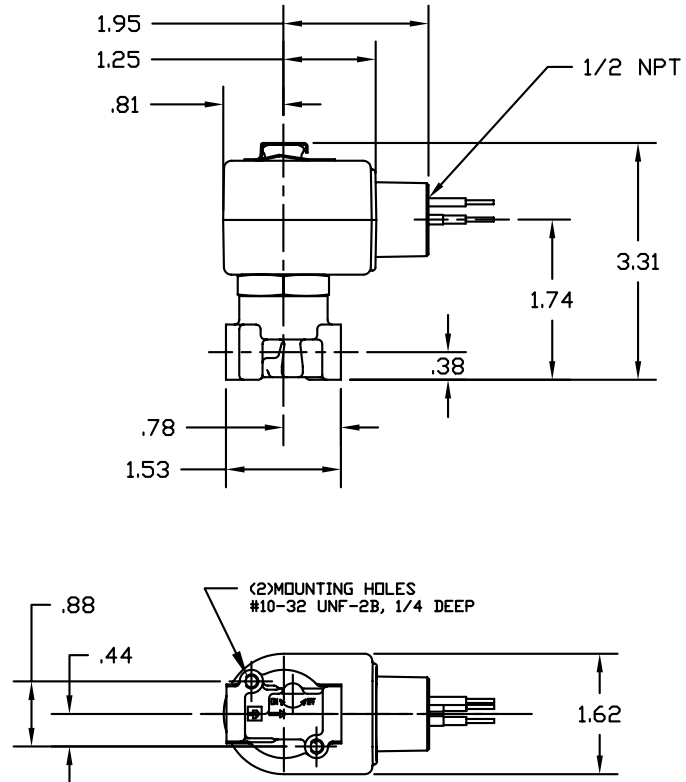
2-Way Normally Closed:
Port Identification:
In-In/Out-Out



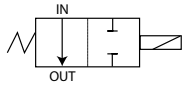
Valve Reference A4



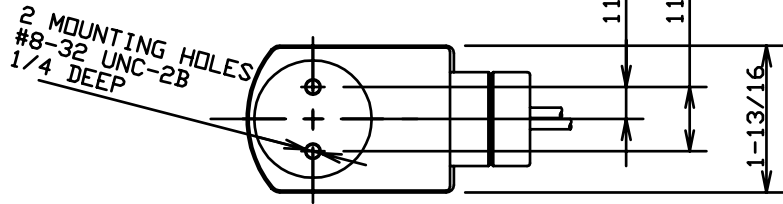
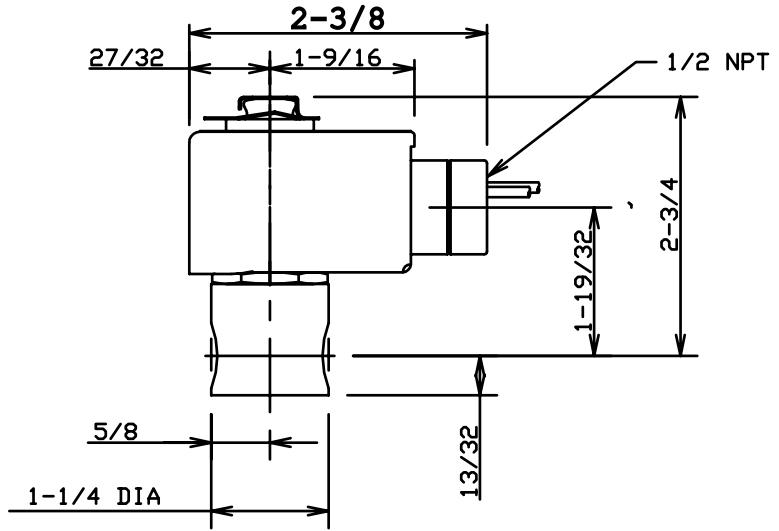
2-Way Normally Closed:
Port Identification:
In-In/Out-Out



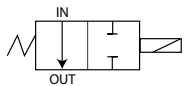
Valve Reference A5



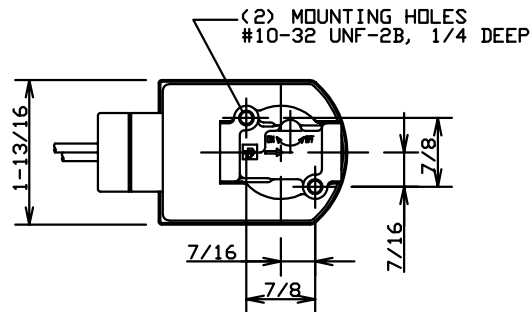
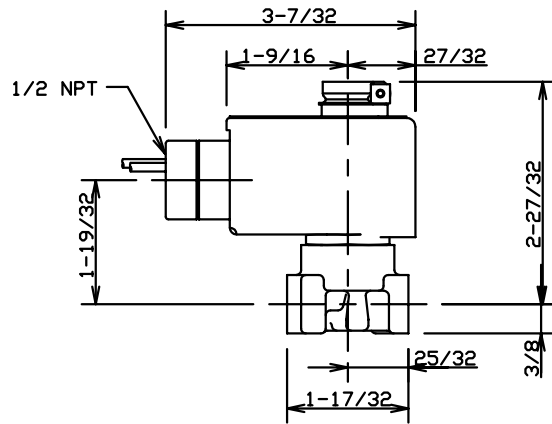
2-Way Normally Open
 Port Identification:
 In-In/Out-Out



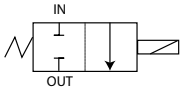
Valve Reference A6



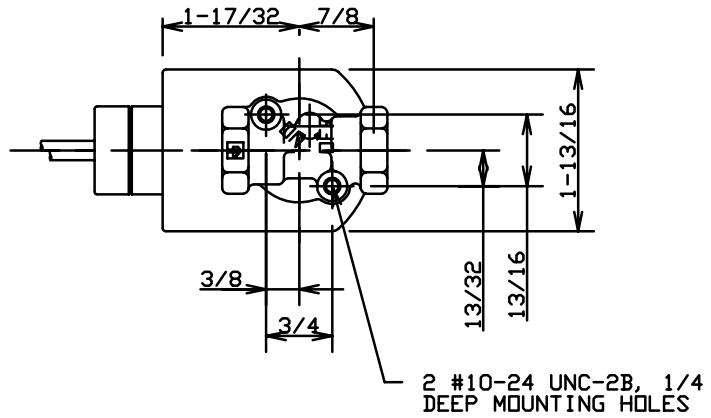
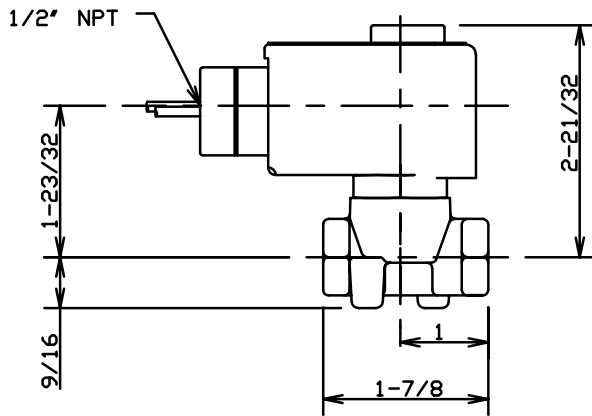
2-Way Normally Open
 Port Identification:
 In-In/Out-Out



Valve Reference A7

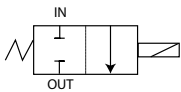


2-Way Normally Closed
Port Identification:
In-In/Out-Out

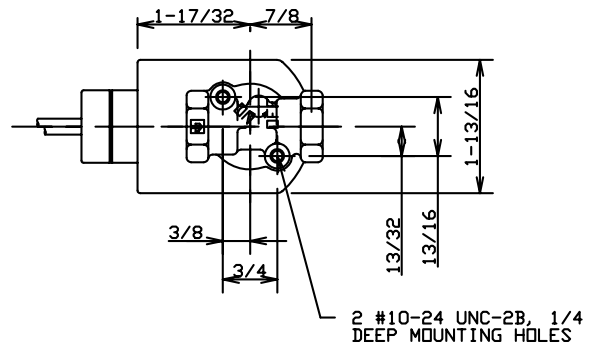
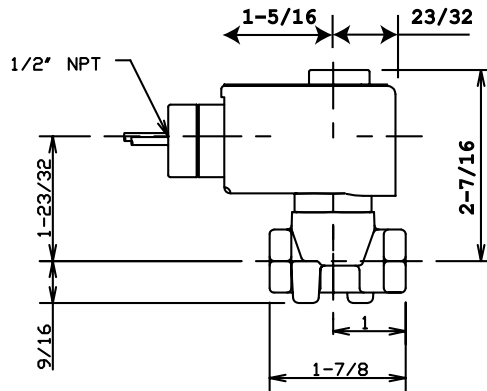


2-Way

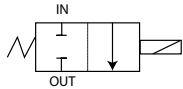
Valve Reference A8



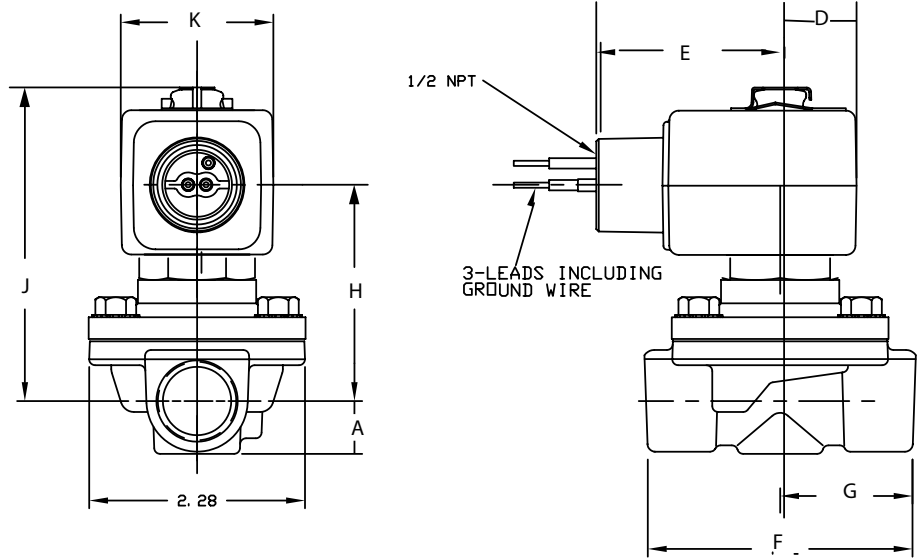
2-Way Normally Closed
Port Identification:
In-In/Out-Out



Valve Reference A9

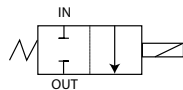


2-Way Normally Closed
Port Identification:
In-In/Out-Out

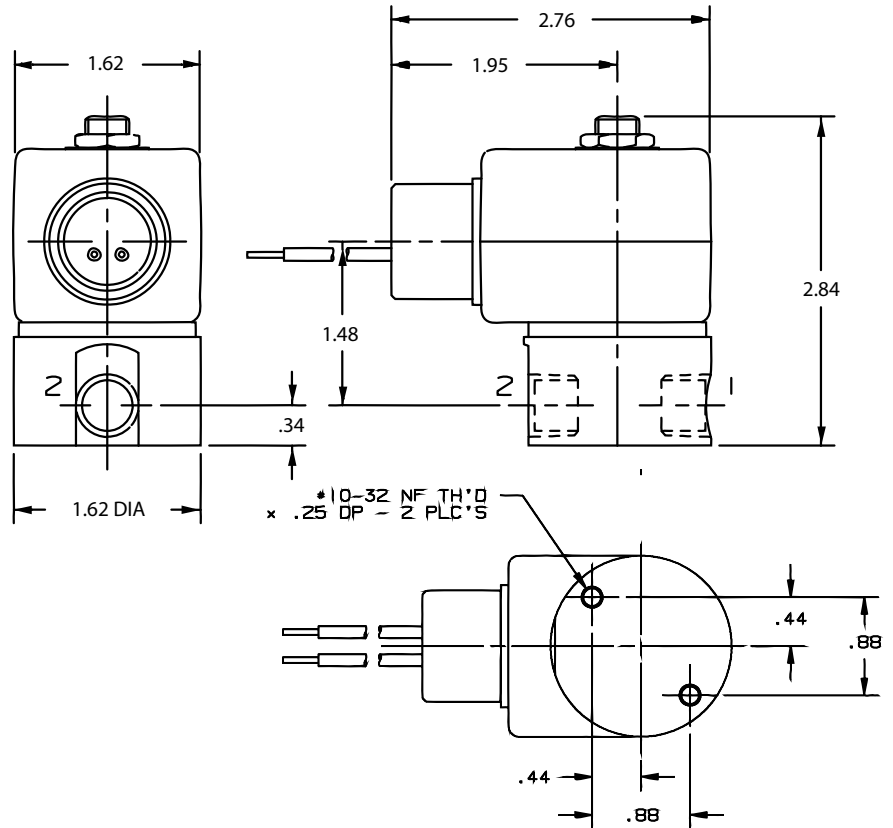


Part Number	Dimensions							
	A	D	E	F	G	H	J	K
08F20C2128AAF	9/16	23/32	1 - 25/32	2 - 13/16	1-13/32	1-15/16	2-25/32	1-9/16
08F20C2128ADF 08F20C2128A3F	9/16	7/8	1 - 15/16	2 - 13/16	1-13/32	2-1/4	3-9/32	1-13/16
12F20C2148ADF	11/16	7/8	1 - 15/16	2 - 29/32	1-15/32	2-11/32	3-3/8	1-13/16

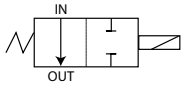
Valve Reference A10



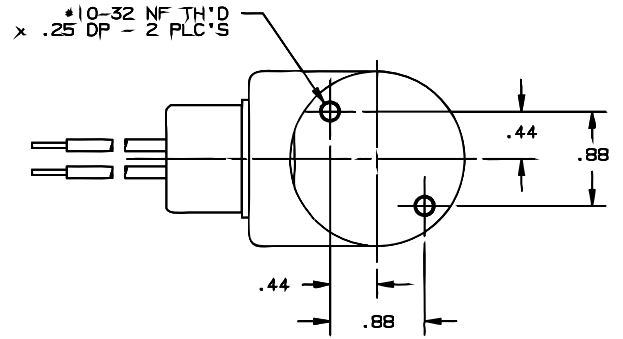
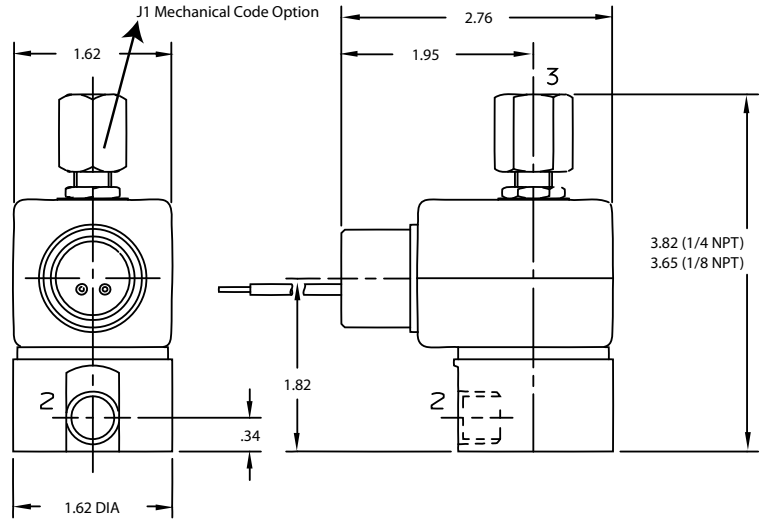
2-Way Normally Closed
Port Identification:
2-IN / 1-OUT



Valve Reference A11

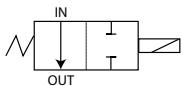


2-Way Normally Open
 Port Identification:
 2-IN / 3-OUT

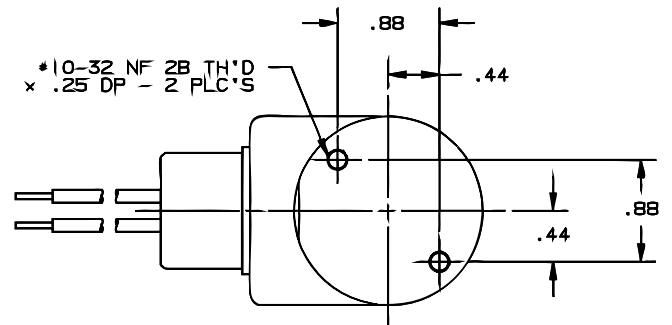
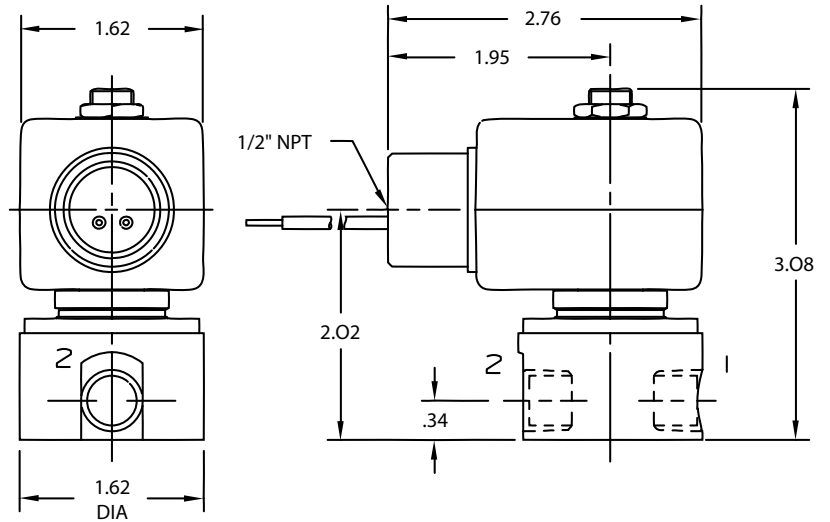


2-Way

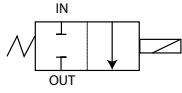
Valve Reference A12



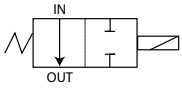
2-Way Normally Open
 Port Identification:
 1-OUT / 2-IN



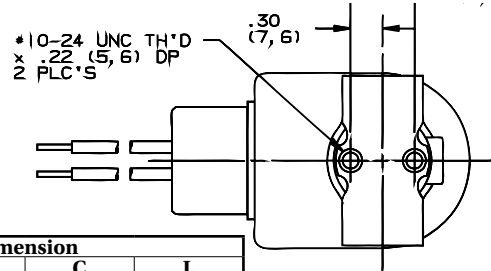
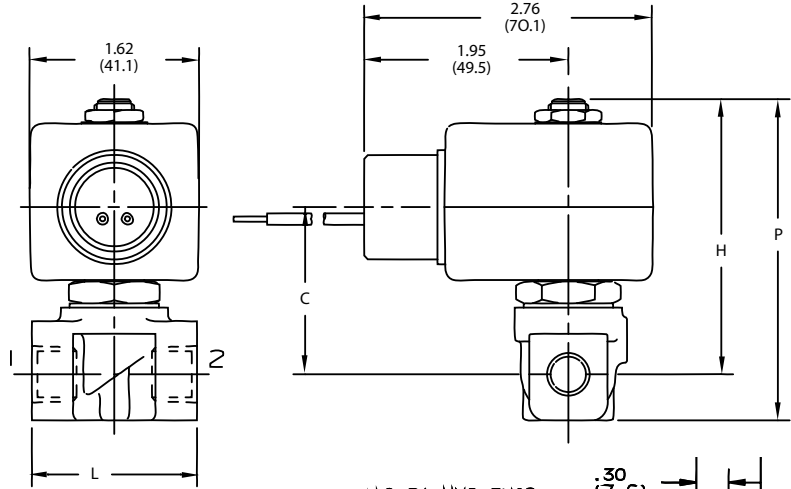
Valve Reference A13



2-Way Normally Closed
7121KBN
Port Identification:
1-IN / 2-OUT

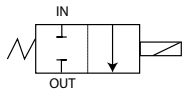


2-Way Normally Open
7122KBN
Port Identification:
1-IN / 2-OUT

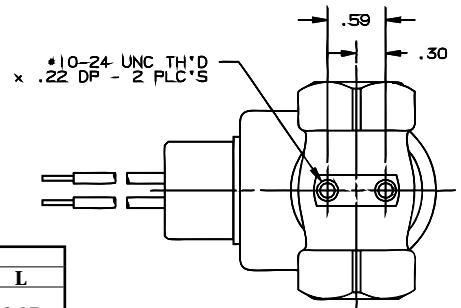
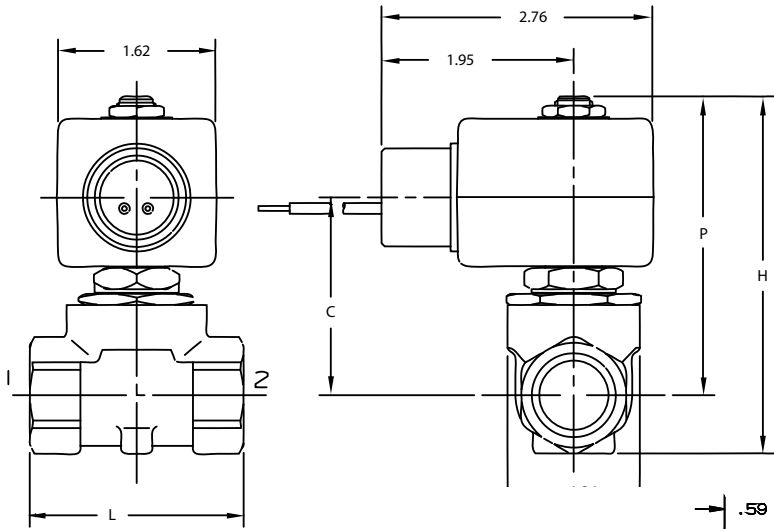


Part Number	Dimension			
	H	P	C	L
7121KBN1XXXX				
7121KBN2XXXX	2.63	3.07	1.61	1.57
7122KBN1XXXX				
7122KBN2XXXX				
7121KBN3XXXX	2.57	3.08	1.55	1.97

Valve Reference A14



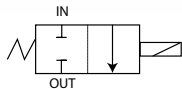
2-Way Normally Closed
Port Identification:
Flow arrow on body
indicates flow direction.
Ports are not marked.



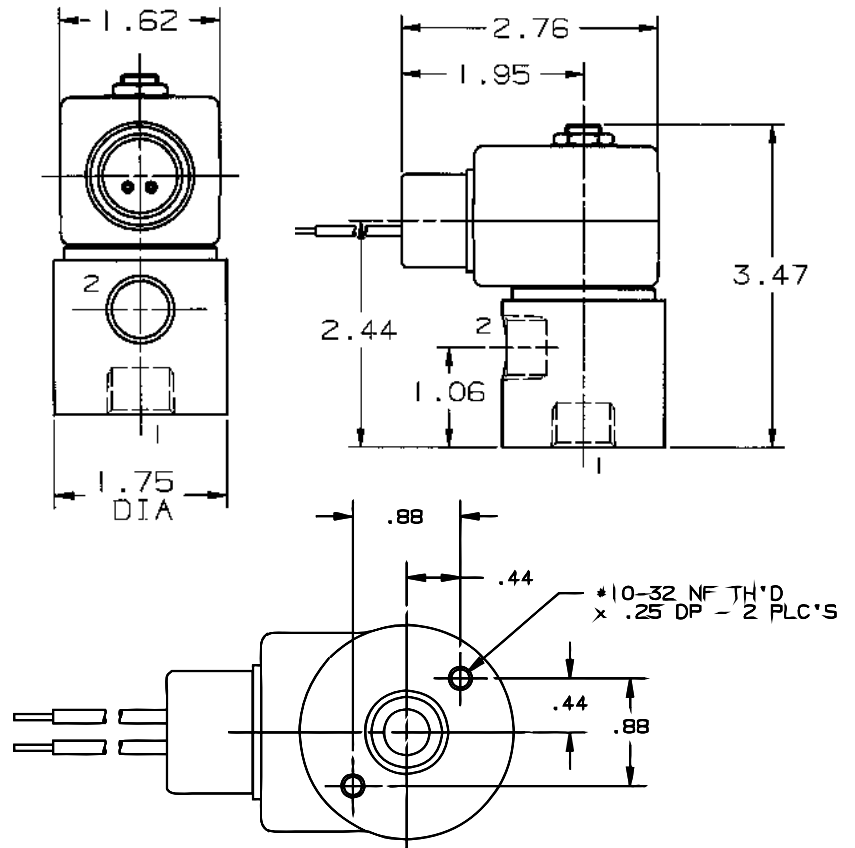
Part Number	Dimension			
	H	P	C	L
7121KBN44V00	3.56	2.97	1.96	2.17



Valve Reference A15

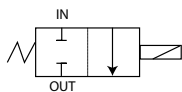


2-Way Normally Closed
Port Identification:
2-IN / 1-OUT

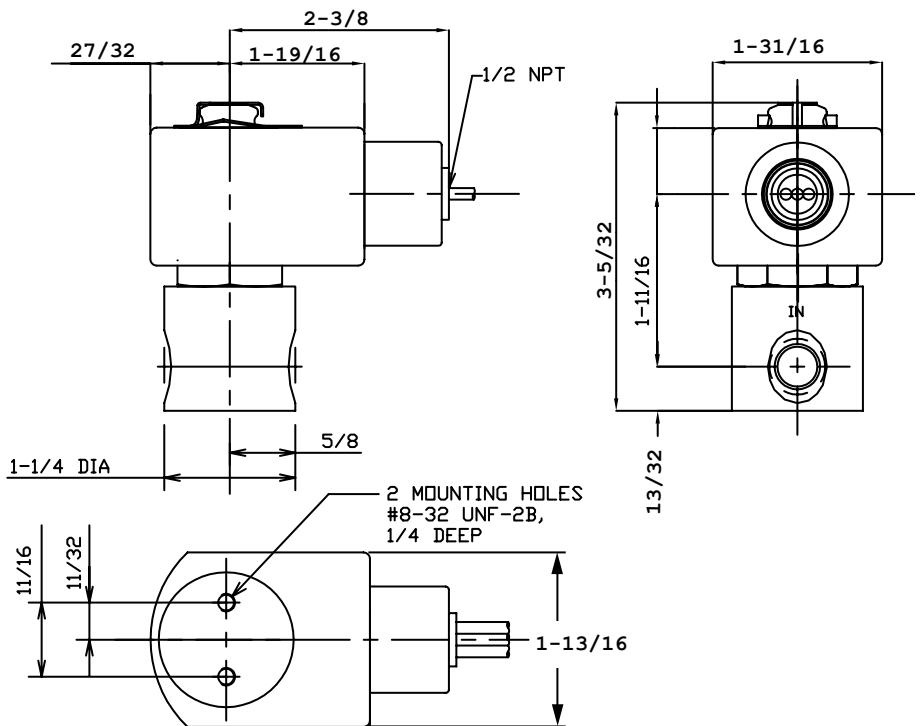


2-Way

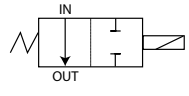
Valve Reference A16



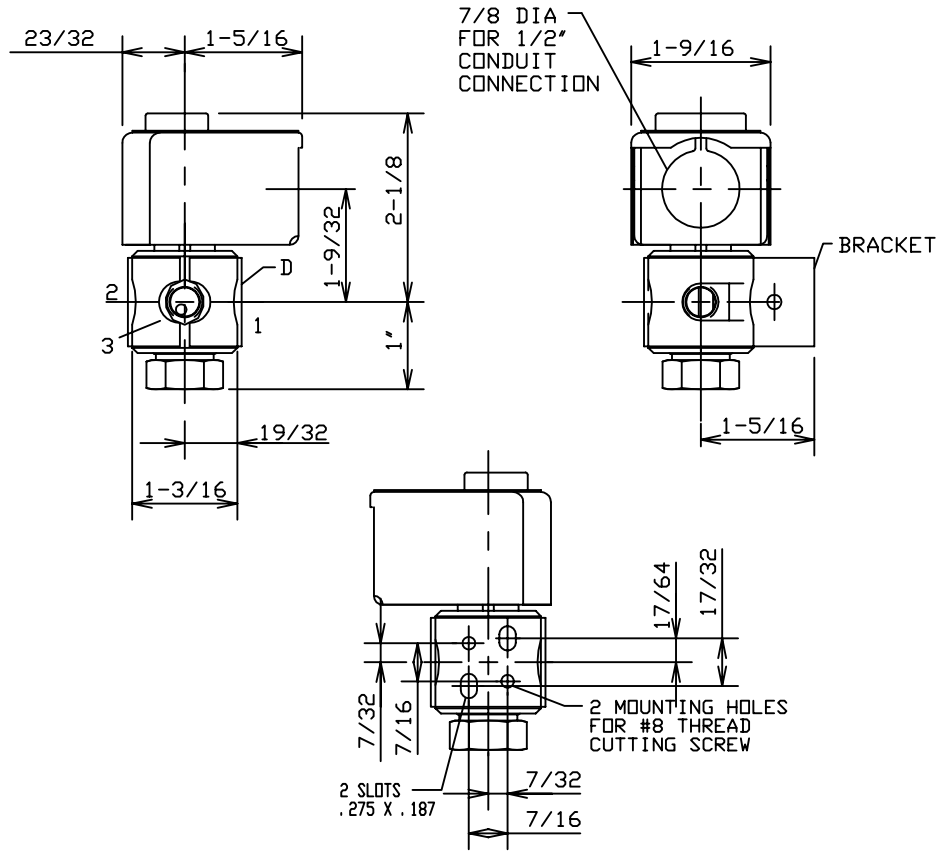
2-Way Normally Closed
Port Identification:
IN-IN / OUT-OUT



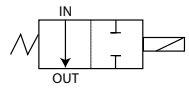
Valve Reference A17



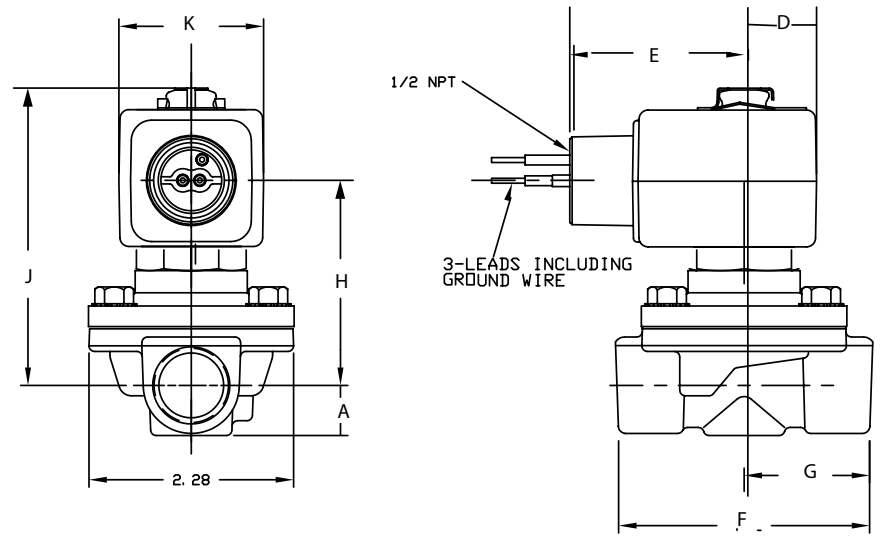
2-Way Normally Open
 Port Identification:
 IN-IN/OUT-OUT



Valve Reference A18



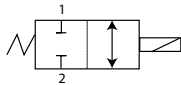
2-Way Normally Open
 Port Identification:
 IN-IN/OUT-OUT



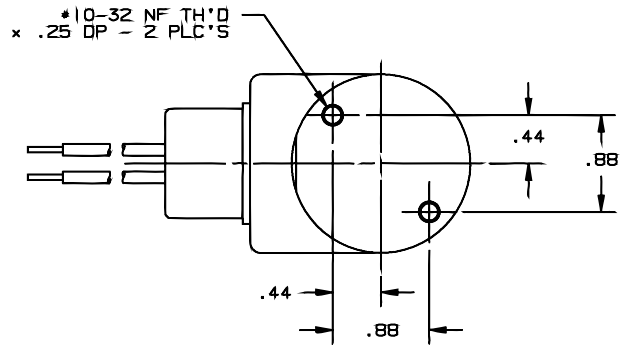
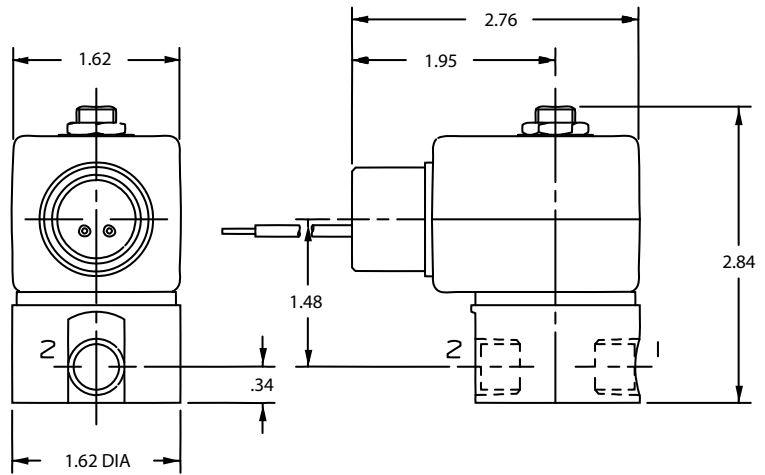
Dimensions							
A	D	E	F	G	H	J	K
9/16	7/8	1 - 15/16	2 - 13/16	1 - 13/32	2 - 1/8	3 - 9/32	1 - 13/16
11/16	7/8	1 - 15/16	2 - 29/32	1 - 15/32	2 - 7/32	3 - 3/8	1 - 13/16



Valve Reference A19

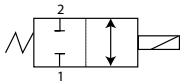


2-Way Bi-Directional
Port Identification:
Pressure can be applied
to either port.

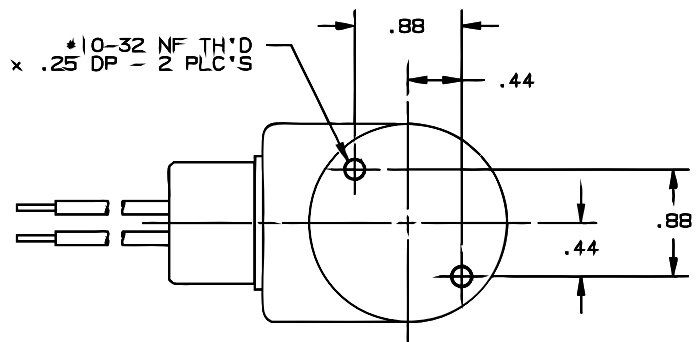
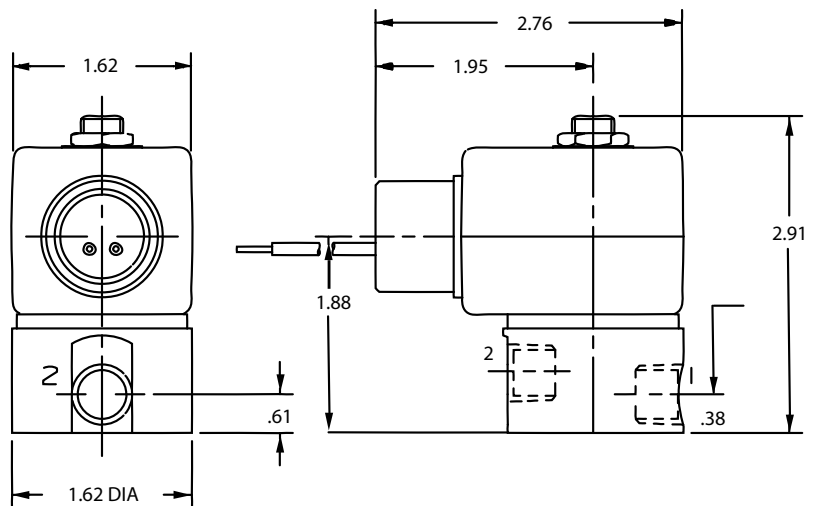


2-Way

Valve Reference A20



2-Way Normally Closed
Port Identification:
2 IN/1 OUT



2-Way Direct Acting Materials of Construction**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
02F2001	6	2WNO	1/8	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
02F2001	9.5, 10	2WNO	1/8	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
04F20C1	6, 11	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
04F20C1	9.5, 10, 16	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
04F20C2	6, 11	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
04F20C2	9.5, 10, 16	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
04F2001	6, 11	2WNO	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
04F2001	9.5, 10, 16	2WNO	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
04F2002	6, 11	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
04F2002	9.5, 10, 16	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
06F20C2	6, 11	2WNC	3/8	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
06F20C2	9.5, 10, 16	2WNC	3/8	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
08F20C2	6, 11	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
08F20C2	9.5, 10, 16	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
08F2002	6, 11	2WNO	1/2	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
08F2002	9.5, 10, 16	2WNO	1/2	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
12F20C2	6, 11	2WNC	3/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
12F20C2	9.5, 10, 16	2WNC	3/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F
12F2002	6, 11	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	130°F
12F2002	3, 9.5, 10, 16	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	17-7PH	Copper	77°F

* Shows the first 7 digits of pressure vessel part number.

**Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog



2-Way Direct Acting Materials of Construction (Continued)**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
71215SN	10	2WNC	1/8 - 3/8	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71215SN	22	2WNC	1/8 - 3/8	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
71216SN	10	2WNC	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71216SN	22	2WNC	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7121KBN	10	2WNC	1/8 - 3/8	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
7121KBN	22	2WNC	1/8 - 3/8	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
71225SN	10	2WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71225SN	22	2WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7122KBN	10	2WNO	1/8 - 1/4	Brass	304SS	430FR	430F	430FR/4106	301SS	Copper	150°F
7122KBN	22	2WNO	1/8 - 1/4	Brass	304SS	430FR	430F	430FR/4106	301SS	Copper	77°F
71235SN	10	2WDP	1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71235SN	22	2WDP	1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
71295SN	10	2WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71295SN	22	2WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F

* Shows the first 7 digits of pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

2-Way

Direct Lift, Pilot & Remote Operated Valves
1/4"–2" NPT



2-Way

General Description:

2-Way Direct Lift, Pilot & Remote Operated valves are designed for higher flow and medium to high pressure applications. Pilot operated valves require the minimum pressure differential specified for proper valve operation.

Installation

Valves should be mounted with solenoid coil vertical and upright.

Standard Materials of Construction

Please refer to page A55

Compatible Fluids

Lubricated Air, Inert Gases, Water and Light Oil (300 SSU). Additional fluids compatible with alternate materials of construction (consult factory).

Use of non-lubricated gaseous media can affect valve life.

Electrical Characteristics:

Standard Voltages:

AC –24/60

120/60–110/50

240/60–220/50

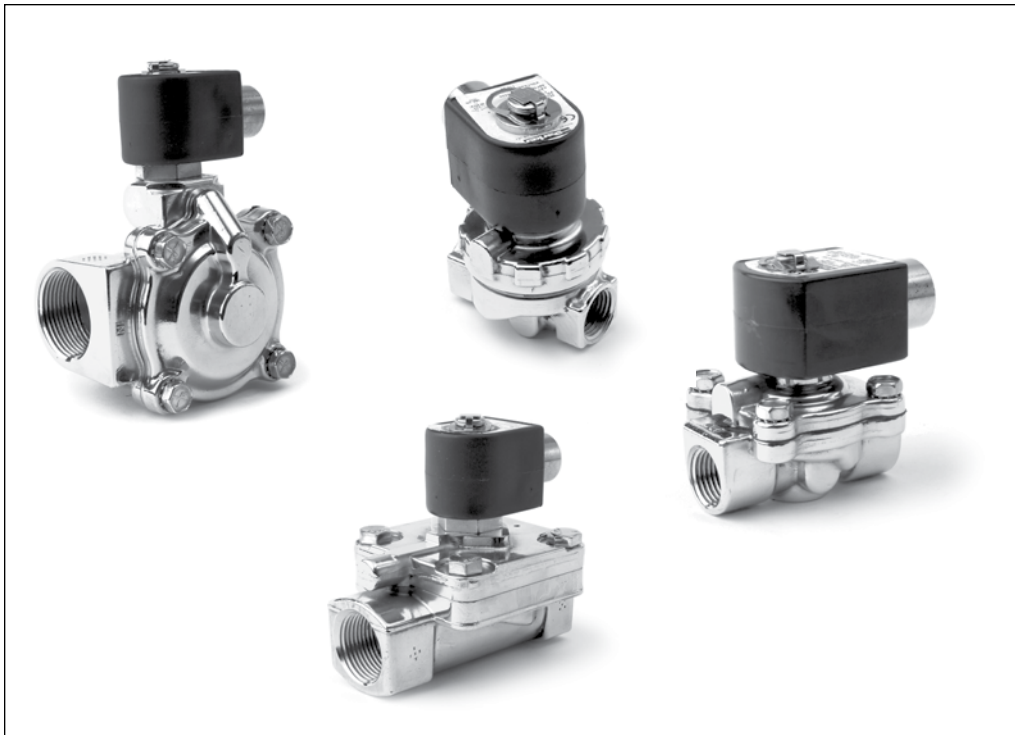
DC –12, 24 & 120

For other voltages – consult factory

Coil Classification:

Class F standard

Class H available



Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory.

Maximum Ambient Temperature

150°F

Please refer to page A55 for details.

Applications:

- Irrigation systems
- Fire suppression equipment
- Molding equipment
- Cooling of machine tools
- Sterilizers
- Car wash
- Water treatment and purification
- Air compressors and dryers
- Floor cleaning equipment
- Hospital equipment
- Automated systems
- Food processing

2-Way Internal Pilot Operated - Normally Closed - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/4	1/4	0.76	5	300	300	300	10	185	NBR	73212BN2MN00	7	A35
1/4	11/32	1.20	5	300	300	300	6	180	NBR	04F25C2122CAF	1	A54
1/4	7/16	2.00	3	150	150	150	10	185	NBR	7321KBN2RN00	7	A46
3/8	11/32	1.20	5	300	300	300	6	180	NBR	06F25C2122CAF	1	A54
3/8	1/2	2.40	5	300	300	300	10	185	NBR	73212BN3SN00	7	A32
3/8	7/16	2.50	3	150	150	150	10	185	NBR	7321KBN3SN00	7	A46
3/8	5/8	3.00	5	300	300	300	16	175	NBR	06F22C2140ADF	5	A22
3/8	1/2	3.00	1	300	235	235	11	180	NBR	06F25C2132ACF	4	A21
3/8	5/8	3.00	5	200	135	135	6	180	NBR	06F22C2140AAF	1	A23
3/8	5/8	3.00	5	150	150	150	10	185	NBR	73218BN3TN00	7	A43
3/8	5/8	3.00	0	150	150	150	11	180	NBR	06F23C2140ACF*	4	A22
3/8	5/8	3.00	0	100	100	100	10	185	NBR	72218BN3TN00*	7	A36
3/8	19/32	4.40	0	230	230	230	10	185	NBR	7221GBN3VN00*	7	A47
1/2	7/16	2.50	3	150	150	150	10	185	NBR	7321KBN4SN00	7	A46
1/2	1/2	2.80	5	300	300	300	10	185	NBR	73212BN4TN00	7	A32
1/2	1/2	3.60	1	300	235	235	11	180	NBR	08F25C2132ACF	4	A21
1/2	5/8	4.00	5	300	300	300	16	175	NBR	08F22C2140ADF	5	A22
1/2	5/8	4.00	5	250	220	220	11	180	NBR	08F22C2140ACF	4	A22
1/2	5/8	4.00	5	200	135	135	6	180	NBR	08F22C2140AAF	1	A23
1/2	5/8	4.00	5	150	150	150	10	185	NBR	73218BN4UN00	7	A43
1/2	5/8	4.00	0	150	150	150	11	180	NBR	08F23C2140ACF*	4	A22
1/2	5/8	4.00	0	100	100	100	10	185	NBR	72218BN4UN00*	7	A36
1/2	19/32	4.40	0	230	230	230	10	185	NBR	7221GBN4VN00*	7	A47
3/4	3/4	5.00	5	150	150	150	10	185	NBR	73218BN5VN00	7	A43
3/4	3/4	5.00	0	150	150	150	11	180	NBR	12F23C2148ACF*	4	A25
3/4	3/4	5.00	5	125	125	125	6	180	NBR	12F22C2148AAF	1	A24
3/4	3/4	5.00	0	100	100	100	10	185	NBR	72218BN5VN00*	7	A36
3/4	19/32	5.50	0	230	230	230	10	185	NBR	7221GBN51N00*	7	A47
3/4	3/4	6.50	5	250	150	250	6	180	NBR	12F24C2148AAF	1	A27
3/4	3/4	7.30	5	300	300	300	10	185	NBR	73212BN52N00	7	A33
3/4	3/4	7.40	1	300	235	235	11	180	NBR	12F25C2148ACF	4	A28
3/4	25/32	9.60	5	230	230	230	10	185	NBR	7321GBN53N00	7	A48

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.

2-Way Internal Pilot Operated - Normally Closed - Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1	19/32	5.50	0	230	230	230	10	185	NBR	7221GBN61N00*	7	A47
1	1	11.0	5	300	300	300	10	185	NBR	73212BN63N00	7	A33
1	1	11.7	0	230	230	230	10	185	NBR	7221GBN64N00*	7	A47
1	1	12.2	1	300	300	-	11	180	NBR	16F25C2164ACF	4	A30
1	1	12.5	5	230	230	230	10	185	NBR	7321GBN64N00	7	A48
1	1	13.0	5	150	150	100	6	180	NBR	16F24C2164AAF	1	A29
1	1 1/16	13.5	5	125	125	125	10	185	NBR	73218BN64N00	7	A44
1 1/4	1 1/8	15.0	5	150	150	100	6	180	NBR	20F24C2172AAF	1	A29
1 1/4	1 1/8	15.0	5	125	125	125	10	185	NBR	73218BN75N00	7	A44
1 1/4	1 1/8	19.3	5	230	230	230	10	185	NBR	7321GBN76N00	7	A48
1 1/4	1 9/16	29.0	5	230	230	230	10	185	NBR	7321GBN88N00	7	A48
1 1/2	1 1/4	22.5	5	150	150	100	6	180	NBR	24F24C2180AAF	1	A31
1 1/2	1 1/4	22.5	5	125	125	125	10	185	NBR	73218BN87N00	7	A42
2	1 9/16	38.6	5	230	230	230	10	185	NBR	7321GBN99N00	7	A48

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.

2-Way Internal Pilot Operated - Normally Closed - Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1/4	1/4	0.76	5	300	300	300	10	185	NBR	73212BN2MN00	7	A35
1/4	11/32	1.20	5	275	275	275	11.5	150	NBR	04F25C2122C3F	6	A54
1/4	7/16	2.00	3	150	150	150	22	185	NBR	7321KBN2RN00	8	A46
1/4	7/16	2.00	3	60	60	60	10	185	NBR	7321KBN2RN00	7	A46
3/8	11/32	1.20	5	275	275	275	11.5	150	NBR	06F25C2122C3F	6	A54
3/8	1/2	2.40	5	300	300	300	10	185	NBR	73212BN3SN00	7	A32
3/8	7/16	2.50	3	150	150	150	22	185	NBR	7321KBN3SN00	8	A46
3/8	7/16	2.50	3	60	60	60	10	185	NBR	7321KBN3SN00	7	A46
3/8	5/8	3.00	5	150	150	150	10	185	NBR	73218BN3TN00	7	A43
3/8	1/2	3.00	1	130	130	130	11.5	150	NBR	06F25C2132A3F	6	A21
3/8	5/8	3.00	5	125	100	100	11.5	150	NBR	06F22C2140A3F	6	A22
3/8	5/8	3.00	0	40	40	40	22	185	NBR	72218BN3TN00*	8	A36
3/8	5/8	3.00	0	40	40	-	11.5	150	NBR	06F23C2140A3F*	6	A22
3/8	19/32	4.40	0	100	100	100	22	185	NBR	7221GBN3VN00*	8	A47
1/2	7/16	2.50	3	150	150	150	22	185	NBR	7321KBN4SN00	8	A46
1/2	7/16	2.50	3	60	60	60	10	185	NBR	7321KBN4SN00	7	A46
1/2	1/2	2.80	5	300	300	300	10	185	NBR	73212BN4TN00	7	A32
1/2	1/2	3.60	1	130	130	130	11.5	150	NBR	08F25C2132A3F	6	A21
1/2	5/8	4.00	5	150	150	150	10	185	NBR	73218BN4UN00	7	A43
1/2	5/8	4.00	5	125	100	100	11.5	150	NBR	08F22C2140A3F	6	A22
1/2	5/8	4.00	0	40	40	40	22	185	NBR	72218BN4UN00*	8	A36
1/2	5/8	4.00	0	40	40	-	11.5	150	NBR	08F23C2140A3F*	6	A22
1/2	19/32	4.40	0	100	100	100	22	185	NBR	7221GBN4VN00*	8	A47
3/4	3/4	5.00	5	150	150	150	10	185	NBR	73218BN5VN00	7	A43
3/4	3/4	5.00	5	100	90	75	11.5	180	NBR	12F22C2148A3F	6	A25
3/4	3/4	5.00	0	40	40	40	22	185	NBR	72218BN5VN00*	8	A36
3/4	3/4	5.00	0	40	40	-	11.5	150	NBR	12F23C2148A3F*	6	A25
3/4	19/32	5.50	0	100	100	100	22	185	NBR	7221GBN51N00*	8	A47
3/4	3/4	6.50	5	125	125	125	11.5	150	NBR	12F24C2148A3F	6	A26
3/4	3/4	7.30	5	300	300	300	10	185	NBR	73212BN52N00	7	A33
3/4	25/32	9.60	5	230	230	230	10	185	NBR	7321GBN53N00	7	A48

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.



2-Way Internal Pilot Operated - Normally Closed - Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1	19/32	5.50	0	100	100	100	22	185	NBR	7221GBN61N00*	8	A47
1	1	11.0	5	300	300	300	10	185	NBR	73212BN63N00	7	A33
1	1	11.7	0	85	85	85	22	185	NBR	7221GBN64N00*	8	A47
1	1	12.2	1	275	275	275	11.5	180	NBR	16F25C2164A3F	6	A30
1	1	12.5	5	230	230	230	10	185	NBR	7321GBN64N00	7	A48
1	1	13.0	5	125	125	125	11.5	150	NBR	16F24C2164A3F	6	A29
1	1 1/16	13.5	5	125	125	125	10	185	NBR	73218BN64N00	7	A44
1 1/4	1 1/8	19.3	5	230	230	230	10	185	NBR	7321GBN76N00	7	A48
1 1/4	1 1/8	15.0	5	125	125	125	11.5	150	NBR	20F24C2172A3F	6	A29
1 1/4	1 1/8	15.0	5	125	125	125	10	185	NBR	73218BN75N00	7	A44
1 1/2	1 1/4	22.5	5	125	125	125	11.5	150	NBR	24F24C2180A3F	6	A31
1 1/2	1 1/4	22.5	5	125	125	125	10	185	NBR	73218BN87N00	7	A42
1 1/2	1 9/16	29.0	5	230	230	230	22	185	NBR	7321GBN88N00	8	A48
1 1/2	1 9/16	29.0	5	200	200	200	10	185	NBR	7321GBN88N00	7	A48
2	1 9/16	38.6	5	230	230	230	22	185	NBR	7321GBN99N00	8	A48
2	1 9/16	38.6	5	200	200	200	10	185	NBR	7321GBN99N00	7	A48

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.

2-Way Internal Pilot Operated - Normally Closed - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

1/4	1/4	0.76	5	300	300	300	10	185	NBR	73212SN2MN00	7	A38
3/8	5/8	3.00	5	300	300	300	16	175	NBR	06F22C6140ADF	5	A22
3/8	5/8	3.00	0	150	150	150	11	180	NBR	06F23C6140ACF*	4	A22
3/8	5/8	3.00	0	100	100	100	10	185	FKM	72218RN3TV00*	7	A36
1/2	1/2	4.00	5	300	300	300	16	175	NBR	08F22C6140ADF	5	A22
1/2	1/2	4.00	0	150	150	150	11	180	NBR	08F23C6140ACF*	4	A22
1/2	5/8	4.00	0	100	100	100	10	185	FKM	72218RN4UV00*	7	A36
3/4	3/4	5.00	5	300	300	300	16	175	NBR	12F22C6148ADF	5	A25
3/4	3/4	5.00	0	150	150	150	11	180	NBR	12F23C6148ACF*	4	A25
3/4	3/4	5.00	0	100	100	100	10	185	FKM	72218RN5VV00*	7	A36
1	1	13.00	5	150	150	100	6	180	NBR	16F24C6164AAF	1	A29
1 1/2	1 1/4	22.50	5	150	150	100	6	180	NBR	24F24C6180AAF	1	A31

DC TECHNICAL SPECIFICATIONS

1/4	1/4	0.76	5	300	300	300	10	185	NBR	73212SN2MN00	7	A38
3/8	5/8	3.00	5	125	100	100	11.5	150	NBR	06F22C6140A3F	6	A22
3/8	5/8	3.00	0	40	40	40	22	185	FKM	72218RN3TV00*	8	A36
3/8	5/8	3.00	0	40	40	-	11.5	150	NBR	06F23C6140A3F*	6	A22
1/2	1/2	4.00	5	125	100	100	11.5	150	NBR	08F22C6140A3F	6	A22
1/2	5/8	4.00	0	40	40	40	22	185	FKM	72218RN4UV00*	8	A36
1/2	1/2	4.00	0	40	40	-	11.5	150	NBR	08F23C6140A3F*	6	A22
3/4	3/4	5.00	5	100	90	75	11.5	150	NBR	12F22C6148A3F	6	A25
3/4	3/4	5.00	0	40	40	40	22	185	FKM	72218RN5VV00*	8	A36
3/4	3/4	5.00	0	40	40	-	11.5	150	NBR	12F23C6148A3F*	6	A25
1	1	13.00	5	125	125	125	11.5	150	NBR	16F24C6164A3F	6	A29
1 1/2	1 1/4	22.50	5	125	125	125	11.5	150	NBR	24F24C6180A3F	6	A31

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.



2-Way Internal Pilot Operated - Normally Open - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/4	1/4	0.76	5	200	200	200	10	185	NBR	73222BN2MN00	7	A35
1/4	11/32	1.20	5	300	300	300	11	180	NBR	04F25O2122CCF	4	A54
3/8	1/2	2.40	5	200	200	200	10	185	NBR	73222BN3SN00	7	A49
3/8	1/2	3.00	1	200	175	175	11	180	NBR	06F25O2132ACF	4	A21
3/8	5/8	3.00	0	150	150	150	11	150	NBR	06F23O2140ACF*	4	A51
3/8	5/8	3.00	5	150	150	150	10	185	NBR	73228BN3TN00	7	A40
3/8	5/8	3.00	0	125	125	125	22	185	FKM	72228BN3TV00*	8	A37
1/2	1/2	2.80	5	200	200	200	10	185	NBR	73222BN4TN00	7	A49
1/2	1/2	3.60	1	200	175	175	11	180	NBR	08F25O2132ACF	4	A21
1/2	5/8	4.00	5	150	150	150	10	185	NBR	73228BN4UN00	7	A40
1/2	5/8	4.00	0	150	150	150	11	150	NBR	08F23O2140ACF*	4	A51
1/2	1/2	4.00	0	125	125	125	22	185	FKM	72228BN4UV00*	8	A37
3/4	3/4	5.00	5	150	150	150	10	185	NBR	73228BN5VN00	7	A40
3/4	3/4	5.00	0	125	125	125	22	185	FKM	72228BN5VV00*	8	A37
3/4	3/4	5.50	0	150	150	150	11	180	NBR	12F23O2148ACF*	4	A52
3/4	3/4	6.50	5	250	200	200	11	180	NBR	12F24O2148ACF	4	A26
3/4	3/4	7.30	5	200	200	200	10	185	NBR	73222BN52N00	7	A50
3/4	3/4	7.40	1	275	275	275	11	180	NBR	12F25O2148ACF	4	A28
3/4	25/32	9.60	5	230	230	230	10	185	NBR	73222GBN53N00	7	A48
1	1	11.00	5	200	200	200	10	185	NBR	73222BN63N00	7	A50
1	1	12.20	1	300	250	230	11	180	NBR	16F25O2164ACF	4	A30
1	1	12.50	5	230	230	230	10	185	NBR	73222GBN64N00	7	A48
1	1	13.00	5	125	125	125	11	180	NBR	16F24O2164ACF	4	A29
1	1 1/16	13.50	5	125	125	125	10	185	NBR	73228BN64N00	7	A41
1 1/4	1 1/8	15.00	5	125	125	125	11	180	NBR	20F24O2172ACF	4	A29
1 1/4	1 1/8	15.00	5	125	125	125	10	185	NBR	73228BN75N00	7	A41
1 1/4	1 1/8	19.30	5	230	230	230	10	185	NBR	73222GBN76N00	7	A48
1 1/2	1.25	22.50	5	125	125	125	11	180	NBR	24F24O2180ACF	4	A31
1 1/2	1.25	22.50	5	125	125	125	10	185	NBR	73228BN87N00	7	A42
1 1/2	1 9/16	29.00	5	170	170	170	10	185	NBR	73222GBN88N00	7	A48
2	1 9/16	38.60	5	170	170	170	10	185	NBR	73222GBN99N00	7	A48

*See note on A32.

2-Way Internal Pilot Operated - Normally Open - Brass (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1/4	1/4	0.76	5	200	200	200	10	185	NBR	73222BN2MN00	7	A35
1/4	11/32	1.20	5	160	160	160	11.5	150	NBR	04F25O2122C3F	6	A54
3/8	1/2	2.40	5	200	200	200	10	185	NBR	73222BN3SN00	7	A49
3/8	5/8	3.00	5	150	150	150	10	185	NBR	73228BN3TN00	7	A40
3/8	5/8	3.00	0	125	125	80	11.5	150	NBR	06F23O2140A3F*	6	A51
3/8	5/8	3.00	0	125	125	125	22	185	FKM	72228BN3TV00*	8	A37
1/2	1/2	2.80	5	200	200	200	10	185	NBR	73222BN4TN00	7	A49
1/2	5/8	4.00	5	150	150	150	10	185	NBR	73228BN4UN00	7	A40
1/2	1/2	4.00	0	125	125	125	22	185	FKM	72228BN4UV00*	8	A37
1/2	5/8	4.00	0	125	125	80	11.5	150	NBR	08F23O2140A3F*	6	A51
1/2	1/2	12.70	5	200	175	175	11.5	180	NBR	08F25O2132C3F	6	A21
3/4	3/4	5.00	5	150	150	150	10	185	NBR	73228BN5VN00	7	A40
3/4	3/4	5.00	0	125	125	125	22	185	FKM	72228BN5VV00*	8	A37
3/4	3/4	5.50	0	125	125	80	11.5	150	NBR	12F23O2148A3F*	6	A52
3/4	3/4	7.30	5	200	200	200	10	185	NBR	73222BN52N00	7	A50
3/4	25/32	9.60	5	230	230	230	10	185	NBR	7322GBN53N00	7	A48
1	1	11.00	5	200	200	200	10	185	NBR	73222BN63N00	7	A50
1	1	12.50	5	230	230	230	10	185	NBR	7322GBN64N00	7	A48
1	1	13.00	5	125	125	125	11.5	180	NBR	16F24O2164A3F	6	A29
1	1 1/16	13.50	5	125	125	125	10	185	NBR	73228BN64N00	7	A41
1 1/4	1 1/8	15.00	5	125	125	125	10	185	NBR	73228BN75N00	7	A41
1 1/4	1 1/8	19.30	5	230	230	230	10	185	NBR	7322GBN76N00	7	A48
1 1/2	1 1/4	22.50	5	125	125	125	11.5	180	NBR	24F24O2180A3F	6	A31
1 1/2	1 1/4	22.50	5	125	125	125	10	185	NBR	73228BN87N00	7	A42
1 1/2	1 9/16	29.00	5	170	170	170	10	185	NBR	7322GBN88N00	7	A48
2	1 9/16	38.60	5	170	170	170	10	185	NBR	7322GBN99N00	7	A48

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.

2-Way Internal Pilot Operated - Normally Open - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/4	1/4	0.76	5	200	200	200	10	185	NBR	73222SN2MN00	7	A39
3/8	5/8	3.00	0	150	150	150	11	175	NBR	06F23O6140ACF*	4	A51
3/8	5/8	3.00	0	125	125	125	22	185	FKM	72228RN3TV00*	8	A37
1/2	1/2	4.00	0	150	150	150	11	175	NBR	08F23O6140ACF*	4	A51
1/2	1/2	4.00	0	125	125	125	22	185	FKM	72228RN4UV00*	8	A37
3/4	3/4	5.00	0	150	150	150	11	175	NBR	12F23O6148ACF*	4	A52
3/4	3/4	5.00	0	125	125	125	22	185	FKM	72228RN5VV00*	8	A37
1	1	13.00	5	125	125	125	11	180	NBR	16F24O6164ACF	4	A29
1 1/2	1 1/4	22.50	5	125	125	125	11	180	NBR	24F24O6180ACF		A31
DC TECHNICAL SPECIFICATIONS												
1/4	1/4	0.76	5	200	200	200	10	185	NBR	73222SN2MN00	7	A39
3/8	5/8	3.00	0	125	125	125	22	185	FKM	72228RN3TV00*	8	A37
3/8	5/8	3.00	0	125	125	80	11.5	150	NBR	06F23O6140A3F*	6	A51
1/2	1/2	4.00	0	125	125	125	22	185	FKM	72228RN4UV00*	8	A37
1/2	1/2	4.00	0	125	125	80	11.5	150	NBR	08F23O6140A3F*	6	A51
3/4	3/4	5.00	0	125	125	125	22	185	FKM	72228RN5VV00*	8	A37
3/4	3/4	5.00	0	125	125	80	11.5	150	NBR	12F23O6148A3F*	6	A52
1	1	13.00	5	125	125	125	11.5	150	NBR	16F24O6164A3F	6	A29
1 1/2	1 1/4	22.50	5	125	125	125	11.5	150	NBR	24F24O6180A3F	6	A31

*Direct Lift Valves (0 minimum pressure differential) will open at zero differential pressure, however, full flow through the valve will be achieved at approximately 5 psi differential.

2-Way External Pilot Operated* - Universal - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
3/8	1/2	2.40	0	150	150	150	10	185	NBR	74232BN3SNJ1	7	A45
1/2	1/2	2.80	0	150	150	150	10	185	NBR	74232BN4TNJ1	7	A45
3/4	3/4	7.30	0	150	150	150	10	185	NBR	74232BN52NJ1	7	A34
1	1	11.00	0	150	150	150	10	185	NBR	74232BN63NJ1	7	A34

AC TECHNICAL SPECIFICATIONS

3/8	1/2	2.40	0	150	150	150	10	185	NBR	74232BN3SNJ1	7	A45
1/2	1/2	2.80	0	150	150	150	10	185	NBR	74232BN4TNJ1	7	A45
3/4	3/4	7.30	0	150	150	150	10	185	NBR	74232BN52NJ1	7	A34
1	1	11.00	0	150	150	150	10	185	NBR	74232BN63NJ1	7	A34

*External pilot pressure valves require a minimum external pilot pressure equal to the main line pressure plus 10 psi. Maximum external pilot pressure is 145 psi for vacuum applications and 160 psi for pressure applications. (Pressure ratings may be reduced, however. Consult factory for details.)

2-Way Remote Pressure Operated Valves - Universal - Brass, NBR Seals

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
3/8	1/2	2.4	0	190	190	190	--	185		75232BN3SN00	-	A55
1/2	1/2	2.8	0	190	190	190	--	185		75232BN4TN00	-	A55
3/4	3/4	7.3	0	190	190	190	--	185		75232BN52N00	-	A55

2-Way Remote Operated Valve Port Connections

Valve Type	Main Line Supply	Remote Control Valve Hookup			3-Way Pilot Valve Hookup		
		IN Port	OUT Port	Pilot Inlet Port 1/8" NPT	Normally Closed Port	Normally Open Port	Common Port
Normally Open	0-190 PSIG	IN	OUT	Common Port of 3-Way Pilot Valve	Main Line Pressure +10 PSI Min.	Pilot Exhaust	Pilot IN Port (1/8" NPT) of Remote Control Valve
Normally Open	Vacuum	Non-Vacuum Pump	Vacuum Pump		Main Line Pressure +10 PSI Min.	Vacuum	
Normally Closed	0-190 PSIG	IN	OUT				
Normally Closed	Vacuum	Non-Vacuum Pump	Vacuum Pump				

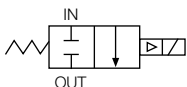
* To assure long, trouble free life, the Pilot IN to main pressure differential should not exceed 200 PSIG.

NOTE: This valve in its normal state, without piloting, is normally open.

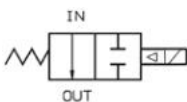
NOTE: These valves do not have an electrical operator, therefore, No enclosure and/or coil selection is required.



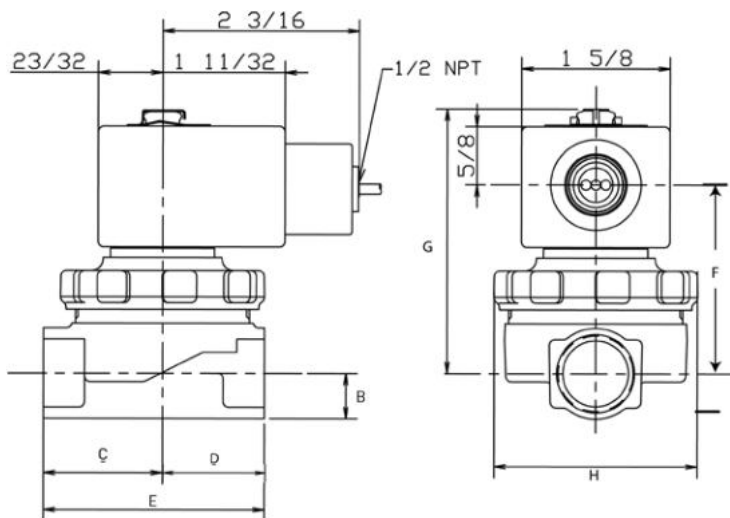
Valve Reference A21



2-Way Normally Closed
06F25C, 08F25C

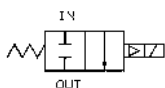


2-Way Normally Open
06F250, 08F250
Port Identification:
In-In/Out-Out

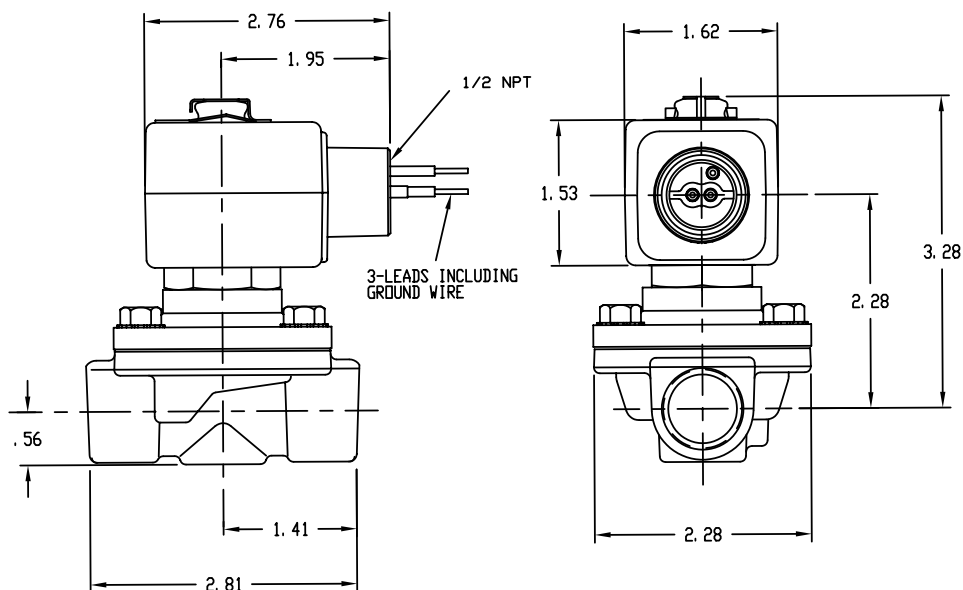


Valve	Dimensions						
	B	C	D	E	F	G	H
06F25C2132ACF							
08F25C2132ACF	1/2	1 5/16	1 1/8	2 7/16	2 5/16	2 29/32	2 1/4
06F25C2132A3F							
08F25C2132A3F							
06F25O2132ACF							
08F25O2132ACF	1/2	1 5/16	1 1/8	2 7/16	2 7/32	2 29/32	2 1/4
08F25O2132A3F							

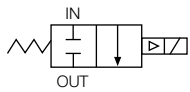
Valve Reference A22



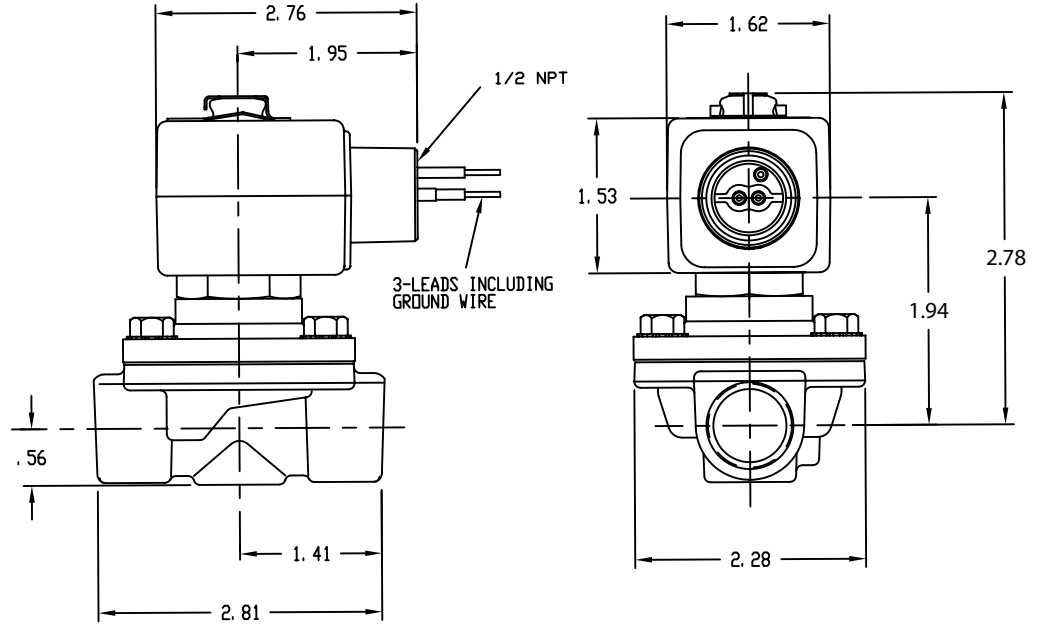
2-Way Normally Closed
Port Identification:
In-In/Out-Out



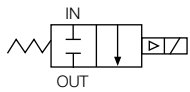
Valve Reference A23



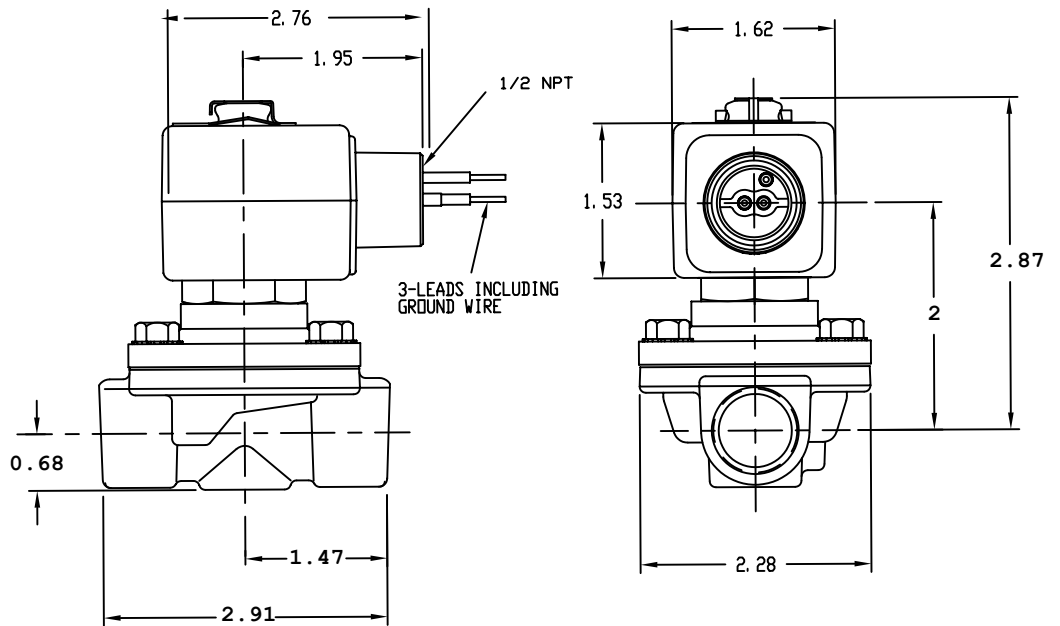
2-Way Normally Closed
Port Identification:
In-In/Out-Out



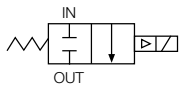
Valve Reference A24



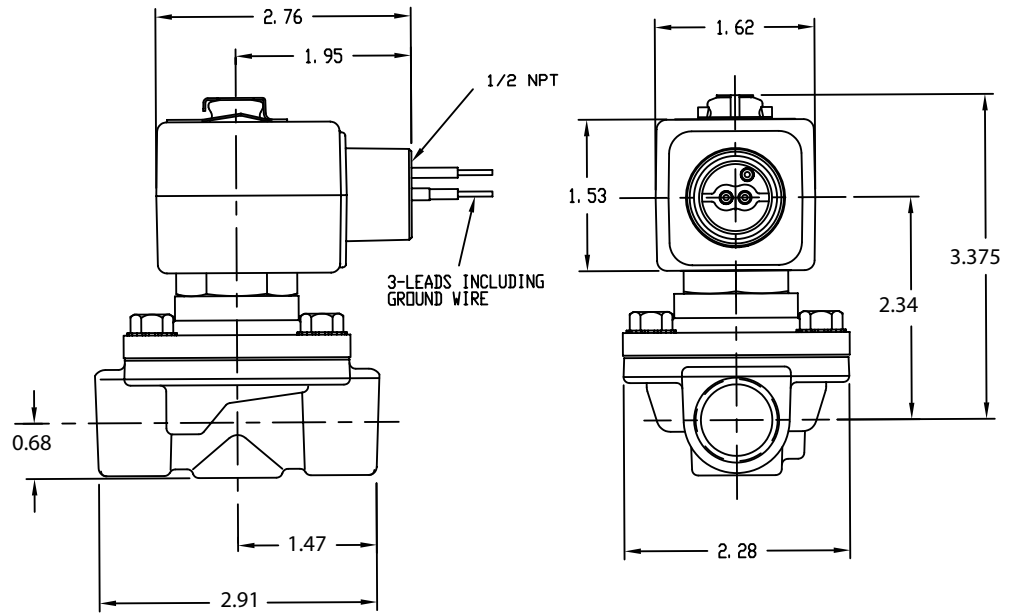
2-Way Normally Closed
Port Identification:
In-In/Out-Out



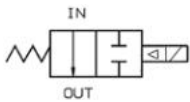
Valve Reference A25



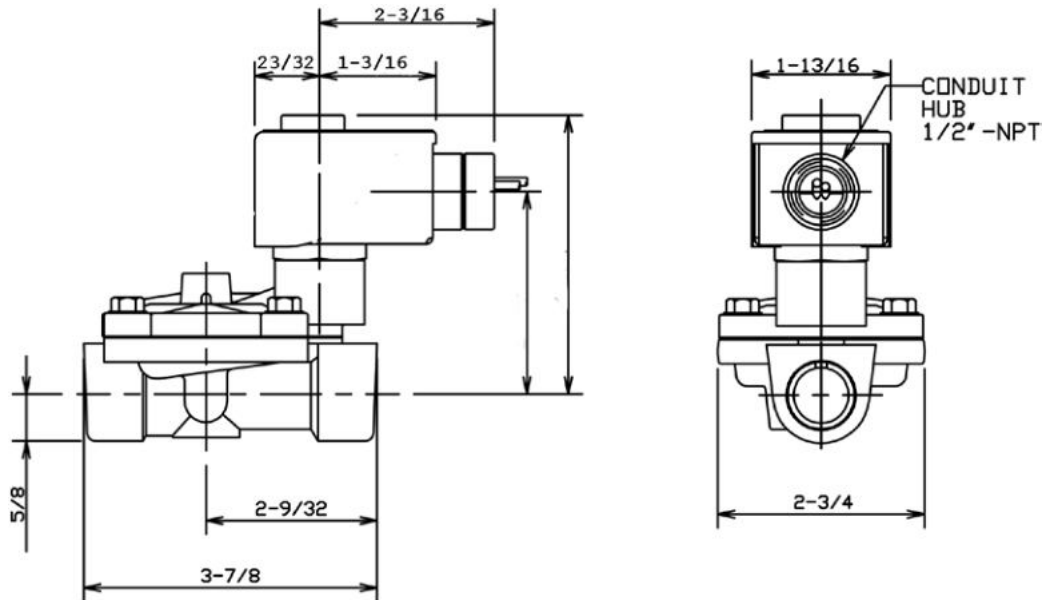
2-Way Normally Closed
Port Identification:
In-In/Out-Out



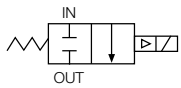
Valve Reference A26



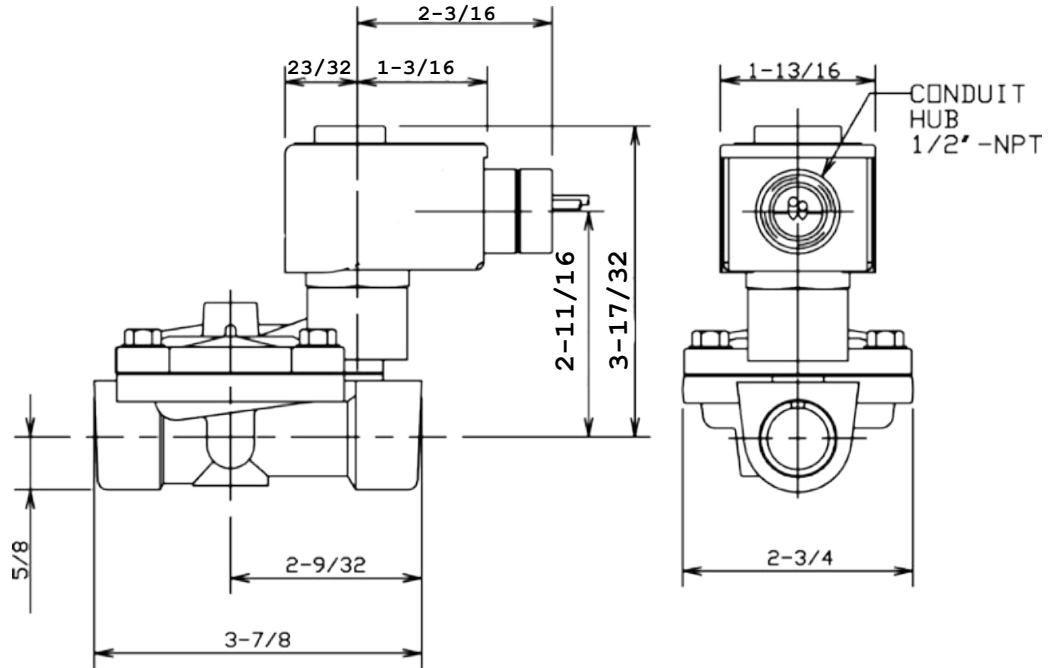
2-Way Normally Open
Port Identification:
In-In/Out-Out



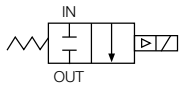
Valve Reference A27



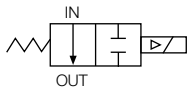
2-Way Normally Closed:
Port Identification:
In-In/Out-Out



Valve Reference A28

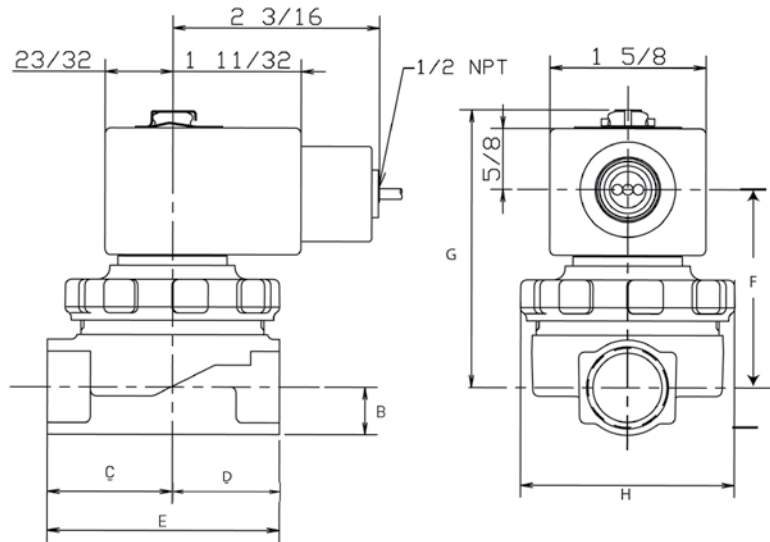


2-Way Normally Closed:
12F25Cxx



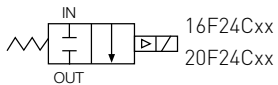
2-Way Normally Open:
12F250xx

Port Identification:
In-In/Out-Out

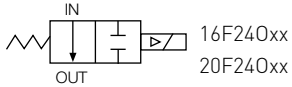


Valve	Dimensions						
	B	C	D	E	F	G	H
12F25C2148ACF	5/8	1 5/8	1 1/2	3 1/8	2 11/32	3 15/32	3 1/2
12F25O2148ACF	5/8	1 5/8	1 1/2	3 1/8	2 1/4	3 15/32	2 29/32

Valve Reference A29

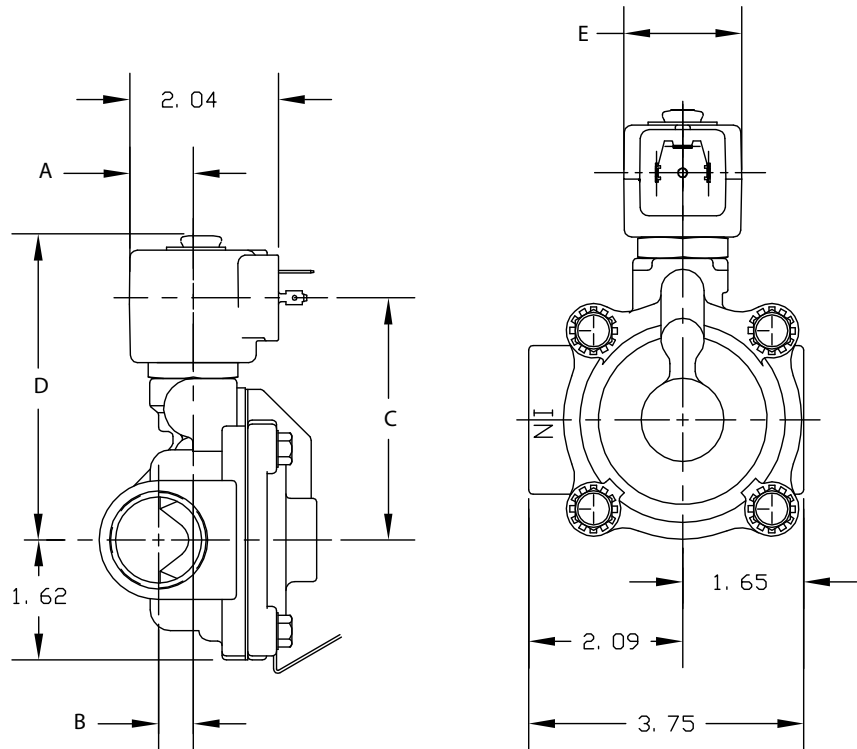


2-Way normally closed:



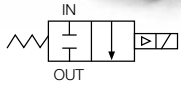
2-Way normally open:

Port Identification:
In-In/Out-Out

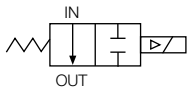


Valve	Dimensions				
	A	B	C	D	E
16F24C2164AAF 16F24C6164AAF	23/32	15/32	3 1/8	3 31/32	1 9/16
16F24C2164A3F 16F24C6164A3F	7/8	15/32	3 9/32	4 3/16	1 13/16
20F24C2172AAF 20F24C2172A3F	23/32	17/32	3 1/8	3 31/32	1 9/16
16F24O2164ACF 16F24O2164A3F 16F24O6164ACF 16F24O6164A3F	23/32	15/32	4 5/32	4 3/16	1 13/16
20F24O2172ACF 20F24O2172A3F	7/8	17/32	4 3/8	4 13/16	1 13/16

Valve Reference A30

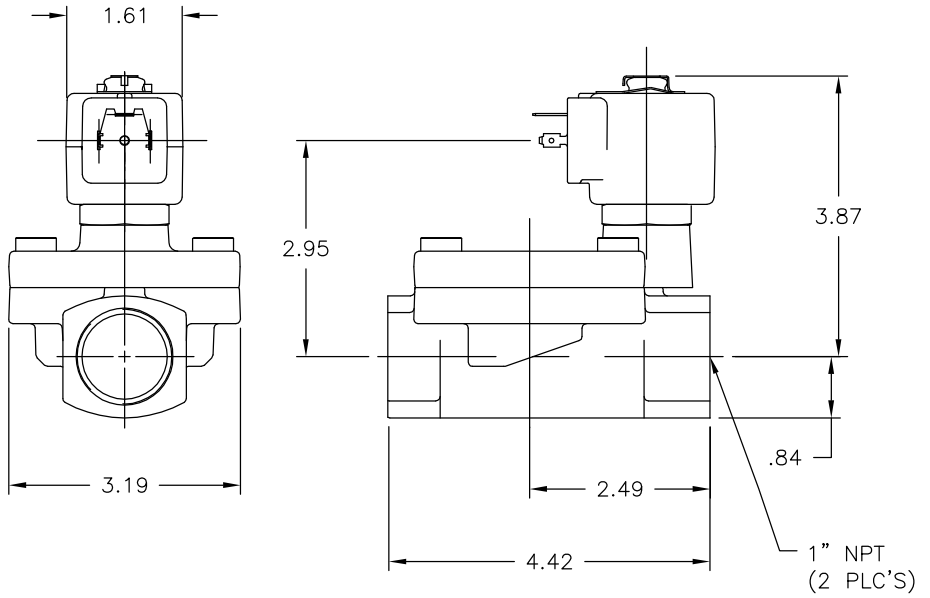


2-Way Normally Closed:
16F25Cxx

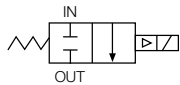


2-Way Normally Open:
16F25Oxx

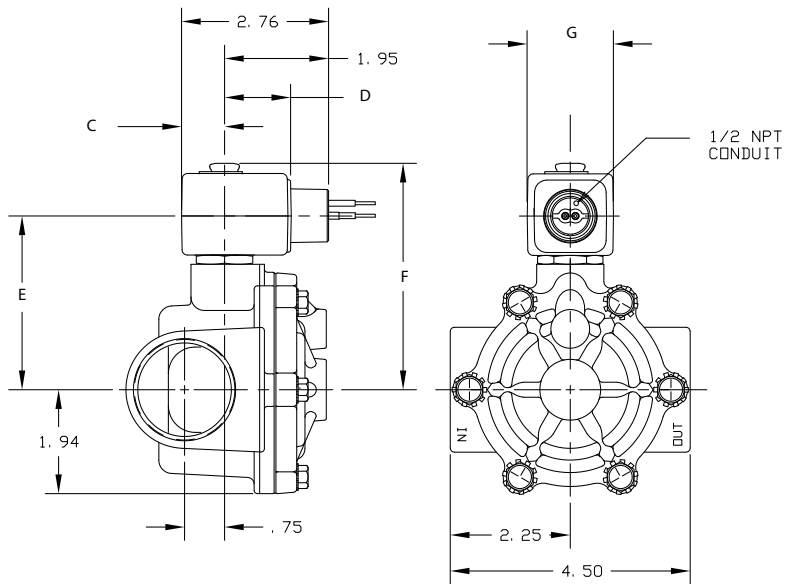
Port identification:
In-In/Out-Out



Valve Reference A31



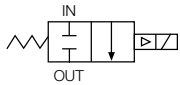
2-Way Normally Closed
Port identification:
In-In/Out-Out



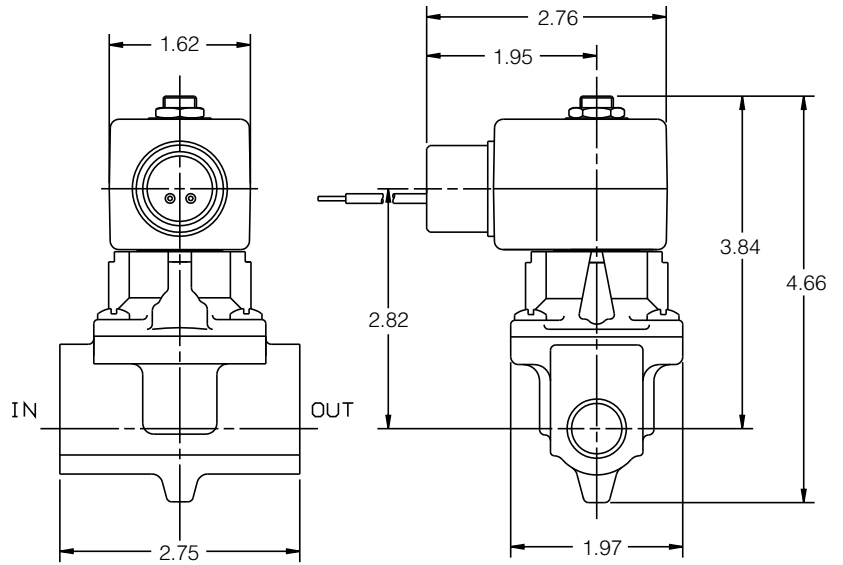
Part Number	Dimension				
	C	D	E	F	G
24F24C2180AAF 24F24C180AAF	23/32	1 5/16	3 5/16	4 5/32	1 9/16
24F24C2180A3F	7/8	1 17/32	3 17/32	4 3/8	1 13/16
24F2402180ACF 24F2402180A3F 24F2406180ACF	7/8	1 17/32	3 3/8	4 3/8	1 13/16



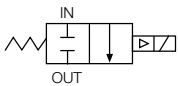
Valve Reference A32



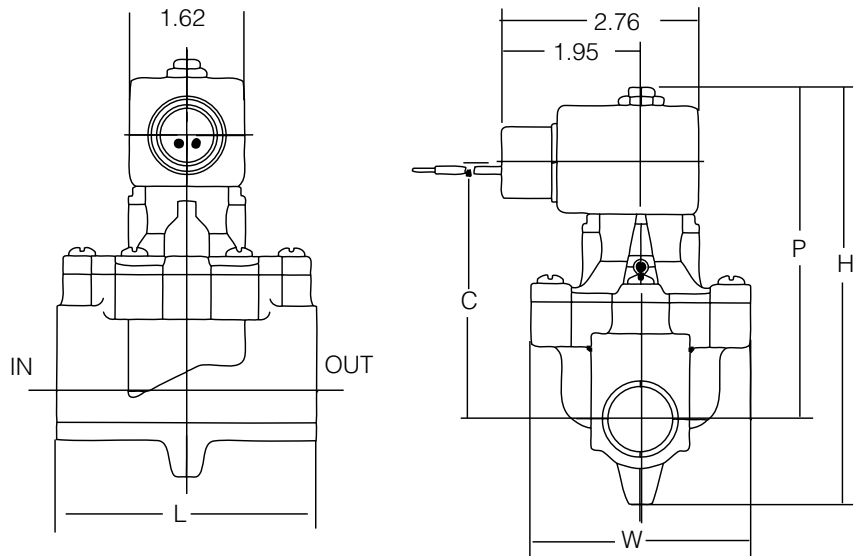
2-Way Normally Closed
 Port Identification:
 IN-IN/OUT-OUT



Valve Reference A33



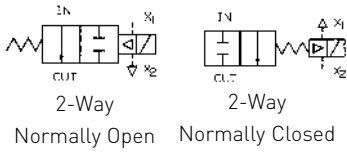
2-Way Normally Closed
 Port identification:
 In-In/Out-Out
 73212BN52
 P-IN/A-OUT
 73212BN63



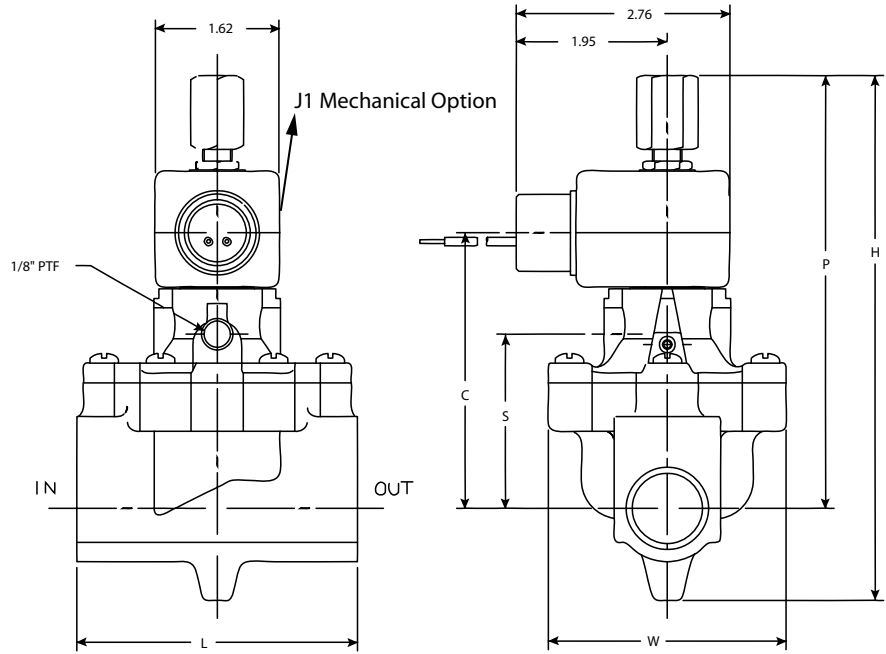
Part Number	Dimension					Port Identification	
	H	P	C	L	W	IN	OUT
73212BN52NOO	5.81	4.62	3.59	3.62	3.09	IN	OUT
73212BN63NOO	6.22	4.89	3.87	4.31	3.45	P	A



Valve Reference A34

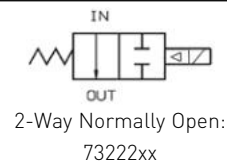
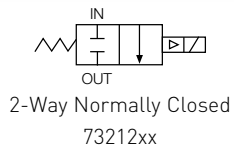


2-Way Universal
Valve may be Normally Closed or Normally Open, depending on piping of external pilot.

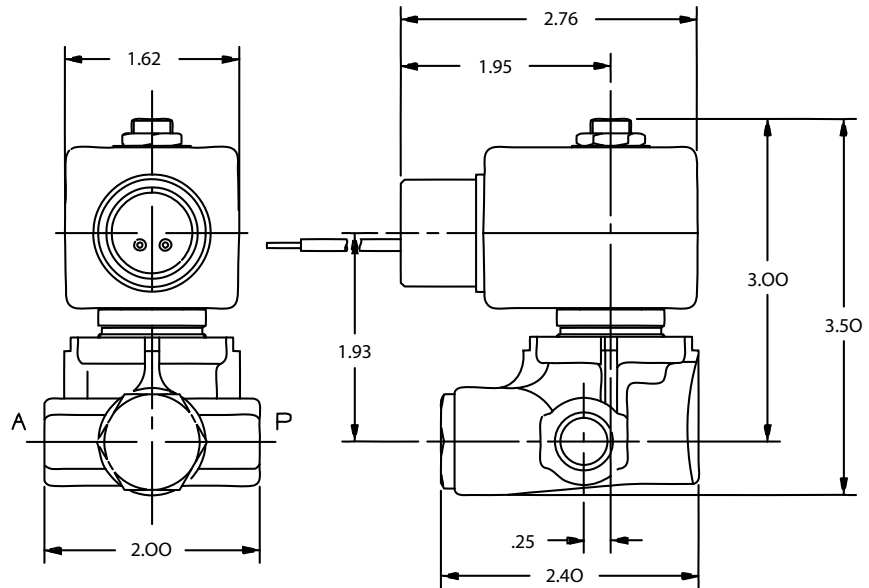


Part Number	Dimension						Port Identification	
	H	P	C	L	W	S	IN	OUT
74232BN52NJ1	6.78	5.59	3.59	3.62	3.09	2.28	IN	OUT
74232BN63NJ1	7.19	5.86	3.87	4.31	3.45	2.56	P	A

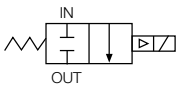
Valve Reference A35



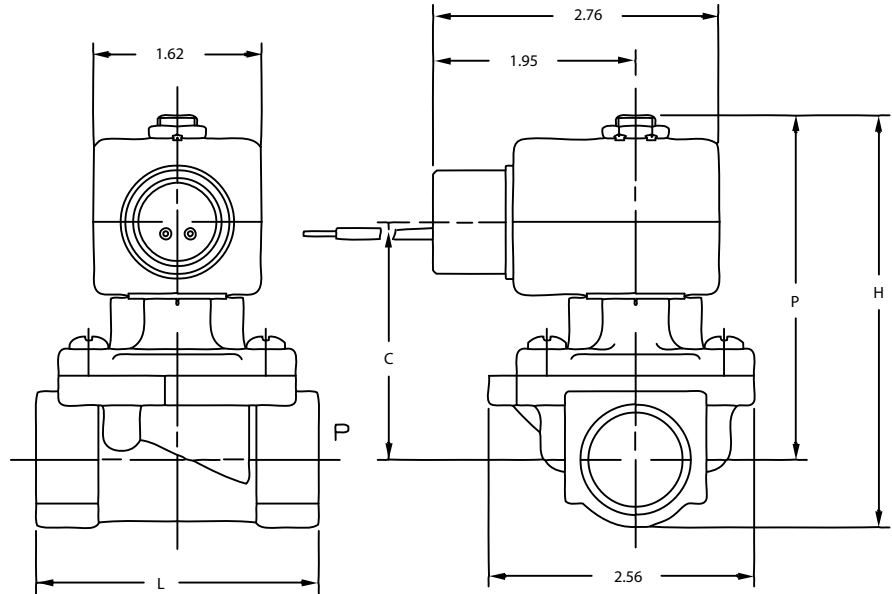
Port Identification:
IN-IN/--OUT



Valve Reference A36

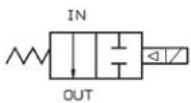


2-Way Normally Closed
 Port Identification:
 P-IN/--OUT

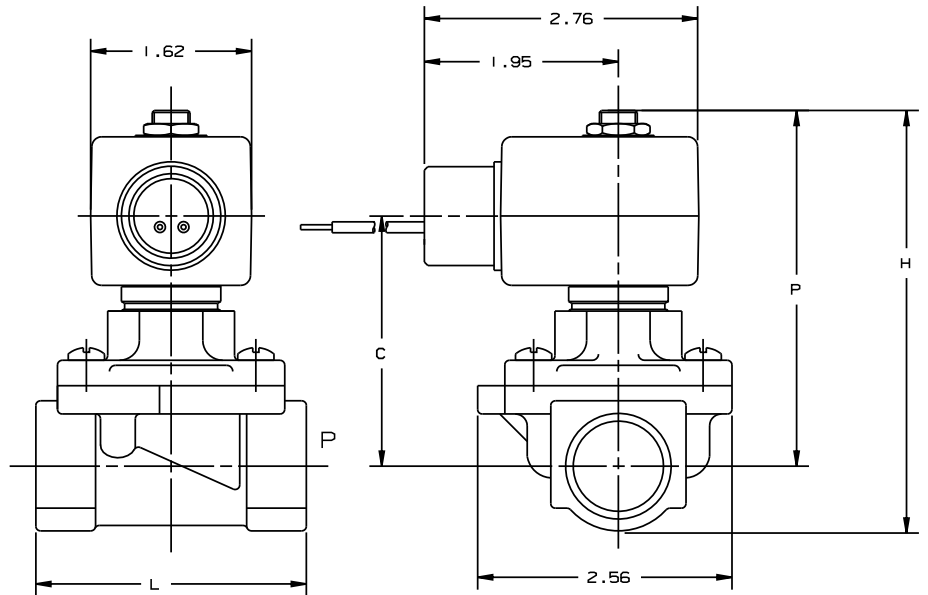


Valve	Dimensions			
	H	P	C	L
72218BN3TXXX 72218BN4UXXX	3.78	3.23	2.21	2.64
72218RN3TXXX 72218RN4UXXX 72218BN5VXXX 72218RN5VXXX	3.99	3.33	2.31	2.71

Valve Reference A37

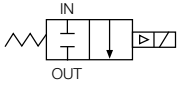


2-Way Normally Open
 Port Identification:
 P-IN/--OUT

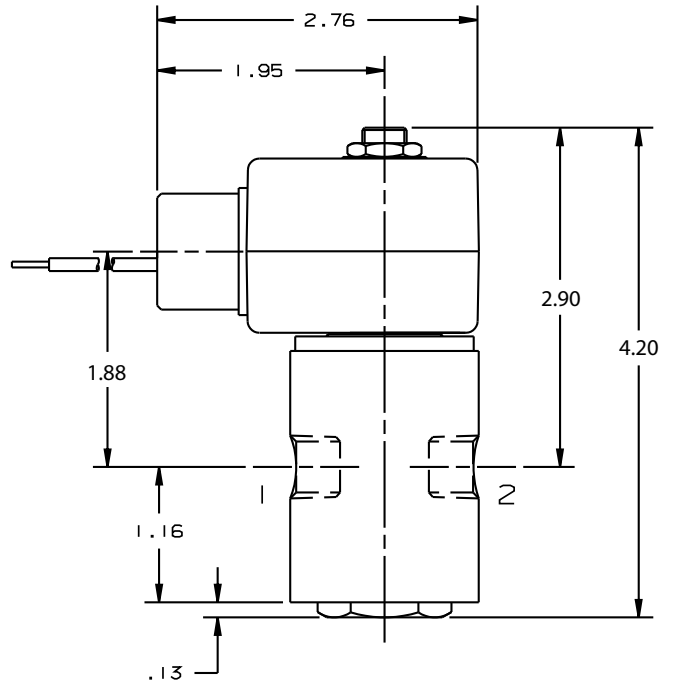
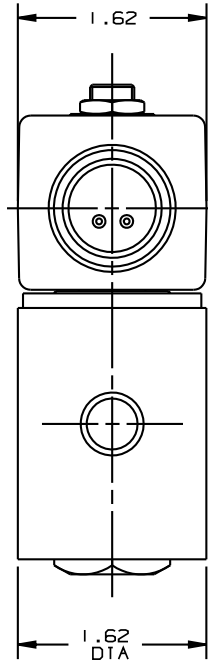


Valve	Dimensions			
	H	P	C	L
72228BN3TXXX 72228BN4UXXX 72228RN3TXXX 72228RN4UXXX	4.04	3.49	2.43	2.64
72228BN5VXXX 72228RN5VXXX	4.24	3.58	2.52	2.72

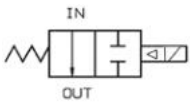
Valve Reference A38



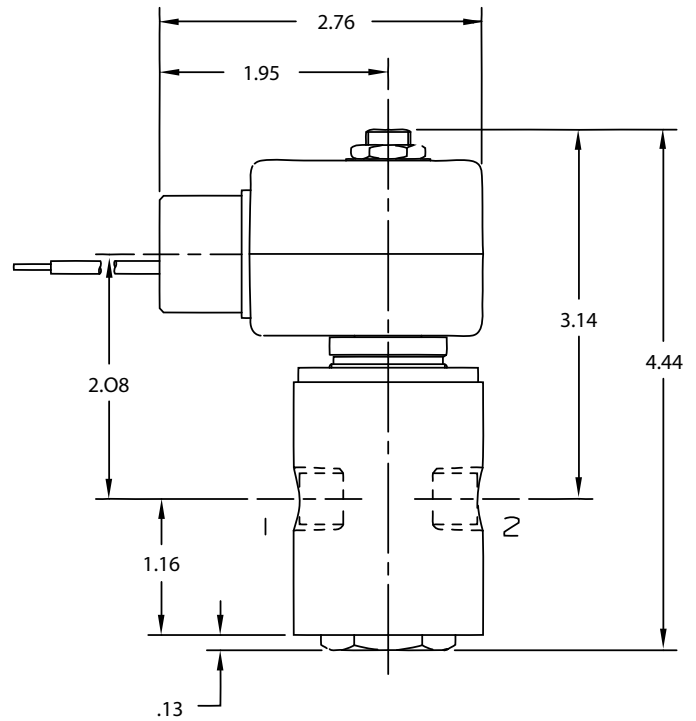
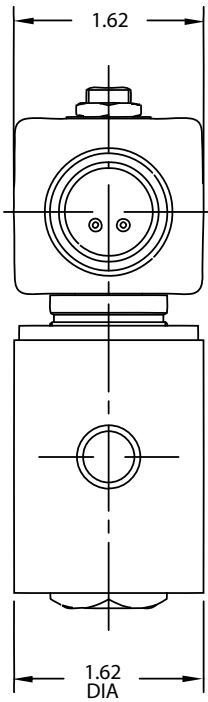
2-Way Normally Closed
 Port Identification:
 2-IN/1-OUT



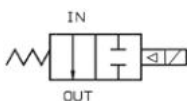
Valve Reference A39



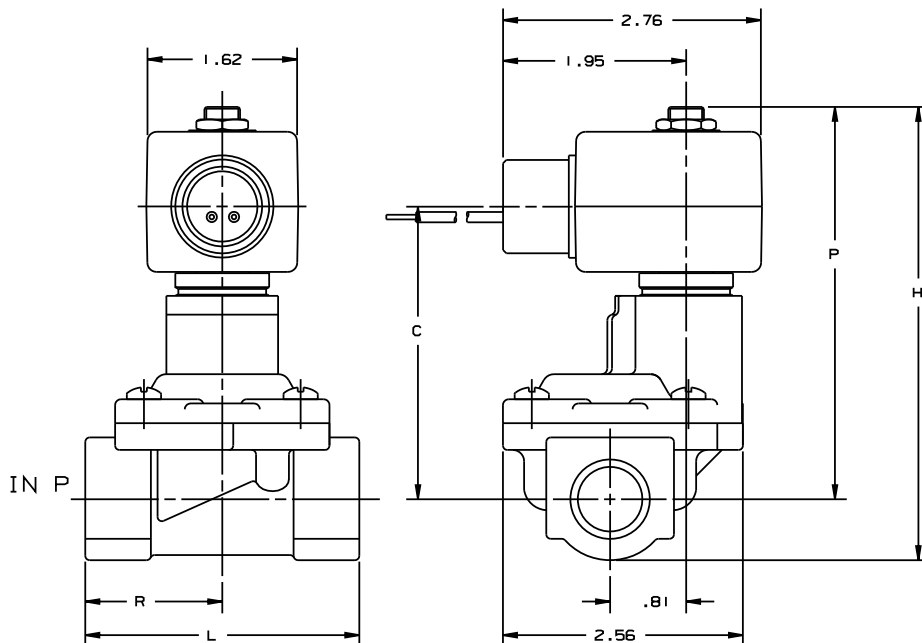
2-Way Normally Open
 Port Identification:
 2-IN/1-OUT



Valve Reference A40



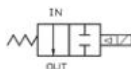
2-Way Normally Open
Port Identification:
P-IN/--OUT



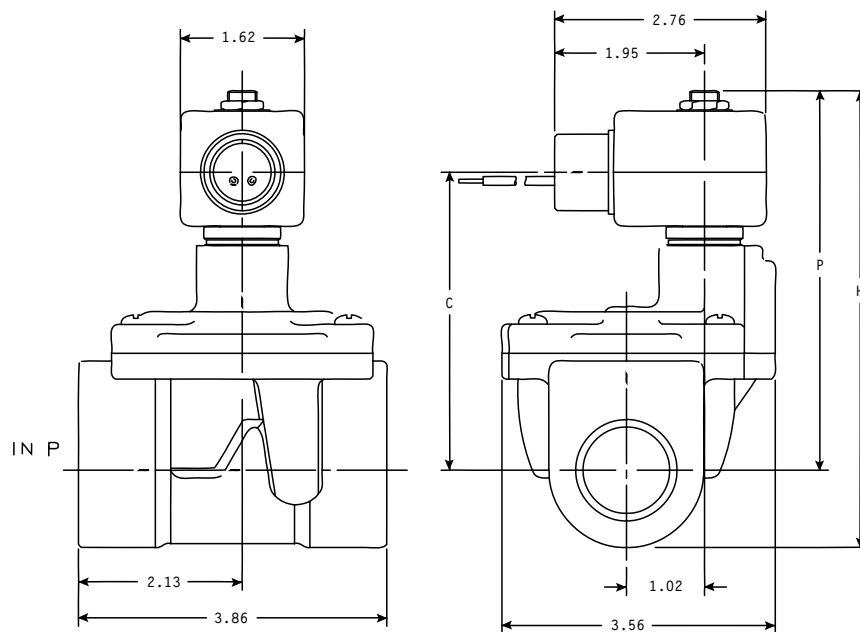
Valve	Dimensions				
	H	P	C	L	R
73228BN3TN00 73228BN4UN00	4.62	4.07	3.01	2.64	1.39
73228BN5VN00	4.83	4.17	3.11	2.72	1.43

2-Way

Valve Reference A41

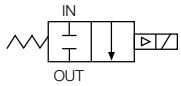


2-Way Normally Open
Port Identification:
P-IN/--OUT

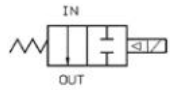


Valve	Dimensions		
	H	P	C
73228BN64N00 73228BN64V00	5.69	4.83	3.77
73228BN75N00 73228BN75V00	5.97	4.97	3.91

Valve Reference A42

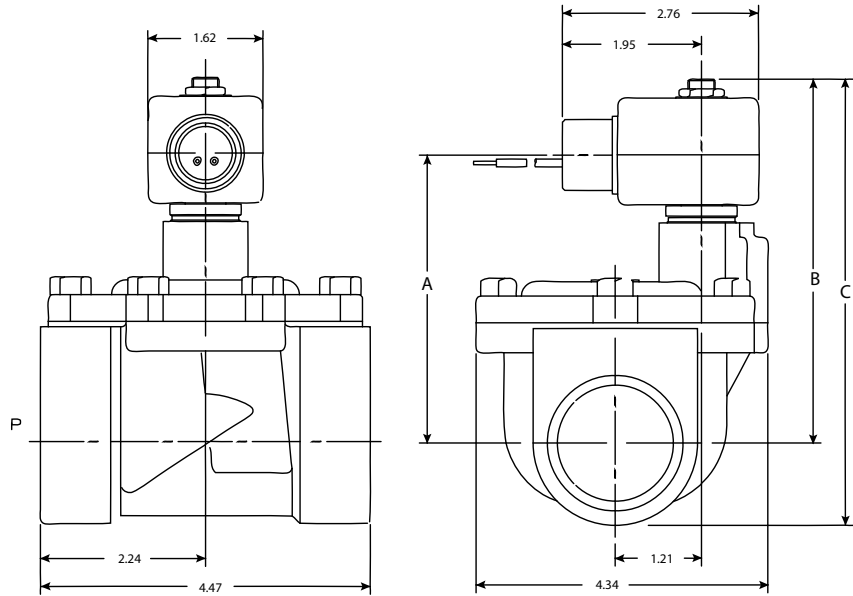


2-Way Normally Closed
73218xx



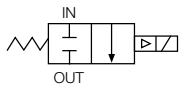
2-Way Normally Open
73228xx

Port Identification:
In-In/--Out



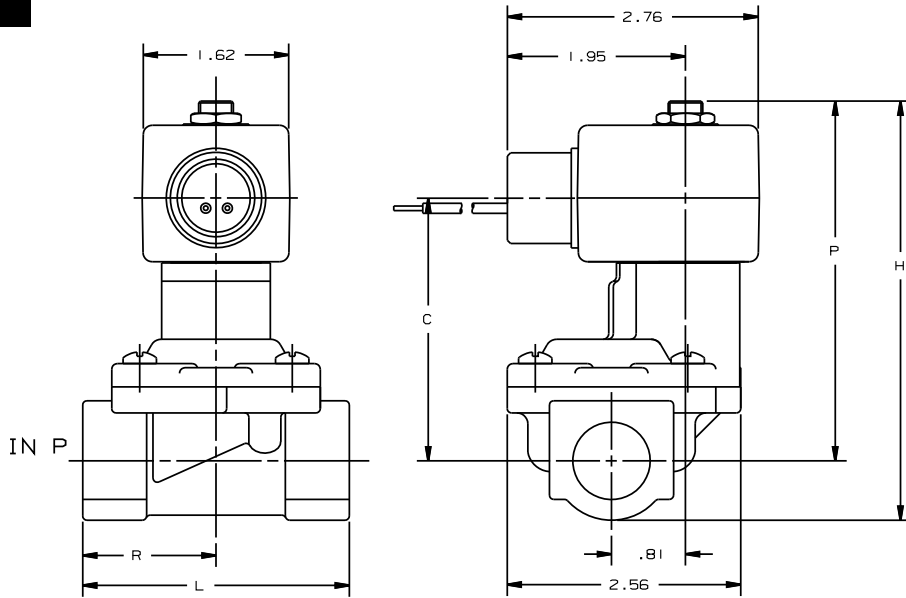
Valve	Dimensions		
	A	B	C
73218xxx	3.87	4.89	6.05
73228xxx	4.07	5.13	6.28

Valve Reference A43



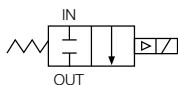
2-Way Normally Closed
73218xx

Port Identification:
P-IN/--OUT

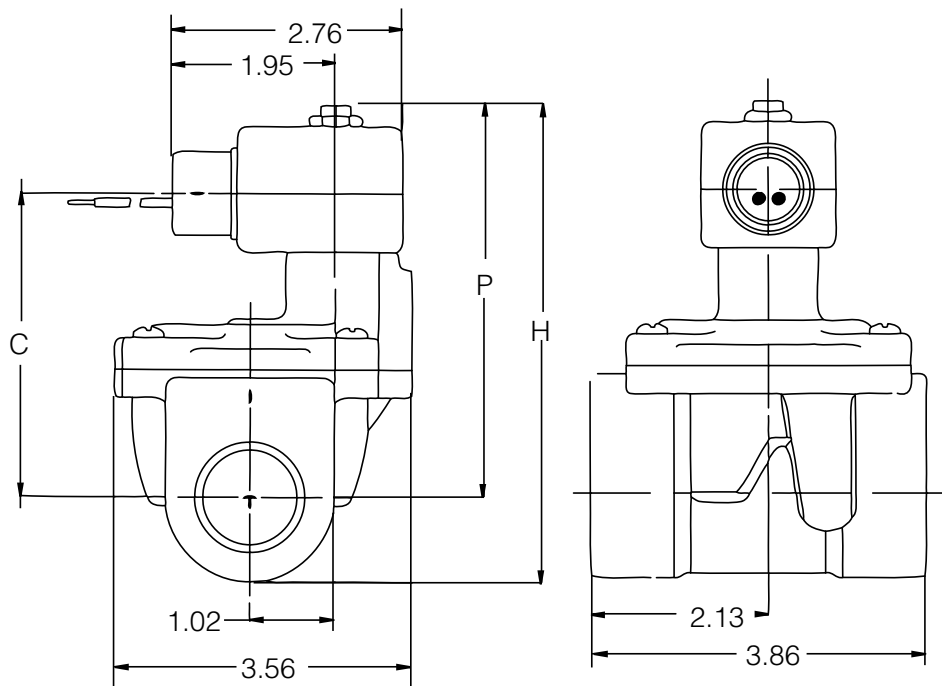


Valve	Dimensions				
	H	P	C	L	R
73218BN3TXXX 73218BN4UXXX	4.38	3.84	2.81	2.64	1.39
73218BN5VXXX	4.59	3.94	2.91	2.72	1.43

Valve Reference A44



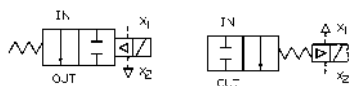
2-Way Normally Closed
Port Identification:
P-IN/--OUT



Valve	Dimensions		
	H	P	C
73218BN64XXX	5.45	4.59	3.57
73218BN75XXX	5.74	4.73	3.71

"X" denotes multiple digit combinations for brevity

Valve Reference A45



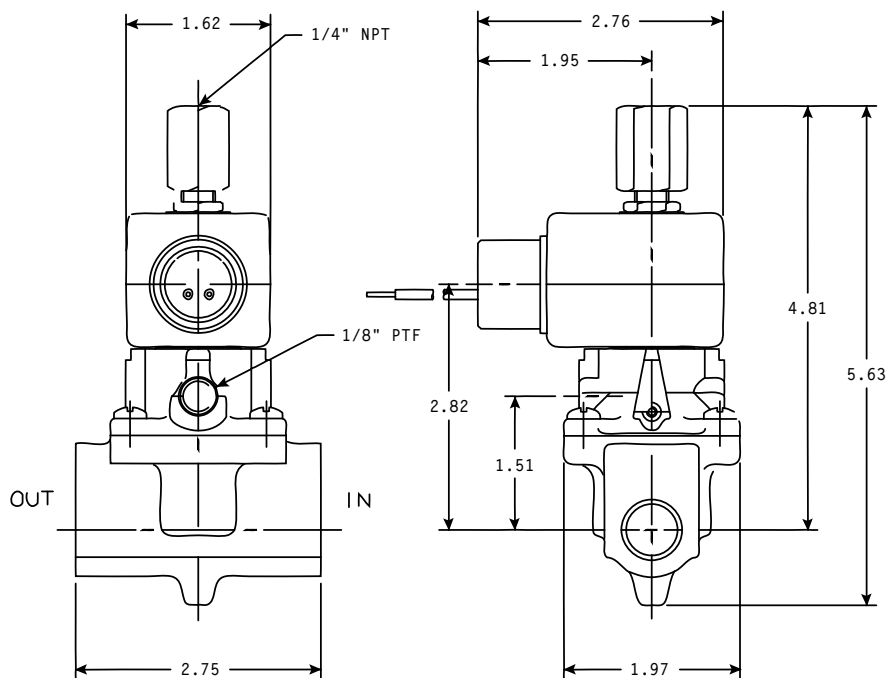
2-Way Normally Open 2-Way Normally Closed

2-Way Universal

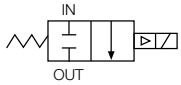
Valve may be normally closed or normally open, depending on piping of external pilot.

Port identification:

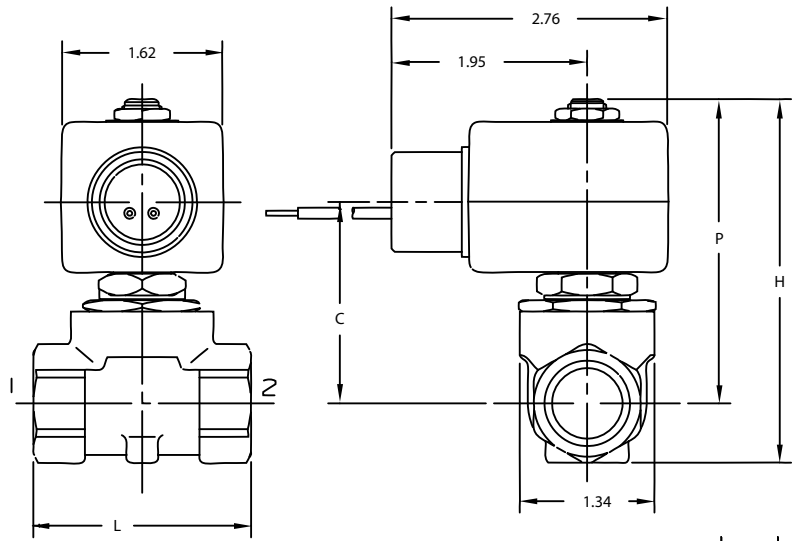
In-In/Out-Out



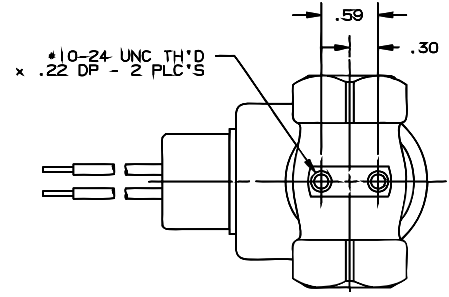
Valve Reference A46



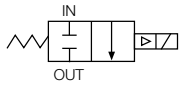
2-Way Normally Closed
 Port Identification:
 Flow arrow on body
 indicates flow direction.
 Ports are not marked.



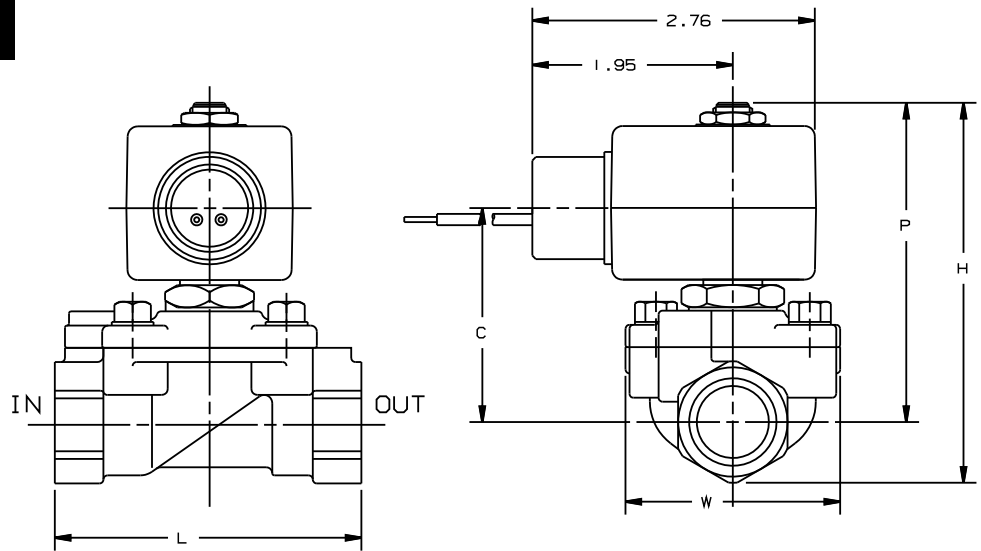
Valve	Dimensions			
	H	P	C	L
7321KBN2RXXX	3.56	2.97	1.96	1.97
7321KBN3SXXX	3.56	2.97	1.96	1.97
7321KBN4SXXX	3.56	2.97	1.96	2.17



Valve Reference A47



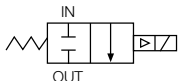
2-Way Normally Closed
 Port Identification:
 Flow arrow on body
 indicates flow direction
 Ports are not marked



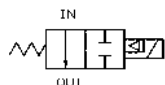
Valve	Dimensions				
	H	P	C	L	W
7221GBN3VXXX	3.66	3.07	2.06	2.95	2.09
7221GBN4VXXX	3.66	3.07	2.06	2.95	2.09
7221GBN51XXX	3.75	3.07	2.06	3.15	2.09
7221GBN61XXX	4.03	3.15	2.12	3.35	2.09
7221GBN64XXX	4.25	3.35	2.34	3.94	2.75



Valve Reference A48

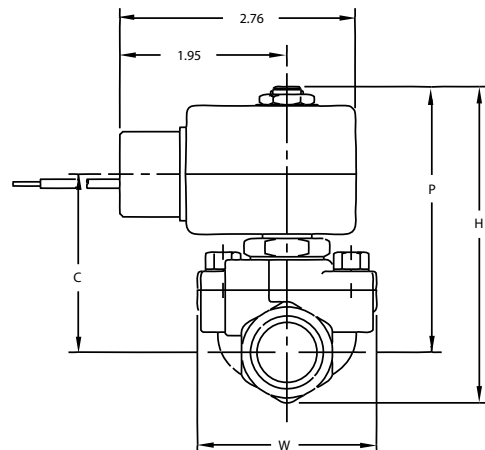
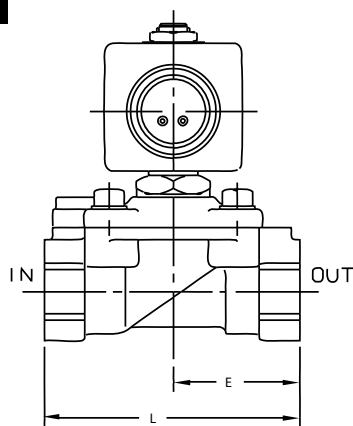


2-Way Normally Closed
7321GBNxx



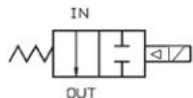
2-Way Normally Open
7322GBNxx

Port Identification:
Flow arrow on body indicates flow direction. Ports are not marked.

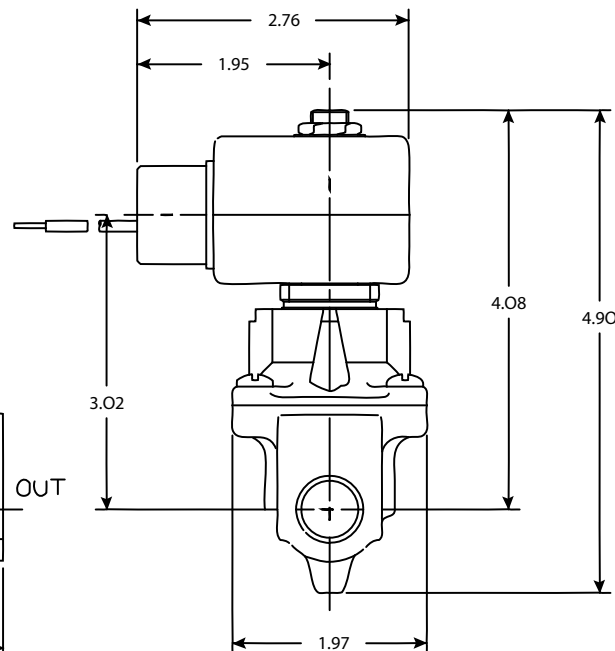
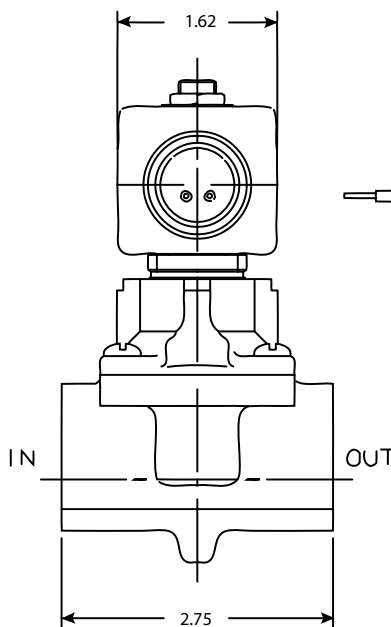


Valve	Dimensions					
	H	P	C	L	E	W
7321GBN53XXX 7322GBN53XXX 7321GBN64XXX 7322GBN64XXX	4.75	3.86	2.84	3.94	1.97	2.75
7321GBN76XXX 7322GBN76XXX	5.41	4.11	3.09	4.33	2.17	2.75
7321GBN88XXX 7322GBN88XXX	5.66	4.37	3.35	5.51	2.95	3.90
7321GBN99XXX 7322GBN99XXX	6.25	4.60	3.58	5.91	3.15	3.90

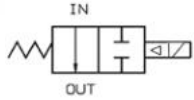
Valve Reference A49



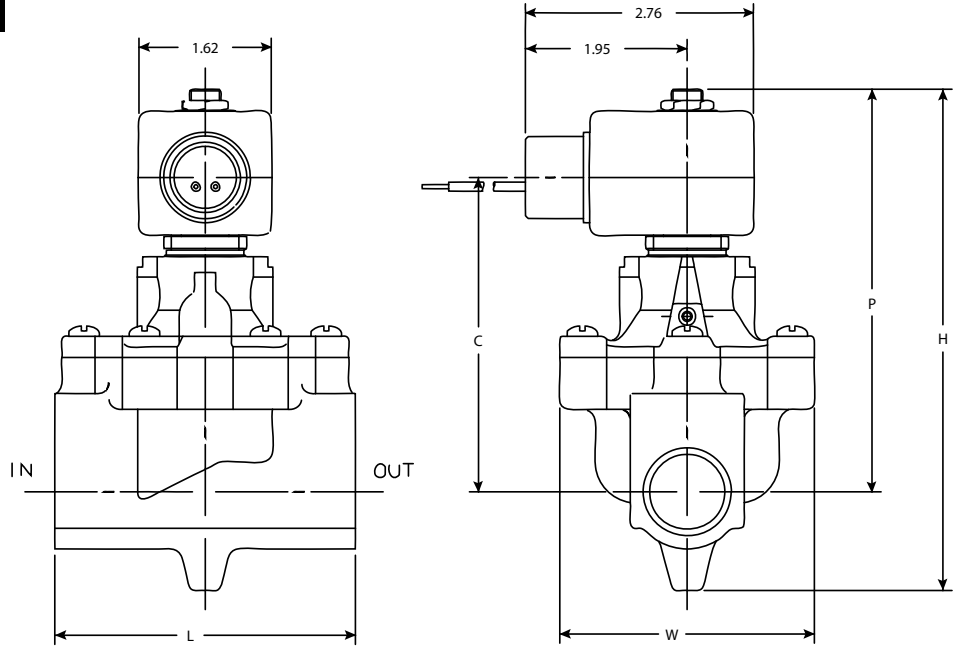
2-Way Normally Open
Port Identification:
IN-IN/ OUT-OUT



Valve Reference A50

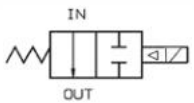


2-Way Normally Open
 Port Identification:
 IN-IN/ OUT-OUT
 (7322BN52xx)
 P-IN/A-OUT
 (7322BN63xx)

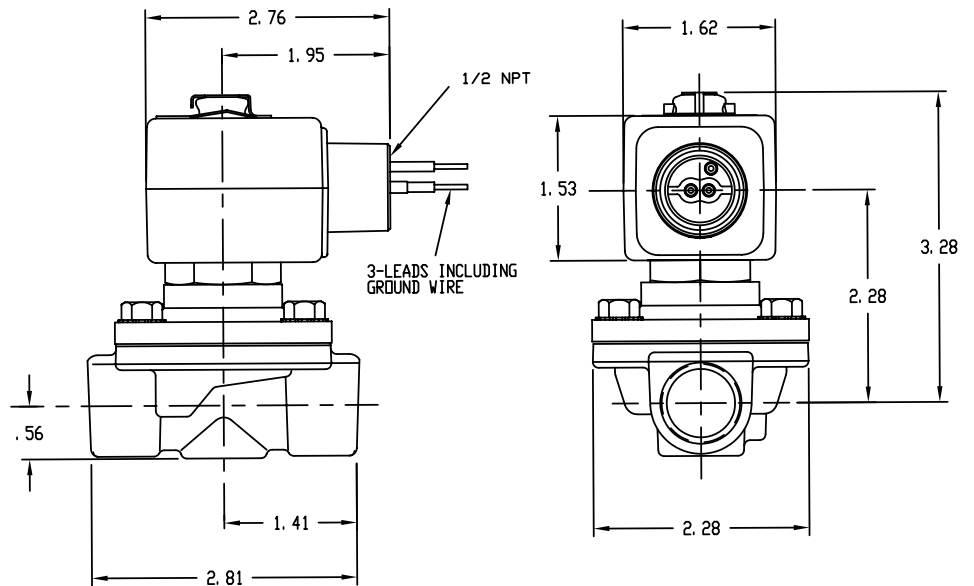


Valve	Dimensions				
	H	P	C	L	W
73222BN52N00	6.04	4.85	3.79	3.62	3.09
73222BN63N00	6.46	5.13	4.07	4.31	3.45

Valve Reference A51

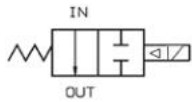


2-Way Normally Open
 Port Identification:
 IN-IN/ OUT-OUT

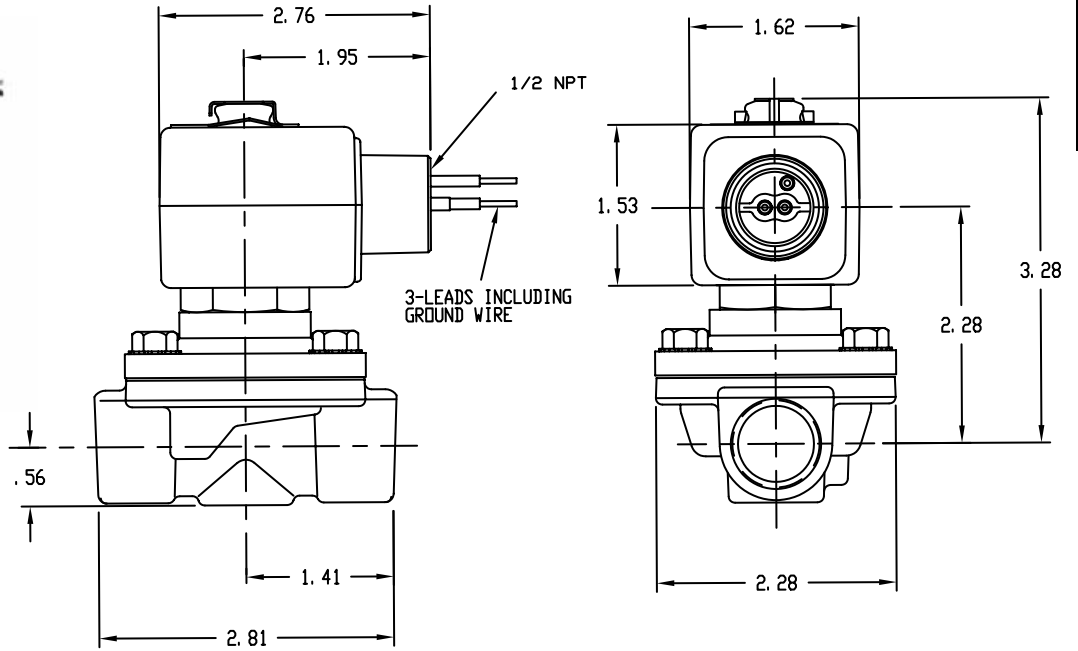


Explosion-proof watertight shown in outline

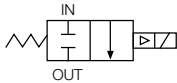
Valve Reference A52



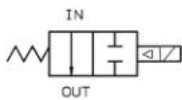
2-Way Normally Open
Port Identification:
IN-IN/ OUT-OUT



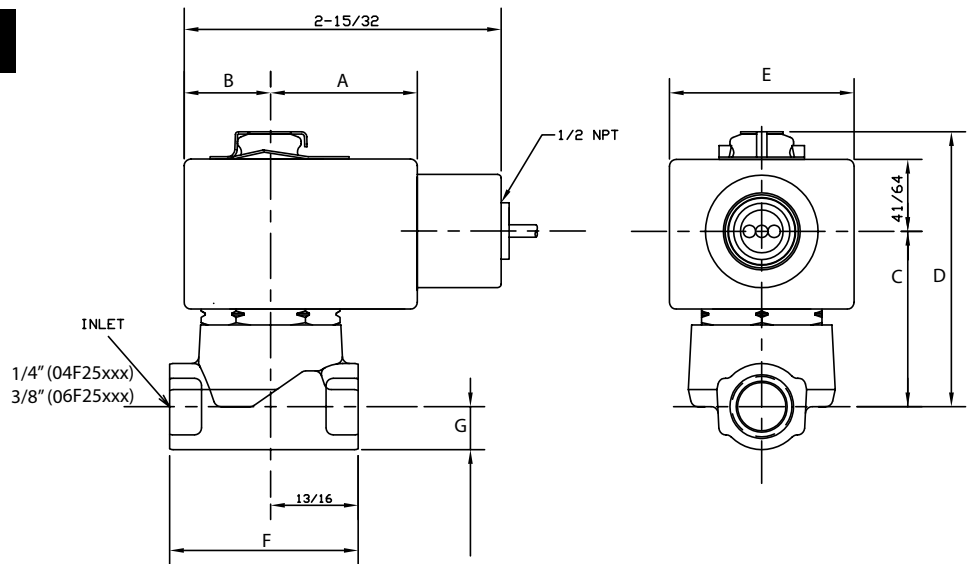
Valve Reference A54



2-Way Normally Closed
04F25C2xx/06F25C2xx
Port Identification:
IN-IN/ OUT-OUT



2-Way Normally Open
04F25O2xx/06F25O2xx
Port Identification:
IN-IN/ OUT-OUT

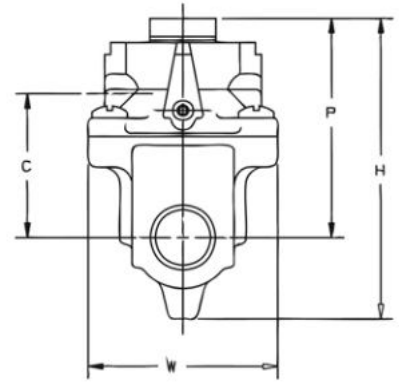
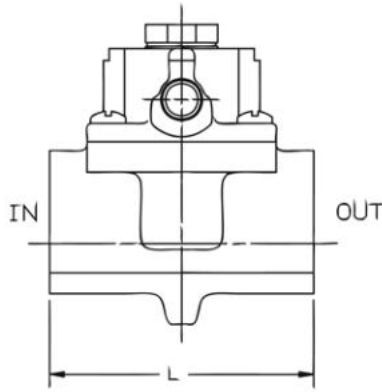


Valve	Dimensions						
	A	B	C	D	E	F	G
04F25C2122CAF	1 5/16	23/32	1 9/16	2 7/16	1 9/16	1 3/4	3/8
06F25C2122CAF	1 5/16	23/32	1 5/8	2 1/2	1 9/16	1 3/4	7/16
04F25O2122CCF	1 17/32	7/8	1 25/32	2 7/8	1 13/16	1 3/4	3/8
04F25O2122C3F	1 17/32	7/8	1 15/16	2 7/8	1 13/16	1 3/4	3/8
06F25C2122C3F	1 17/32	7/8	2	2 15/16	1 13/16	1 3/4	7/16

Valve Reference A55



2-Way Normally Open
Remote Pilot
Port Identification:
3/8, 1/2, 3/4
IN-IN/ OUT-OUT
Port Identification - 1"
P - IN/A - OUT



Valve	Dimensions					Port Identification	
	H	P	C	L	W	IN	OUT
75232BN3SN00	3.17	2.35	1.51	2.75	1.97	IN	OUT
75232BN4TN00	3.17	2.35	1.51	2.75	1.97	IN	OUT
75232BN52N00	4.31	3.12	2.28	4.62	3.09	IN	OUT

- Valve can be normally closed or normally open depending on piping of external pilot.
- Pilot port is marked "C."

2-Way Pilot Operated Materials of Construction**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
04F25C2	6	2WNC	1/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
04F25C2	11.5	2WNC	1/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	77°F
04F25O2	11	2WNO	1/4	Brass	305SS	430FR	416/430FR	430FR	302SS	Copper	130°F
04F25O2	11.5	2WNO	1/4	Brass	305SS	430FR	416/430FR	430FR	302SS	Copper	77°F
06F22C2	6	2WNC	3/8	Brass	305SS	430FR	Brass	430FR	302SS	Copper	77°F
06F22C2	11.5, 16	2WNC	3/8	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
06F22C6	6	2WNC	3/8	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
06F22C6	11.5, 16	2WNC	3/8	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
06F23C2	11	2WNC	3/8	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
06F23C2	11.5	2WNC	3/8	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
06F23C6	11	2WNC	3/8	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
06F23C6	11.5	2WNC	3/8	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
06F23O2	11	2WNO	3/8	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
06F23O2	11.5	2WNO	3/8	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
06F23O6	11	2WNO	3/8	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
06F23O6	11.5	2WNO	3/8	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
06F25C2	6,11	2WNC	3/8	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
06F25C2	11.5	2WNC	3/8	Brass	305SS	430FR	Brass	430FR	302SS	Copper	77°F
06F25O2	11	2WNO	3/8	Brass	305SS	430FR	416/430FR	430FR	302SS	Copper	130°F
06FH5C2	11	2WNC	3/8	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
08F22C2	6	2WNC	1/2	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
08F22C2	11	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
08F22C2	11.5, 16	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
08F22C6	11.5, 16	2WNC	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F

* Shows the first 7 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

2-Way Pilot Operated Materials of Construction (Continued)**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
08F23C2	11	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
08F23C2	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
08F23C6	11	2WNC	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
08F23C6	11.5	2WNC	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
08F23O2	11	2WNO	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
08F23O2	11.5	2WNO	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
08F23O6	11	2WNO	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
08F23O6	11.5	2WNO	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
08F25C2	11	2WNC	1/2	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
08F25C2	11.5	2WNC	1/2	Brass	305SS	430FR	Brass	430FR	302SS	Copper	77°F
08F25O2	11	2WNO	1/2	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
08F25O2	11.5	2WNO	1/2	Brass	305SS	430FR	Brass	430FR	302SS	Copper	77°F
08FH5C2	11	2WNC	1/2	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
12F22C2	6	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
12F22C2	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
12F22C6	11.5, 16	2WNC	3/4	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
12F23C2	11	2WNC	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
12F23C2	11.5	2WNC	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
12F23C6	11	2WNC	3/4	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
12F23C6	11.5	2WNC	3/4	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
12F23O2	11	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F

* Shows the first 7 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

2-Way Pilot Operated Materials of Construction (Continued)**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
12F23O2	11.5	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
12F23O6	11	2WNO	3/4	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
12F23O6	11.5	2WNO	3/4	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
12F24C2	6	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
12F24C2	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
12F24O2	11	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
12F25C2	11	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
12F25O2	11	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
12FH5C2	11	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
16F24C2	6	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
16F24C2	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
16F24C6	6	2WNC	3/4	316SS	305SS	430FR	303	430FR	302SS	Silver	130°F
16F24C6	11.5	2WNC	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
16F24O2	11.5	2WNO	1	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
16F24O2	11	2WNO	1	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
16F24O6	11.5	2WNO	1	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
16F24O6	11	2WNO	1	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
16F25C2	11.5	2WNC	1	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
16F25C2	11	2WNC	1	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
16F25O2	11	2WNO	1	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
16FH5C2	16	2WNC	1	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F

* Shows the first 7 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

2-Way Pilot Operated Materials of Construction (Continued)**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
20F24C2	6	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
20F24C2	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
20F24O2	11	2WNO	1¼	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
24F24C2	6	2WNC	3/4	Brass	305SS	430FR	Brass	430FR	302SS	Copper	130°F
24F24C2	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
24F24C6	6	2WNC	3/4	316SS	305SS	430FR	303	430FR	302SS	Silver	130°F
24F24C6	11.5	2WNC	1/2	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
24F24O2	11.5	2WNO	1½	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
24F24O2	11	2WNO	1½	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
24F24O6	11.5	2WNO	1½	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	77°F
24F24O6	11	2WNO	1½	316SS	305SS	430FR	12L14 Plated	430FR	302SS	Silver	130°F
72218BN	10	2WNC	3/8 - 3/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
72218BN	22	2WNC	3/8 - 3/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
72218RN	10	2WNC	3/8 - 3/4	316SS	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
72218RN	22	2WNC	3/8 - 3/4	316SS	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7221GBN	10	2WNC	3/8 - 1	Brass	304SS	430FR	430F	430FR/ 4106	301SS	Copper	150°F
7221GBN	22	2WNC	3/8 - 1	Brass	304SS	430FR	430F	430FR/ 4106	301SS	Copper	77°F
72228BN	10	2WNO	3/8 - 3/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
72228BN	22	2WNO	3/8 - 3/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
72228RN	10	2WNO	3/8 - 3/4	316SS	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
72228RN	22	2WNO	3/8 - 3/4	316SS	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
73212BN	10	2WNC	1/4 - 1	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73212BN	22	2WNC	1/4 - 1	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F

* Shows the first 7 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.



2-Way Pilot Operated Materials of Construction (Continued)**

Product*	Watt	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
73212SN	10	2WNC	1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73212SN	22	2WNC	1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
73218BN	10	2WNC	3/8 - 1½	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73218BN	22	2WNC	3/8 - 1½	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7321GBN	10	2WNC	3/4 - 2	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
7321GBN	22	2WNC	3/4 - 2	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7321KBN	10	2WNC	1/4 - 1/2	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
7321KBN	22	2WNC	1/4 - 1/2	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
73222BN	10	2WNO	1/4 - 1	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73222BN	22	2WNO	1/4 - 1	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
73222SN	10	2WNO	1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73222SN	22	2WNO	1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
73228BN	10	2WNO	3/8 - 1½	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73228BN	22	2WNO	3/8 - 1½	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7322GBN	10	2WNO	3/4 - 2	Brass	304SS	430FR	430F	430FR	301SS	Copper	150°F
7322GBN	22	2WNO	3/4 - 2	Brass	304SS	430FR	430F	430FR	301SS	Copper	77°F
74232BN	10	2WDP	3/8 - 1	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
74232BN	22	2WDP	3/8 - 1	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
75232***	-	UNIV	3/8-2	Brass	N/A	N/A	N/A	N/A	N/A	N/A	-

* Shows the first 7 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

*** Pilot Orifice is 303SS. These are remotely piloted valves. No coil required.

2-Way

Direct Acting & Pilot Operated
High Pressure
1/8" - 3/4" NPT



General Description:

2-Way Direct Acting and Pilot Operated High Pressure valves are generally installed where high pressure and large flow requirements dictate the use of piston valves and/or valves with more robust seals such as PTFE and Ruby discs*. Pilot Operated valves require the minimum pressure differential specified for proper valve operation.

Installation

Pilot Operated Valves should be mounted with solenoid coils vertical and upright. Direct Acting valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

Standard Materials of Construction

Please refer to page A73.

Compatible Fluids

Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and other non-compressible media.

Use of non-lubricated gaseous media can affect valve life.

Electrical Characteristics:

Standard Voltages:

AC -24/60
120/60-110/50
240/60-220/50

DC -12, 24 & 120

For other voltages - consult factory



Coil Classification:

Class F standard
Class H available

Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory.

Maximum Ambient Temperature
150°F

Please refer to page A73 for details.

Applications:

- Blow molding
- Compressors
- Car washing equipment
- Pumps

*Table 1:

Allowable Max. Seat Leakage Chart	
Valve	Leakage on gases
06F28, 08F28, 12F28	472 cc/min
73216	50 cc/min
7321H, 7322H	25 cc/min

2-Way Direct Acting - High Pressure - Normally Closed - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

1/8	1/16	0.11	0	1000	1000	1000	10	165	PCTFE	7121KBN1GF00	7	A65
1/8	3/32	0.24	0	725	725	725	22	210	RUBY	7121KBN1LR00	8	A65
1/8	3/32	0.24	0	500	500	500	10	210	RUBY	7121KBN1LR00	7	A65
1/8	1/8	0.31	0	365	365	365	10	165	PCTFE	7121KBN1NF00	7	A65
1/4	1/16	0.11	0	1450	1450	1450	22	210	RUBY	7121KBN2GR00	8	A65
1/4	1/16	0.11	0	1100	1100	1100	10	210	RUBY	7121KBN2GR00	7	A65
1/4	1/16	0.11	0	1000	1000	1000	10	165	PCTFE	7121KBN2GF00	7	A65
1/4	5/64	0.17	0	1030	1030	1030	22	210	RUBY	7121KBN2JR00	8	A65
1/4	5/64	0.17	0	700	700	700	10	210	RUBY	7121KBN2JR00	7	A65
1/4	3/32	0.24	0	725	725	725	22	210	RUBY	7121KBN2LR00	8	A65
1/4	3/32	0.24	0	500	500	500	10	210	RUBY	7121KBN2LR00	7	A65
1/4	1/8	0.31	0	525	525	525	22	210	RUBY	7121KBN2NR00	8	A65
1/4	1/8	0.31	0	365	365	365	10	165	PCTFE	7121KBN2NF00	7	A65
1/4	1/8	0.31	0	365	365	365	10	210	RUBY	7121KBN2NR00	7	A65

DC TECHNICAL SPECIFICATIONS

1/8	1/16	0.11	0	700	700	700	22	165	PCTFE	7121KBN1GF00	8	A65
1/8	1/16	0.11	0	435	435	435	10	165	PCTFE	7121KBN1GF00	7	A65
1/8	3/32	0.24	0	320	320	320	22	210	RUBY	7121KBN1LR00	8	A65
1/8	3/32	0.24	0	175	175	175	10	210	RUBY	7121KBN1LR00	7	A65
1/8	1/8	0.31	0	205	205	205	22	165	PCTFE	7121KBN1NF00	8	A65
1/8	1/8	0.31	0	125	125	125	10	165	PCTFE	7121KBN1NF00	7	A65
1/4	1/16	0.11	0	800	800	800	22	210	RUBY	7121KBN2GR00	8	A65
1/4	1/16	0.11	0	700	700	700	22	165	PCTFE	7121KBN2GF00	8	A65
1/4	1/16	0.11	0	435	435	435	10	210	RUBY	7121KBN2GR00	7	A65
1/4	1/16	0.11	0	435	435	435	10	165	PCTFE	7121KBN2GF00	7	A65
1/4	5/64	0.17	0	460	460	460	22	210	RUBY	7121KBN2JR00	8	A65
1/4	5/64	0.17	0	260	260	260	10	210	RUBY	7121KBN2JR00	7	A65
1/4	3/32	0.24	0	320	320	320	22	210	RUBY	7121KBN2LR00	8	A65
1/4	3/32	0.24	0	175	175	175	10	210	RUBY	7121KBN2LR00	7	A65
1/4	1/8	0.31	0	220	220	220	22	210	RUBY	7121KBN2NR00	8	A65
1/4	1/8	0.31	0	205	205	205	22	165	PCTFE	7121KBN2NF00	8	A65
1/4	1/8	0.31	0	125	125	125	10	210	RUBY	7121KBN2NR00	7	A65
1/4	1/8	0.31	0	125	125	125	10	165	PCTFE	7121KBN2NF00	7	A65

*RUBY Seals: Allowable Seat leakage is 90 cc/min on air and inert gas at rated pressure: 7121KBNxxRxx



2-Way Direct Acting - High Pressure - Normally Closed - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	1/32	0.021	0	3000	3000	3000	10	185	NYLON	71216SN1BL00	7	A60
1/8	3/64	0.037	0	1500	1500	1500	10	185	RULON	71216SN1FU00	7	A60
1/8	3/64	0.060	0	1000	1000	1000	10	165	PCTFE	71215SN1EF00	7	A60
1/8	1/16	0.070	0	1250	1250	1250	10	185	NYLON	71216SN1GL00	7	A60
1/8	1/16	0.100	0	700	700	700	10	165	PCTFE	71215SN1GF00	7	A60
1/8	5/64	0.090	0	500	500	500	10	185	PTFE	71216SN1JT00	7	A60
1/8	3/32	0.180	0	650	650	650	22	165	PCTFE	71215SN1KF00	8	A60
1/8	3/32	0.180	0	260	260	260	10	165	PCTFE	71215SN1KF00	7	A60
1/8	1/8	0.280	0	520	520	520	22	165	PCTFE	71215SN1MF00	8	A60
1/8	1/8	0.280	0	200	200	200	10	165	PCTFE	71215SN1MF00	7	A60

1/4	1/32	0.021	0	3000	3000	3000	10	185	NYLON	71216SN2BL00	7	A60
1/4	3/64	0.037	0	1500	1500	1500	10	185	RULON	71216SN2FU00	7	A60
1/4	3/64	0.060	0	1000	1000	1000	10	165	PCTFE	71215SN2EF00	7	A60
1/4	1/16	0.070	0	1250	1250	1250	10	185	NYLON	71216SN2GL00	7	A60
1/4	5/64	0.090	0	500	500	500	10	185	PTFE	71216SN2JT00	7	A60
1/4	1/16	0.100	0	700	700	700	10	165	PCTFE	71215SN2GF00	7	A60
1/4	3/32	0.180	0	650	650	650	22	165	PCTFE	71215SN2KF00	8	A60
1/4	3/32	0.180	0	260	260	260	10	165	PCTFE	71215SN2KF00	7	A60
1/4	1/8	0.280	0	520	520	520	22	165	PCTFE	71215SN2MF00	8	A60
1/4	1/8	0.280	0	200	200	200	10	165	PCTFE	71215SN2MF00	7	A60

DC TECHNICAL SPECIFICATIONS

1/8	1/32	0.020	0	3000	3000	3000	22	185	NYLON	71216SN1BL00	8	A60
1/8	1/32	0.020	0	2500	2500	2500	10	185	NYLON	71216SN1BL00	7	A60
1/8	3/64	0.040	0	1000	1000	1000	10	185	RULON	71216SN1FU00	7	A60
1/8	3/64	0.060	0	1000	1000	1000	22	165	PCTFE	71215SN1EF00	8	A60
1/8	3/64	0.060	0	520	520	520	10	165	PCTFE	71215SN1EF00	7	A60

* NYLON Seals: Allowable Seat leakage is 50 cc/min on air and inert gas at rated pressure: 71216SNxxLxx

RULON Seals: Allowable Seat leakage is 20 cc/min on air and inert gas at rated pressure: 71216SNxxUxx

PTFE Seals: Allowable Seat leakage is 20 cc/min on air and inert gas at rated pressure: 71216SNxxTxx

2-Way Direct Acting - High Pressure - Normally Closed - Stainless Steel (Continued)

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
DC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.04	0	1500	1500	1500	22	185	RULON	71216SN1FU00	8	A60
1/8	1/16	0.07	0	1000	1000	1000	22	185	NYLON	71216SN1GL00	8	A60
1/8	1/16	0.07	0	500	500	500	10	185	NYLON	71216SN1GL00	7	A60
1/8	5/64	0.09	0	400	400	400	22	185	PTFE	71216SN1JT00	8	A60
1/8	5/64	0.09	0	200	200	200	10	185	PTFE	71216SN1JT00	7	A60
1/8	1/16	0.10	0	700	700	700	22	165	PCTFE	71215SN1GF00	8	A60
1/8	1/16	0.10	0	350	350	350	10	165	PCTFE	71215SN1GF00	7	A60
1/8	3/32	0.18	0	300	300	300	22	165	PCTFE	71215SN1KF00	8	A60
1/8	3/32	0.18	0	130	130	130	10	165	PCTFE	71215SN1KF00	7	A60
1/8	1/8	0.28	0	200	200	200	22	165	PCTFE	71215SN1MF00	8	A60
1/8	1/8	0.28	0	100	100	100	10	165	PCTFE	71215SN1MF00	7	A60
1/4	1/32	0.02	0	3000	3000	3000	22	185	NYLON	71216SN2BL00	8	A60
1/4	1/32	0.02	0	2500	2500	2500	10	185	NYLON	71216SN2BL00	7	A60
1/4	3/64	0.06	0	1000	1000	1000	22	165	PCTFE	71215SN2EF00	8	A60
1/4	3/64	0.06	0	520	520	520	10	165	PCTFE	71215SN2EF00	7	A60
1/4	3/64	0.04	0	1500	1500	1500	22	185	RULON	71216SN2FU00	8	A60
1/4	3/64	0.04	0	1000	1000	1000	10	185	RULON	71216SN2FU00	7	A60
1/4	1/16	0.07	0	1000	1000	1000	22	185	NYLON	71216SN2GL00	8	A60
1/4	1/16	0.07	0	500	500	500	10	185	NYLON	71216SN2GL00	7	A60
1/4	5/64	0.09	0	400	400	400	22	185	PTFE	71216SN2JT00	8	A60
1/4	5/64	0.09	0	200	200	200	10	185	PTFE	71216SN2JT00	7	A60
1/4	1/16	0.10	0	700	700	700	22	165	PCTFE	71215SN2GF00	8	A60
1/4	1/16	0.10	0	350	350	350	10	165	PCTFE	71215SN2GF00	7	A60
1/4	3/32	0.18	0	300	300	300	22	165	PCTFE	71215SN2KF00	8	A60
1/4	3/32	0.18	0	130	130	130	10	165	PCTFE	71215SN2KF00	7	A60
1/4	1/8	0.28	0	200	200	200	22	165	PCTFE	71215SN2MF00	8	A60
1/4	1/8	0.28	0	100	100	100	10	165	PCTFE	71215SN2MF00	7	A60

* NYLON Seals: Allowable Seat leakage is 50 cc/min on air and inert gas at rated pressure: 71216SNxxLxx
RULON Seals: Allowable Seat leakage is 20 cc/min on air and inert gas at rated pressure: 71216SNxxUxx
PTFE Seals: Allowable Seat leakage is 20 cc/min on air and inert gas at rated pressure: 71216SNxxTxx

2-Way Direct Acting - High Pressure - Normally Open - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

1/8	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN1GF00	7	A65
1/8	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN1LF00	7	A65
1/4	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN2GF00	7	A65
1/4	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN2LF00	7	A65

DC TECHNICAL SPECIFICATIONS

1/8	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN1GF00	7	A65
1/8	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN1LF00	7	A65
1/4	1/16	0.11	0	435	435	435	10	165	PCTFE	7122KBN2GF00	7	A65
1/4	3/32	0.21	0	175	175	175	10	165	PCTFE	7122KBN2LF00	7	A65

2-Way Direct Acting - High Pressure - Normally Open - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

1/8	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN1EF00	7	A64
1/8	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN1GF00	7	A64
1/8	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN1KF00	7	A64
1/4	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN2EF00	7	A64
1/4	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN2GF00	7	A64
1/4	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN2KF00	7	A64

DC TECHNICAL SPECIFICATIONS

1/8	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN1EF00	7	A64
1/8	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN1GF00	7	A64
1/8	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN1KF00	7	A64
1/4	3/64	0.05	0	750	750	750	10	165	PCTFE	71225SN2EF00	7	A64
1/4	1/16	0.11	0	400	400	400	10	165	PCTFE	71225SN2GF00	7	A64
1/4	3/32	0.15	0	170	170	170	10	165	PCTFE	71225SN2KF00	7	A64

2-Way Internal Pilot Operated - High Pressure - Normally Closed - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve

AC TECHNICAL SPECIFICATIONS

1/4	1/4	0.76	5	1500	1500	1500	10	210	PTFE	73216BN2MT00	7	A61
1/4	5/16	1.50	15	1500	1500	1500	11	200	DEL	04F28C1D20ACF	4	A56
1/4	5/16	2.50	5	600	600	600	10	185	NBR	7321HBN2SN00	7	A63
3/8	5/16	1.50	15	1500	1500	1500	11	200	DEL	06F28C1D20ACF	4	A57
3/8	7/16	3.50	5	600	600	600	10	185	NBR	7321HBN3TN00	7	A63
1/2	3/8	3.20	25	1500	1500	1500	11	200	DEL	08F28C1D24ACF	4	A58
1/2	9/16	4.10	5	600	600	600	10	185	NBR	7321HBN4UN00	7	A63
3/4	3/4	7.80	25	1000	1000	1000	11	200	DEL	12F28C1D48BCF	4	A59

DC TECHNICAL SPECIFICATIONS

1/4	5/16	2.50	5	600	600	600	22	185	NBR	7321HBN2SN00	8	A63
1/4	5/16	2.50	5	435	435	435	10	185	NBR	7321HBN2SN00	7	A63
1/4	1/4	0.76	5	1500	1500	1500	22	210	PTFE	73216BN2MT00	8	A61
1/4	1/4	0.76	5	800	800	800	10	210	PTFE	73216BN2MT00	7	A61
3/8	7/16	3.50	5	600	600	600	22	185	NBR	7321HBN3TN00	8	A63
3/8	7/16	3.50	5	435	435	435	10	185	NBR	7321HBN3TN00	7	A63
1/2	3/8	3.20	25	500	500	500	11.5	150	DEL	08F28C1D24A3F	6	A58
1/2	9/16	4.10	5	600	600	600	22	185	NBR	7321HBN4UN00	8	A63
1/2	9/16	4.10	5	435	435	435	10	185	NBR	7321HBN4UN00	7	A63
3/4	3/4	7.80	25	450	450	450	11.5	150	DEL	12F28C1D48A3F	6	A59

* PTFE Seals: Allowable Seat leakage is 50 cc/min on air and inert gas at rated pressure: 73216BNxxTxx
 DELRIN Seals: Allowable Seat leakage is 472 cc/min on air and inert gas at rated pressure: xxF28C1Dxxxx

2-Way Internal Pilot Operated - High Pressure - Normally Closed - Stainless Steel

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
1/4	1/4	0.76	5	1500	1500	1500	10	210	PTFE	73216SN2MT00	7	A62

AC TECHNICAL SPECIFICATIONS**DC TECHNICAL SPECIFICATIONS**

1/4	1/4	0.76	5	1500	1500	1500	22	210	PTFE	73216SN2MT00	8	A62
1/4	1/4	0.76	5	800	800	800	10	210	PTFE	73216SN2MT00	7	A62

* PTFE Seals: Allowable Seat leakage is 50 cc/min on air and inert gas at rated pressure: 73216BNxxTxx
 DELRIN Seals: Allowable Seat leakage is 472 cc/min on air and inert gas at rated pressure: xxF28C1Dxxxx

2-Way Internal Pilot Operated - High Pressure - Normally Opened - Brass

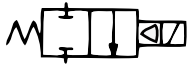
Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal*	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
1/4	5/16	2.50	5	600	600	600	10	185	FKM	7322HBN2SV00	7	A63
3/8	7/16	3.50	5	600	600	600	10	185	NBR	7322HBN3TN00	7	A63
1/2	3/8	3.20	25	1000	1000	1000	11	200	DEL	08F28O1D24ACF	4	A58
1/2	9/16	4.10	5	600	600	600	10	185	NBR	7322HBN4UN00	7	A63
3/4	3/4	7.80	25	500	500	500	11	200	DEL	12F28O1D48BCF	4	A59

AC TECHNICAL SPECIFICATIONS**DC TECHNICAL SPECIFICATIONS**

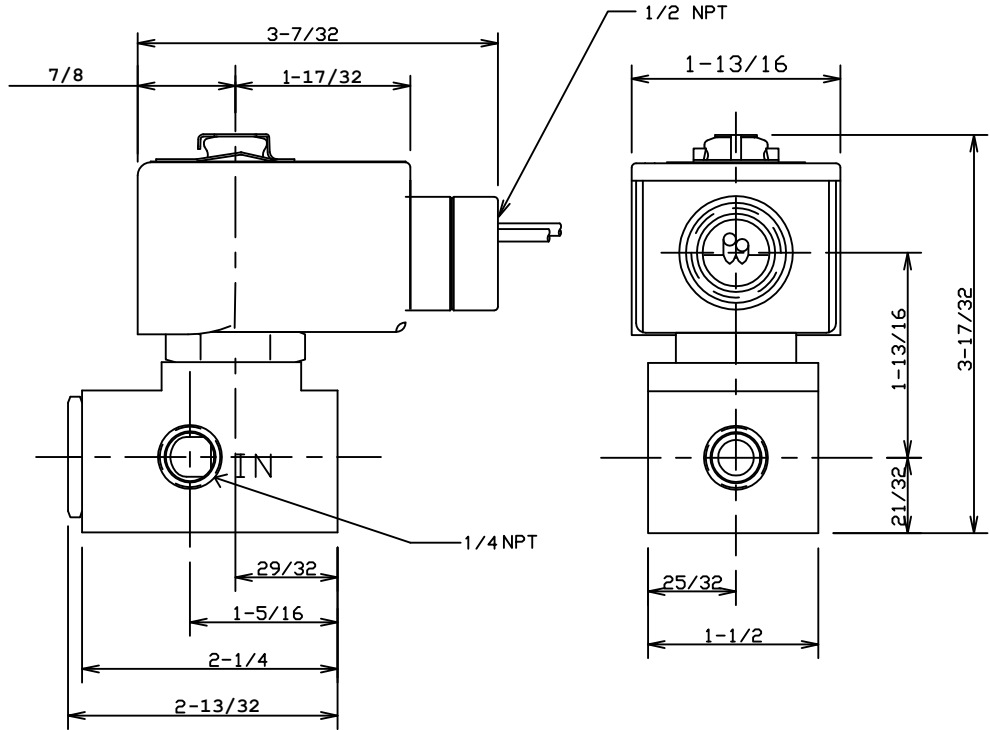
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3/8	7/16	3.50	5	600	600	600	10	185	NBR	7322HBN3TN00	7	A63
1/2	9/16	4.10	5	600	600	600	10	185	NBR	7322HBN4UN00	7	A63

* PTFE Seals: Allowable Seat leakage is 50 cc/min on air and inert gas at rated pressure: 73216BNxxTxx
 DELRIN Seals: Allowable Seat leakage is 472 cc/min on air and inert gas at rated pressure: xxF28O1Dxxxx

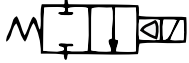
Valve Reference A56



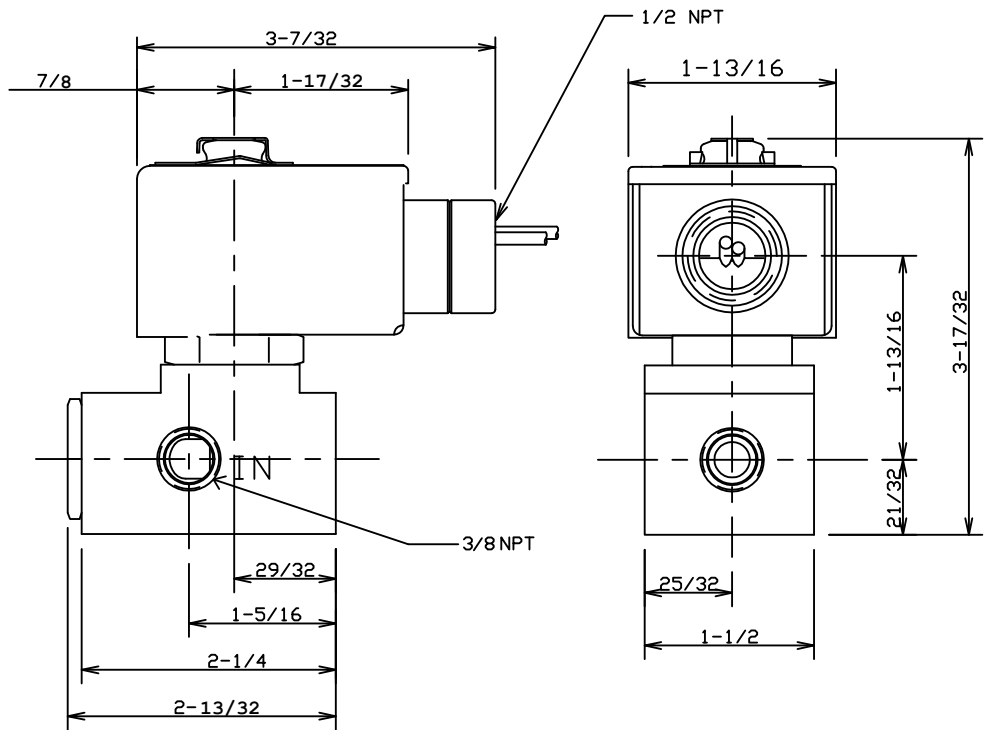
2-Way Normally Closed
04F28Cxxx
Port Identification:
IN-IN/ OUT-OUT



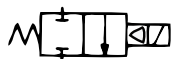
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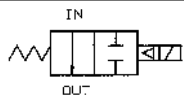
2-Way Normally Closed
06F28Cxxx
Port Identification:
IN-IN/ OUT-OUT



Valve Reference A58

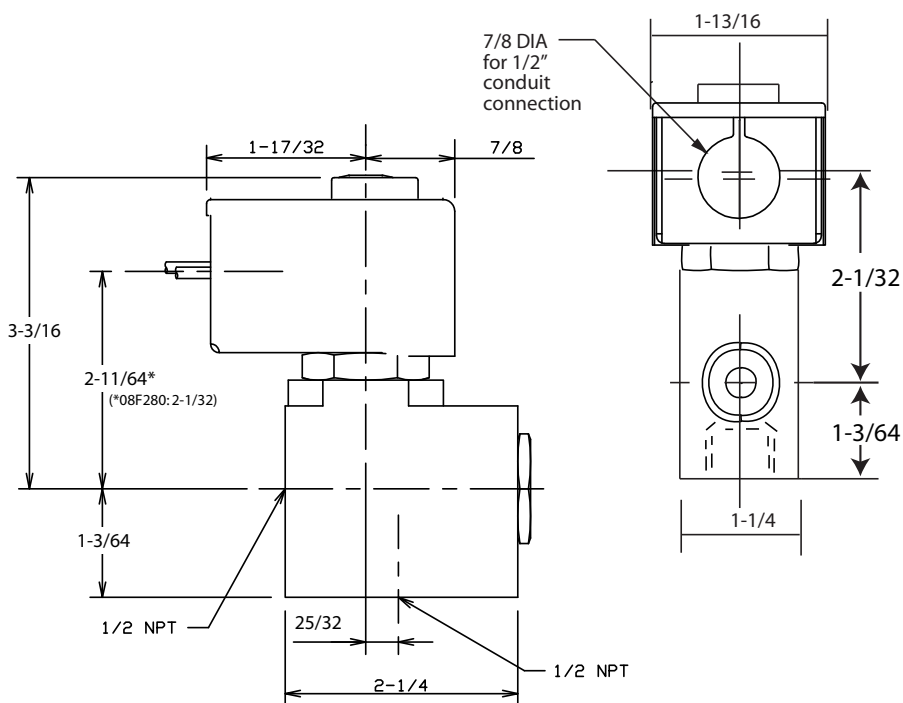


2-Way Normally Closed
08F28Cxx



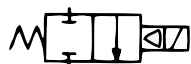
2-Way Normally Open
08F280xx

Port Identification:
IN-IN/ OUT-OUT

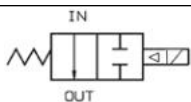


2-Way

Valve Reference A59

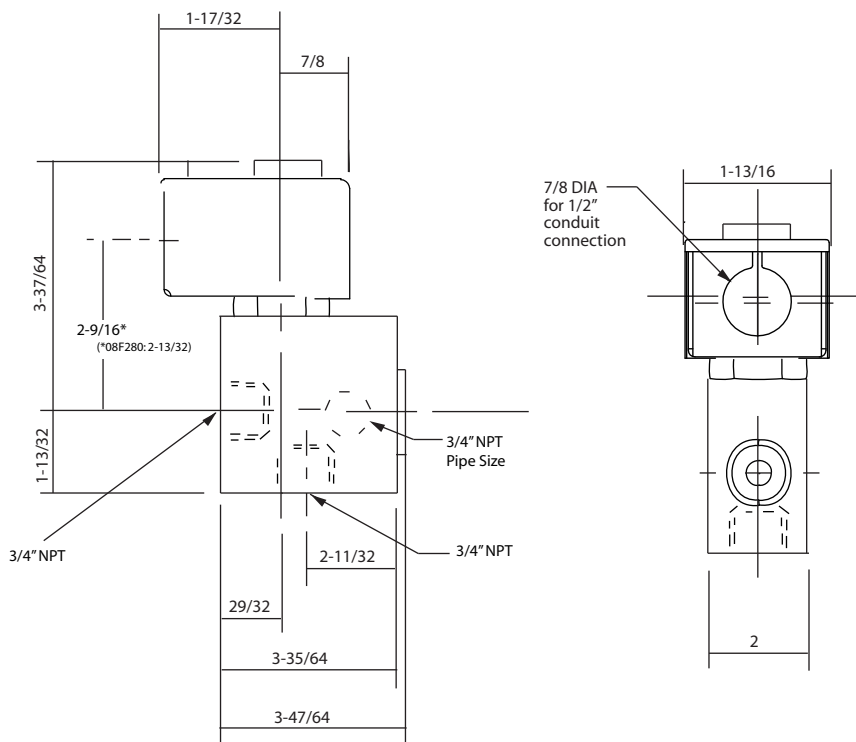


2-Way Normally Closed
12F28Cxx



2-Way Normally Open
12F280xx

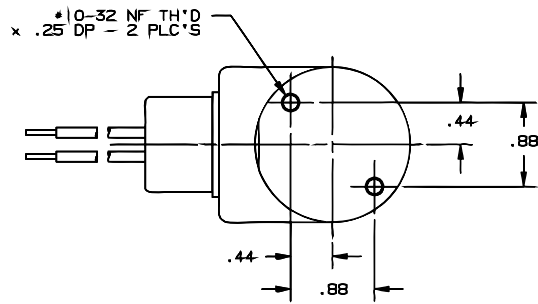
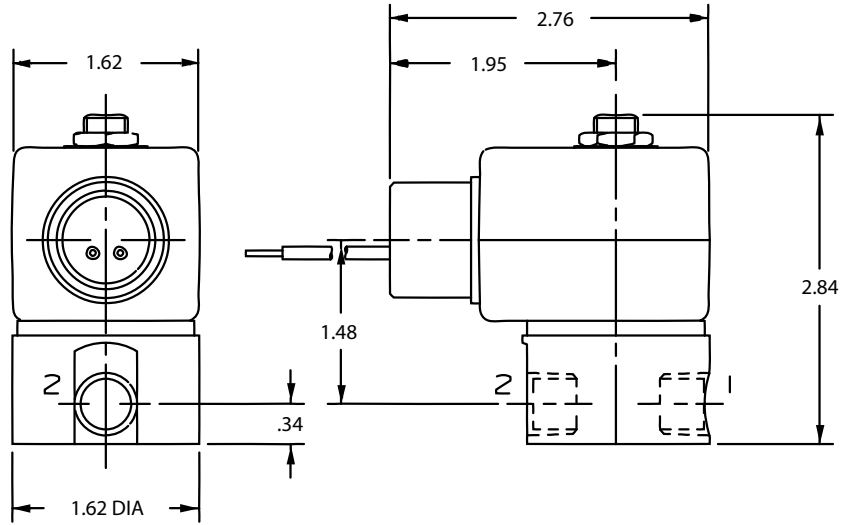
Port Identification:
IN-IN/ OUT-OUT



Valve Reference A60



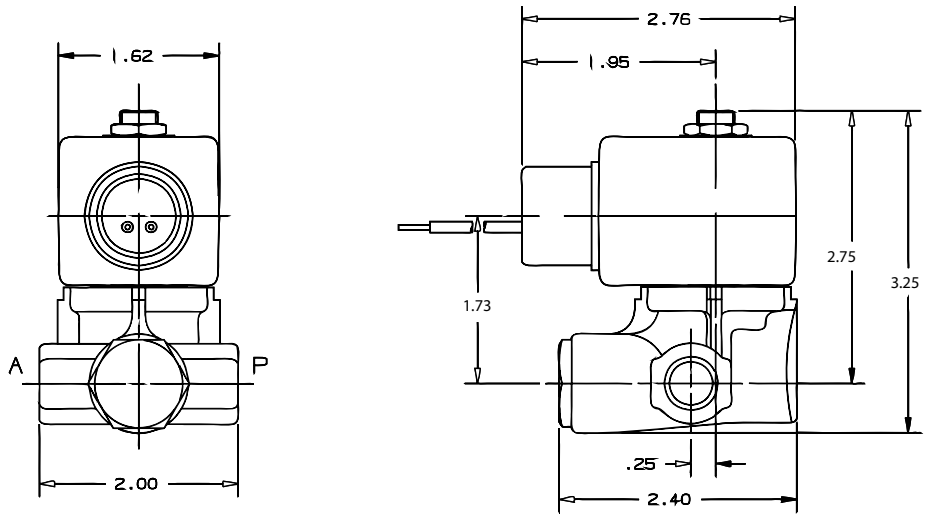
2-Way Normally Closed
 Port Identification:
 1-OUT/ 2-IN



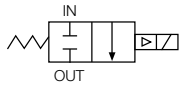
Valve Reference A61



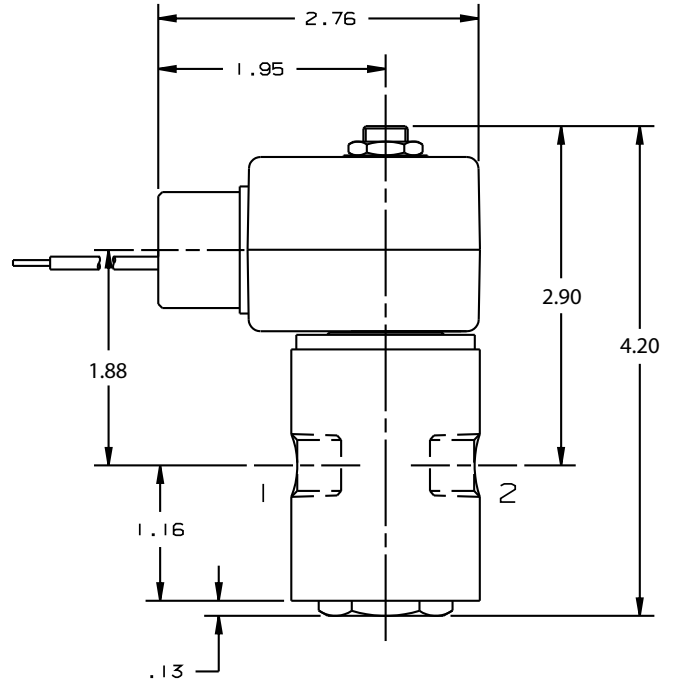
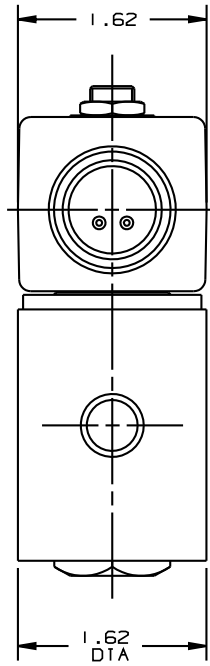
2-Way Normally Closed
 Port Identification:
 P-IN/ A-OUT



Valve Reference A62

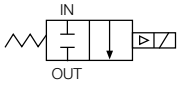


2-Way Normally Closed
Port Identification:
2-IN/ 1-OUT

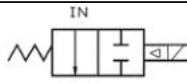


2-Way

Valve Reference A63



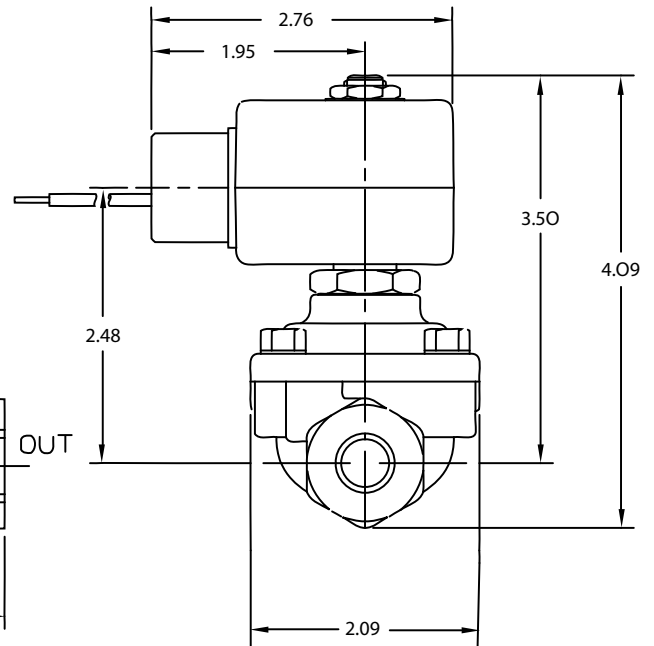
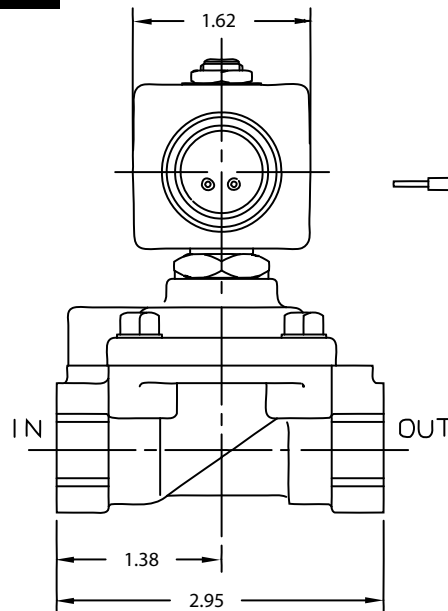
2-Way Normally Closed
7321HBxx



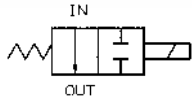
2-Way Normally Open
7322HBxx

Port Identification:

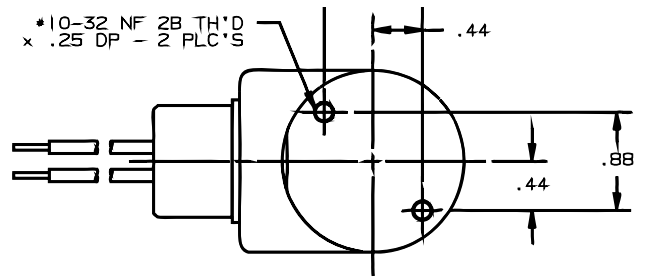
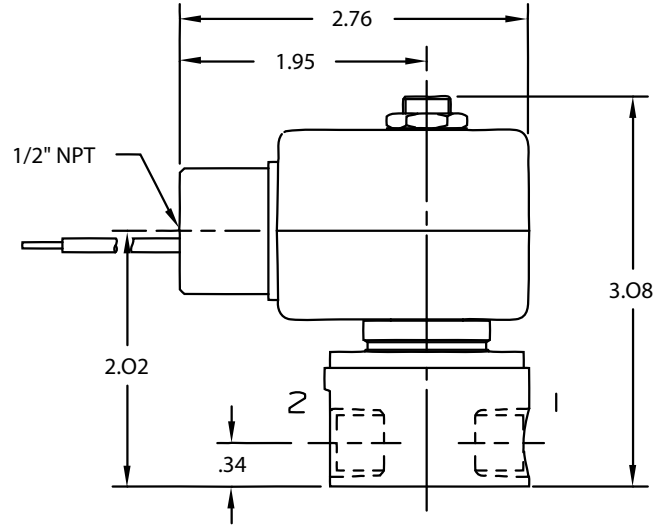
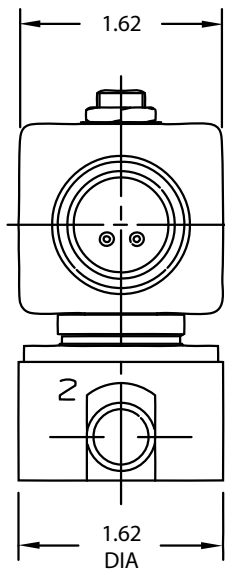
Flow arrow on body indicates flow direction. Ports are not marked.



Valve Reference A64

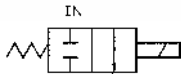


2-Way Normally Open
Port Identification:
2-IN/ 1-OUT

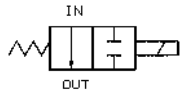


*10-32 NF 2B TH'D
x .25 DP - 2 PLC'S

Valve Reference A65

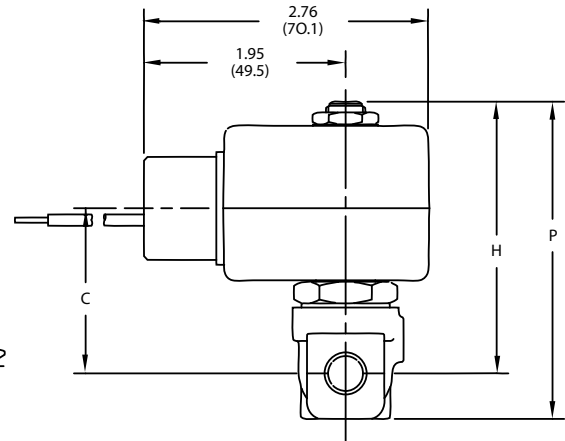
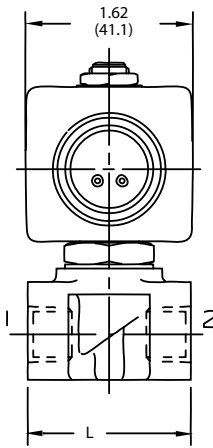


2-Way Normally Closed
7121KBNxx

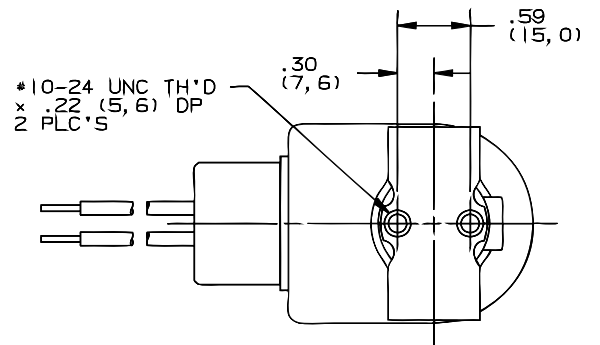


2-Way Normally Open
7122KBNxx

Port Identification:
1-IN/2-OUT



Valve	Dimensions			
	H	P	C	L
7121KBN1XXXX				
7121KBN2XXXX				
7122KBN1XXXX	2.63	3.07	1.61	1.57
7122KBN2XXXX				
7121KBN3XXXX	2.57	3.08	1.55	1.97



*10-24 UNC TH'D
x .22 (5,6) DP
2 PLC'S

2-Way Direct Acting Materials of Construction**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
71215SN	10	2WNC	1/8 - 3/8	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71215SN	22	2WNC	1/8 - 3/8	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
71216SN	10	2WNC	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71216SN	22	2WNC	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7121KBN	10	2WNC	1/8 - 3/8	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
7121KBN	22	2WNC	1/8 - 3/8	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
71225SN	10	2WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
71225SN	22	2WNO	1/8 - 1/4	430F	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7122KBN	10	2WNO	1/8 - 1/4	Brass	304SS	430FR	430F	430FR	301SS	Copper	150°F
7122KBN	22	2WNO	1/8 - 1/4	Brass	304SS	430FR	430F	430FR	301SS	Copper	77°F
73216BN	10	2WNC	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73216BN	22	2WNC	1/4	Brass	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
73216SN	10	2WNC	1/4	316SS	304SS	430FR	430F	430FR	18-8SS	Copper	150°F
73216SN	22	2WNC	1/4	316SS	304SS	430FR	430F	430FR	18-8SS	Copper	77°F
7321HBN	10	2WNC	1/4 - 1/2	Brass	304SS	430FR	430F	430FR	301SS	Copper	150°F
7321HBN	22	2WNC	1/4 - 1/2	Brass	304SS	430FR	430F	430FR	301SS	Copper	77°F
7322HBN	10	2WNO	1/4 - 1/2	Brass	304SS	430FR/ 4106	430F/ 4144	430FR	301SS	Copper	150°F
7322HBN	22	2WNO	1/4 - 1/2	Brass	304SS	430FR/ 4106	430F/ 4144	430FR	301SS	Copper	77°F
04F28C1	11	2WNC	1/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
06F28C1	11	2WNC	3/8	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
08F28C1	11	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
08F28C1	11.5	2WNC	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
08F28O1	11	2WNO	1/2	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
12F28C1	11.5	2WNC	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	77°F
12F28C1	11	2WNC	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F
12F28O1	11	2WNO	3/4	Brass	305SS	430FR	12L14 Plated	430FR	302SS	Copper	130°F

* Shows the first 7 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

2-Way

Anti-Water Hammer & Slow Closing Valves 3/8" - 2" NPT



2-Way

General Description:

2-way Anti-Water Hammer and Slow Closing valves are designed for liquid applications where the installation is susceptible to shock waves caused by the abrupt closing of the valves. Anti-water hammer valves have integral speed control so that the valve closes in a more controlled and slower manner, thus eliminating the shock to the system piping. Pilot operated valves require the minimum pressure differential specified for proper valve operation.

Installation

Valves should be mounted with solenoid coils vertical and upright.

Standard Materials of Construction

Please refer to page A80

Compatible Fluids

Water, hydraulic fluids and other non-compressible media.

Electrical Characteristics:

Standard Voltages:

AC -24/60

120/60-110/50

240/60-220/50

DC -12, 24 & 120

For other voltages - consult factory



Coil Classification:

Class F standard

Class H available

Agency Approvals:

Standard valves with NEMA 4X or explosion proof solenoid enclosures are UL Listed and CSA Certified. For additional details, consult factory

Maximum Ambient Temperature

150°F

Please refer to page A80 for details.

Applications:

- Used in applications on water or other non-compressible liquids where normal operation may cause a 'water hammer' effect which results in shockwaves to the system that can damage the piping or other components.

2-Way Pilot Operated - Anti-Water Hammer - Normally Closed - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number**	Reference	
			Min.	Water and other non-compressible media					Coil	Valve
AC TECHNICAL SPECIFICATIONS										
3/8	7/16	2.5	3	150	10	185	NBR	7321KBN3SNW0	7	A66
1/2	7/16	2.5	3	150	10	185	NBR	7321KBN4SNW0	7	A66
3/4	19/32	5.5	0	230	10	185	NBR	7221GBN51NC0*	7	A67
3/4	25/32	9.6	5	230	10	185	NBR	7321GBN53NMC	7	A68
1	1	12.5	5	230	10	185	NBR	7321GBN64NMC	7	A68
1	1	11.7	0	230	10	185	NBR	7221GBN64NC0*	7	A67
1 1/4	1 1/8	19.3	5	230	10	185	NBR	7321GBN76NMC	7	A68
1 1/2	1 9/16	29.0	5	230	10	185	NBR	7321GBN88NMC	7	A68
2	1 9/16	38.6	5	230	10	185	NBR	7321GBN99NMC	7	A68
DC TECHNICAL SPECIFICATIONS										
3/8	7/16	2.5	3	150	22	185	NBR	7321KBN3SNW0	8	A66
3/8	7/16	2.5	3	60	10	185	NBR	7321KBN3SNW0	7	A66
1/2	7/16	2.5	3	150	22	185	NBR	7321KBN4SNW0	8	A66
1/2	7/16	2.5	3	60	10	185	NBR	7321KBN4SNW0	7	A66
3/4	3/4	9.6	5	230	10	185	NBR	7321GBN53NMC	7	A68
3/4	19/32	5.5	0	100	22	185	NBR	7221GBN51NC0*	8	A67
1	1	12.5	5	230	10	185	NBR	7321GBN64NMC	7	A68
1	1	11.7	0	85	22	185	NBR	7221GBN64NC0*	8	A67
1 1/4	1 1/8	19.3	5	230	10	185	NBR	7321GBN76NMC	7	A68
1 1/2	1 9/16	29.0	5	230	22	185	NBR	7321GBN88NMC	8	A68
1 1/2	1 9/16	29.0	5	200	10	185	NBR	7321GBN88NMC	7	A68
2	1 9/16	38.6	5	230	22	185	NBR	7321GBN99NMC	8	A68
2	1 9/16	38.6	5	200	10	185	NBR	7321GBN99NMC	7	A68

* These are direct lift valves that will open at zero pressure differential, but not fully open until approximately 5 psi differential is achieved.

** Mechanical Options indicated in pressure vessel catalog number (eleventh and twelfth digits) are as follows:
C0=four-step adjustable closing, MC>manual override with four-step adjustable closing, W0=non-adjustable control



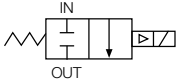
2-Way Pilot Operated - Anti-Water Hammer - Normally Open - Brass

Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI		Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number**	Reference	
			Min.	Water and other non-compressible media					Coil	Valve
AC TECHNICAL SPECIFICATIONS										
3/4	25/32	9.6	5	230	10	185	NBR	7322GBN53NC0	7	A68
1	1	12.5	5	230	10	185	NBR	7322GBN64NC0	7	A68
1 1/4	1 1/8	19.3	5	230	10	185	NBR	7322GBN76NC0	7	A68
1 1/2	1 9/16	29.0	5	170	10	185	NBR	7322GBN88NC0	7	A68
2	1 9/16	38.6	5	170	10	185	NBR	7322GBN99NC0	7	A68
DC TECHNICAL SPECIFICATIONS										
3/4	25/32	9.6	5	230	10	185	NBR	7322GBN53NC0	7	A68
1	1	12.5	5	230	10	185	NBR	7322GBN64NC0	7	A68
1 1/4	1 1/8	19.3	5	230	10	185	NBR	7322GBN76NC0	7	A68
1 1/2	1 9/16	29.0	5	170	10	185	NBR	7322GBN88NC0	7	A68
2	1 9/16	38.6	5	170	10	185	NBR	7322GBN99NC0	7	A68

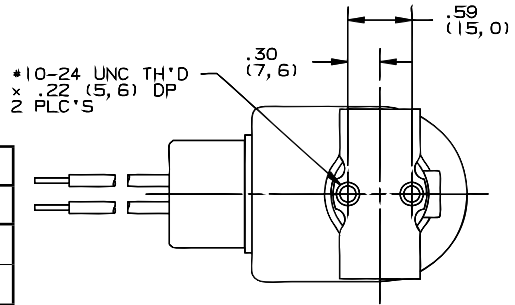
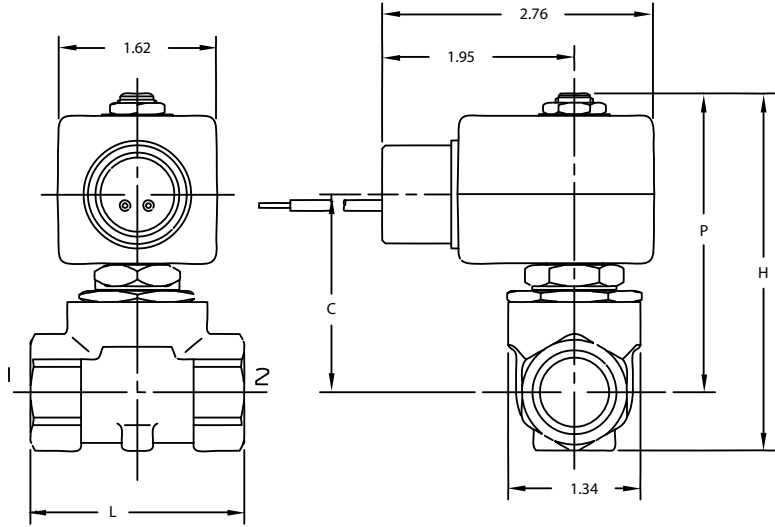
****Mechanical Options indicated in pressure vessel catalog number (eleventh and twelfth digits) are as follows: C0=four-step adjustable closing, MC>manual override with four-step adjustable closing, W0=non-adjustable control**

Response Time		
Valve Type	Opening Time Range (Seconds)	Closing Time Range (Seconds)
7221GBN51NC0	0.03	0.2-1.7
7221GBN64NC0	0.07-0.17	0.5-4.0
7321KBN3SNW0	0.015	0.85
7321KBN4SNW0	0.015	0.85
7321GBN53NMC	0.1 - 0.25	0.6-4.5
7321GBN64NMC	0.1 - 0.25	0.6-4.5
7321GBN76NMC	0.2 - 0.5	0.8-5.8
7321GBN88NMC	0.2 - 0.4	1.5-9.0
7321GBN99NMC	0.25 - 0.45	1.5-9.5
7322GBN53NC0	0.1 - 0.25	0.6-4.5
7322GBN64NC0	0.1 - 0.25	0.6-4.5
7322GBN76NC0	0.2 - 0.5	0.8-5.8
7322GBN88NC0	0.2 - 0.4	1.5-9.0
7322GBN99NC0	0.25 - 0.45	1.5-9.5

Valve Reference A66

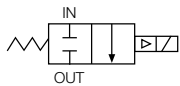


2-Way Normally Closed
 Port Identification:
 Flow arrow on body
 indicates flow direction
 ports are not marked

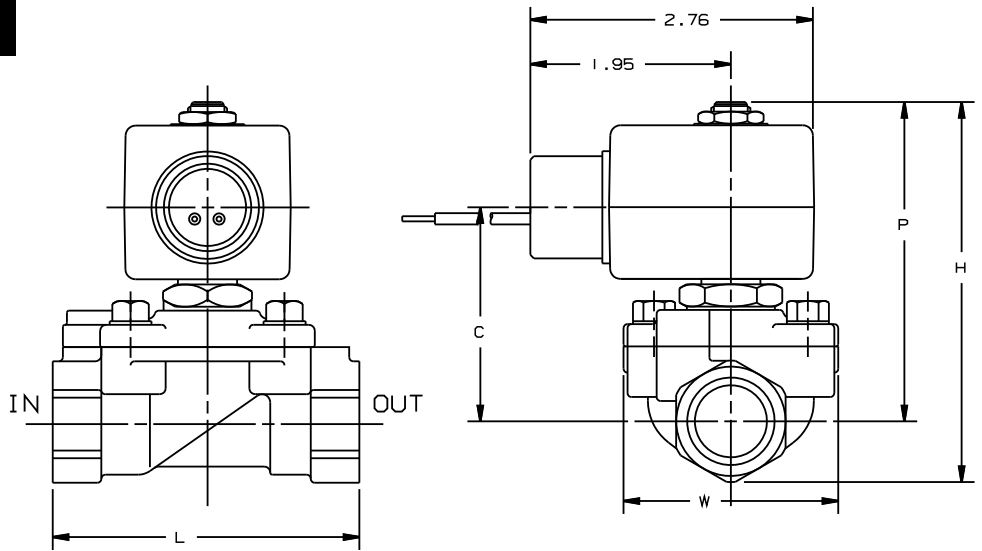


Valve	Dimensions			
	H	P	C	L
7321KBN3SNW0	3.56	2.97	1.96	2.17
7321KBN4SNW0	3.56	2.97	1.96	1.97

Valve Reference A67

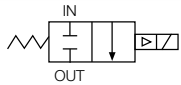


2-Way Normally Closed
 Port Identification:
 Flow arrow on body
 indicates flow direction
 ports are not marked

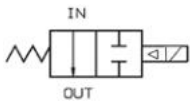


Valve	Dimensions				
	H	P	C	L	W
7221GBN51XXX	3.75	3.07	2.06	3.15	2.09
7221GBN64XXX	4.25	3.35	2.34	3.94	2.75

Valve Reference A68

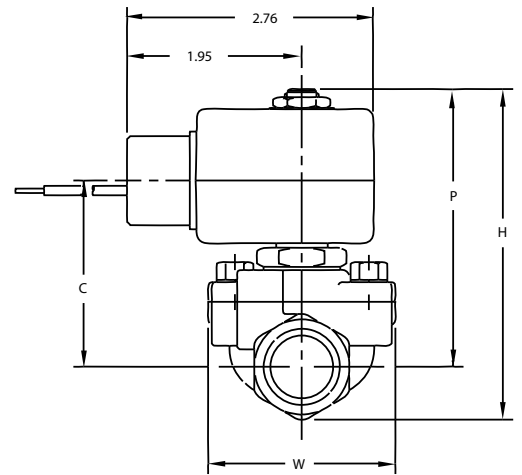
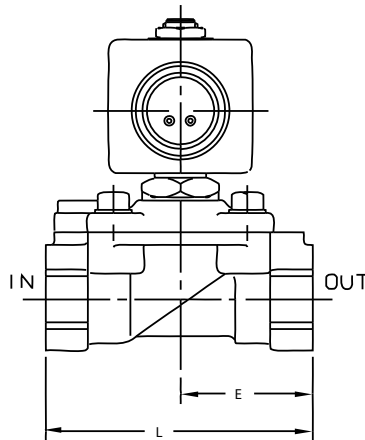


2-Way Normally Closed
7321GBNxx



2-Way Normally Open
7322GBNxx

Port Identification:
Flow arrow on body indicates flow
direction ports are not marked



2-Way

Valve	Dimensions					
	H	P	C	L	E	W
7321GBN53NMC 7322GBN53NCO	4.75	3.86	2.84	3.94	1.97	2.75
7321GBN64NMC 7322GBN64NCO	5.41	4.11	3.09	4.33	2.17	2.75
7321GBN88NMC 7322GBN88NCO	5.66	4.37	3.35	5.51	2.95	3.90
7321GBN99NMC 7322GBN99NCO	6.25	4.60	3.58	5.91	3.15	3.90

