

# 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
<b>AC TECHNICAL SPECIFICATIONS</b>												
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

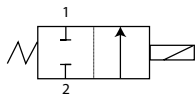
**2-Way Miniature Direct Acting - Normally Open - Stainless Steel**

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
<b>AC TECHNICAL SPECIFICATIONS</b>												
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

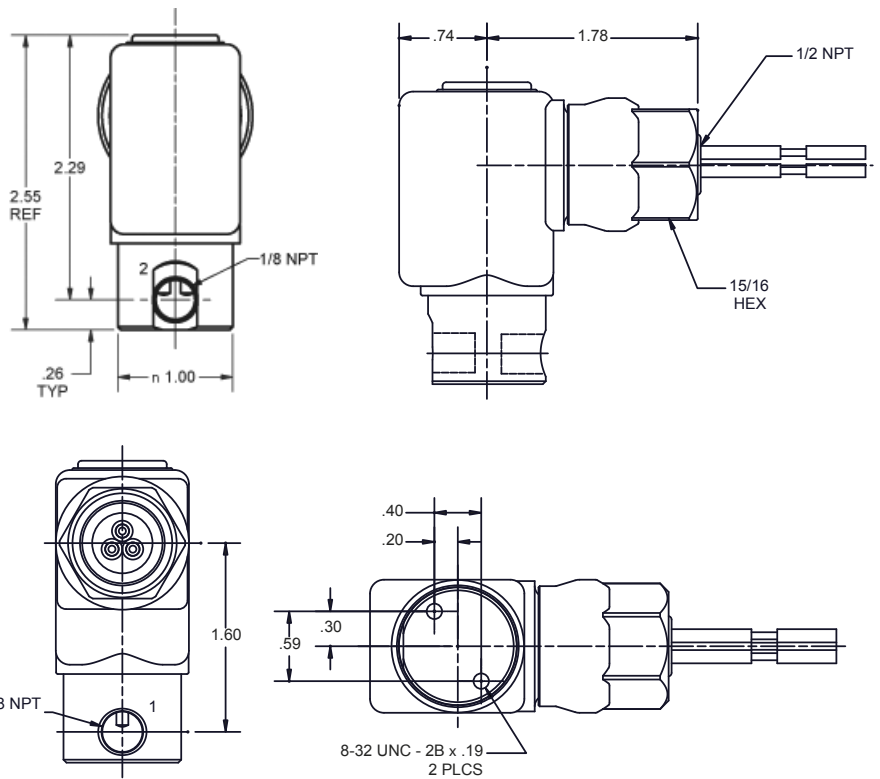
**DC TECHNICAL SPECIFICATIONS**

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

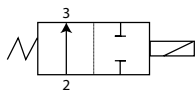


2-Way Normally Closed:  
20CCxx  
Port Identification:  
2-In/1-Out

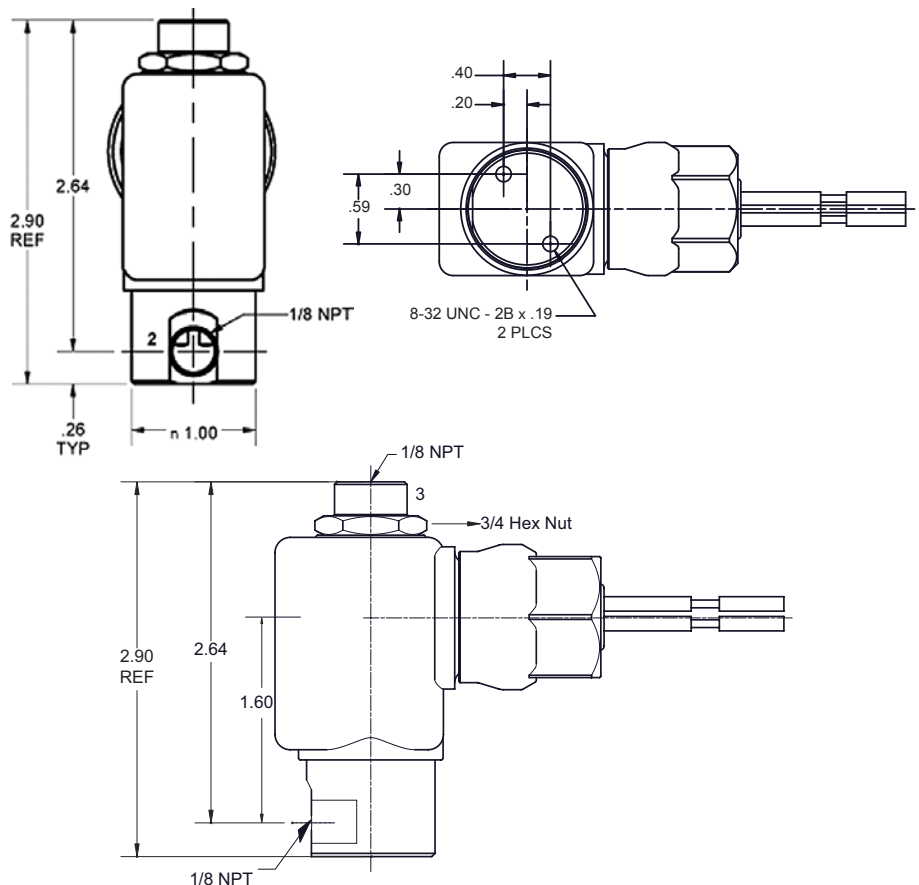


2-Way

## 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.