

3-Way Manual Reset

Direct Acting & Pilot Operated Valves



General Description:

3-Way Manual Reset solenoid valves are designed to start and stop the flow of media as the result of an electrical signal. This can be a problem in some power outage situations where the valve must remain in the no voltage supplied position until the system is manually restarted. Manual reset valves have an added safety device to address this issue. When the manual reset device is triggered, the valve remains in the at rest position until the reset mechanism is manually latched.

Pilot operated versions require minimum operating pressure differential for proper operation.

Installation:

Valves can be mounted in any position.



Specialty

Mechanical Characteristics:

Standard Materials of Construction

- Body — brass or stainless steel (430)
- Seals — NBR or FKM seals as listed
- Sleeve tube — stainless steel (303 or 304)
- Plunger — stainless steel (430FR)
- Shading ring — copper
- Stop — stainless steel (430FR)
- Springs — stainless steel (18-8)
- Pilot orifice — stainless steel (303)

Compatible Fluids

- Depending on the valve used, most common media including air, inert gases or petroleum products.
- Hydraulic Fluids

Power Consumption

- 10, 22 watts

Agency Approvals

- cUL listed.

Maximum Ambient Temperature

149°F

Electrical Characteristics:

Voltages

- AC — 120/60–110/50
240/60–220/50
- DC — 12, 24 & 120

Applications:

- Pilot control on process valves
- Fluid “circuit breakers” requiring manual intervention to reset after being tripped (safety feature).

3-Way Direct Acting Stainless Steel Valves — Normally Closed, NBR or FKM Seals

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (PSI)				No-Voltage Release Pressure Vessel Number	Valve		
					Min.*	Maximum				Coil	Ref.	
	AC Ratings		DC Ratings			AC	DC					
	10 Watt	22 Watt	10 Watt	22 Watt								
1/4"	3/64	3/32	0.062	0.17	0	200		200	70315SN2EVVR	7	8	D51
1/4"	1/16	3/32	0.11	0.17	0	150		150	70315SN2GVVR	7	8	D51
1/4"	3/32	3/32	0.17	0.17	0	90		90	70315SN2KVVR	7	8	D51

3-Way Pilot Operated - Brass Valves — Normally Closed or NBR Seals

Port Size NPT	Orifice Size in.		Cv Factor		Operating Pressure Differential (PSI)				No-Voltage Release Pressure Vessel Number	Valve		
					Min.*	Maximum				Coil	Ref.	
	AC Ratings		DC Ratings			AC	DC					
	10 Watt	22 Watt	10 Watt	22 Watt								
1/2"	1/2		3.6		10	180		180	70312BN4UNVR	7	8	D51

* Pilot operated valves require the minimum pressure differential specified for proper valve operation.

3-Way Direct Acting Brass Valves — Universal All-Ports-In-Body, FKM Seals

Port Size NPT	Orifice Size In.		Flow Factor Cv		Operating Pressure Differential (PSI)				No-Voltage Release Pressure Vessel Number	Valve		
					Min.*	Maximum				Coil	Ref.	
	AC Ratings		DC Ratings			AC	DC					
	10 Watt	22 Watt	10 Watt	22 Watt								
1/4"	5/64	5/64	0.14	0.14	0	100		100	7033TBN2JVVR	7	8	D51
1/4"	1/8	1/8	0.23	0.23	0	50		50	7033TBN2NVVR	7	8	D51

3-Way Direct Acting 316L Stainless Steel Valves — Intrinsically Safe, NBR Seals

Port Size NPT	Orifice Size in.		Cv Factor		Operating Pressure Differential (PSI)				No-Voltage Release Pressure Vessel Number	Valve	
					Min.*	Maximum				Coil	Ref.
	AC Ratings		DC Ratings								
	10 Watt	22 Watt	10 Watt	22 Watt							
1/4"	3/16		0.53		0	145		145	U033X5156*	*	D40

* Consult factory for available coil/enclosure options.



Specialty

Principles of Operation

No Voltage release models

3-Way Normally Closed Valves

These valve types can only be actuated (opened) when the coil is energized and the hand lever is manually moved downward to the latched valve-open position. If the coil is not energized, the mechanism will not become latched in this position, as soon as the hand lever is released, it will return to the unlatched valve-closed position. The hand lever mechanism can only be engaged when the coil is energized. When the solenoid coil is de-energized, the handle and the mechanism are automatically tripped at the valve is returned to its original normally closed, unlatched position.

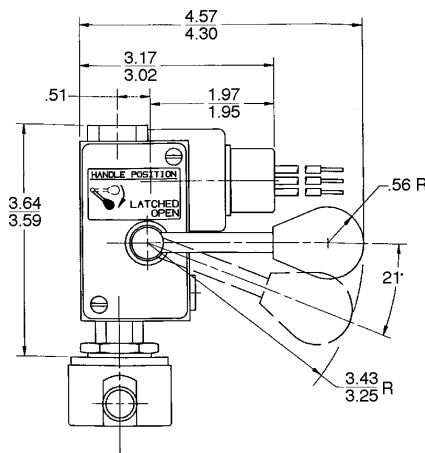
3-way Normally Open Valves

The principles of operation for normally open valves are identical to the normally closed version except the valve's de-energized position is normally open.

Valve Reference D51

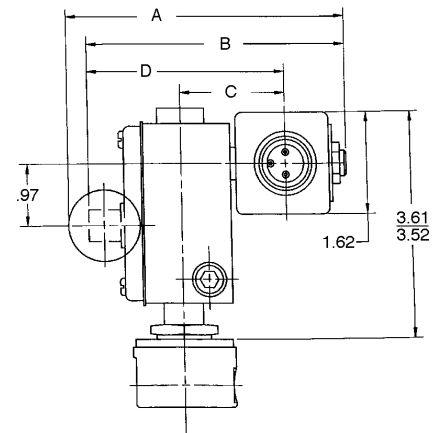


3-Way Normally Closed



Dimensions apply to Manual Reset feature only.

Dimension	No-Voltage Release	Electrically Tripped
	A	4.64
B	4.31	4.07
C	1.79	1.59
D	3.26	3.06



Specialty

Valve Specifications

70312, 70315, 7033T Part Numbers		U033 Part Numbers Intrinsically Safe Valves
Valve Function	Multipurpose or Normally Closed	Multipurpose
Port Size	¼" NPT or ½" NPT	¼" NPT
Body Material	Brass or Stainless Steel	Stainless Steel
Seal Material	FKM or NBR	FKM
Coil Temperature Rating	Class F or Class H	Not Applicable
Power Consumption	10 Watt for AC or 22 Watt for DC	3 Watt
Voltage	120/60 - 110/50, 24 VDC	24 - 28 VDC
Coil Enclosure	½" Conduit for Hazardous Locations	Splice Box Enclosure with Strain Relief
Maximum Fluid Temperature	180°F	167°F
Max Ambient Temperature	104°F	149°F

