

B3...VS Series, 3-Way, Ball Valve Bronze Body, Stainless Steel Ball and Stem



- 316 Stainless Ball and Stem
- Reinforced PTFE seats and stuffing box
- Blow-out proof stem design
- Adjustable packing gland

Application

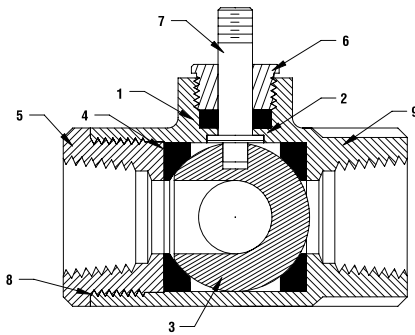
These threaded valves are designed to provide modulating or two position control of hot or chilled water.

Typical applications include reheat coils, VAV terminal control, unit ventilators, and air handlers, especially in areas which have minimum profile requirements.

- 400 PSIG WOG, Cold Non-Shock

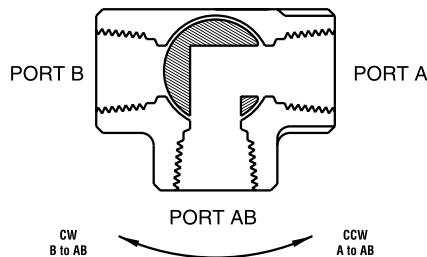
Technical Data	
Media	chilled or hot water, glycol
Flow characteristic	modified equal percentage
Action	90° rotation A to AB open CCW, B to AB open CW
Sizes	½", ¾", 1", 1¼", 1½", 2"
Type of end fitting	SAE NPT (female connection)
Materials:	
1 Stem Packing	PTFE
2 Stem Bearing	PTFE
3 Ball	316 Stainless Steel
4 Seat (x2)	PTFE w/ Durafill
5 Retainer	B16 (½" - 1") Brass B584 (1¼" - 2") Brass
6 Gland	ASTM B16 Brass
7 Stem	316 Stainless steel
8 Jam Nut	PTFE (1¼" - 2")
9 Body Seal	B584-C84400 Bronze

C _v	Valve Nominal Size		Type	Suitable Return Actuators		
	Inches	DN [mm]		Spring		Non-Spring
4.8	½	15	B315VS	LF	NF	LN
11	¾	20	B320VS	NF		NM Series
21	1	25	B325VS	AF Series		
33	1¼	32	B332VS			AM
49	1½	40	B340VS			GM Series
91	2	50	B350VS			

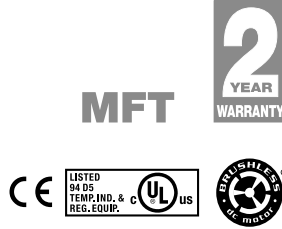


Pressure rating	400 psig WOG
Media temp. range	-22°F to 250°F (-30°C to 120°C)
Close-off pressure	400 psig @ 100°F
Maximum differential pressure (ΔP)	<75 psig

Flow Patterns



IM40006 - 05/10 - Subject to change. © Belimo Aircontrols (USA), Inc.



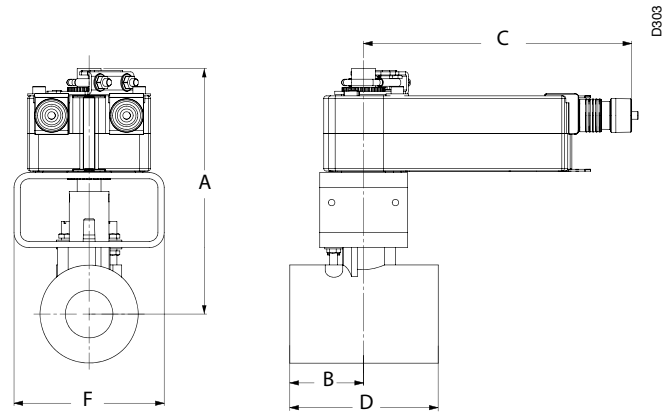
Models

NFX24-MFT-X1
NFX24-MFT-S-X1

Technical Data	
Control	MFT
Control signal	2 to 10 VDC, (4 to 20 mA with 500 Ω resistor)
Power supply	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running 6.5 W holding 3 W
Transformer sizing	9 VA, class 2 power
Electrical connection	½" conduit connector 3 ft [1m], 18 GA appliance cable
Overload protection	electronic throughout rotation
Feedback output	variable DC
Angle of rotation♦	95°, adjustable 35° to 95° (mechanically with limit stops), MFT (electronically variable 0-100%)
Direction of rotation♦	external switch (proportional models) electronically selectable with MFT
Spring return reversible	CW/CCW mounting
Position indication	visual indicator, 0° to 95°
Running time	control 150 seconds default spring <60 seconds at -22° F [-30°C] 20 seconds at -4°F to 122°F [-20°C to 50°C]
Operating temperature	-22° F to 122° F [-30° C to 50° C]
Housing	NEMA 2 / IP54, Enclosure Type2
Agency listings	cULus according to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE according to 2004/108/EC and 2006/95/EC
Noise level	<45 dB(A)
NFX24-MFT-S-X1	
Auxiliary switches	2 x SPDT, 3A (0.5A inductive) @ 250 VAC, UL approved, one switch is set at +10°, one is adjustable 10° to 90°

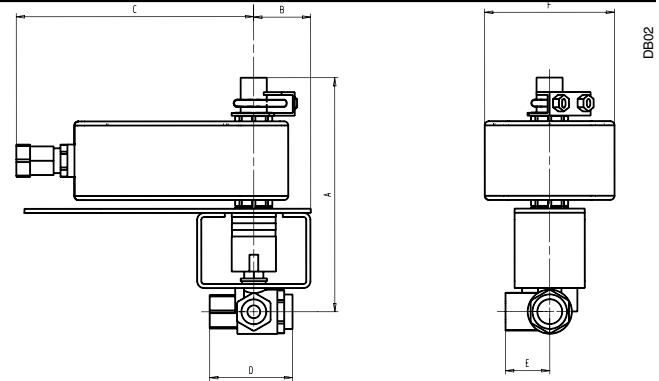
♦ Variable with MFT

Dimensions with 2-Way Valve



Valve Body	COP	Valve Nominal Size		Dimensions (Inches)				
		Inches	DN [mm]	A	B	C	D	F
B2075VS-30	400	¾	20	7.50	2.00	9.76	3.00	4.60
B2075VS-51	400	¾	20	7.50	2.00	9.76	3.20	4.60
B2100VS-43	400	1	25	7.81	2.00	9.76	3.40	4.60
B2075VSS-30	1000	¾	20	7.50	2.00	9.76	3.00	4.60
B2100VSS-43	1000	1	25	7.81	2.00	9.76	3.40	4.60

Dimensions with 3-Way Valve



Valve Body	COP	Valve Nominal Size		Dimensions (Inches)					
		Inches	DN [mm]	A	B	C	D	E	F
B315VS	200	½	15	7.00	2.00	8.00	3.56	1.88	6.25
B320VS	75	¾	20	7.00	2.00	8.00	3.56	1.88	6.25

Wiring Diagrams

✂️ INSTALLATION NOTES

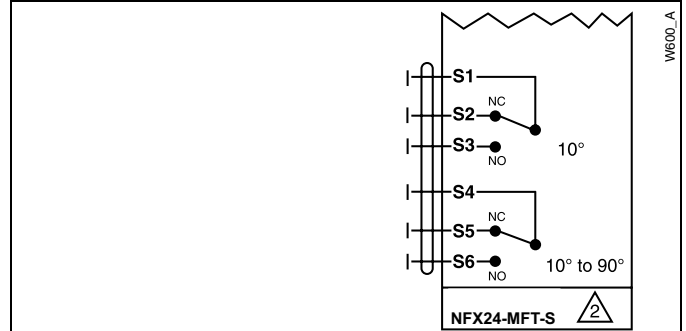
- ⚠️ **CAUTION Equipment damage!**
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.
- ⚡️ Actuators may also be powered by 24 VDC.
- ⚡️ Triac A and B can also be contact closures.
- ⚡️ Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- ⚡️ Position feedback cannot be used with Triac sink controller. The actuators internal common reference is not compatible.

📄 APPLICATION NOTES

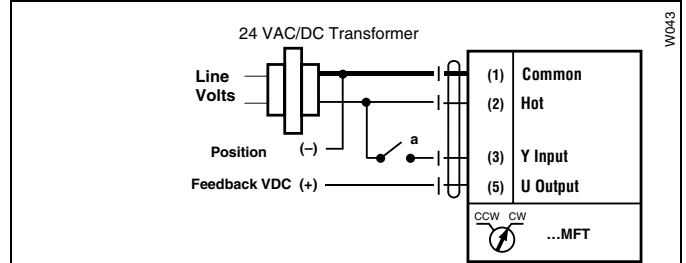
- ◆ The ZG-R01 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC, up to 2 actuators may be connected in parallel.
- ◆ Meets cULus or UL and CSA requirements without the need of an electrical ground connection.

⚠️ **WARNING Live Electrical Components!**
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

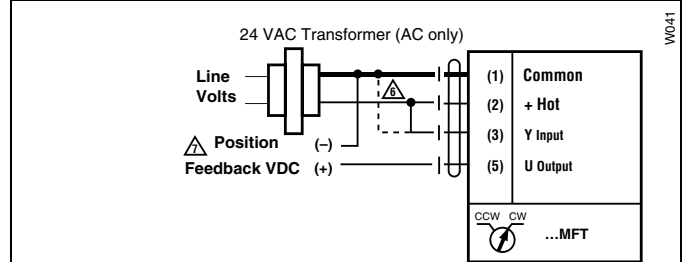
MA40006 - 05/10 - Subject to change. © Belimo Aircontrols (USA), Inc.



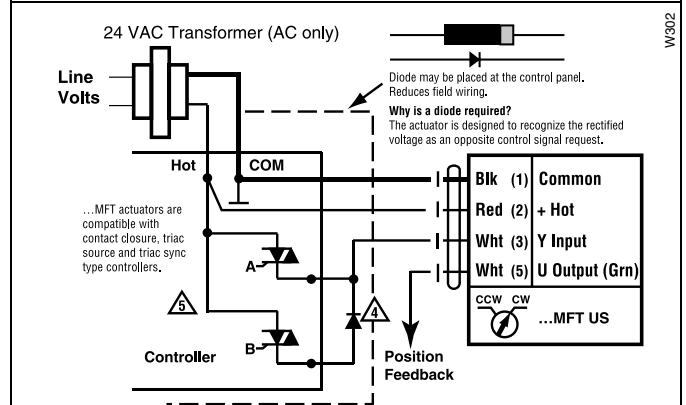
Auxiliary switches for NFX24-MFT-S



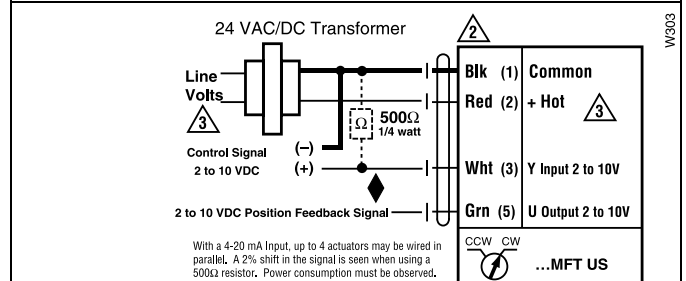
On/Off control



PWM, triac source and sink



Floating Point control



Proportional 2 to 10 or 4 to 20 mA control signal