

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

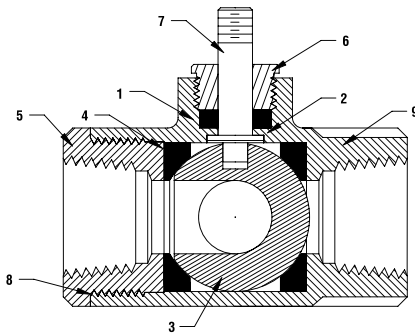
These threaded valves are designed to provide modulating or two position control of hot or chilled water.

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

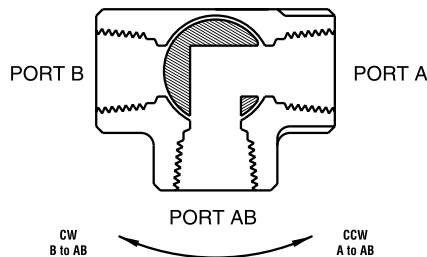
Technical Data	
Media	chilled or hot water, glycol
Flow characteristic	modified equal percentage
Action	90° rotation A to AB open CCW, B to AB open CW
Sizes	½", ¾", 1", 1¼", 1½", 2"
Type of end fitting	SAE NPT (female connection)
Materials:	
1 Stem Packing	PTFE
2 Stem Bearing	PTFE
3 Ball	316 Stainless 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	LM
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			

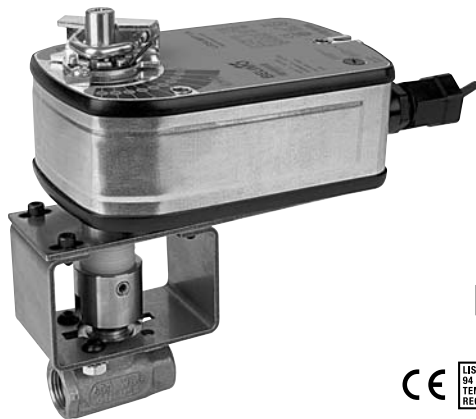


Pressure rating	400 psig WOG
Media temp. range	-22°F to 250°F (-30°C to 120°C)
Close-off pressure	400 psig @ 100°F
Maximum differential pressure (ΔP)	<75 psig

Flow Patterns



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MFT

2
YEAR
WARRANTY



Models

LF24-MFT US
LF24-MFT-S US w/built-in Aux. Switch

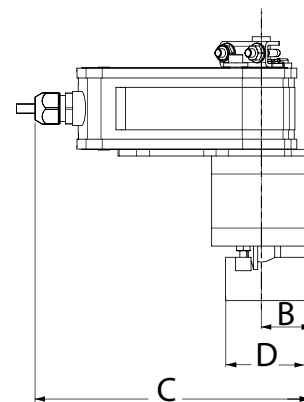
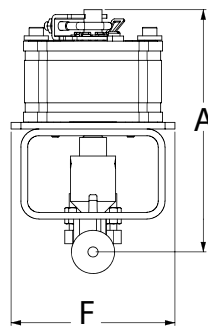
Technical Data

Control	MFT
Control signal	2 to 10 VDC (4-20mA with 500 Ω resistor)
Power consumption	running 2.5 W holding 1 W
Transformer sizing	5 VA (class 2 power source)
Electrical connection	½" conduit connector
(-S models have 2 cables)	3 ft [1m], 18 GA appliance cable
Overload protection	electronic throughout 0° to 95° rotation
Input impedance	100 kΩ for 2 to 10 VDC (0.1 mA) 500 Ω for 4 to 20mA 750 Ω for PWM 500 Ω for on/off and floating point
Feedback	2 to 10 VDC, 0.5 mA max
Angle of rotation	95°
Direction of rotation	spring reversible with CW/CCW mounting motor reversible with built-in switch
Position indication	visual indicator
Running time	<40 to 75 seconds (on-off) 150 seconds independent of load (proportional)
spring	<25 seconds @ -4°F to 122°F [-20°C to 50°C] <60 seconds @ -22°F [-30°C]
Ambient temperature	-22° F to 122° F [-30° C to 50° C]
Housing	NEMA 2
Agency listings	UL 873, CSA C22.2 No. 24 certified, CE
Noise level	max. 62 dB(A)
Quality standard	ISO 9001

LF24-MFT-S US

Auxiliary switch 1 x SPDT, 6A (1.5A) @ 250 VAC, UL Listed, adjustable 0° to 95° (double insulated)

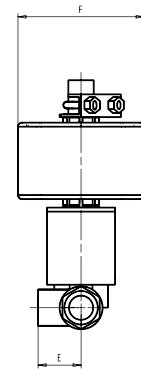
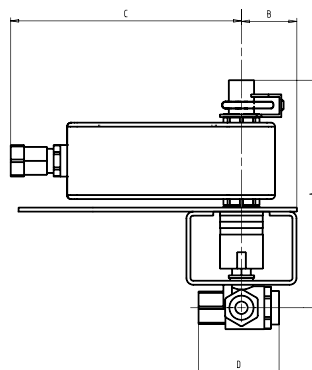
Dimensions with 2-Way Valve



D300

Valve Body	COP	Valve Nominal Size		Dimensions (Inches)				
		Inches	DN [mm]	A	B	C	D	F
B2050VS-01	100	½"	15	6.75	0.98	7.69	2.20	4.72
B2050VS-02	100	½"	15	6.75	0.98	7.69	2.20	4.72
B2050VS-04	100	½"	15	6.75	0.98	7.69	2.20	4.72
B2050VS-15	100	½"	15	6.75	0.98	7.69	2.20	4.72
B2050VSS-15	1000	½"	15	6.75	1.12	7.69	2.30	4.72

Dimensions with 3-Way Valve



B315_LFPs

Valve Body	COP	Valve Nominal Size		Dimensions (Inches)					
		Inches	DN [mm]	A	B	C	D	E	F
B315VS	75	½"	15	6.50	2.00	8.00	2.30	1.25	4.00

Wiring Diagrams

✂️ INSTALLATION NOTES

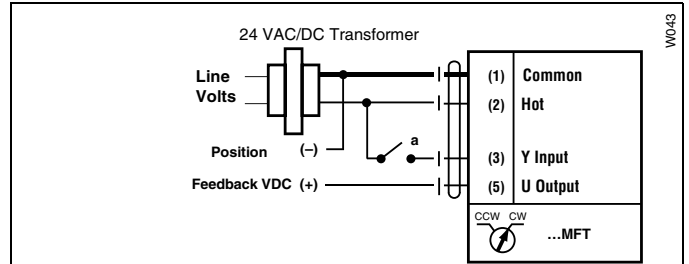
- 2 **CAUTION Equipment damage!**
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 4 IN4004 or IN4007 diode (IN4007 supplied, Belimo part number 40155).
- 5 Triac A and B can also be contact closures.
- 6 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- 7 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.

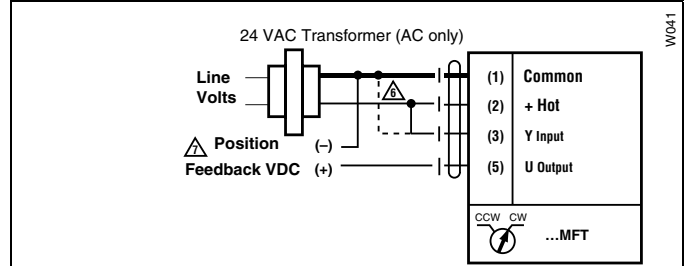
⚠️ WARNING Live Electrical Components!
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components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

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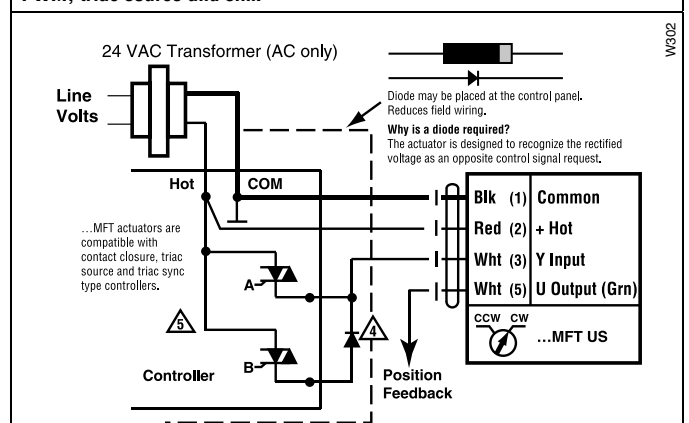
On/Off control

WD43



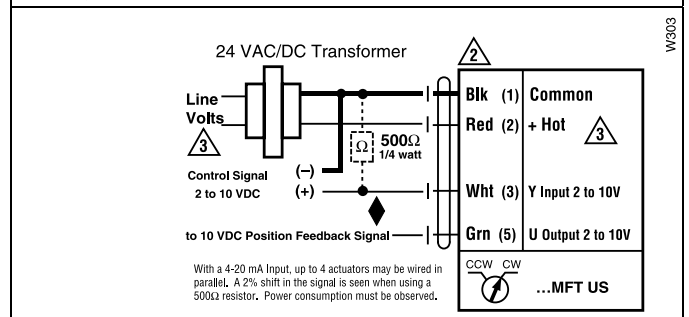
PWM, triac source and sink

WD11



Floating Point control

WS02



Proportional 2 to 10 or 4 to 20 mA control signal

WS03