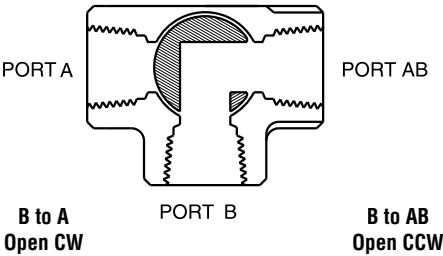


B3...L Series, 3-way, Ball Valve
Chrome Plated Brass Ball and Nickel Plated Stem



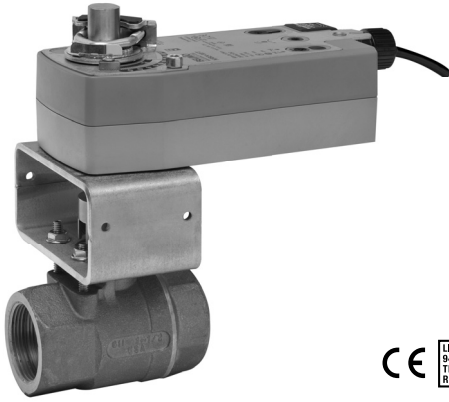
Technical Data table with 2 columns: Property and Value. Rows include Media, Flow characteristic, Action, Sizes, Type of end fitting, Materials (Body, Ball, Stem, Stem seal, Valve seat), Leakage, Pressure rating, Media temp. range, Close-off pressure, and Maximum differential pressure.

Flow Patterns



Application
This valve is typically used in air handling and fan coil units on heating or cooling coils, unit ventilators, VAV box re-heat coils, and bypass loops. This valve is suitable for use as a diverting valve only.

Table with 7 columns: Cv, Inches, DN [mm], Type, 3-way NPT, Suitable Actuators (Spring Return, Non-Spring Return, Electronic Fail-Safe). Rows list valve types B315L through B350L with their corresponding actuator series (LF, LR, NR, AR).



**MFT**

**2**  
YEAR  
WARRANTY



## Models

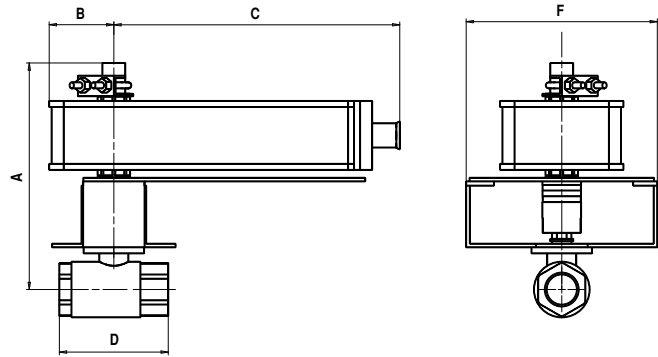
AFX24-MFT-X1  
AFX24-MFT-S-X1 w/built-in Aux. Switches  
AFX24-MFT95-X1  
AFRX24-MFT

Technical Data	
Control	MFT
Control signal	2 to 10 VDC, (4 to 20 mA with 500 $\Omega$ resistor) 0-135 $\Omega$ (MFT95)
Power supply	24 VAC $\pm$ 20% 50/60 Hz 24 VDC $\pm$ 10%
Power consumption	running 7.5 W holding 3 W
Transformer sizing	10 VA (class 2 power source)
Electrical connection	1/2" conduit connector (-S model has 2 cables) 3 ft. [1m], 18 GA appliance cable
Overload protection	electronic throughout rotation
Input impedance	100 k $\Omega$ for 2 to 10 VDC (0.1 mA) 500 $\Omega$ for 4 to 20 mA 750 $\Omega$ for PWM 1500 $\Omega$ for on/off and floating point
Feedback output	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
Manual override	hex crank
Running time	control 150 seconds independent of load spring <20 seconds
Ambient temperature	-22°F to +122°F [-30°C to +50°C]
Housing	NEMA 2 / IP54
Agency listings	UL 873, CSA C22.2 No. 24 certified, CE
Noise level	max. 45 dB(A)

AFX24-MFT-S-X1	
Auxiliary switches	2 x SPDT, 7A (2.5A) @ 250 VAC, UL listed, one switch is fixed at +5°, one is adjustable 25° to 85° (double insulated)

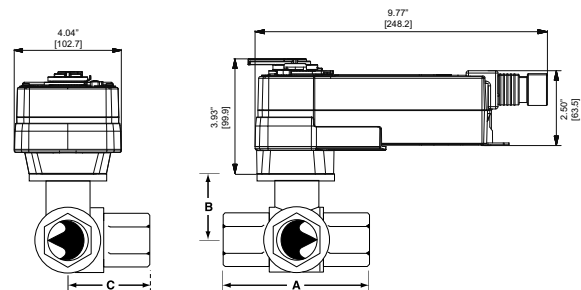
\* Dual Mounted Actuators

## Dimensions with 2-Way Valve



Valve Nominal Size				Dimensions (Inches)				
Valve Body	COP	Inches	DN [mm]	A	B	C	D	F
B224VS	400	1	25	7.00	1.25	6.77	3.37	6.25
B225VS	200	1	25	7.00	1.25	6.77	3.62	6.25
B232VS	600	1 1/4	32	7.00	1.25	6.77	3.97	6.25
*B239VS	600	1 1/2	40	15.00	N/A	13.54	4.37	6.25
*B240VS	600	1 1/2	40	15.00	N/A	13.54	4.75	6.25
*B249VS	600	2	50	15.00	N/A	13.54	4.68	6.25
B224VSS	1000	1	25	7.00	1.25	6.77	3.37	6.25
B232VSS	1000	1 1/4	32	7.00	1.25	6.77	3.97	6.25
*B249VSS	1000	2	50	15.00	N/A	13.54	4.68	6.25

## Dimensions with 3-Way Valve



Valve Nominal Size				Dimensions (mm)		
Valve Body	COP	Inches	DN [mm]	A	B	C
B332L	200	1 1/4	32	4.13" [105]	2.00" [51]	2.19" [56]
B340L	200	1 1/2	40	4.80" [122]	2.44" [62]	2.61" [67]
B350L	200	2	50	5.60" [142]	2.67" [68]	3.11" [79]

### 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  $\Omega$  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.

