









### **Technical data**

Functional data	Valve Size	1.5" [40]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	20280°F [-7138°C]
	Body Pressure Rating	ANSI Class 250, up to 400 psi below 150°F
	Flow characteristic	modified equal percentage, linear B – AB
	Servicing	repack kits available
	Rangeability Sv	A-port 100:1, B-port 50:1
	Flow Pattern	3-way Mixing/Diverting
	Leakage rate	ANSI Class VI
	Controllable flow range	stem up - open B – AB
	Cv	28
	ANSI Class	250
	Body pressure rating note	up to 400 psi below 150°F
Materials	Valve body	Bronze
	Valve plug	brass
	Stem seal	EPDM O-ring
	Seat	Bronze
	Pipe connection	NPT female ends
uitable actuators	Non-Spring	SVB(X)
	Electronic fail-safe	SVKB(X)

### Safety notes

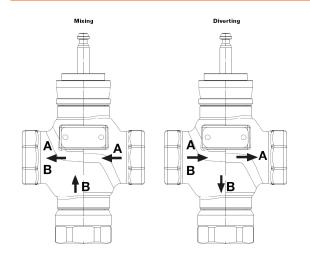


- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov
- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The valve does not contain any parts that can be replaced or repaired by the user.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.

### **Product features**

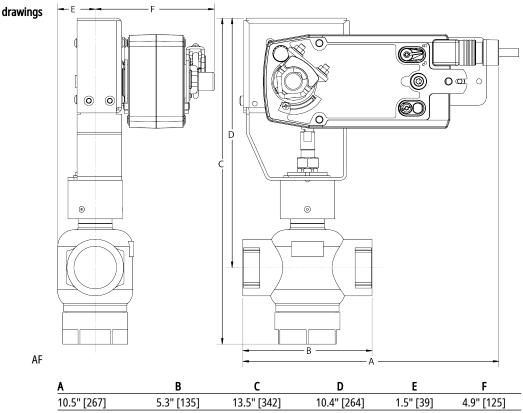


Flow/Mounting details

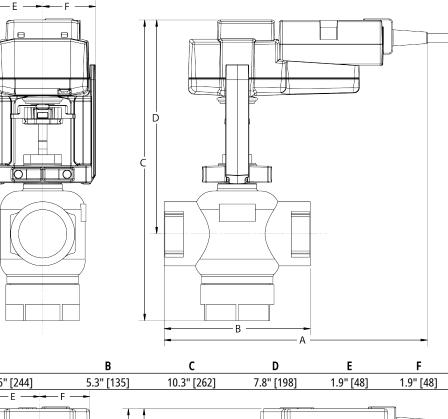


### Dimensions

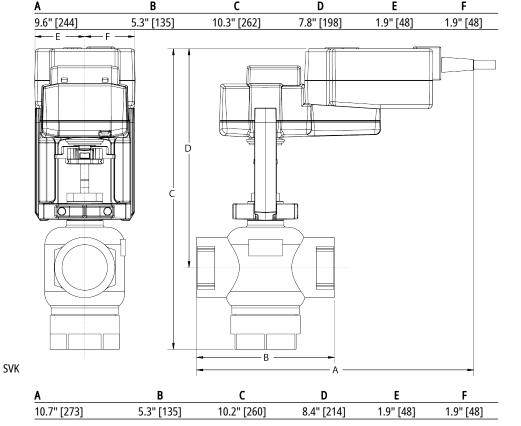
Dimensional drawings



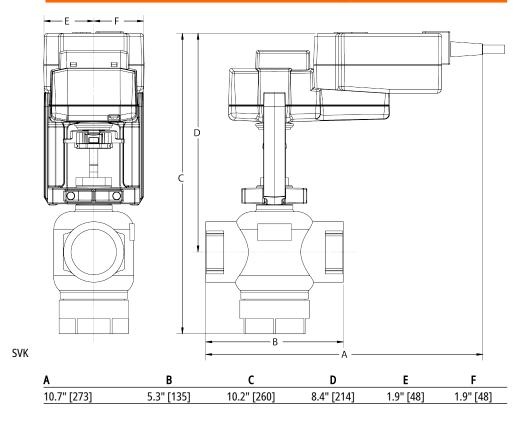




SV

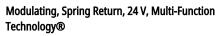








# AFX24-MFT-S-X1







# Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	7.5 W
	Power consumption in rest position	3 W
	Transformer sizing	10 VA (class 2 power source)
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 1090°
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	(2) 18 GA appliance cables with or without 1/2" conduit connectors, 3 ft [1 m], 10 ft [3 m] or 16ft [5 m]
	Overload Protection	electronic throughout 095° rotation
Functional data	Operating range Y	210 V
	Operating range Y note	420 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Operating range Y variable	Start point 0.530 V End point 2.532 V
	Options positioning signal	variable (VDC, PWM, on/off, floating point)
	Position feedback U	210 V
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Direction of motion motor	selectable with switch 0/1
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	95°, adjustable with mechanical end stop, 3595°
	Angle of rotation note	adjustable with mechanical end stop, 3595°
	Running Time (Motor)	default 150 s, variable 70220 s
	Running time motor variable	70220 s
	Running time fail-safe	<20 s
	Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%
	Noise level, motor	40 dB(A)
	Noise level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2 UL Enclosure Type 2
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU
	Quality Standard	ISO 9001
	Ambient temperature	-22122°F [-3050°C]



BELIMO		Technical data sheet	AFX24-MFT-S-X1
		Storage temperature	-40176°F [-4080°C]
		Ambient humidity	max. 95% r.H., non-condensing
		Servicing	maintenance-free
	Weight	Weight	4.6 lb [2.1 kg]
	Materials	Housing material	Galvanized steel and plastic housing
Safety notes			
	Ń	<ul> <li>NEMA 4X, 316L stainless steel enclose</li> <li>Battery Back Up System for SY(7~10</li> <li>ZS-300 without brackets.</li> <li>NEMA 4X, 304 stainless steel enclose</li> <li>MFT95 resistor kit for 4 to 20 mA compared to 20</li></ul>	)-110 ure.
Electrical installation			
	<u>^</u>	with live electrical components. Have properly trained in handling live elec	! and troubleshooting of this product, it may be necessary to work a qualified licensed electrician or other individual who has been trical components perform these tasks. Failure to follow all electrical live electrical components could result in death or serious injury.
		Meets cULus requirements without the	he need of an electrical ground connection.
		combined operation of line voltage/s Provide overload protection and disc Actuators may also be powered by 24 Two built-in auxiliary switches (2x SP	Class 2 voltage to the terminals of auxiliary switches. Mixed or afety extra low voltage is not allowed. onnect as required. 4 VDC. DT), for end position indication, interlock control, fan startup, etc.
		$_{\Delta}$ Only connect common to negative (-) $_{\Delta}$ A 500 $\Omega$ resistor (ZG-R01) converts th	e 420 mA control signal to 210 V.

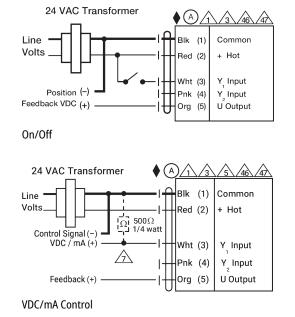
A Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line.

The For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.

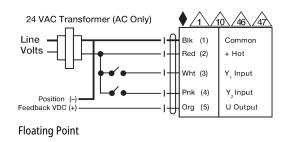
/ IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).

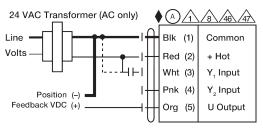
Actuators may be controlled in parallel. Current draw and input impedance must be observed.

Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).



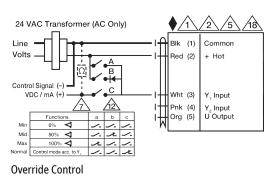
<u>/</u>47

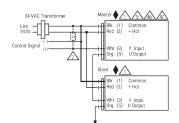




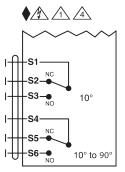
**PWM Control** 











**Auxiliary Switches** 

