

3-way Mixing/Diverting, Characterized Control Valve, Stainless Steel Ball and Stem









		Picture may differ from product		
Type overview				
Type B312		DN 1/2" [15]		
D312		1/2" [15]		
Technical data				
	Functional data	Valve size [mm]	0.5" [15]	
		Fluid	chilled or hot water, up to 60% glycol	
		Fluid Temp Range (water)	0250°F [-18120°C]	
		Body Pressure Rating	600 psi	
		Close-off pressure Δps	200 psi	
		Flow	A-port: as stated in chart B-port: 70% of A – AB Cv	
		Flow characteristic	A-port equal percentage, B-port modified for constant common port flow	
		Leakage rate	0% for A – AB, <2.0% for B – AB	
		Pipe connection	Internal thread NPT (female)	
		Servicing	maintenance-free	
		Flow Pattern	3-way Mixing/Diverting	
		Controllable flow range	75°	
		Cv	3	
	Materials	Valve body	Nickel-plated brass body	

Suitable actuators

Stem

Stem seal Seat

TEFZEL®		
EPDM (lubricated)		
stainless steel		
TR LRB(X) LRQB(X) NRB(X) N4		
TFRB(X) LF		

stainless steel EPDM (lubricated)

PTFE

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



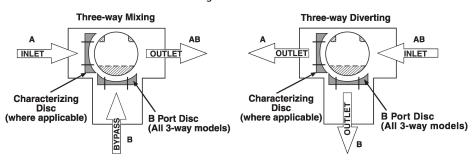
Product features

Application

This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable or constant flow.

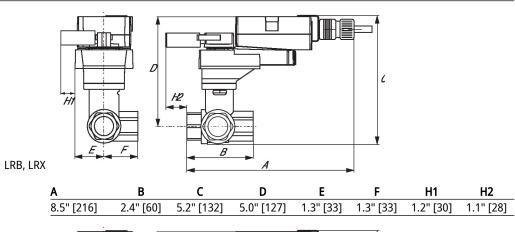
Flow/Mounting details

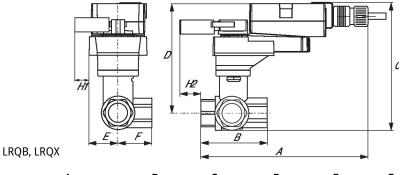
This valve is not suitable for use as a change over valve.



Dimensions

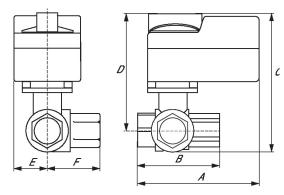






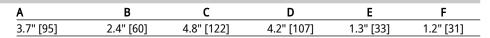
 A
 B
 C
 D
 E
 F
 H1
 H2

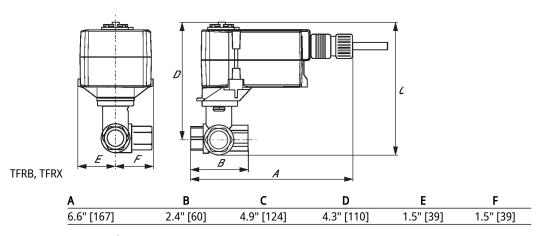
 8.9" [226]
 2.4" [60]
 5.7" [146]
 5.2" [131]
 1.6" [40]
 1.6" [40]
 1.2" [30]
 1.3" [33]

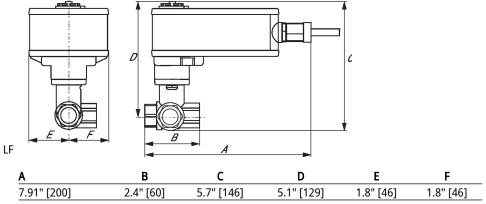


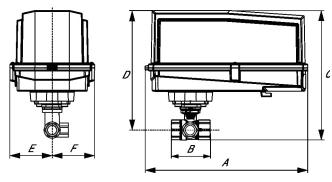


Dimensions









ARB N4, ARX N4

Α	В	С	D	E	F
11.4" [289]	2.4" [60]	7.2" [184]	6.7" [169]	3.1" [80]	3.1" [80]



On/Off, Spring return, 120 V





Technical data			
Electrical data	Nominal voltage	AC 120 V	
	Nominal voltage frequency	50/60 Hz	
	Nominal voltage range	AC 96132 V	
	Power consumption in operation	5.5 W	
	Power consumption in rest position	3.5 W	
	Transformer sizing	7.5 VA	
	Auxiliary switch	1x SPDT, 1 mA3 A (0.5 A inductive), DC 5 VAC 250 V, adjustable 095°	
	Switching capacity auxiliary switch	1 mA3 A (0.5 A inductive), DC 5 VAC 250 V	
	Electrical Connection	(2) 18 GA appliance cables, 3 ft [1 m], with 1/2" NPT conduit connectors	
	Overload Protection	electronic throughout 095° rotation	
Functional data	Direction of motion motor	selectable with switch 0/1	
	Direction of motion fail-safe	reversible with cw/ccw mounting	
	Angle of rotation	90°	
	Running Time (Motor)	75 s / 90°	
	Running time fail-safe	<25 s @ -4122°F [-2050°C], <60 s @ -22°F [-30°C]	
	Noise level, motor	50 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	
	Enclosure	UL Enclosure Type 2	
	Agency Listing	cULus acc. To UL 873 and CAN/CSA C22.2 No. 24-93	
	Quality Standard	ISO 9001	
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC	
	Ambient humidity	Max. 95% RH, non-condensing	
	Ambient temperature	-22122°F [-3050°C]	
	Storage temperature	-40176°F [-4080°C]	



Technical data Safety data Servicing maintenance-free Weight Weight Housing material galvanized steel

Electrical installation

X INSTALLATION NOTES

Footnotes

A Actuators with appliance cables are numbered.

Provide overload protection and disconnect as required.

Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.

Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.

Meets cULus 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.

Wiring diagrams On/Off

