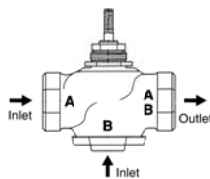




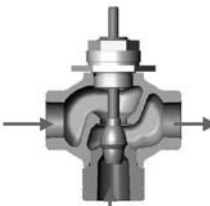
Technical Data		G3	G3...D
Service		chilled or hot water, 60% glycol	
Flow characteristic		linear	
Action		stem up - open B to AB	stem up - open B to AB
Sizes		½" to 2"	
End fitting		NPT female ends	
Materials			
Body		bronze	
Seat		bronze	
Stem		stainless steel	
Plug		brass	
Packing		spring loaded TFE	
Disc		none	
ANSI Class		ANSI 250 (up to 400 psi below 150°F)	
Leakage		ANSI III	
Media temperature			
Water		20°F to 250°F (-7°C to 120°C)	
Maximum ΔP*		A port- 87 psi (600 kPa)	35 psi (241 kPa)
Water		B port- 35 psi (241 kPa)	
Rangeability		500:1	
		*(50% or more open)	

G3...(D) 3-way Flow Patterns

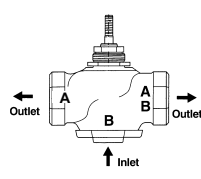
G3 3-way Mixing Valve



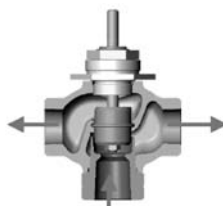
Stem Up- Open B to AB



G3...D 3-way Diverting Valve



Stem Up- Open B to AB



Note: Flow B to A travels through center of plug (as shown).

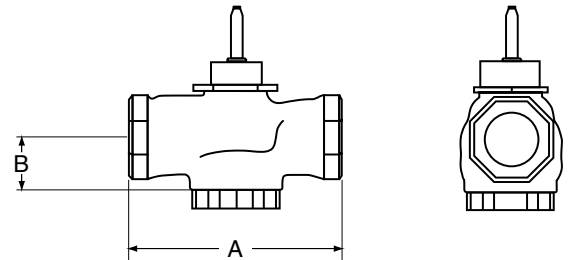
Application

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 reheat coils and bypass loops. This valve is suitable for use in a hydronic system with constant or variable flow.

3-way valves are available with mixing or diverting flow patterns.

Valve Nominal Size			Type	Suitable Actuators		
C _v	Inches	DN [mm]	3-way NPT	Non-Spring	Spring	
2.2	½	15	G314	LM Series	NV Series	LF Series
4.4	½	15	G315(D)			
7.5	¾	20	G320(D)	NM	NF	NVF Series
14	1	25	G325(D)			
20	1¼	32	G332(D)	AM Series	AF(X) Series	NVF Series
28	1½	40	G340(D)			
41	2	50	G350			
40	2	50	G350(D)			

Dimensions

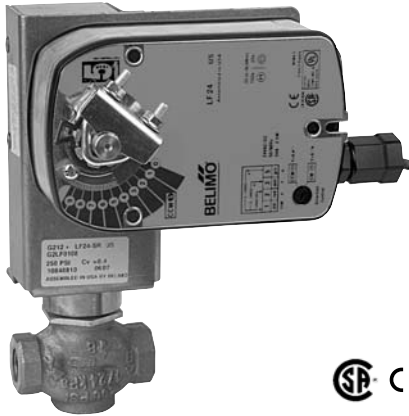


D078-3W

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
G314	½"	15	3.06" [78]	1.37" [35]
G315(D)	½"	15	3.06" [78]	1.37" [35]
G320(D)	¾"	20	3.62" [92]	1.68" [43]
G325(D)	1"	25	4.62" [117]	1.56" [40]
G332(D)	1¼"	32	4.62" [117]	1.62" [41]
G340(D)	1½"	40	5.37" [137]	1.62" [41]
G350(D)	2"	50	6.12" [156]	1.87" [48]

Piping

The valves should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. For the NV Series, allow 6" for cover removal and 12" for complete actuator removal. The G2(S) and G3(D) preferred mounting position of the valve is with the valve stem vertical above the valve body, for maximum life. However, the assemblies can be mounted with the valve stem vertical or horizontal in relation to the pipe. The actuators should never be mounted underneath the valve, as condensation can build up and result in a failure of the actuators. Do not reverse flow direction.

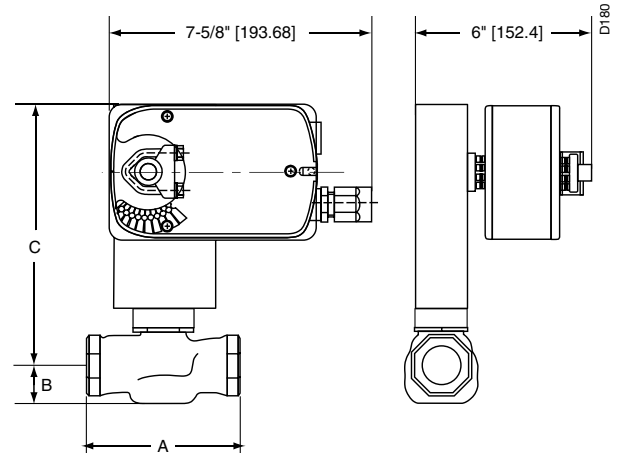


Models

LF24-3 US
LF24-3-S US w/built-in Aux. Switch

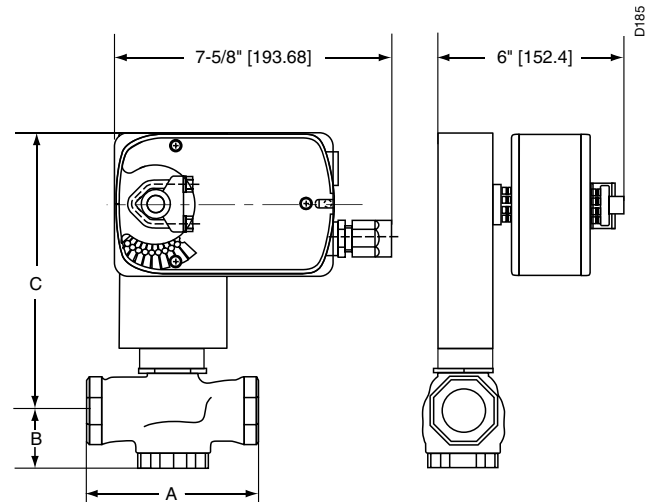
Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running 2.5 W holding 1W
Transformer sizing	5 VA (class 2 power source)
Electrical connection	3 ft, 18 GA appliance cables (-S model has 2 cables) ½" conduit connector
Overload protection	electronic throughout 0° to 95° rotation
Input Impedance	1000 Ω (0.6w) control inputs
Angle of rotation	95°
Torque	35 in-lb [Nm]
Direction of rotation	spring reversible with CW/CCW mounting motor reversible with built-in ↻/↺ switch
Position indication	visual indicator 0° to 90°
Running time	motor 150 sec. constant independent of load spring <25 sec. @ -4°F to 122°F [-20°C to 50°C] <60 sec. @ -22°F [-30°C]
Humidity	5 to 95% RH non-condensing
Ambient temperature	-22° F to 122° F [-30° C to 50° C]
Storage temperature	-40° F to 176° F [-40° C to 80° C]
Housing	NEMA type 2/IP54
Housing material	zinc coated metal
Agency listings	UL 873 listed, CSA C22.2 No. 24 certified, CE
Noise level (max)	running <30 db(A) spring return 62 db(A)
Servicing	maintenance free
Quality standard	ISO 9001
LF24-3-S US	
Auxiliary switch	1 x SPDT, 6A (1.5A) @ 250 VAC, UL Listed, adjustable 0° to 95° (double insulated)

Dimensions with G2...(S) Series 2-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G2(S)	½"	15	3.06" [78]	1.06" [27]	7.56" [192]
G2(S)	¾"	20	3.62" [92]	1.06" [27]	7.56" [192]

Dimensions with G3...(D) Series 3-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
G3(D)	½"	(15)	3.00" [76]	1.37" [35]	7.87" [200]
G3(D)	¾"	(20)	3.62" [92]	1.68" [43]	8.18" [208]

LF24-3 US Actuators, Floating Point



Wiring Diagrams



INSTALLATION NOTES



CAUTION Equipment damage!

Actuators may be connected in parallel. Power consumption must be observed.



Actuators may also be powered by 24 VDC.



The common connection from the actuator must be connected to the Hot connection of the controller.



The actuator Hot must be connected to the control board common.



For end position indication, interlock control, fan startup, etc., LF24-3-S US incorporates one built-in auxiliary switch: 1 x SPDT, 6A (1.5A) @ 250 VAC, UL listed, adjustable 0° to 95°.



Actuators with plenum rated cable do not have numbers on wires; use color coded instead. Actuators with appliance rated cable use numbers.



APPLICATION NOTES

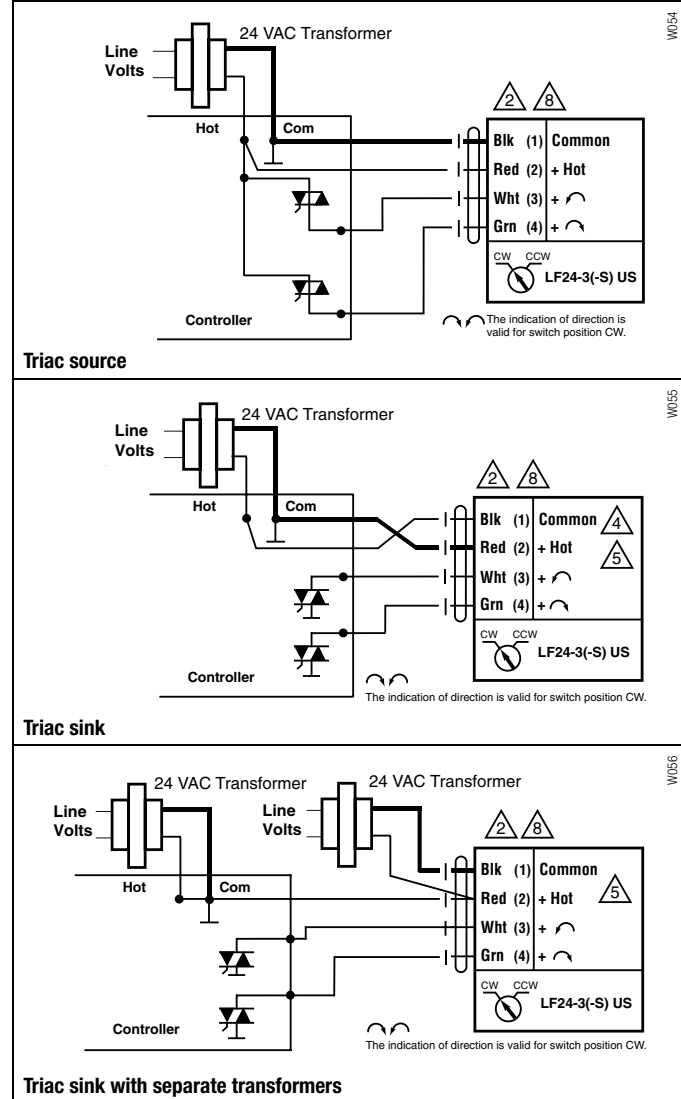
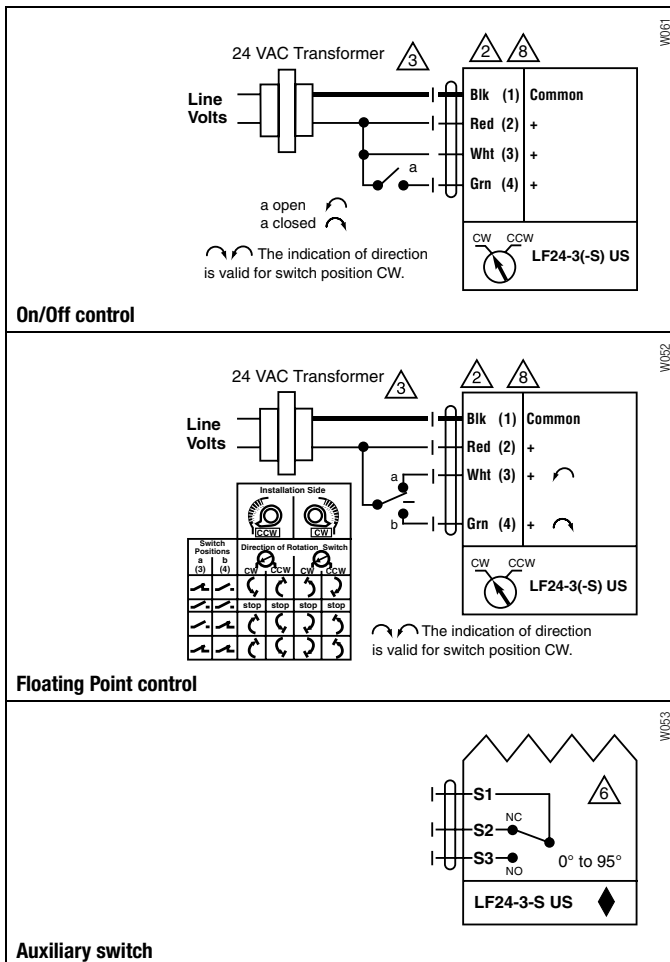


Meets cULus or UL and CSA requirements without the need of an electrical ground connection.



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.



	Non-Spring Return						Spring Return					
	NVD	NV	NVG	LM	NM	AM	NVFD	NVF	LF	NF	AF	AFX
2-way												
G212(S)	250			250			250		250			
G213(S)	250			250			250		250			
G214(S)	250			250			250		250			
G215(S)	250			250			250		250			
G219(S)	250			250			250		185			
G220(S)	250			250			250		185			
G224(S)		250			250			207		250		
G225(S)		250			250			207		250		
G232(S)		162			158			130		158		
G240(S)		110	160			230		88			169	230
G250(S)		58	190			127		47			93	127
3-way Mixing												
G314	250			250			250		250			
G315	250			250			250		250			
G320	250			250			250		250			
G325		250			168			207		250		
G332		162			105			130		158		
G340		110				169		88			169	230
G350		58				93		47			93	127
3-way Diverting												
G315D	250			250			250		250			
G320D	250			250			250		250			
G325D	250				250		250			250		
G332D		250			250			250		250		
G340D		250				250		250			250	250
G350D		250				250		250			250	250