

G3...(D) Three-way Globe Valve, Bronze Trim, Mixing or Diverting LF Spring Actuators, Proportional



Technical Data/Submittal

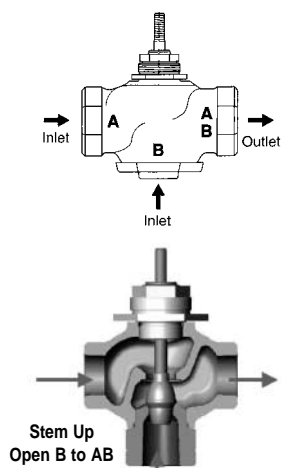


Valve Specifications

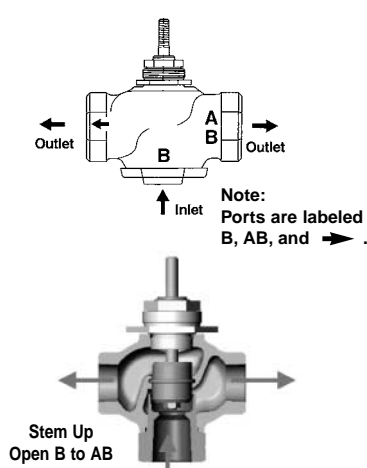
	G3	G3..D
Service	chilled or hot water, 60% glycol	
Flow characteristic	linear	linear
Action	stem up - closed A to AB	stem up - open B to AB
Sizes	1/2" to 3/4"	
End fitting	NPT	
Materials		
Body	bronze	
Seat	bronze	
Stem	stainless steel	
Plug	brass	
Packing	spring loaded TFE	
Disc	none	
ANSI Class	ANSI 250 (up to 400 psi below 150F)	
Leakage	ANSI Class III	
Media temp - water	20°F to 250°F (-7°C to 120°C)	
Ambient temp	32°F to 122°F (0°C to 50°C)	
Maximum ΔP* water	35 psi (241kPa)	
Rangeability	500:1 (based on Class III leakage)	

*(50% or more open)

G3 Three-way Mixing



G3...D Three-way Diverting



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. This valve is driven by an actuator with proportional control.

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

Operation

The LF series actuators provide true spring return operation for reliable fail-safe application. The spring return system provides consistent force to the valve with, and without, power applied to the actuator.

The LF24-SR (-S) US uses a brushless DC motor which is controlled by an Application Specific Integrated Circuit (ASIC) and a microprocessor. The microprocessor provides the intelligence to the ASIC to provide a constant rotation rate and to know the actuator's exact fail-safe position. The ASIC monitors and controls the brushless DC motor's rotation and provides a digital rotation sensing function to prevent damage to the actuator in a stall condition. The actuator may be stalled anywhere in its normal rotation without the need of mechanical end switches. Power consumption is reduced in holding mode.

Actuator Specifications

LF24-SR US

Power supply	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running: 2.5 W; holding: 1 W
Transformer sizing	5 VA (class 2 power source)
Electrical connection	LF24-SR US 3 ft, plenum rated cable
Overload protection	electronic throughout 0 to 95° rotation
Operating range Y	2 to 10 VDC, 4 to 20 mA
Input impedance	100kΩ (0.1 mA), 500Ω
Feedback output U	2 to 10 VDC (max. 0.7 mA) for 95°
Angle of rotation	max. 95°, adjust. with mechanical stop
Torque	35 in-lb [4 Nm]
Direction of rotation	spring: reversible with cw/ccw mounting motor: reversible with built-in switch
Position indication	visual indicator, 0° to 95° (0° is spring return position)
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
Weight	LF24-SR 3.1 lbs (1.40 kg.)

J20764 06/07 Subject to change.



LF24...



NF24...



AF24...

G3 Three-way Mixing Globe Valve Bronze Trim, with Spring Return



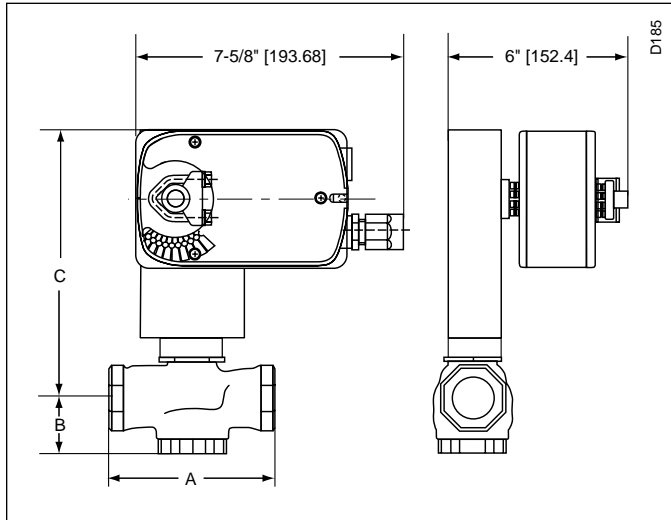
Valve					Spring Return Actuator							
Model # Valve	Cv Rating	Valve Nominal Size		Close-Off psi	On/Off Floating	Proportional	Close-Off psi	On/Off Floating	Proportional	Close-Off psi	On/Off Floating	Proportional
		Inches	DN mm		LF24 US	LF24-SR US		AF24-MFT US	NF24-SR US		AF24-MFT US	AF24-SR US
G314	2.2	1/2"	15	250	\$ 856.00	\$ 936.00						
G315	4.4	1/2"	15	250	\$ 858.00	\$ 938.00						
G320	7.5	3/4"	20	250	\$ 860.00	\$ 940.00						
G325	14	1"	25				168	\$ 1,064.00	\$ 1,014.00			
G332	20	1-1/4"	32				105	\$ 1,144.00	\$ 1,094.00			
G340	28	1-1/2"	40							169	\$ 1,550.00	\$ 1,500.00
G350	40	2"	50							93	\$ 1,658.00	\$ 1,608.00

G3...D Three-way Diverting Globe Valve Bronze Trim, with Spring Return



Valve					Spring Return Actuator							
Model # Valve	Cv Rating	Valve Nominal Size		Close-Off psi	On/Off Floating	Proportional	Close-Off psi	On/Off Floating	Proportional	Close-Off psi	On/Off Floating	Proportional
		Inches	DN mm		LF24 US	LF24-SR US		AF24-MFT US	NF24-SR US		AF24-MFT US	AF24-SR US
G315D	4.4	1/2"	15	250	\$ 1,000.00	\$ 1,080.00						
G320D	7.5	3/4"	20	250	\$ 1,018.00	\$ 1,098.00						
G325D	14	1"	25				250	\$ 1,294.00	\$ 1,244.00			
G332D	20	1-1/4"	32				250	\$ 1,602.00	\$ 1,552.00			
G340D	28	1-1/2"	40							250	\$ 1,866.00	\$ 1,816.00
G350D	40	2"	50							250	\$ 2,590.00	\$ 2,540.00

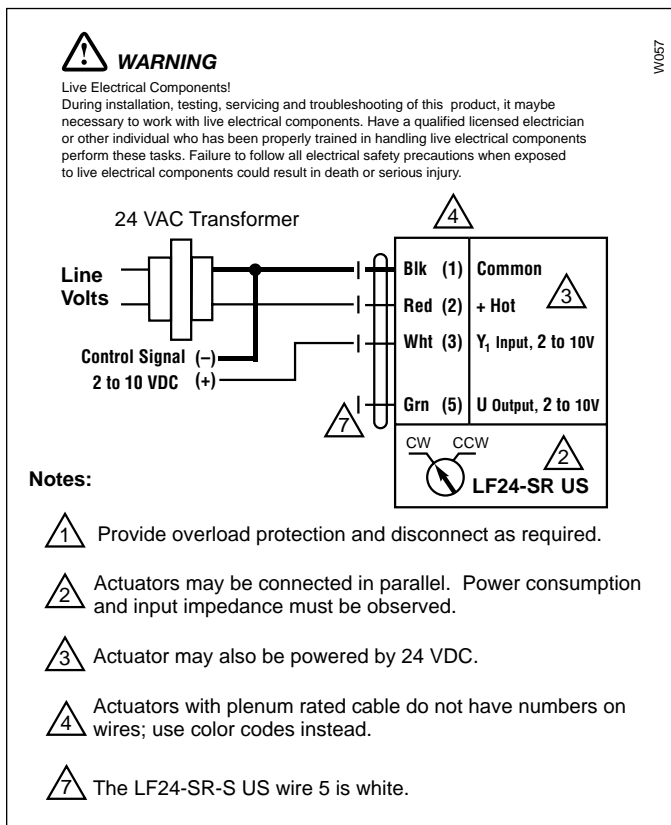
Dimensions



Three-way

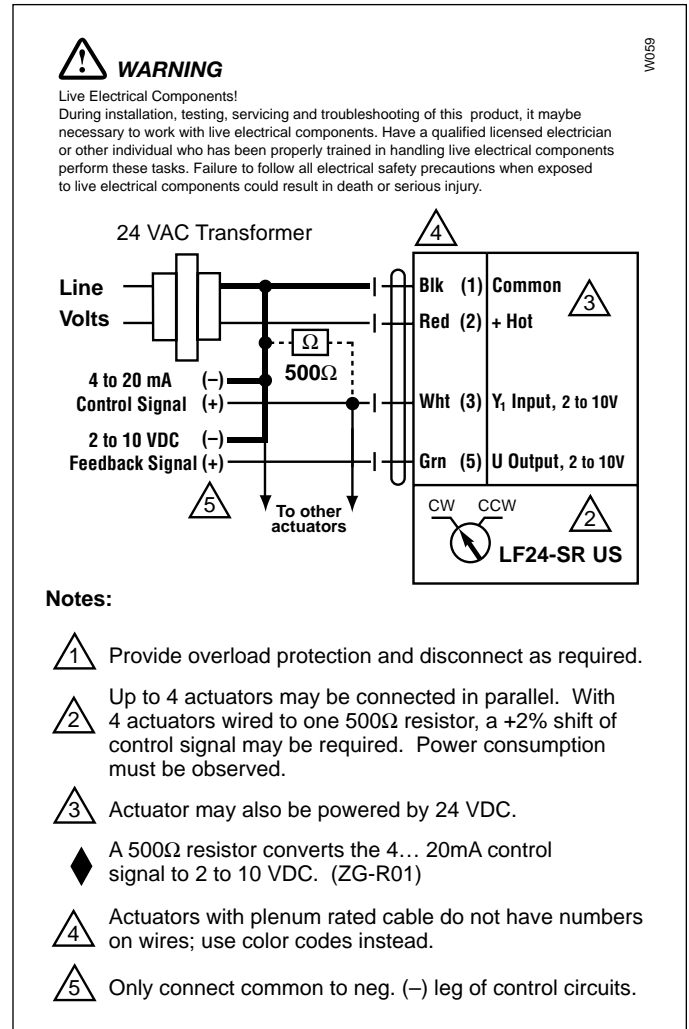
Pipe Size	A	B	C
1/2" [15]	3-1/16" [78]	1-3/8" [35]	8" [203.2]
3/4" [20]	3-5/8" [92]	1-11/16" [43]	8" [203.2]

Wiring Diagrams



2 to 10 VDC control of LF24-SR (-S) US

Wiring Diagrams



4 to 20 mA control of LF24-SR US with 2 to 10 VDC feedback output