

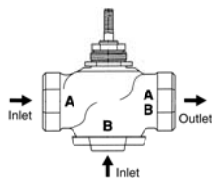
G3...(D) 3-way Globe Valve, Bronze Trim



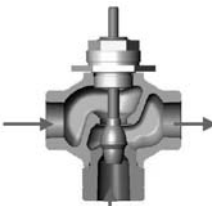
| Technical Data | | G3 | G3...D |
|---------------------|--------------------------------------|------------------|------------------------|
| Service | chilled or hot water, 60% glycol | | |
| Flow characteristic | linear | | |
| Action | stem up - open B to AB | | stem up - open B to AB |
| Sizes | 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

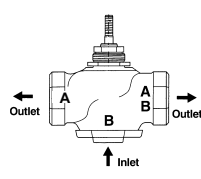
G3 3-way Mixing Valve



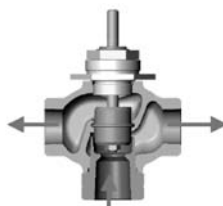
Stem Up- Open B to AB



G3...D 3-way Diverting Valve



Stem Up- Open B to AB



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

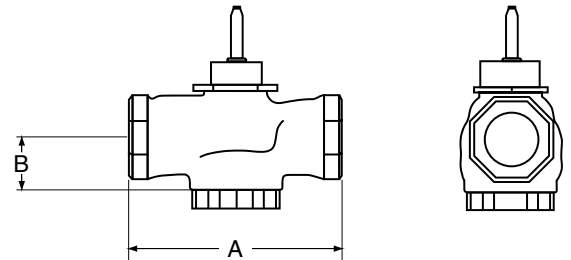
Application

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

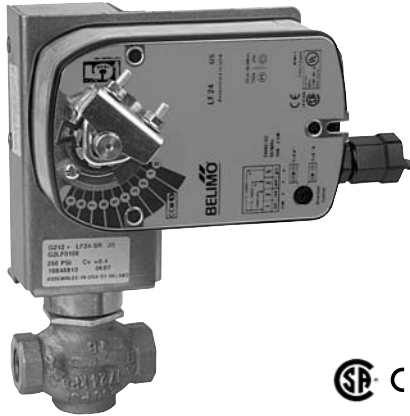


D078-3W

| 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

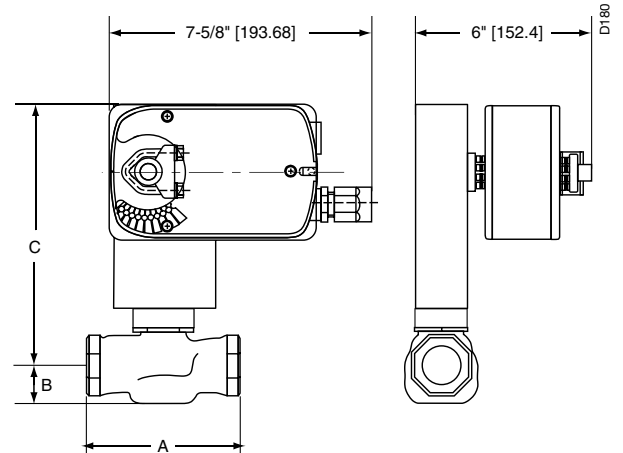
LF24-3 US

LF24-3-S US

w/built-in Aux. Switch

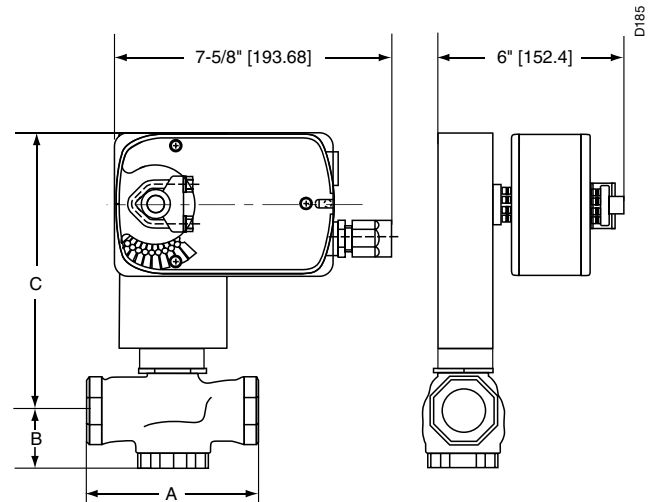
| Technical Data | | |
|-----------------------|---------------|---|
| Power supply | | 24 VAC ± 20% 50/60 Hz 24 VDC ± 10% |
| Power consumption | running | 2.5 W |
| | holding | 1W |
| Transformer sizing | | 5 VA (class 2 power source) |
| Electrical connection | | 3 ft, 18 GA appliance cables (-S model 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 |
| 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] |

Wiring Diagrams

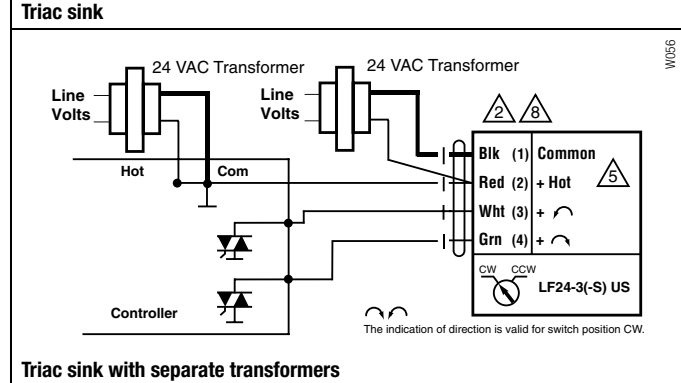
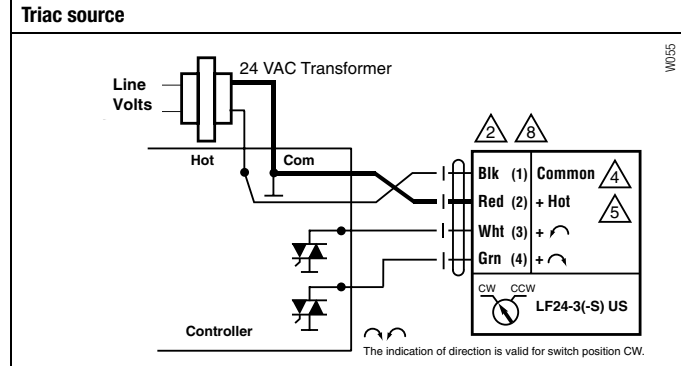
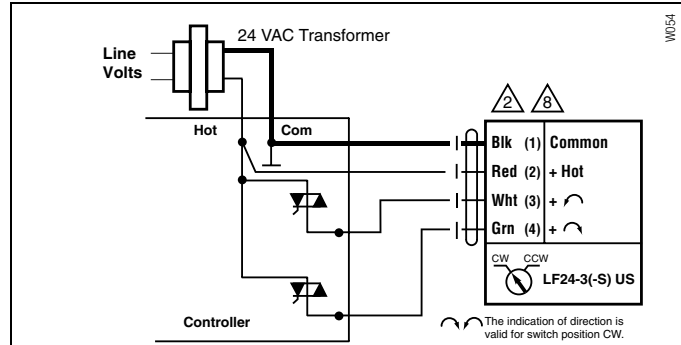
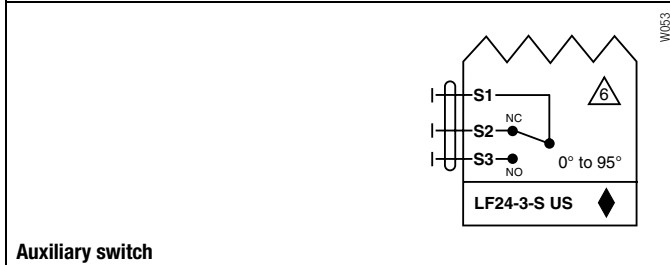
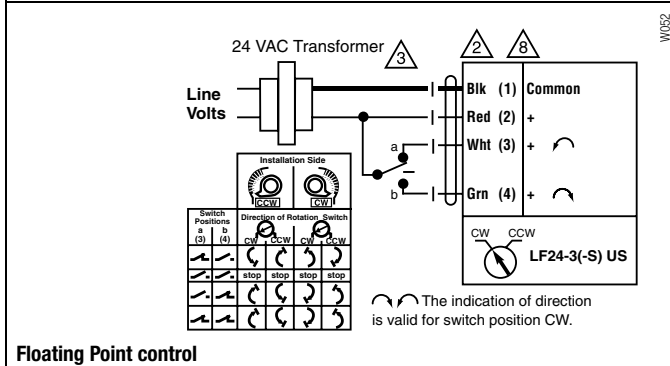
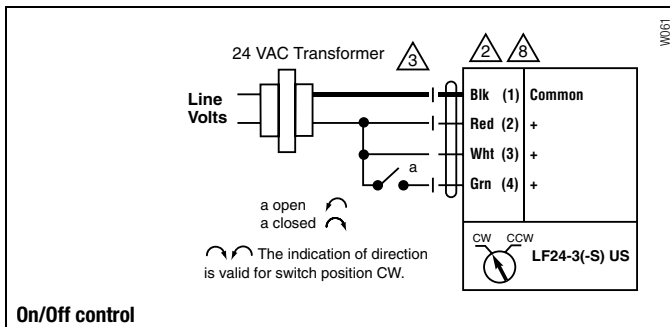
INSTALLATION NOTES

- 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 |