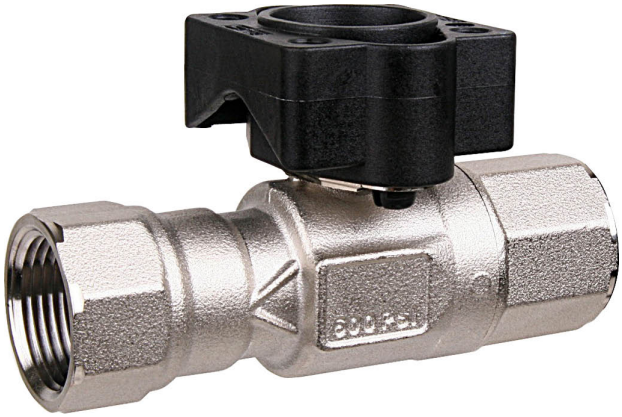
2-way, Characterized Control Valve, Stainless Steel Ball and Stem



5-year warranty

## Type overview

| Type | DN |
|---|---|
| B225HT1856 | 25 |

## Technical data

| | | |
|---|---|---|
| **Functional data** | Valve size [mm] | 1" [25] |
| | Fluid | high temperature hot water/low pressure steam, up to 60% glycol |
| | Fluid Temp Range (water) | 60...266°F [16...130°C] |
| | Fluid Temp Range (steam) | 250°F [120°C] |
| | Body Pressure Rating | 600 psi |
| | Close-off pressure Δps | 200 psi |
| | Flow characteristic | equal percentage |
| | Pipe connection | Internal thread<br>NPT (female) |
| | Servicing | maintenance-free |
| | Max Differential Pressure (Steam) | 15 psi |
| | Flow Pattern | 2-way |
| | Leakage rate | 0% |
| | Controllable flow range | 75° |
| | Cv | 18.56 |
| | Maximum Inlet Pressure (Steam) | 15 psi |
| **Materials** | Valve body | Nickel-plated brass (DZR) P-CuZn35Pb2 |
| | Stem | stainless steel |
| | Stem seal | Vition O-ring |
| | Seat | ETFE |
| | Characterized disc | ETFE |
| | O-ring | EPDM (lubricated) |
| | Ball | stainless steel |
| **Suitable actuators** | Non Fail-Safe | LRB(X) |
| | Spring | LF |

## 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

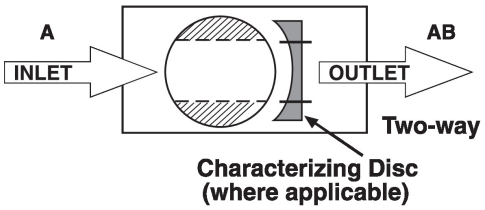
## Product features

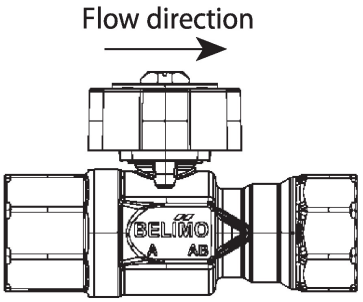
**Application**

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 flow.

This valve is designed to fit in compact areas where on/off, floating point and modulating control is required using 24 VAC.

**Flow/Mounting details**

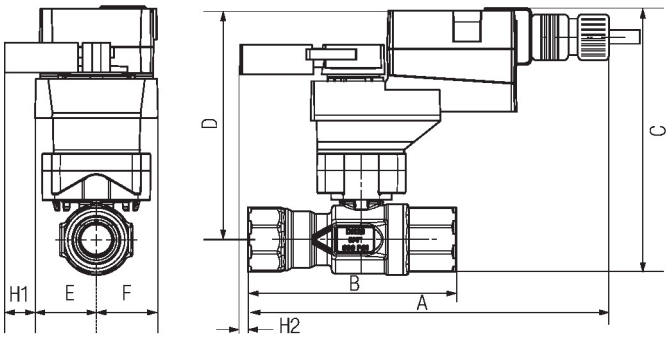



## Dimensions

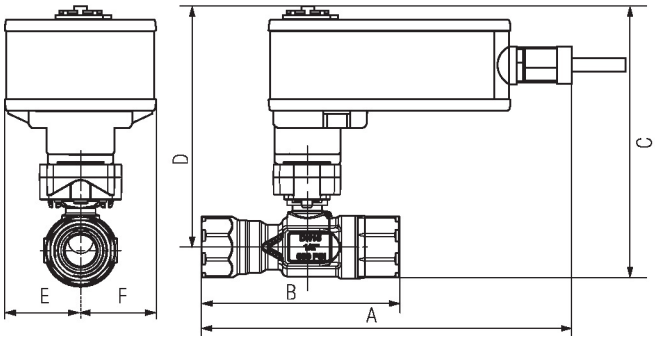
| Type | DN | Weight |
|---|---|---|
| B225HT1856 | 25 | 1.7 lb [0.78 kg] |

LRB, LRX




| A | B | C | D | E | F | H1 | H2 |
|---|---|---|---|---|---|---|---|
| 8.6" [218] | 5.2" [131] | 6.9" [175] | 6.4" [162] | 1.3" [33] | 1.3" [33] | 1.2" [30] | 0.6" [15] |

LF




| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 9.5" [241] | 5.2" [131] | 7.7" [196] | 6.9" [174] | 1.9" [48] | 1.9" [48] |

BELIMO

Modulating, Spring return, 24 V

# Technical data sheet LF24-SR-S US

5-year warranty

## Technical data

| | | |
|---|---|---|
| **Electrical data** | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Nominal voltage range | AC 19.2...28.8 V / DC 21.6...28.8 V |
| | Power consumption in operation | 2.5 W |
| | Power consumption in rest position | 1 W |
| | Transformer sizing | 5 VA |
| | Auxiliary switch | 1x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V, adjustable 0...95° |
| | Switching capacity auxiliary switch | 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V |
| | Electrical Connection | (2) 18 GA appliance cables, 1 m, with 1/2" NPT conduit connectors |
| | Overload Protection | electronic throughout 0...95° rotation |
| **Functional data** | Operating range Y | 2...10 V |
| | Operating range Y note | 4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor) |
| | Input impedance | 100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA |
| | Position feedback U | 2...10 V |
| | Position feedback U note | Max. 0.7 mA |
| | 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) | 150 s / 90° |
| | Running time motor note | constant, independent of load |
| | Running time fail-safe | <25 s @ -4...122°F [-20...50°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** | Power source UL | Class 2 Supply |
| | 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 | -22...122°F [-30...50°C] |
| | Storage temperature | -40...176°F [-40...80°C] |
| | Servicing | maintenance-free |

| | | |
|---|---|---|
| **Weight** | Weight | [] |
| **Materials** | Housing material | galvanized steel |

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

## Electrical installation

**INSTALLATION NOTES**

A Actuators with appliance cables are numbered.

1 Provide overload protection and disconnect as required.

3 Actuators may also be powered by DC 24 V.

5 Only connect common to negative (-) leg of control circuits.

7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.

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

44 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.

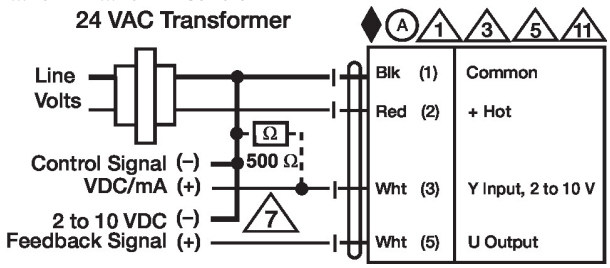
Meets cULus requirements without the need of an electrical ground connection.

**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

2...10 V / 4...20 mA Control




Auxiliary Switches