BELIMO

Bronze Body, Stainless Steel Ball and Stem

# Technical data sheet B240VS

2

2-year warranty

## Type overview

| Type | DN |
|---|---|
| B240VS | 40 |

## Technical data

| | | |
|---|---|---|
| **Functional data** | Valve size [mm] | 1.5" [40] |
| | Fluid | chilled or hot water, up to 60% glycol, steam |
| | Fluid Temp Range (water) | -22...280°F [-30...138°C] |
| | Body Pressure Rating | 600 psig WOG psi |
| | Close-off pressure Δps | 600 psi |
| | Flow characteristic | modified equal percentage |
| | Max Differential Pressure (Steam) | 35 psi |
| | Flow Pattern | 2-way |
| | Leakage rate | ANSI Class VI |
| | Controllable flow range | 90° rotation |
| | Cv | 177 |
| | Maximum Inlet Pressure (Steam) | 35 psi [241 kPa] |
| | Maximum Velocity | 15 FPS |
| **Materials** | Valve body | Bronze B584-C84400 |
| | Housing seal | PTFE |
| | Spindle | 316 stainless steel |
| | Spindle seal | RPTFE |
| | Seat | RPTFE |
| | Lock nut | stainless steel |
| | Pipe connection | NPT female ends |
| | Retainer | B584-C84400 bronze |
| | Ball | 316 stainless steel |
| **Suitable actuators** | Non-Spring | GMB(X)<br>SY1<br>PRB(X) |
| | Spring | AF |
| | Electrical fail-safe | PKRB(X) |

## 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 with MFT functionally which facilitates the use of various control input.

Up to 35 psi steam

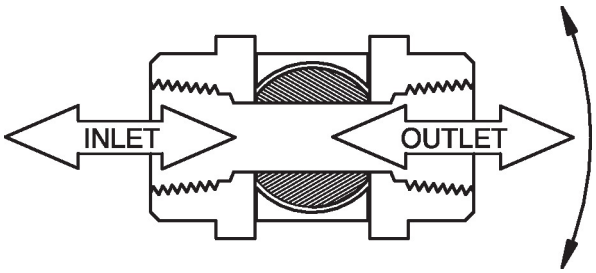
1/2" - 2" 600 PSIG WOG, Cold Non-Shock

Federal Specification: WW-V-35C, Type II

Composition: BZ

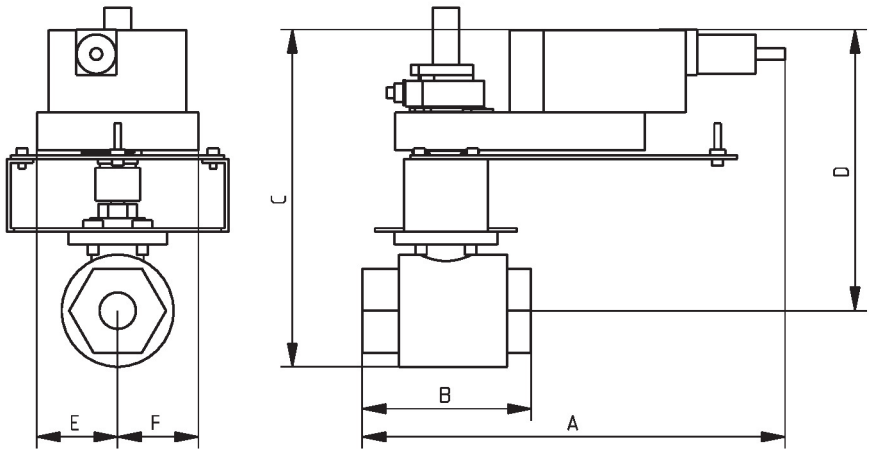
Style: 3

**Flow/Mounting details**




## Dimensions

| Type | DN |
|---|---|
| B240VS | 40 |



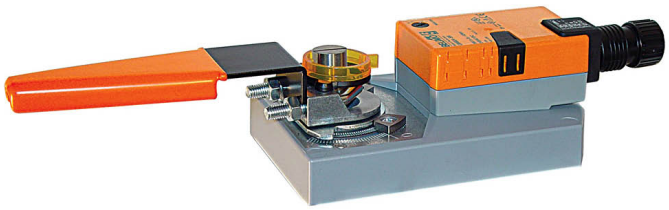

B240VS+GK..X1

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 11.9" [302.5] | 4.8" [121] | 10.1" [257] | 7.9" [201] | 2.3" [58] | 2.3" [58] |

BELIMO

On/Off, Floating Point, Non-Spring Return, 24 V

# Technical data sheet GMB24-3-X1



5-year warranty

## Technical data

| | | |
|---|---|---|
| **Electrical data** | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Power consumption in operation | 4 W |
| | Power consumption in rest position | 2 W |
| | Power consumption for wire sizing | 6 VA |
| | Transformer sizing | 6 VA (class 2 power source) |
| | Electrical Connection | 18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54 |
| | Overload Protection | electronic throughout 0...95° rotation |
| **Functional data** | Torque motor | 40 Nm |
| | Direction of motion motor | selectable with switch 0/1 |
| | Manual override | external push button |
| | Angle of rotation | Max. 95° |
| | Angle of rotation note | adjustable with mechanical stop |
| | Running Time (Motor) | 150 s / 90° |
| | Running time motor note | constant, independent of load |
| | Noise level, motor | 45 dB(A) |
| | Position indication | Mechanically, 30...65 mm stroke |
| **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 UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC |
| | Quality Standard | ISO 9001 |
| | Ambient temperature | -22...122°F [-30...50°C] |
| | Storage temperature | -40...176°F [-40...80°C] |
| | Ambient humidity | Max. 95% RH, non-condensing |
| | Servicing | maintenance-free |
| **Materials** | Housing material | Galvanized steel and plastic housing |

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

## Accessories

| Electrical accessories | Description | Type |
|---|---|---|
| | Battery backup system, for non-spring return models | NSV24 US |
| | Battery, 12 V, 1.2 Ah (two required) | NSV-BAT |
| | Feedback potentiometer 140 Ω add-on, grey | P140A GR |
| | Feedback potentiometer 500 Ω add-on, grey | P500A GR |
| | Feedback potentiometer 1 kΩ add-on, grey | P1000A GR |
| | Feedback potentiometer 2.8 kΩ add-on, grey | P2800A GR |
| | Feedback potentiometer 5 kΩ add-on, grey | P5000A GR |
| | Feedback potentiometer 10 kΩ add-on, grey | P10000A GR |
| | Auxiliary switch 1 x SPDT add-on | S1A |
| | Auxiliary switch 2 x SPDT add-on | S2A |

## 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.

6 Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.

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

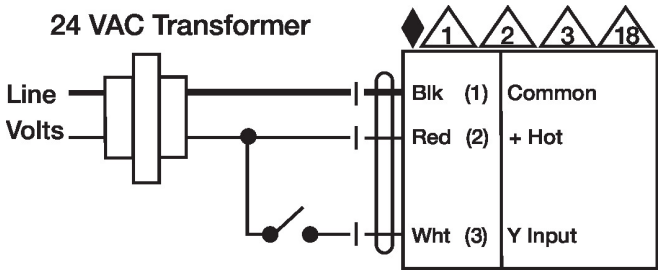
Meets cULus requirements without the need of an electrical ground connection.

**Warning! Live electrical components!**

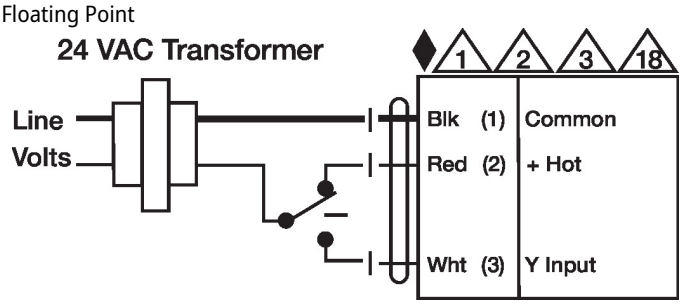
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

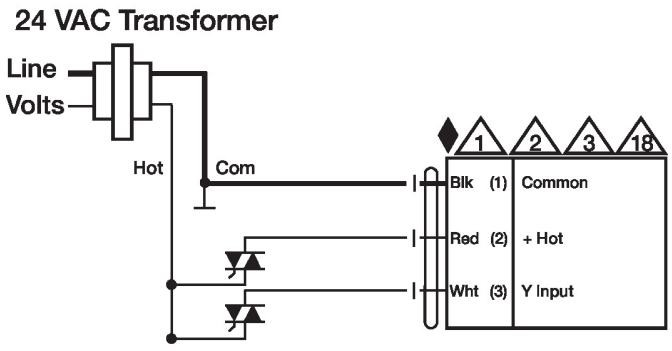
### Wiring diagrams

On/Off




Floating Point




Floating Point - Triac Sink