# Technical data sheet B232VS

Ball Valve (VS), DN 1 1/4" [32], 2-way, Cv 48

Picture may differ from product

2-year warranty

## Type overview

| Type | DN |
|---|---|
| B232VS | 1 1/4" [32] |

## Technical data

| | | |
|---|---|---|
| **Functional data** | Valve size [mm] | 1.25" [32] |
| | 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 |
| | Leakage rate | ANSI Class VI |
| | Pipe connection | Internal thread<br>NPT (female) |
| | Max Differential Pressure (Steam) | 35 psi |
| | Flow Pattern | 2-way |
| | Controllable flow range | 90° rotation |
| | Cv | 48 |
| | Maximum Inlet Pressure (Steam) | 35 psi [241 kPa] |
| **Materials** | Valve body | Bronze B584-C84400 |
| | Housing seal | PTFE |
| | Stem | 316 stainless steel |
| | Stem seal | RPTFE |
| | Seat | RPTFE |
| | Lock nut | stainless steel |
| | Retainer | B584-C84400 bronze |
| | Ball | 316 stainless steel |
| **Suitable actuators** | Non Fail-Safe | AMB(X)<br>GRCB(X)<br>GRB(X) |
| | Spring | AF |

## 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

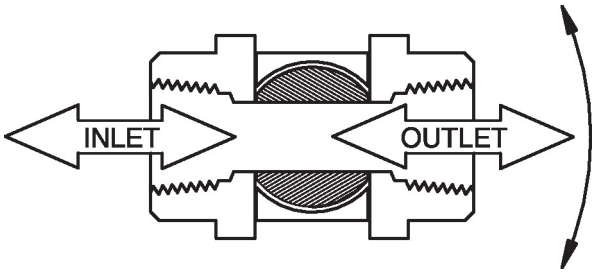
1/2" - 2" 600 PSIG WOG, Cold Non-Shock

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

Composition: BZ

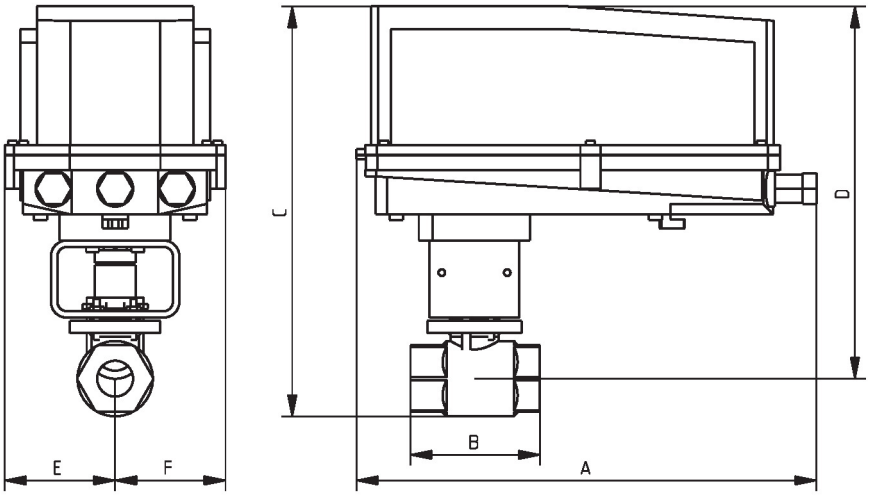
Style: 3

**Flow/Mounting details**




## Dimensions

| Type | DN | Weight |
|---|---|---|
| B232VS | 1 1/4" [32] | 3.5 lb [1.6 kg] |




B232VS+GRC..N4

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 14.1" [358] | 4.0" [101] | 12.6" [320] | 11.4" [290] | 3.4" [86] | 3.4" [86] |

MFT/programmable, Spring return, 24 V

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 | 7.5 W |
| | Power consumption in rest position | 3 W |
| | Transformer sizing | 10 VA |
| | Electrical Connection | 18 GA appliance cable, 1 m, 3 m, or 5 m with 1/2" NPT conduit connector, degree of protection NEMA 2 / IP54 |
| | Overload Protection | electronic throughout 0...95° rotation |
| **Functional data** | Operating range Y | 0...135 Ω |
| | Operating range Y note | Honeywell Electronic Series 90, input 0...135 Ω |
| | Position feedback U | 2...10 V |
| | Position feedback U note | Max. 0.5 mA |
| | Position feedback U variable | VDC variable |
| | Direction of motion motor | selectable with switch 0/1 |
| | Manual override | 5 mm hex crank (3/16" Allen), supplied |
| | Angle of rotation | 95° |
| | Angle of rotation note | adjustable with mechanical end stop, 35...95° |
| | Running Time (Motor) | 150 s / 90° |
| | Running time motor variable | 70...220 s |
| | Running time fail-safe | <20 s |
| | Override control | MIN (minimum position) = 0%<br>MID (intermediate position) = 50%<br>MAX (maximum position) = 100% |
| | Noise level, motor | 40 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 |

## Technical data

| | | |
|---|---|---|
| **Safety data** | Agency Listing | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU |
| | 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 | 4.6 lb [2.1 kg] |
| **Materials** | Housing material | Galvanized steel and plastic housing |

**Footnotes** *Variable when configured with MFT options.

## Accessories

| Electrical accessories | Description | Type |
|---|---|---|
| | Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices | ZTH US |

## Electrical installation

**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.

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

1 Provide overload protection and disconnect as required.

3 Actuators may also be powered by DC 24 V.

22 Actuators and controller must have separate transformers.

23 Consult controller instruction data for more detailed information.

24 Resistor value depends on the type of controller and the number of actuators. No resistor is used for one actuator. Honeywell® resistor kits may also be used.

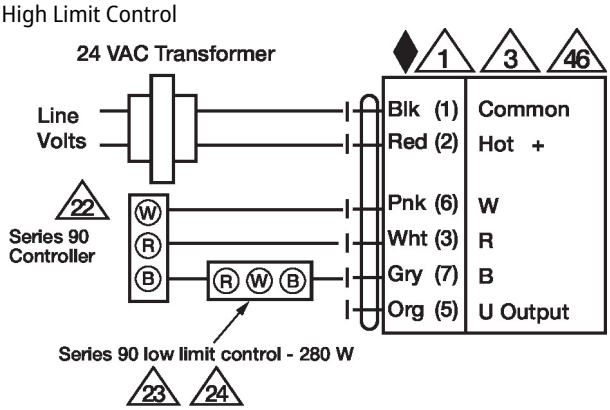
25 To reverse control rotation, use the reversing switch.

46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.

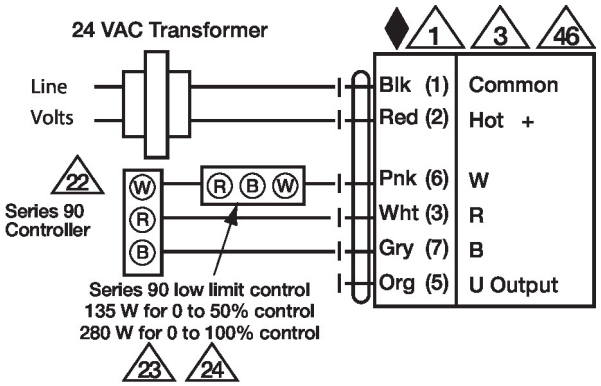
## Electrical installation

### Wiring diagrams

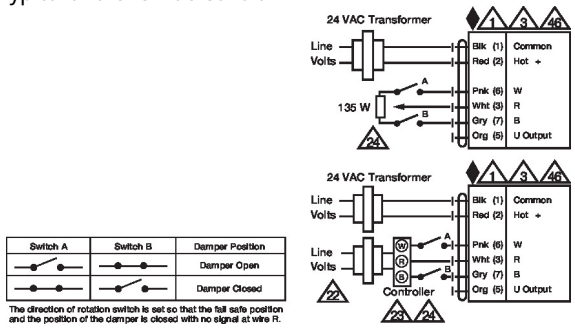
High Limit Control



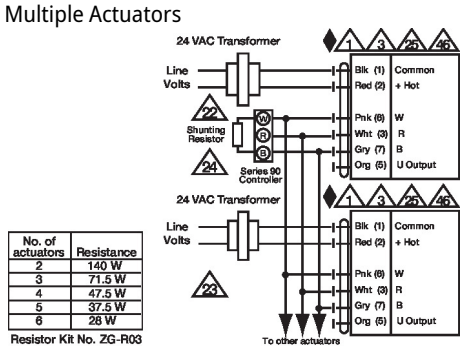

Low Limit Control



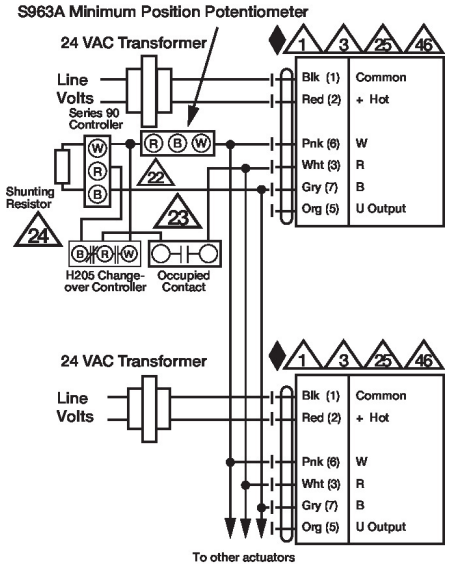

Typical and Override Control




Multiple Actuators




Multiple Actuators with Minimum Position Potentiometer




Multiple Actuators Used with W973, W7100 and T775