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



5-year warranty

## Type overview

| Type | DN |
|---|---|
| B252 | 50 |

## Technical data

| | | |
|---|---|---|
| **Functional data** | Valve size [mm] | 2" [50] |
| | Fluid | chilled or hot water, up to 60% glycol |
| | Fluid Temp Range (water) | 0...250°F [-18...120°C] |
| | Body Pressure Rating | 400 psi |
| | Close-off pressure Δps | 200 psi |
| | Flow characteristic | equal percentage |
| | Leakage rate | 0% for A – AB |
| | Pipe connection | Internal thread<br>NPT (female) |
| | Servicing | maintenance-free |
| | Flow Pattern | 2-way |
| | Controllable flow range | 75° |
| | Cv | 85 |
| **Materials** | Valve body | Nickel-plated brass body |
| | Stem | stainless steel |
| | Stem seal | EPDM (lubricated) |
| | Seat | PTFE |
| | Characterized disc | stainless steel |
| | O-ring | EPDM (lubricated) |
| | Ball | stainless steel |
| **Suitable actuators** | Non Fail-Safe | ARB(X)<br>ARQB(X)<br>ARB(X) N4 |
| | Spring | AFRB(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

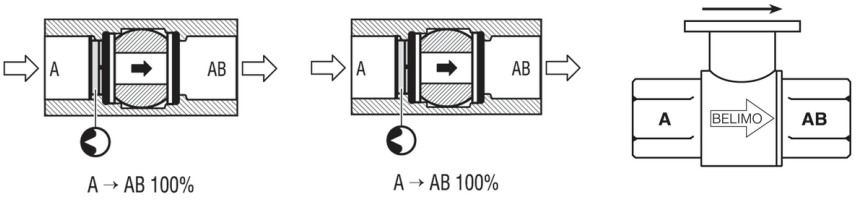
## Product features

**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.

**Flow/Mounting details**

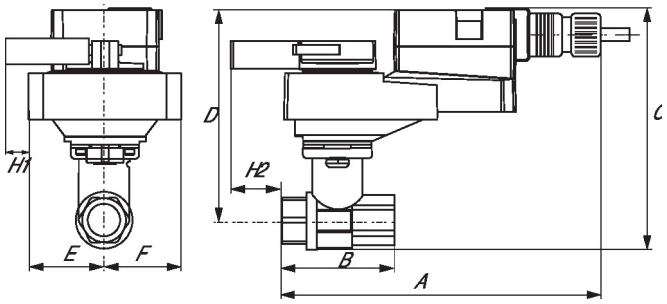
Two-way valves should be installed with the disc upstream.




## Dimensions

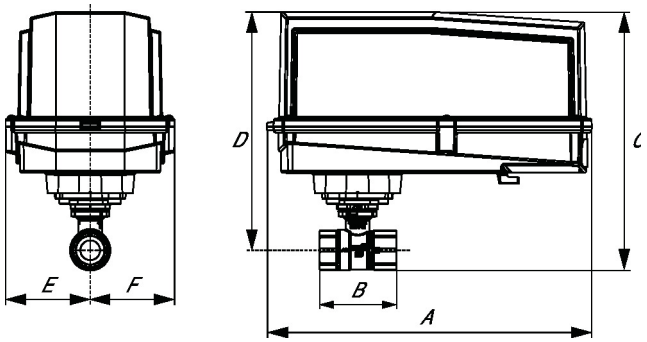
| Type | DN | Weight |
|---|---|---|
| B252 | 50 | 5.4 lb [2.4 kg] |

ARB, ARX



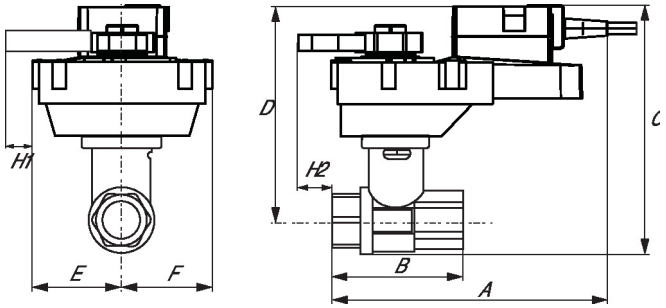

| A | B | C | D | E | F | H1 |
|---|---|---|---|---|---|---|
| 10.2" [260] | 4.9" [125] | 7.7" [196] | 6.0" [153] | 1.7" [44] | 1.7" [44] | 1.2" [30] |

ARB N4, ARX N4, NRB N4, NRX N4




| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 11.4" [289] | 4.9" [125] | 9.8" [249] | 7.6" [194] | 3.1" [80] | 3.1" [80] |

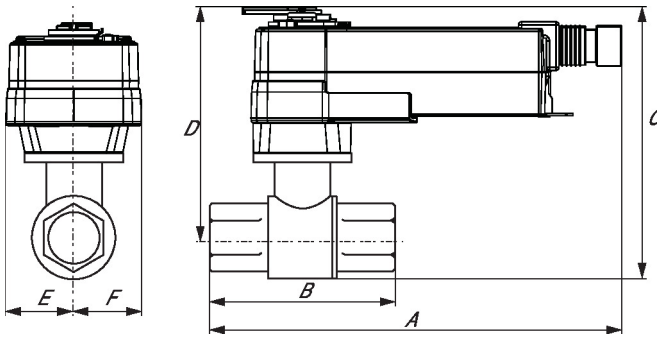
ARQB, ARQX



## Dimensions

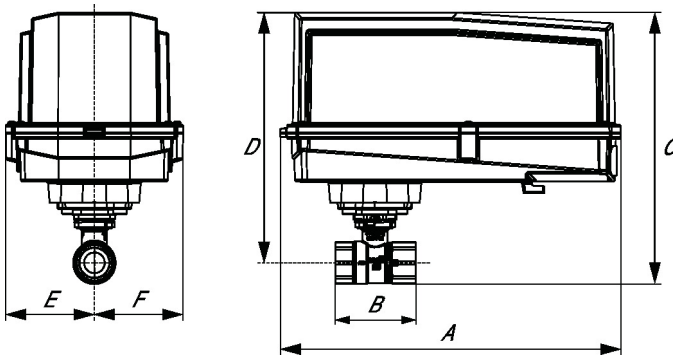
| A | B | C | D | E | F | H1 | H2 |
|---|---|---|---|---|---|---|---|
| 9.9" [251] | 4.9" [125] | 7.5" [191] | 6.1" [155] | 2.3" [58] | 2.3" [58] | 0.8" [20] | 0.6" [15] |

AFRB, AFRX




| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 11.3" [286] | 4.9" [125] | 10.6" [268] | 8.9" [225] | 2.0" [51] | 2.0" [51] |

AFRB N4, AFRX N4




| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 13.0" [330] | 4.9" [125] | 10.3" [262] | 9.3" [235] | 3.4" [86] | 3.4" [86] |

On/Off, Floating point, Non fail-safe, 100...240 V



5-year warranty

## Technical data

| | | |
|---|---|---|
| **Electrical data** | Nominal voltage | AC 100...240 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Nominal voltage range | AC 85...265 V |
| | Power consumption in operation | 3 W |
| | Power consumption in rest position | 0.6 W |
| | Transformer sizing | 7 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 thoughout 0...90° rotation |
| **Functional data** | Direction of motion motor | selectable with switch 0/1 |
| | Manual override | external push button |
| | Angle of rotation | 90° |
| | Angle of rotation note | adjustable with mechanical stop |
| | Running Time (Motor) | 90 s / 90° |
| | Running time motor variable | 90 or 150 s |
| | Noise level, motor | 45 dB(A) |
| | Position indication | Mechanical, pluggable |
| **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 UL60730-1A/-2-14, CAN/CSA E60730-1:02<br>CE acc. to 2014/30/EU and 2014/35/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 | 2.0 lb [0.92 kg] |
| **Materials** | Housing material | Galvanized steel and plastic housing |

## Technical data

**Footnotes** †Rated Impulse Voltage 4kV, Type of action 1, Control Pollution Degree 3.

## Electrical installation

**INSTALLATION NOTES**

A Actuators with appliance cables are numbered.

1 Provide overload protection and disconnect as required.

2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.

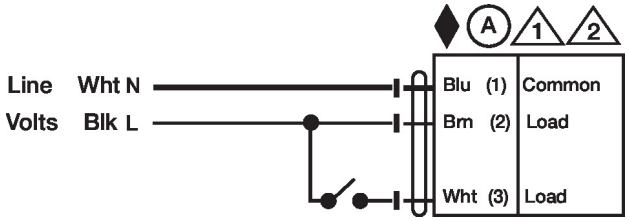
Meets cULus requirements without the need of an electrical ground connection.

**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 AC 100...240 V




Floating Point AC 100...240 V

