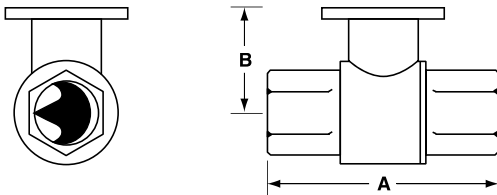




| Technical Data | |
|------------------------------------|--------------------------------------|
| Service | chilled or hot water, 60% glycol |
| Flow characteristic | A-port equal percentage |
| Action | 90° rotation |
| Sizes | ½", ¾", 1", 1¼", 1½", 2", 2½", 3" |
| Type of end fitting | NPT female ends |
| Materials: | |
| Body | forged brass, nickel plated |
| Ball | stainless steel |
| Stem | stainless steel |
| Seats | PTFE |
| Characterizing disc | Tefzel® |
| Packing | 2 EPDM O-rings, lubricated |
| Body pressure rating | |
| 600 psi | ½" - 1¼" (B230) |
| 400 psi | 1¼" (B231) - 3" |
| Media temp. range | 0°F to 212°F [-18°C to 100°C] |
| Close off pressure | |
| 200 psi | ½" - 2" (B250) |
| 100 psi | 2" (B251) - 3" |
| Maximum differential pressure (ΔP) | 30 psi for typical applications |
| Leakage | 0% for A to AB |
| External leakage | according to EN 12266-1:2003 |
| C _v rating | A-port: see product chart for values |

Tefzel® is a registered trademark of DuPont

Dimensions



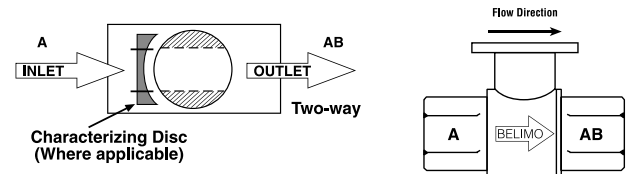
2WayValve-B207-B220

| Valve Body | Valve Nominal Size | | Dimensions (Inches [mm]) | |
|------------|--------------------|---------|--------------------------|--------------|
| | Inches | DN [mm] | A | B |
| B207-B211 | ½" | 15 | 2.41" [61.1] | 1.39" [35.2] |
| B212-B215 | ½" | 15 | 2.38" [60.4] | 1.78" [45.2] |
| B217-B220 | ¾" | 20 | 2.73" [69.3] | 1.87" [47.4] |
| B222-B225 | 1" | 25 | 3.09" [78.4] | 1.87" [47.4] |
| B229-B230 | 1¼" | 32 | 3.72" [94.6] | 1.87" [47.4] |
| B231-B232 | 1¼" | 32 | 3.72" [94.6] | 2.04" [51.9] |
| B238-B240 | 1½" | 40 | 3.88" [98.5] | 2.04" [51.9] |
| B248-B250 | 2" | 50 | 4.21" [107.0] | 2.27" [57.7] |
| B251-B254 | 2" | 50 | 4.93" [125.2] | 2.73" [69.5] |
| B261-B265 | 2½" | 65 | 5.55" [140.9] | 2.73" [69.5] |
| B277-B280 | 3" | 80 | 5.82" [147.9] | 2.73" [69.5] |

| C _v | Valve Nominal Size | | Type | Suitable Actuators | |
|----------------|--------------------|---------|-----------|--------------------|--------|
| | Inches | DN [mm] | 2-Way NPT | Non-Spring | Spring |
| 0.3 | ½" | 15 | B207 | TR Series | |
| 0.46 | ½" | 15 | B208 | | |
| 0.8 | ½" | 15 | B209 | | |
| 1.2 | ½" | 15 | B210 | | |
| 1.9 | ½" | 15 | B211 | | |
| 3 | ½" | 15 | B212 | | |
| 4.7 | ½" | 15 | B213 | | |
| 7.4 | ½" | 15 | B214 | | |
| 10 | ½" | 15 | B215* | | |
| 4.7 | ¾" | 20 | B217 | | |
| 7.4 | ¾" | 20 | B218 | | |
| 10 | ¾" | 20 | B219 | | |
| 24 | ¾" | 20 | B220* | | |
| 7.4 | 1" | 25 | B222 | | |
| 10 | 1" | 25 | B223 | | |
| 19 | 1" | 25 | B224 | | |
| 30 | 1" | 25 | B225* | | |
| 10 | 1¼" | 32 | B229 | | |
| 19 | 1¼" | 32 | B230* | | |
| 25 | 1¼" | 32 | B231 | | |
| 37 | 1¼" | 32 | B232* | | |
| 19 | 1½" | 40 | B238 | | |
| 29 | 1½" | 40 | B239 | | |
| 37 | 1½" | 40 | B240* | | |
| 29 | 2" | 50 | B248 | | |
| 46 | 2" | 50 | B249 | | |
| 57 | 2" | 50 | B250* | | |
| 65 | 2" | 50 | B251 | | |
| 85 | 2" | 50 | B252 | | |
| 120 | 2" | 50 | B253 | | |
| 240 | 2" | 50 | B254* | | |
| 60 | 2½" | 65 | B261 | | |
| 75 | 2½" | 65 | B262 | | |
| 110 | 2½" | 65 | B263 | | |
| 150 | 2½" | 65 | B264 | | |
| 210 | 2½" | 65 | B265* | | |
| 70 | 3" | 80 | B277 | | |
| 130 | 3" | 80 | B278 | | |
| 170 | 3" | 80 | B280* | | |

*Models without characterizing disc

Flow Patterns



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AF24-SR Actuators, Proportional

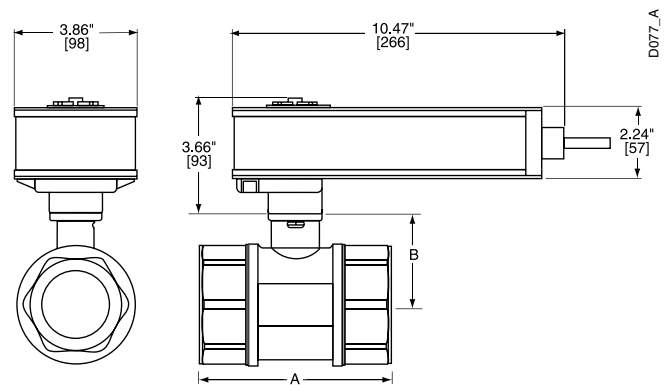


Models

AF24-SR US

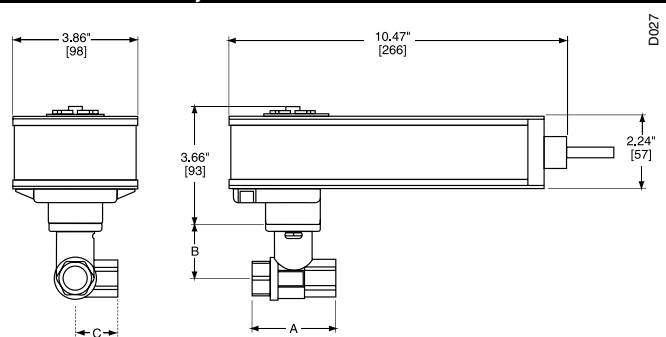
| Technical Data | | |
|-----------------------|---------|--|
| Control | | proportional |
| Power supply | | 24 VAC ± 20% 50/60 Hz 24 VDC ± 10% |
| Power consumption | running | 6 W |
| | holding | 2 W |
| Transformer sizing | | 10 VA, class 2 power |
| Electrical connection | | ½" conduit connector 3 ft [1m], 18 GA appliance cable |
| Overload protection | | electronic throughout 0° to 95° rotation |
| Feedback output | | 2 to 10 VDC, 0.5 mA max |
| Angle of rotation | | 95° |
| Direction of rotation | spring | reversible with CW/CCW mounting |
| | motor | reversible with built-in ↻/↻ switch |
| Position indication | | visual indicator |
| Manual override | | hex crank |
| Running time | motor | 150 seconds independent of load |
| | spring | <20 seconds |
| Ambient temperature | | -22° F to 122° F [-30° C to 50° C] |
| Housing | | NEMA 2, IP54 |
| Agency listings | | cULus according to UL 873 and CAN/CSA C22.2 No. 24-93 |
| Noise level | | max. 45 dB(A) |
| Quality standard | | ISO 9001 |

Dimensions with 2-Way Valve



| Valve Body | Valve Nominal Size | | Dimensions (Inches [mm]) | |
|------------|--------------------|---------|--------------------------|--------------|
| | Inches | DN [mm] | A | B |
| B231-B232 | 1¼" | 32 | 3.72" [94.6] | 2.04" [51.9] |
| B238-B240 | 1½" | 40 | 3.88" [98.5] | 2.04" [51.9] |
| B248-B250 | 2" | 50 | 4.21" [107.0] | 2.27" [57.7] |

Dimensions with 3-Way Valve



| Valve Body | Valve Nominal Size | | Dimensions (Inches [mm]) | | |
|------------|--------------------|---------|--------------------------|--------------|--------------|
| | Inches | DN [mm] | A | B | C |
| B329-B331 | 1¼" | 32 | 3.96" [100.6] | 2.27" [57.7] | 2.14" [54.3] |
| B338-B341 | 1½" | 40 | 4.39" [111.6] | 2.51" [63.7] | 2.40" [61.1] |
| B347-B352 | 2" | 50 | 4.90" [124.5] | 2.73" [69.5] | 2.74" [69.7] |

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Wiring Diagrams

✂️ INSTALLATION NOTES

CAUTION Equipment damage!
 2 Actuators may be connected in parallel.
 Power consumption must be observed.

3 Actuators may also be powered by 24 VDC.

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

📄 APPLICATION NOTES

◆ The ZG-R01 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC, up to 2 actuators may be connected in parallel.

⚠️ 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.

