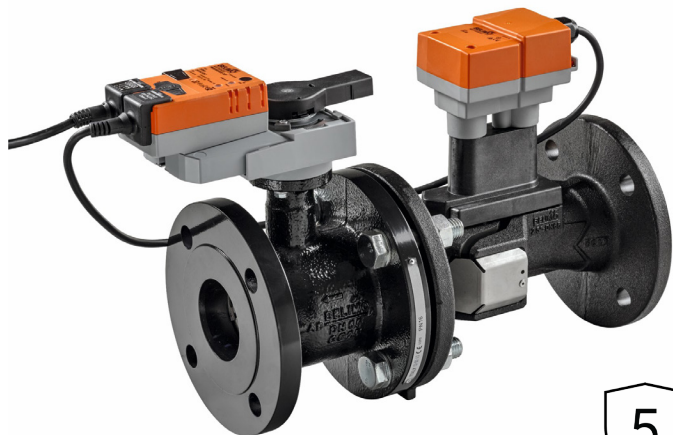


P6300SU-180-250 Technical Data Sheet



| Technical Data | |
|---|--|
| Fluid | chilled or hot water, up to 60% glycol max (open loop/steam not allowed) |
| Flow characteristic | equal percentage or linear |
| Valve Size [mm] | 3" [80] |
| Pipe connector | pattern to mate with ANSI 250 flange |
| Housing | Cast iron - GG 25 |
| Flow measuring pipe | Ductile cast iron - GGG50 |
| Ball | stainless steel |
| Stem | stainless steel |
| Stem seal | EPDM (lubricated) |
| Seat | PTFE |
| O-ring | Viton |
| Characterized disc | stainless steel |
| Package | EPDM |
| Body Pressure Rating | ANSI Class 250, standard class B |
| ANSI Class | 250 |
| Number of Bolt Holes | 8 |
| Differential Pressure Range | 5...50 psi or 1...50 psi see flow reductions chart in tech doc |
| Close-off pressure Δ ps | 310 psi |
| Ambient temperature | -22...122°F [-30...50°C] |
| Inlet Length to Meet Specified Measurement Accuracy | 5X nominal pipe size (NPS) |
| Ambient humidity | max. 95% r.H., non-condensing |
| Measuring accuracy flow | ±2%* |
| Control accuracy | ±5% |
| Flow Measurement Repeatability | ±0.5% |
| Sensor Technology | ultrasonic with glycol and temperature compensation |
| Rangeability Sv | 100:1 |
| Power supply for the flow sensor | sensor is powered by the actuator |
| Weight | 87.3 lb [40 kg] |
| GPM | 180 |
| Fluid Temp Range (water) | 14...250°F [-10...120°C] |
| Leakage rate | 0% |

*All flow tolerances are at 68°F (20°C) & water.

Application

Water-side control of heating and cooling systems for AHUs and water coils. Equal Percentage/ Linear: heating and cooling applications.

Operation

The Electronic Pressure Independent Control Valve is a two-way valve that maintains constant flow regardless of pressure variations in the system.

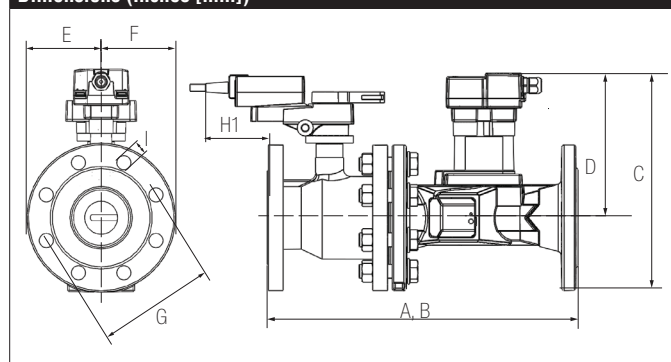
Product Features

Provides constant flow regardless of pressure variations in the system. Maximizes chiller Delta T, preventing energizing additional chillers due to low Delta T. Simplified valve sizing and selection, no Cv calculations required.

Suitable Actuators

| | Non-Spring | Electronic fail-safe |
|-----------------|------------|----------------------|
| P6300SU-180-250 | ARB(X) | (AKRB(X)) |

Dimensions (Inches [mm])



| A | B | C | D | E | F | G | H1 | I |
|-------|-------|-------|-------|-------|------|------|----|---|
| 17.0" | 12.0" | 7.9" | 4.1" | 6.6" | 3.3" | 0.9" | | |
| [433] | [305] | [200] | [105] | [168] | [85] | [22] | | |

AKRX24-EP2 Technical Data Sheet



5-year warranty



| Technical Data | |
|--------------------------------|---|
| Power Supply | 24 VAC, ±20%, 50/60 Hz, 24 VDC, -10% / +20% |
| Power consumption in operation | 8 W |
| Transformer sizing | 16 VA (class 2 power source) |
| Electrical Connection | 18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector |
| Overload Protection | electronic throughout 0...90° rotation |
| Operating Range | 2...10 V (default), 4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor), VDC variable |
| Input Impedance | 100 kΩ (0.1 mA), 500 Ω |
| Position Feedback | default 2...10 V, VDC variable |
| Angle of rotation | 90° |
| Torque motor | 180 in-lb [20 Nm] |
| Direction of motion motor | reversible with pc tool |
| Direction of motion fail-safe | reversible with switch |
| Position indication | electronic throughout 0...90° rotation |
| Manual override | external push button |
| Running Time (Motor) | 90 s |
| Running time fail-safe | <35 s |
| Ambient humidity | max. 95% r.H., non-condensing |
| Ambient temperature | -22...122°F [-30...50°C] |
| Storage temperature | -40...176°F [-40...80°C] |
| Degree of Protection | IP54, NEMA 2, UL Enclosure Type 2 |
| Housing material | UL94-5VA |
| Agency Listing | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU |
| Noise level, motor | 45 dB(A) |
| Servicing | maintenance-free |
| Quality Standard | ISO 9001 |
| Weight | 3.31 lb [1.5 kg] |

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

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

Date created, 06/18/2020 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams

INSTALLATION NOTES

- Provide overload protection and disconnect as required.
- Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- Actuators may also be powered by 24 VDC.
- Actuators are provided with color coded wires. Wire numbers are provided for reference.
- Actuators are provided with a numbered screw terminal strip instead of a cable.
- IN4004 or IN4007 diode required
- 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.

