

# P2200S-381, 2", Electronic Pressure Independent Valve

## Stainless Steel Ball and Stem, Female NPT Ends



Technical Data	
Service	chilled or hot water, up to 60% glycol max (open loop/steam not allowed)
Flow Characteristic	equal percentage or linear
Valve Size	2" [50]
End Fitting	NPT female ends
Body	forged brass, nickel plated
Sensor Housing	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Seat	Teflon® PTFE
Seat O-ring	EPDM
Characterized Disc	TEFZEL® or stainless steel
Body Pressure Rating	360 psi
Media Temperature Range (Water)	14°F to 250°F [-10°C to 120°C]
Differential Pressure Range	5 to 50 psid, 1 to 50 psid (with flow reduction. See chart.), or 8 to 50 psid (with flow increase. See chart.)
Close-Off Pressure	200 psi
Inlet Length to Meet Specified Measurement Accuracy	5X nominal pipe size (NPS)
Ambient Humidity	<95% RH non-condensing
Flow Measurement Tolerance	±2%*
Flow Control Tolerance	±5%
Flow Measurement Repeatability	±0.5%
Sensor Technology	ultrasonic with glycol and temperature compensation
Rangeability	100:1
Power Supply for the Flow Sensor	sensor is powered by the actuator
Weight	9.7 lb [4.4 kg]
GPM	38.1
Leakage	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.

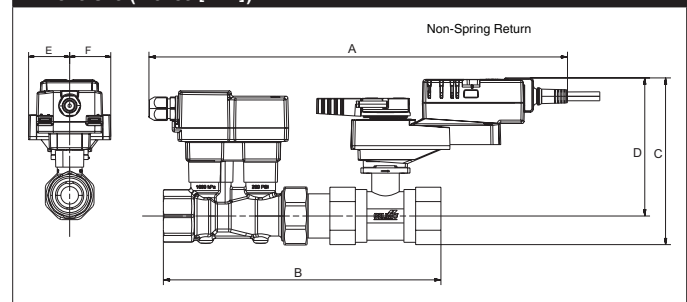
### Product Features

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

### Suitable Actuators

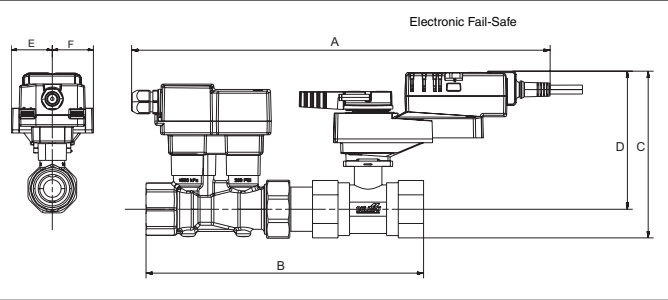
	Non-Spring	US only
P2200S-381	ARB(X)	4349

### Dimensions (Inches [mm])



A	B	C	D	E	F
17.04" [433]	11.18" [284]	6.89" [175]	5.59" [142]	1.73" [44]	

**Dimensions (Inches [mm])**



A	B	C	D	E	F
18.23" [463]	11.18" [284]	9.04" [229]	7.79" [198]	1.89" [48]	

# AKRX24-EP

Modulating, Electronic Fail-Safe, 24 V, Multi-Function Technology®



## Technical Data

Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
Power consumption in operation	6 W
Transformer sizing	12 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° to 90° rotation
Operating Range	DC 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 DC 2...10 V, VDC variable
Angle of rotation	90°
Torque motor	180 in-lb [20 Nm]
direction of rotation motor	reversible with pc tool
direction of rotation spring-return	reversible with switch
Position indication	integrated into handle
Manual override	external push button
Running Time (Motor)	90 sec
Running Time (Fail-Safe)	<35 sec
Ambient humidity	5...95% r.H. non condensing (EN 60730-1)
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP54, NEMA 2
Housing material	UL94-5VA
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level, motor	max. 45 dB (A)
Maintenance	maintenance-free
Quality Standard	ISO 9001
Weight	2.04 lb [1.5 kg]

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

## Safety Notes

⚠ WARNING: For Belimo Products sold in California, these Products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

#### Wiring Diagrams

#### ✂️ INSTALLATION NOTES

- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 18 Actuators with plenum cable do not have numbers; use color codes instead.
- 21 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.

