

B225VS Technical Data Sheet

Bronze Body, Stainless Steel Ball and Stem



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 functionality 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

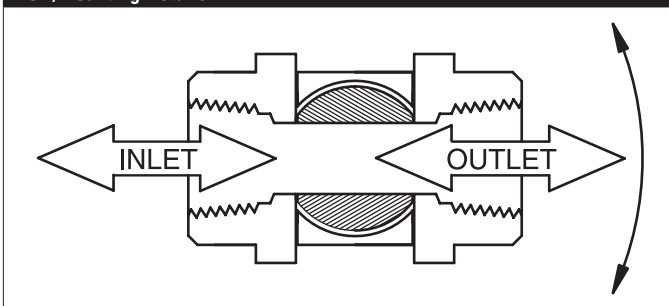
Suitable Actuators

	Non-Spring	Spring
B225VS	AMB(X), GRCB(X), GRB(X)	AF

Technical Data

Fluid	chilled or hot water, up to 60% glycol, steam
Flow characteristic	modified equal percentage
Controllable flow range	90° rotation
Valve Size [mm]	1" [25]
Pipe connection	NPT female ends
Housing	Bronze B584-C84400
Housing seal	PTFE
Ball	316 stainless steel
Retainer	B16 Brass
Stem	316 stainless steel
Stem seal	RPTFE
Spindle bearing	RPTFE
Lock nut	stainless steel
Seat	RPTFE
Body Pressure Rating	600 psig WOG psi
Maximum Inlet Pressure (Steam)	35 psi [241 kPa]
Max Differential Pressure (Steam)	35 psi
Close-off pressure Δ ps	600 psi
Maximum Velocity	15 FPS
Cv	68
Weight	3.53 lb [1.6 kg]
Fluid Temp Range (water)	-22...280°F [-30...138°C]
Leakage rate	ANSI Class VI

Flow/Mounting Details



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

AFBUP-S-X1 Technical Data Sheet

On/Off, Spring Return, AC/DC 24 V



5-year warranty



Technical Data	
Power Supply	24...240 VAC, -20% / +10%, 50/60 Hz, 24...125 VDC, ±10%
Power consumption in operation	7.5 W
Power consumption in rest position	3.5 W
Transformer sizing	7 VA @ AC 24 V (class 2 power source), 8.5 VA @ AC 120 V, 18 VA @ AC 240 V
Electrical Connection	(2) 18 GA appliance cables with 1/2" conduit connectors, 3 ft [1 m].
Overload Protection	electronic throughout 0...95° rotation
Position Feedback	No Feedback
Angle of rotation	95°
Torque motor	180 in-lb [20 Nm]
Direction of motion motor	selectable by ccw/cw mounting
Direction of motion fail-safe	reversible with cw/ccw mounting
Position indication	Mechanical
Manual override	5 mm hex crank (3/16" Allen), supplied
Running Time (Motor)	75 s
Running time fail-safe	<20 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	Galvanized steel and plastic housing
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	50 dB(A)
Noise level, fail-safe	62 dB(A)
Servicing	maintenance-free
Quality Standard	ISO 9001
Weight	4.6 lb [2.1 kg]
Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 10...90°

†Rated Impulse Voltage 4kV, Type of Action 1.AA.B, Control Pollution Degree 3.

Date created, 04/16/2020 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams

! 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.
- (A)** Actuators with appliance cables are numbered.
- (UP)** Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- ⚡** Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.
- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by 24 VDC.
- 4** Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- 45** Actuators may be powered in parallel. Power consumption must be observed.
- 48** Parallel wiring required for piggy-back applications.

