

Ball Valve (VS), DN 1" [25], 2-way, Cv 68





Picture may differ from product

Type overview	
Туре	DN
B225VS	1" [25]

#### **Technical data**

г	:		1 4-4-
FUI	ncu	ona	data

Valve size [mm]	1" [25]
Fluid	chilled or hot water, up to 60% glycol, steam
Fluid Temp Range (water)	-22280°F [-30138°C]
Body Pressure Rating	600 psig WOG psi
Close-off pressure Δps	600 psi
Flow characteristic	modified equal percentage
Leakage rate	ANSI Class VI
Pipe connection	Internal thread
	NPT (female)
Max Differential Pressure (Steam)	35 psi
Flow Pattern	2-way
Controllable flow range	90° rotation
Cv	68
Maximum Inlet Pressure (Steam)	35 psi [241 kPa]
Valve body	Bronze B584-C84400
Housing seal	PTFE

### Materials

Valve body	Bronze B584-C84400
Housing seal	PTFE
Stem	316 stainless steel
Stem seal	RPTFE
Seat	RPTFE
Lock nut	stainless steel
Retainer	B16 Brass
Ball	316 stainless steel
Non Fail-Safe	AMB(X) GRCB(X)
	GRB(X)

# Suitable actuators

Non Fail-Safe	AMB(X)
	GRCB(X)
	GRB(X)
Spring	AF

## 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.

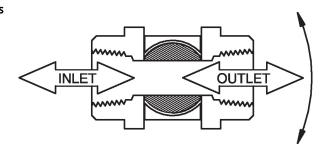
This valve is designed with MFT functionally which facilitates the use of various control input. Up to 35 psi steam

1/2" - 2" 600 PSIG WOG, Cold Non-Shock Federal Specification: WW-V-35C, Type II

Composition: BZ

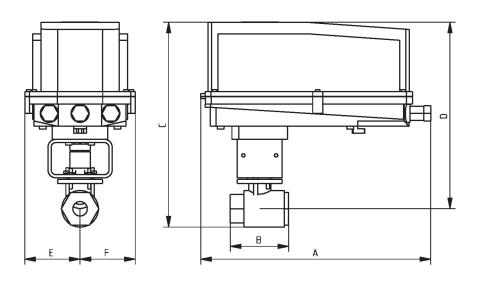
Style: 3

### Flow/Mounting details



### **Dimensions**

Туре	DN	Weight	
B225VS	1" [25]	3.5 lb [1.6 kg]	



#### B225VS+GRC..N4

Α	В	С	D	E	F
14.1" [358]	3.6" [92]	12.6" [320]	11.5" [292]	3.4" [86]	3.4" [86]



# MFT/programmable, Spring return, 24 V





5-year warranty







Tock	nica	data
16(1	шка	l data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.228.8 V / DC 21.628.8 V
	Power consumption in operation	7.5 W
	Power consumption in rest position	3 W
	Transformer sizing	10 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 throughout 095° rotation
Functional data	Operating range Y	210 V
	Operating range Y note	420 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Operating range Y variable	Start point 0.530 V End point 2.532 V
	Operating modes optional	variable (VDC, PWM, on/off, floating point)
	Position feedback U	210 V
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Direction of motion motor	selectable with switch 0/1
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	95°
	Angle of rotation note	adjustable with mechanical end stop, 3595°
	Running Time (Motor)	150 s / 90°
	Running time motor variable	70220 s
	Running time fail-safe	<20 s
	Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%
	Noise level, motor	40 dB(A)
	Noise level, fail-safe	62 dB(A)



#### **Technical data Functional data** Position indication Mechanical Safety data Power source UL Class 2 Supply IP54 Degree of protection IEC/EN 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, CE acc. to 2014/30/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 Ambient humidity Max. 95% RH, non-condensing -22...122°F [-30...50°C] Ambient temperature Storage temperature -40...176°F [-40...80°C] Servicing maintenance-free Weight Weight 4.6 lb [2.1 kg] Materials Housing material Galvanized steel and plastic housing

**Footnotes** 

\*Variable when configured with MFT options.

#### **Accessories**

Electrical accessories	Description	Туре
Service tool, with ZIP-USB function, for programmable and		ZTH US
	communicative Belimo actuators, VAV controller and HVAC performance devices	
	devices	

#### **Electrical installation**



#### 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 Provide overload protection and disconnect as required.



Actuators may also be powered by DC 24 V.



6 Only connect common to negative (-) leg of control circuits.



 $\setminus$  A 500  $\Omega$  resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.

Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line. For triac sink the Common connection from the actuator must be connected to the Hot

connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.

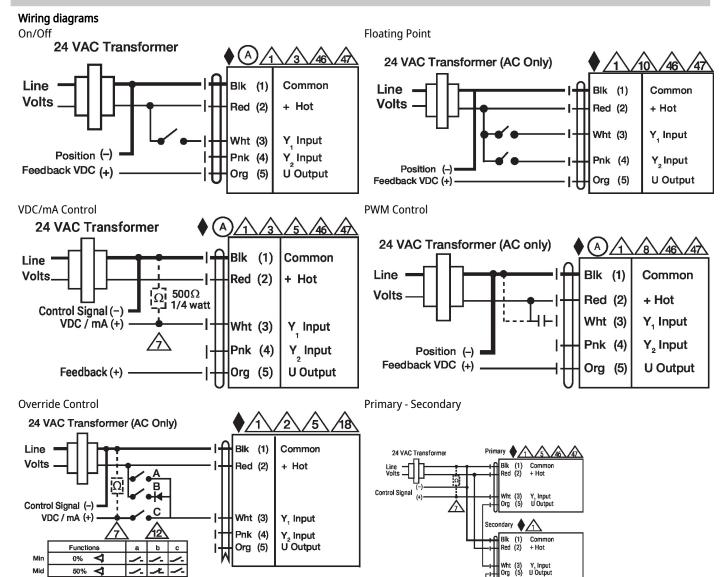


🛕 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).

Actuators may be controlled in parallel. Current draw and input impedance must be observed. Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).



#### **Electrical installation**



Control mode acc. to Y,