

Bronze Body, Stainless Steel Ball and Stem





Type overview	
Туре	DN
B224VS	25

Technical 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 ∆ps	600 psi
Flow characteristic	modified equal percentage
Max Differential Pressure (Steam)	35 psi
Flow Pattern	2-way
Leakage rate	ANSI Class VI
Controllable flow range	90° rotation
Cv	43
Maximum Inlet Pressure (Steam)	35 psi [241 kPa]
Maximum Velocity	15 FPS

Materials

a, v e.e e.e.		
Valve body	Bronze B584-C84400	
Housing seal	PTFE	
Spindle	316 stainless steel	
Spindle seal	RPTFE	
Seat	RPTFE	
Lock nut	stainless steel	
Pipe connection	NPT female ends	
Retainer	B16 Brass	
Ball	316 stainless steel	
Non-Spring	AMB(X)	
	GRCB(X)	
	GRB(X)	

Suitable actuators

Non-Spring	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 reheat 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.

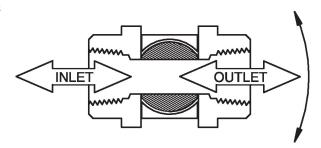
Up to 35 psi steam

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

Composition: BZ

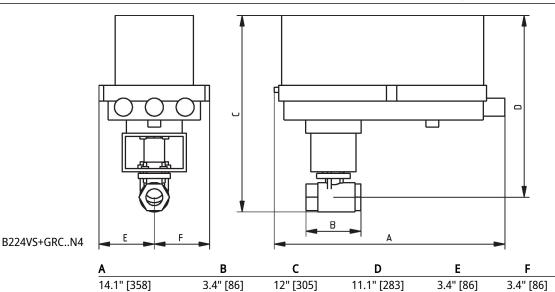
Style: 3

Flow/Mounting details



Dimensions

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Technical data

Technical data sheet NMB24-3-X1

ISO, CE, cCSAus

ISO 9001

Section 602 of the IMC

-22...122°F [-30...50°C] -40...176°F [-40...80°C]

maintenance-free

Max. 95% RH, non-condensing

Galvanized steel and plastic housing

Listed to UL 2043 - suitable for use in air plenums per Section 300.22(C) of the NEC and







Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	2 W
	Power consumption in rest position	0.2 W
	Power consumption for wire sizing	4 VA
	Transformer sizing	4 VA (class 2 power source)
	Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54
	Overload Protection	electronic thoughout 090° rotation
Functional data	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	Max. 95°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	95 s / 90°
	Running time motor note	constant, independent of load
	Noise level, motor	45 dB(A)
	Position indication	Mechanically, 3065 mm stroke
Safety data	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2

Agency Listing

Quality Standard
Ambient temperature

Housing material

Servicing

Materials

Storage temperature
Ambient humidity

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



Accessories

s Description	Туре
Battery backup system, for non-spring return models	NSV24 US
Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
Auxiliary switch 1 x SPDT add-on	S1A
Auxiliary switch 2 x SPDT add-on	S2A
Feedback potentiometer 140 Ω add-on, grey	P140A GR
Feedback potentiometer 1 k Ω add-on, grey	P1000A GR
Feedback potentiometer 10 k Ω add-on, grey	P10000A GR
Feedback potentiometer 2.8 kΩ add-on, grey	P2800A GR
Feedback potentiometer 500 Ω add-on, grey	P500A GR
Feedback potentiometer 5 k Ω add-on, grey	P5000A GR

Electrical installation

X INSTALLATION NOTES

(A) Actuators with appliance cables are numbered.

Provide overload protection and disconnect as required.

Actuators may also be powered by DC 24 V.

Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.

Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

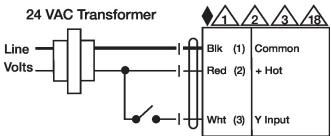
Meets cULus requirements without the need of an electrical ground connection.

Warning! Live electrical components!

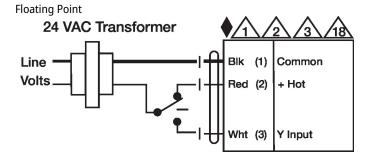
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

Wiring diagrams





Electrical accessories



24 VAC Transformer

Line Volts

Hot Com

Blk (1) Common

Red (2) + Hot

Wht (3) Y Input

