



Type overview	
Туре	DN
B249VSS	50

## **Technical data**

Functional data Valve size [mm]	Valve size [mm]	2" [50]		
	Fluid	shilled or bet water up to 60		

Fluid	chilled or hot water, up to 60% glycol, steam
Fluid Temp Range (water)	-22298°F [-30148°C]
Body Pressure Rating	1500 psig WOG
Close-off pressure Δps	1000 psi
Flow characteristic	modified equal percentage
Max Differential Pressure (Steam)	50 psi
Flow Pattern	2-way
Leakage rate	ANSI Class VI
Controllable flow range	90° rotation, A – AB open ccw, B – AB open cw
Cv	108
Maximum Inlet Pressure (Steam)	50 psi
Maximum Velocity	15 FPS

### Materials

Valve body	Stainless steel A351-CF8M 316
Housing seal	PTFE
Stem	316 stainless steel
Stem seal	RPTFE
Seat	RPTFE
Lock nut	stainless steel
Pipe connection	SAE NPT (female connections)
Ball	316 stainless steel
Non-Spring	GMB(X)

### Suitable actuators

Duli	5 TO Stalliness Steel
Non-Spring	GMB(X)
	PRB(X)
<del> </del>	
Spring	AF
Electrical fail-safe	PKRB(X)

# 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

These threaded valves are designed to provide modulating or two position control of hot or chilled water and saturated steam systems under 50 psi.

Typical applications include reheat coils, VAV terminal control, unit ventilators, and air handlers, especially in areas which have minimum profile requirements.

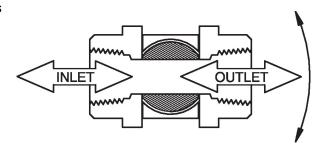
Up to 50 psi steam

1/2" - 2000 PSIG WOG, Cold Non-Shock Federal Specification: WW-V-35C, Type II

Composition: SS

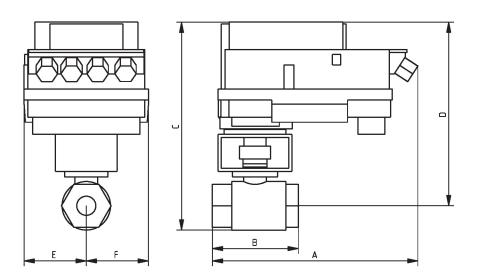
Style: 3

## Flow/Mounting details



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Туре	DN	Weight
B249VSS	50	6.17 lb [2.8 kg]



B249VSS+PKR..

Α	В	C	D	E	F
12.8" [325]	5.5" [140]	13.3" [337]	11.7" [298]	4.0" [102]	4.0" [102]







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Electrical data	Nominal voltage	AC 24240 V / DC 24125 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2264 V / DC 21.6137.5 V
	Power consumption in operation	7.5 W
	Power consumption in rest position	3.5 W
	Transformer sizing	36 VA
	Auxiliary switch	2x SPDT, 1 mA3 A (0.5 A inductive), DC 5 VAC 250 V, one set at 10°, one adjustable 1090°
	Switching capacity auxiliary switch	1 mA3 A (0.5 A inductive), DC 5 VAC 250 V
	Electrical Connection	(2) 18 GA appliance cables, 1 m, with 1/2" NPT conduit connectors
	Overload Protection	electronic throughout 095° rotation
Functional data	Position feedback U note	No Feedback
	Direction of motion motor	selectable by ccw/cw mounting
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	95°
	Running Time (Motor)	75 s / 90°
	Running time fail-safe	<20 s
	Noise level, motor	50 dB(A)
	Noise level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP54
	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 IMC
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-22122°F [-3050°C]
	Storage temperature	-40176°F [-4080°C]
	Servicing	maintenance-free
Weight	Weight	0
Materials	Housing material	Galvanized steel and plastic housing



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

#### **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.

Actuators with appliance cables are numbered.

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

(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.

A Provide overload protection and disconnect as required.

🐧 Actuators may also be powered by DC 24 V.

Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.

🛕 Actuators may be powered in parallel. Power consumption must be observed.

A Parallel wiring required for piggy-back applications.

### Wiring diagrams On/Off

