



2-year warranty

Type overview

Type	DN
B224VSS	25

Technical data

Functional data	Valve size [mm]	1" [25]
	Fluid	chilled or hot water, up to 60% glycol, steam
	Fluid Temp Range (water)	-22...298°F [-30...148°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
	Cv	43
	Maximum Inlet Pressure (Steam)	50 psi
	Maximum Velocity	15 FPS
Materials	Valve body	Stainless steel A351-CF8M 316
	Housing seal	PTFE
	Spindle	316 stainless steel
	Spindle seal	RPTFE
	Seat	RPTFE
	Lock nut	stainless steel
	Pipe connection	SAE NPT (female connections)
	Ball	316 stainless steel
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 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

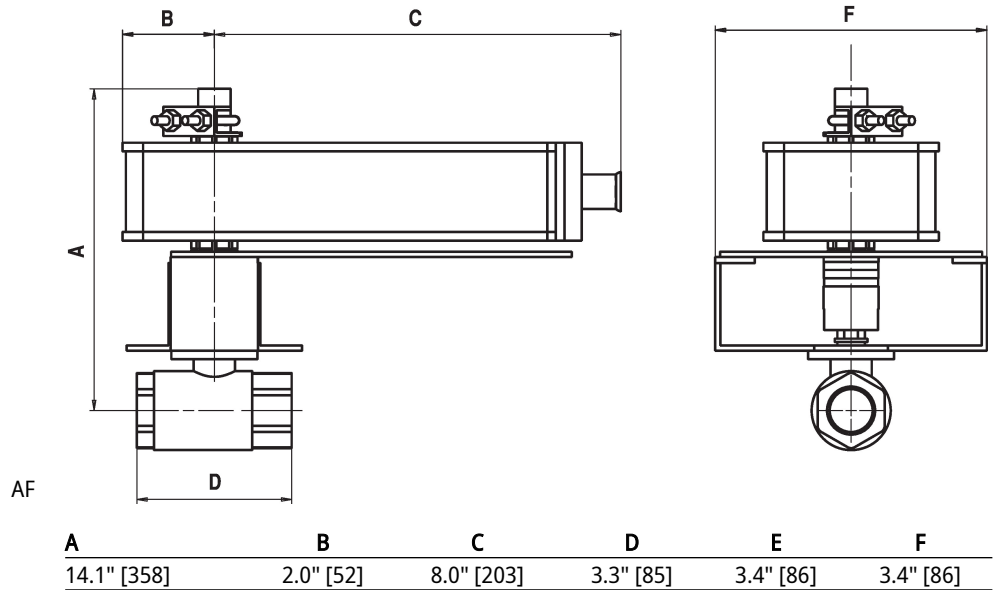
Flow/Mounting details

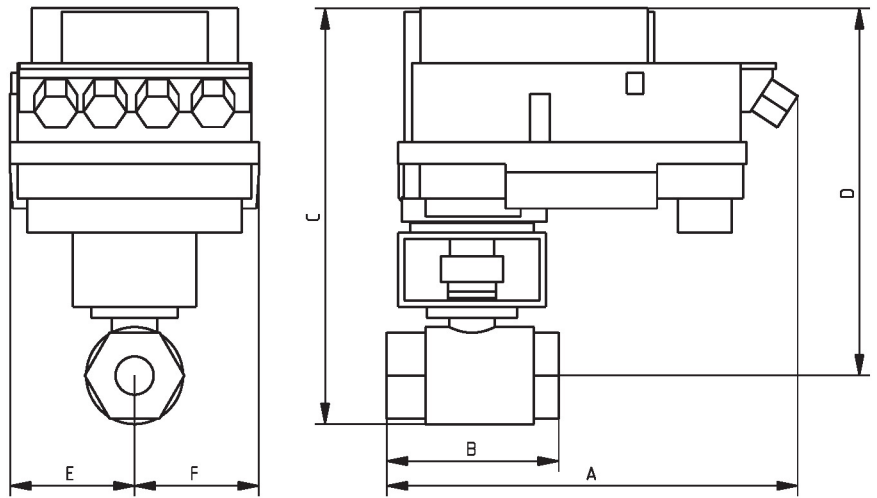


Dimensions

Type
 B224VSS

DN
 25





B249VSS+PKR..

A	B	C	D	E	F
14.1" [358]	3.4" [86]	12.1" [307]	11.1" [283]	3.4" [86]	3.4" [86]



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Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	2.5 W
	Power consumption in rest position	0.5 W
	Transformer sizing	5.5 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 throughout 0...95° 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
	Running time motor variable	90 or 150 s
	Position indication	Mechanically, 30...65 mm stroke
Safety data	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 and 2014/35/EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC
	Quality Standard	ISO 9001
	Ambient temperature	-22...149°F [-30...65°C]
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	Max. 95% RH, non-condensing
	Servicing	maintenance-free
	Materials	Housing material

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

Accessories

Electrical accessories	Description	Type
	Battery backup system, for non-spring return models	NSV24 US
	Battery, 12 V, 1.2 Ah (two required)	NSV-BAT

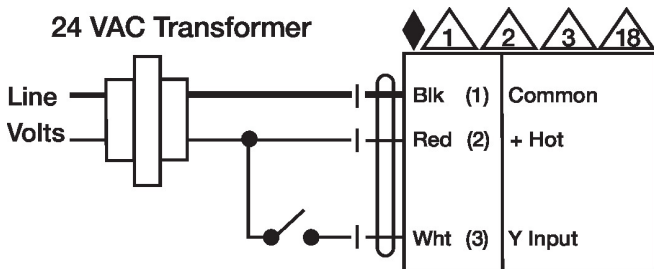
Electrical installation

✂ INSTALLATION NOTES

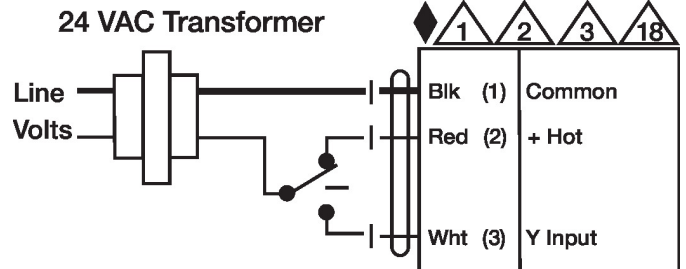
- (A)** Actuators with appliance cables are numbered.
- (1)** Provide overload protection and disconnect as required.
- (2)** Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- (3)** Actuators may also be powered by DC 24 V.
- (6)** Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.
- (18)** Actuators with plenum cable do not have numbers; use color codes instead.
- ◆** 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

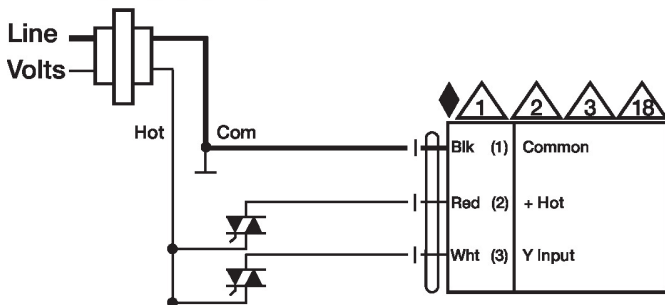
On/Off



Floating Point



24 VAC Transformer



Floating Point - Triac Sink

