

2-year warranty

Type overview

Type	DN
B249VSS	50

Technical data

Functional data	Valve size [mm]	2" [50]
	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, 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
	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	GMB(X) PRB(X)
	Spring	AF
	Electrical fail-safe	PKRB(X)

Safety notes

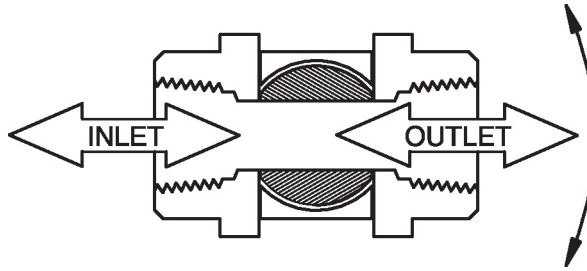


- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

Product features

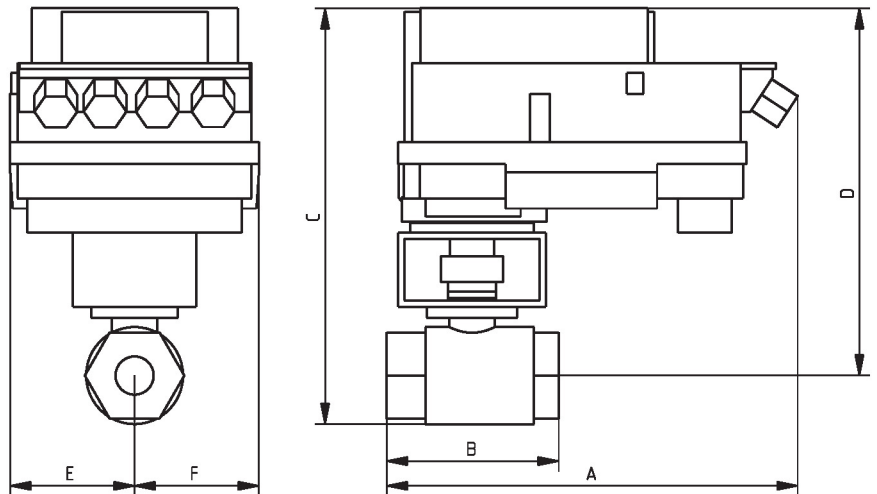
Application These threaded valves are designed to provide modulating or two position control of hot or chilled water and saturated steam systems under 50 psi.
 Typical applications include reheat coils, VAV terminal control, unit ventilators, and air handlers, especially in areas which have minimum profile 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



Dimensions

Type	DN
B249VSS	50



B249VSS+PKR..

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



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 24...240 V / DC 24...125 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	20 W
	Power consumption in rest position	6 W
	Transformer sizing	20 VA @ AC/DC 24 V (class 2 power source), 23 VA @ AC/DC 120 V, 52 VA @ AC 230 V
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, 1 x 10° / 1 x 0...90° (default setting 85°)
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	Terminal blocks, (PE) Ground-Screw
	Overload Protection	electronic throughout 0...90° rotation
	Functional data	Direction of motion motor
Manual override		7 mm hex crank, supplied
Angle of rotation		90°
Running Time (Motor)		35 s / 90°
Noise level, motor		68 dB(A)
Position indication		integral pointer
Safety data	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Enclosure	UL Enclosure Type 4X
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Ambient humidity	Max. 100% RH
	Servicing	maintenance-free
Materials	Housing material	Die cast aluminium and plastic casing

Product features

Application PR Series valve actuators are designed with an integrated linkage and visual position indicators. For outdoor applications, the installed valve must be mounted with the actuator at or above horizontal. For indoor applications the actuator can be in any location including directly under the valve.

Operation The PR series actuator provides 90° of rotation and a visual indicator shows the position of the valve. The PR Series actuator uses a low power consumption brushless DC motor and is electronically protected against overload. A universal power supply is furnished to connect supply voltage in the range of AC 24...240 V and DC 24...125 V. Included is a smart heater with thermostat to eliminate condensation. Two auxiliary switches are provided; one set at 10° open and the other is field adjustable. Running time is field adjustable from 30...120 seconds by using the Near Field Communication (NFC) app and a smart phone.

†Use 60°C/75°C copper wire size range 12...28 AWG, stranded or solid. Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 4000 V. Type of action 1. Control pollution degree 3.

Accessories

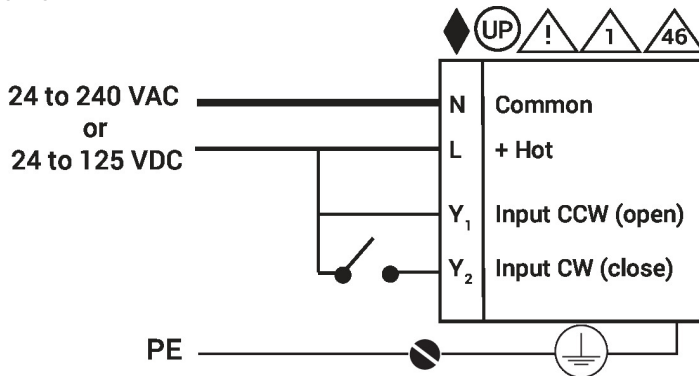
Mechanical accessories	Description	Type
	Hand crank for PR, PKR, PM	ZG-HND PR

Electrical installation

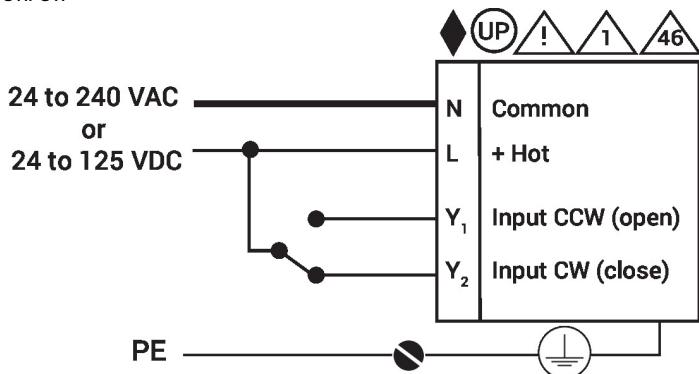
- ◆ Meets cULus requirements without the need of an electrical ground connection.
- Ⓢ Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- ⚡ Disconnect power.
- ⚠ Provide overload protection and disconnect as required.
- ⚠ Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- ⚠ Actuators may be controlled in parallel. Current draw and input impedance must be observed.
- ⚠ **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

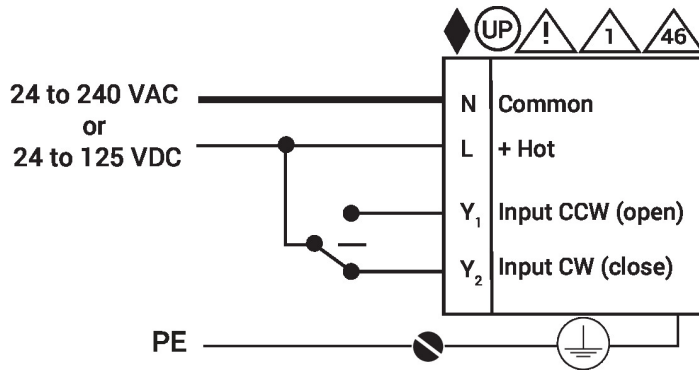
On/Off



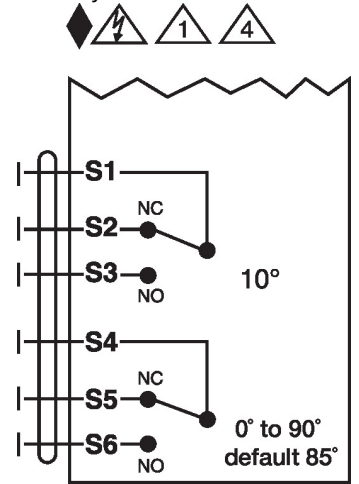
On/Off



Floating Point



Auxiliary Switches



Dimensions

