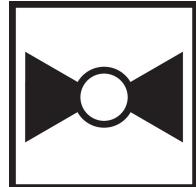


2-way, Characterized Control Valve, Stainless Steel Ball and Stem



5-year warranty



Type overview

Type	DN
B225	25

Technical data

Functional data	Valve size [mm]	1" [25]
Fluid	chilled or hot water, up to 60% glycol	
Fluid Temp Range (water)	0...250°F [-18...120°C]	
Body Pressure Rating	600 psi	
Close-off pressure Δps	200 psi	
Flow characteristic	equal percentage	
Leakage rate	0% for A – AB	
Pipe connection	Internal thread NPT (female)	
Servicing	maintenance-free	
Flow Pattern	2-way	
Controllable flow range	75°	
Cv	30	
No Characterized Disc	TRUE	
Materials	Valve body	Nickel-plated brass body
Stem	stainless steel	
Stem seal	EPDM (lubricated)	
Seat	PTFE	
Characterized disc	TEFZEL®	
O-ring	EPDM (lubricated)	
Ball	stainless steel	
Suitable actuators	Non Fail-Safe	LRB(X) LRQB(X) NRB(X) N4
Spring	LF	

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

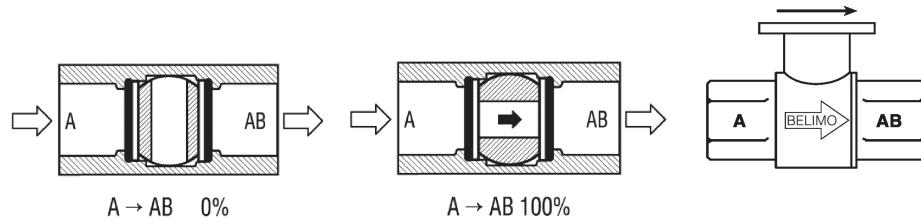
Product features

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.

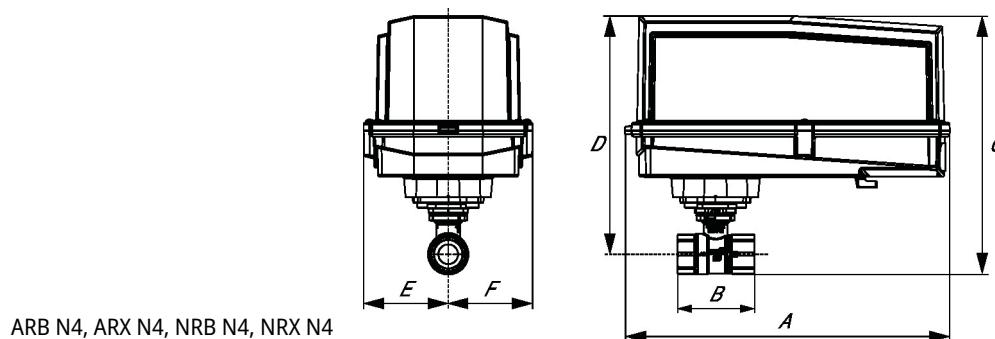
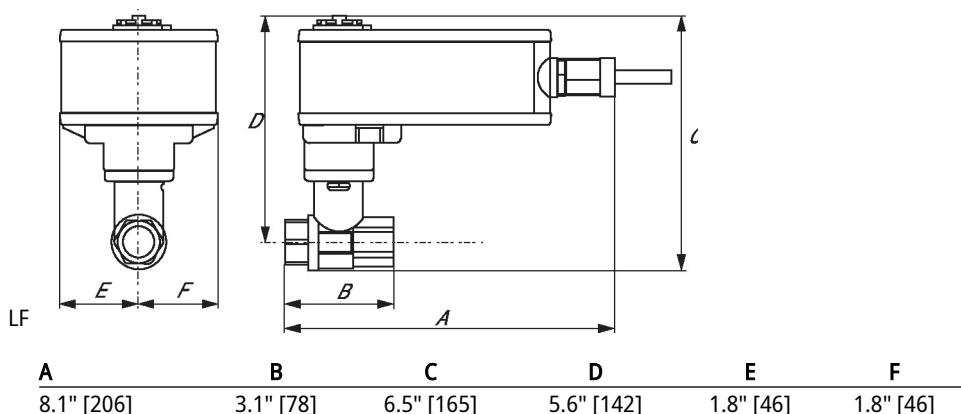
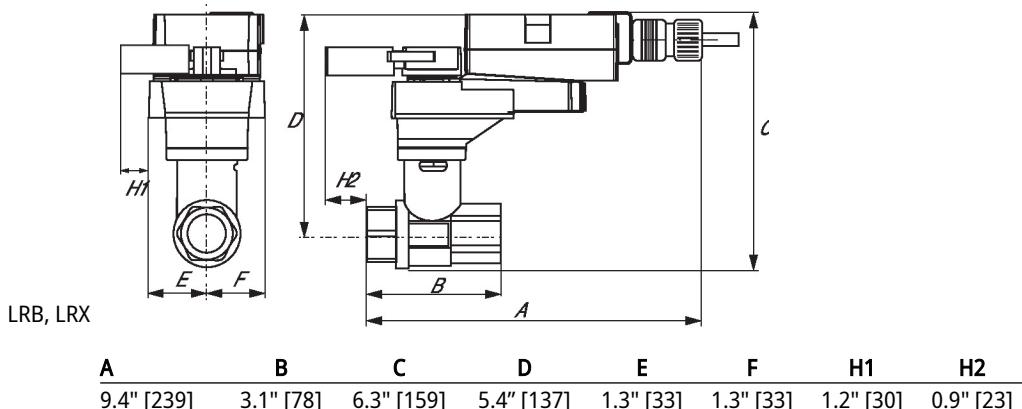
Flow/Mounting details

Two-way valves should be installed with the disc upstream.



Dimensions

Type	DN	Weight
B225	25	1.1 lb [0.49 kg]



Dimensions

A	B	C	D	E	F
11.4" [289]	3.1" [78]	7.8" [199]	7.1" [181]	3.1" [80]	3.1" [80]

On/Off, Floating point, Non fail-safe, 24 V



Technical data

Electrical data		
Nominal voltage	AC/DC 24 V	
Nominal voltage frequency	50/60 Hz	
Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V	
Power consumption in operation	1.5 W	
Power consumption in rest position	0.2 W	
Transformer sizing	2.5 VA	
Auxiliary switch	1x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, adjustable 0...100%	
Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V	
Electrical Connection	18 GA plenum cable, 1 m, 3 m, or 5 m with 1/2" NPT conduit connector, degree of protection NEMA 2 / IP54	
Overload Protection	electronic throughout 0...90° rotation	
Electrical Protection	actuators are double insulated	
Functional data		
Direction of motion motor	selectable with switch 0/1	
Manual override	external push button	
Angle of rotation	90°	
Angle of rotation note	adjustable with mechanical stop	
Running Time (Motor)	90 s / 90°	
Running time motor variable	150, 90, 45, 35 s	
Noise level, motor	35 dB(A)	
Position indication	Mechanical, pluggable	
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 and 2014/35/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	-22...122°F [-30...50°C]	
Storage temperature	-40...176°F [-40...80°C]	

Technical data

Safety data	Servicing	maintenance-free
Weight	Weight	1.2 lb [0.56 kg]
Materials	Housing material	Galvanized steel and plastic housing

Footnotes †Rated Impulse Voltage 800V, Type action 1, 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
Auxiliary switch 1x SPDT add-on		S1A
Auxiliary switch 2x SPDT add-on		S2A
Feedback potentiometer 140 Ω add-on, grey		P140A GR
Feedback potentiometer 1 kΩ add-on, grey		P1000A GR
Feedback potentiometer 10 kΩ 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 kΩ add-on, grey		P5000A GR

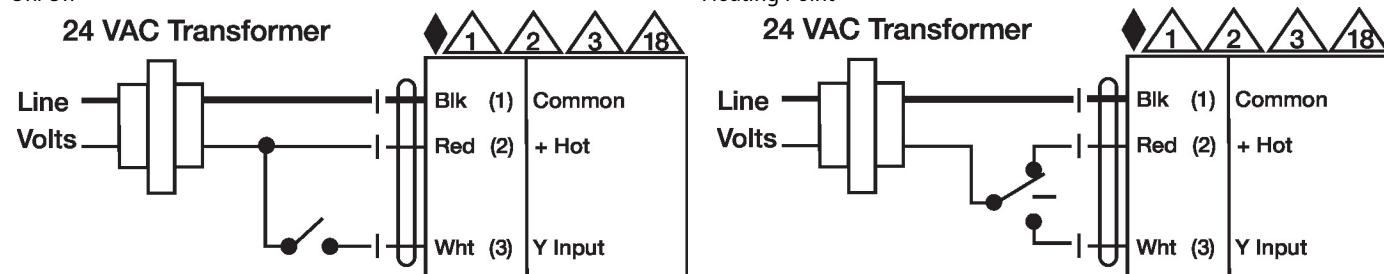
Electrical installation

 **INSTALLATION NOTES**

-  **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.
-  **44** One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.
-  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.
-  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

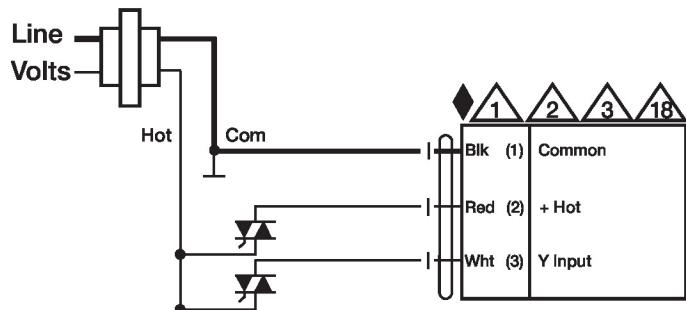
On/Off



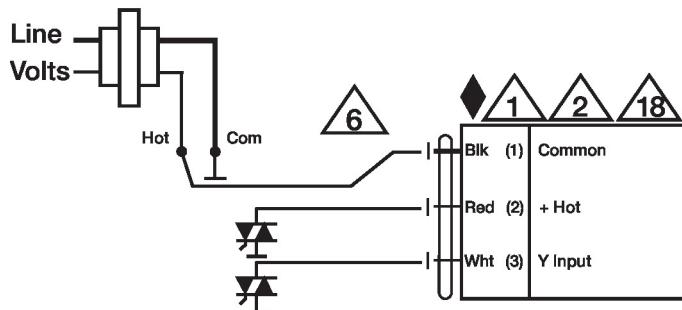
Electrical installation

Wiring diagrams

Floating Point - Triac Source
24 VAC Transformer



Floating Point - Triac Sink
24 VAC Transformer



Auxiliary Switches

