

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







Type overview

Туре	DN
B232	32

Technical data

Functional data	Valve size [mm]	1.25" [32]	
	Fluid	chilled or hot water, up to 60% glycol	
	Fluid Temp Range (water)	0250°F [-18120°C]	
	Body Pressure Rating	400 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	37	
	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	ARB(X) NRQB(X) ARB(X) N4	
	Spring	AFRB(X)	

Safety notes



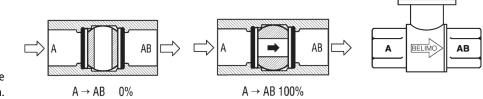
• WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov



Product features

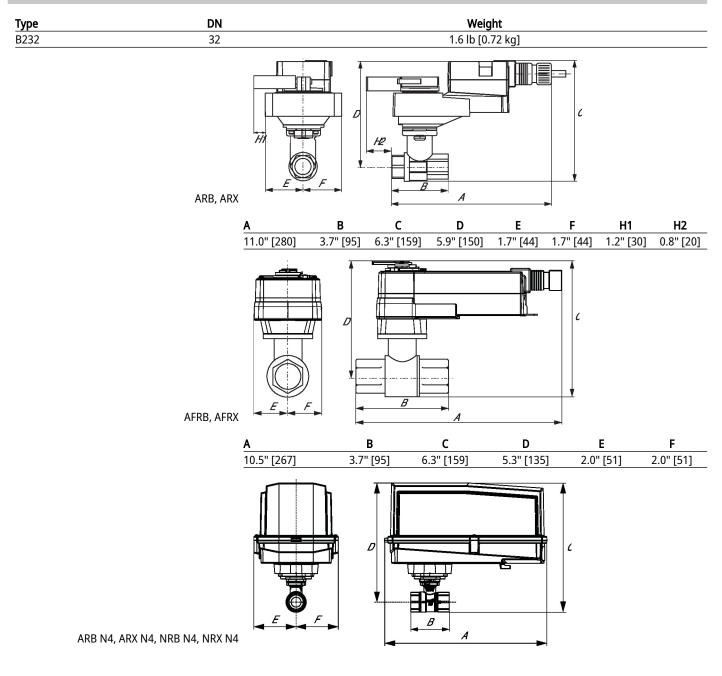
Application This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

Flow/Mounting details



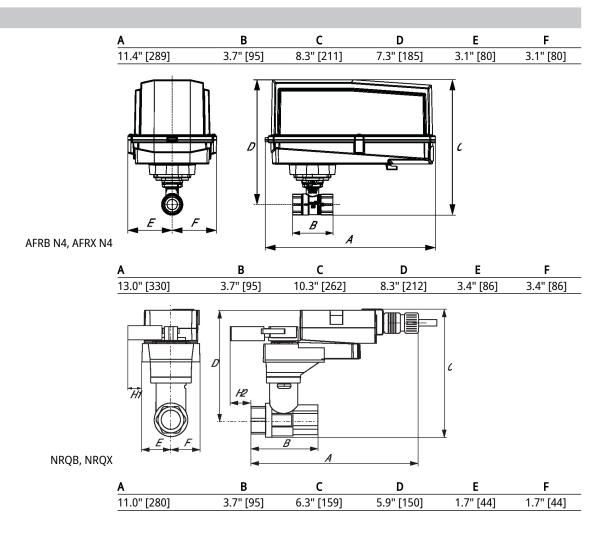
Two-way valves should be installed with the disc upstream.

Dimensions











MFT/programmable, 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 19.228.8 V / DC 21.628.8 V	
	Power consumption in operation	3.5 W	
	Power consumption in rest position	1.3 W	
	Transformer sizing	6 VA	
	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 thoughout 090° rotation	
Functional data	Operating range Y	210 V	
	Operating range Y note	420 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)	
	Input impedance	100 kΩ for 210 V (0.1 mA), 500 Ω for 420 mA, 1500 Ω for PWM, On/Off and Floating point	
	Operating range Y variable	Start point 0.530 V End point 2.532 V	
	Operating modes optional	variable (VDC, on/off, floating point)	
	Position feedback U	210 V	
	Position feedback U note	Max. 0.5 mA	
	Position feedback U variable	VDC variable	
	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)	150 s / 90°	
	Running time motor variable	90150 s	
	Noise level, motor	45 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	
	Quality Standard	ISO 9001	



Safety data	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	2.0 lb [0.92 kg]	
Materials	Materials Housing material Galvanized steel and plast		

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

Accessories

Gateways	Description	Туре
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
Electrical accessories	Description	Туре
	Battery backup system, for non-spring return models	NSV24 US
	Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
	Service tool, with ZIP-USB function, for programmable and	ZTH US
	communicative Belimo actuators, VAV controller and HVAC performance devices	
Tools	Description	Туре
	Connecting cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

Electrical installation

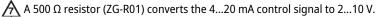
\prec	INSTALLATIO	N NOTES

A Provide overload protection and disconnect as required.

Actuators may be connected in parallel. Power consumption and input impedance must be observed.

Actuators may also be powered by DC 24 V.

S Only connect common to negative (-) leg of control circuits.



Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line.



connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.

IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).

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.



Technical data sheet

Electrical installation

