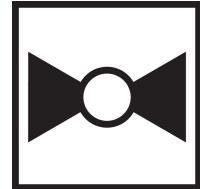


2-way, Characterized Control Valve, Stainless Steel Ball and Stem



5-year warranty



Type overview

Type	DN
B216	15

Technical data

	Functional data	Valve size [mm]	0.5" [15]
	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	16	
	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	TR LRB(X) LRQB(X) NRB(X) N4
	Spring	TFRB(X) 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

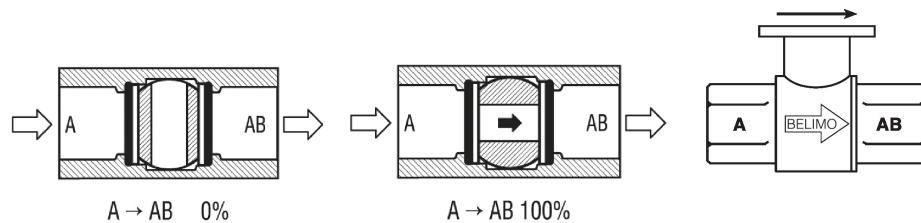
Product features

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.

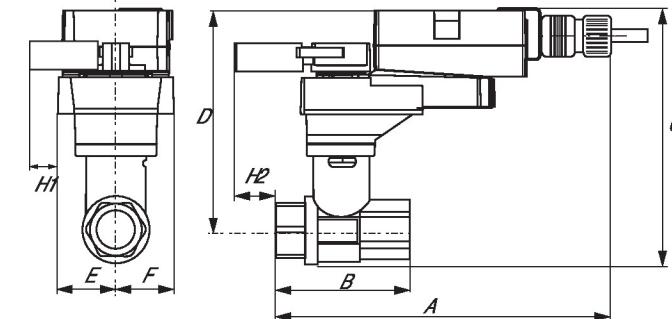
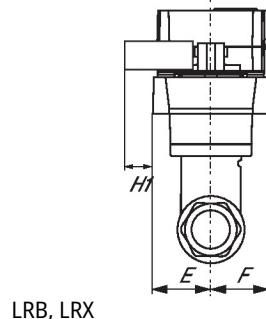
Flow/Mounting details

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



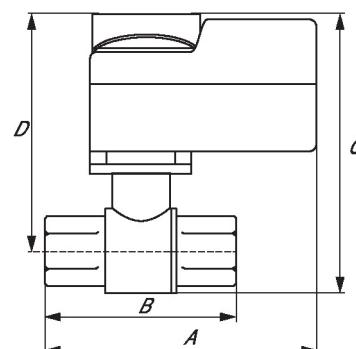
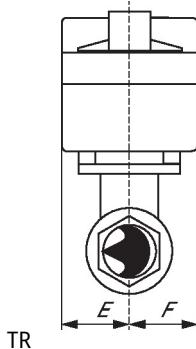
Dimensions

Type	DN	Weight
B216	15	0.66 lb [0.30 kg]



LRB, LRX

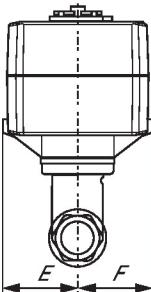
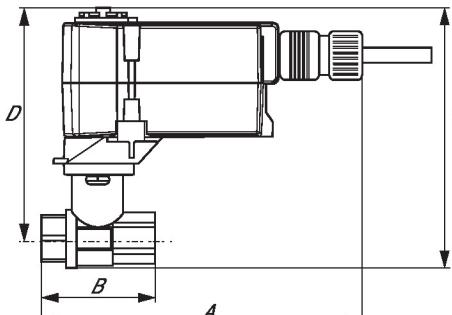
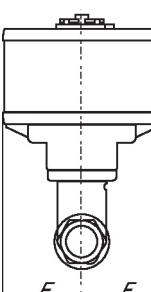
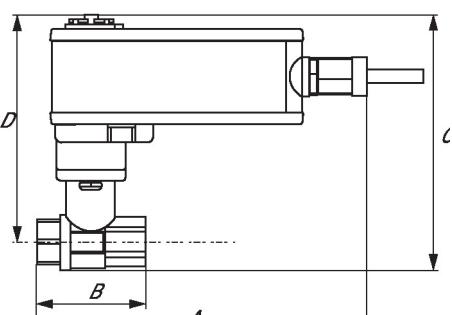
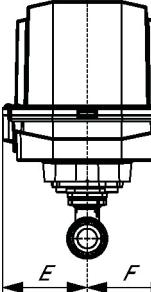
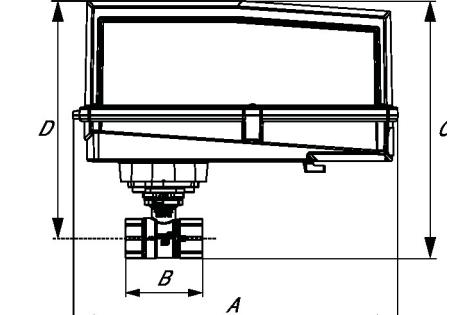
A	B	C	D	E	F	H1	H2
9.4" [239]	2.4" [60]	5.6" [141]	5.0" [127]	1.3" [33]	1.3" [33]	1.2" [30]	1.1" [28]



TR

A	B	C	D	E	F
3.7" [95]	2.4" [60]	5.2" [132]	4.6" [117]	1.3" [33]	1.3" [33]

Dimensions

					
TFRB, TFRX	A 6.6" [167]	B 2.4" [60]	C 5.5" [139]	D 4.7" [120]	E 1.5" [39]
					
LF	A 7.91" [200]	B 2.4" [60]	C 6.1" [154]	D 5.5" [140]	E 1.3" [33]
					
ARB N4, ARX N4, NRB N4, NRX N4	A 11.4" [289]	B 2.4" [60]	C 7.7" [196]	D 7.0" [179]	E 3.1" [80]
					F 3.1" [80]

MFT/programmable, Non fail-safe, 24 V



5-year warranty



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	3.5 W
	Power consumption in rest position	1.3 W
	Transformer sizing	6 VA
	Electrical Connection	Screw terminal (for 26...14 AWG wire), 1/2" NPT conduit connector
	Overload Protection	electronic throughout 0...95° rotation
Functional data	Operating range Y	2...10 V
	Operating range Y note	4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Input impedance	100 kΩ for DC 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for PWM and On/Off
	Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V
	Operating modes optional	variable (VDC, PWM, on/off, floating point)
	Position feedback U	2...10 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	Max. 90°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	150 s / 90°
	Running time motor variable	45...150 s
	Noise level, motor	45 dB(A)
	Position indication	pointer
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Housing	UL Enclosure Type 4X

Safety data	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 humidity	Max. 100% RH	
Ambient temperature	-22...122°F [-30...50°C]	
Ambient temperature note	-40...50°C [104...122°F] for actuator with integrated heating	
Storage temperature	-22...122°F [-30...50°C]	
Servicing	maintenance-free	
Weight	Weight	3.7 lb [1.7 kg]
Materials	Housing material	Die cast aluminium and plastic casing

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

Accessories

	Description	Type
Gateways	Gateway MP to BACnet MS/TP Gateway MP to Modbus RTU Gateway MP to LonWorks	UK24BAC UK24MOD UK24LON
Electrical accessories	Description	Type
	Battery backup system, for non-spring return models Battery, 12 V, 1.2 Ah (two required) Auxiliary switch 1x SPDT add-on Auxiliary switch 2x SPDT add-on Feedback potentiometer 140 Ω add-on, grey Feedback potentiometer 1 kΩ add-on, grey Feedback potentiometer 10 kΩ add-on, grey Feedback potentiometer 2.8 kΩ add-on, grey Feedback potentiometer 500 Ω add-on, grey Feedback potentiometer 5 kΩ add-on, grey	NSV24 US NSV-BAT S1A S2A P140A GR P1000A GR P10000A GR P2800A GR P500A GR P5000A GR
Tools	Description	Type
	Connecting cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection Service tool, with ZIP-USB function, for configurable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZK4-GEN ZTH US
Factory add-on option only	Description	Type
	Heater, with adjustable thermostat	ACT_PACK_H

Electrical installation

INSTALLATION NOTES

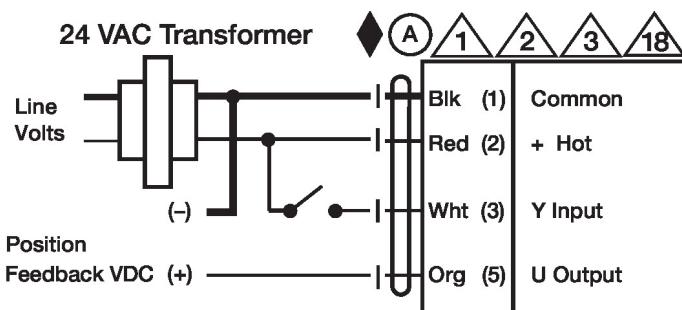
-  **1** Provide overload protection and disconnect as required.
-  **2** Actuators may be connected in parallel. Power consumption and input impedance must be observed.
-  **3** Actuators may also be powered by DC 24 V.
-  **5** Only connect common to negative (-) leg of control circuits.
-  **7** A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
-  **10** For triac sink the Common connection from the actuator must be connected to the Hot 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 are provided with a numbered screw terminal strip instead of a cable.
- ◆ Meets cULus requirements without the need of an electrical ground connection.
- ⚠ **Warning! Live electrical components!**

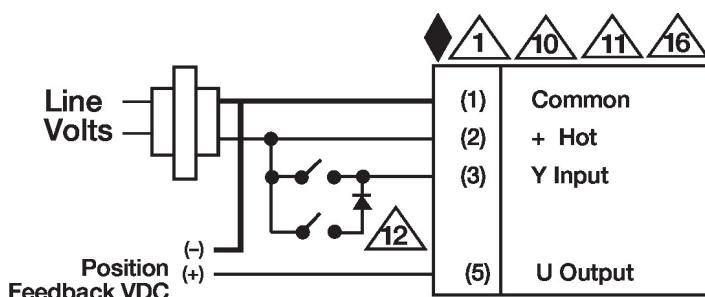
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

Wiring diagrams

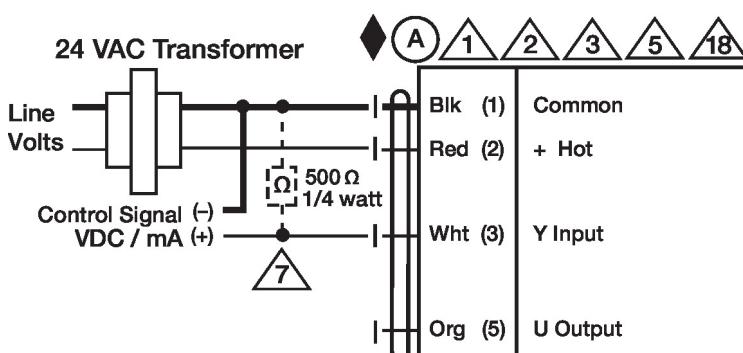
On/Off



Floating Point AC 24 V Transformer (AC Only)



VDC/mA Control



Electrical installation

Wiring diagrams

Override Control

