B212 Technical Data Sheet
Stainless Steel Ball and Stem

5-year warranty

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.

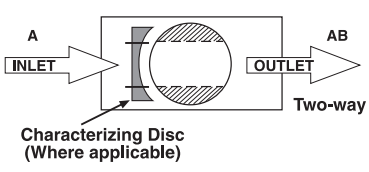
Suitable Actuators

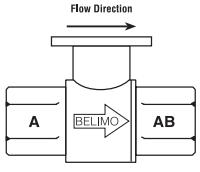
	Non-Spring	Spring
B212	TR, LRB(X), NR	TFRB(X), LF

Technical Data

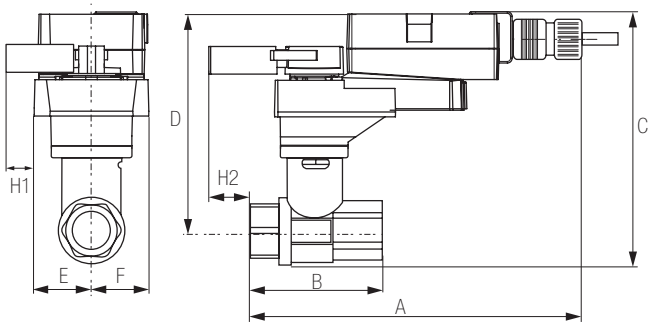
Fluid	chilled, hot water, up to 60% glycol
Flow characteristic	equal percentage
Controllable flow range	75°
Valve Size [mm]	0.5" [15]
Pipe connection	NPT female ends
Housing	Nickel-plated brass body
Ball	stainless steel
Stem	stainless steel
Stem seal	EPDM (lubricated)
Seat	PTFE
O-ring	EPDM (lubricated)
Characterized disc	TEFZEL®
Body Pressure Rating	600 psi
Close-off pressure Δps	200 psi
Cv	3
Weight	0.66 lb [0.30 kg]
Fluid Temp Range (water)	0...250°F [-18...120°C]
Leakage rate	0% for A – AB
Servicing	maintenance-free

Flow/Mounting Details





Dimensions (Inches [mm])

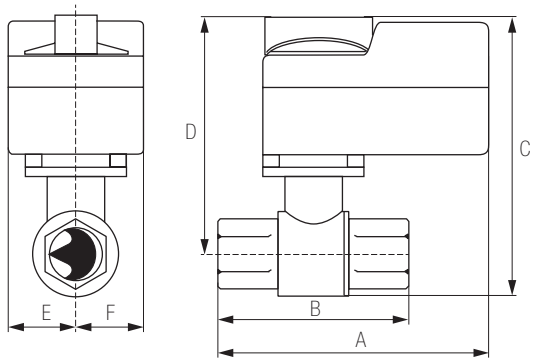


LRB, LRX

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

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

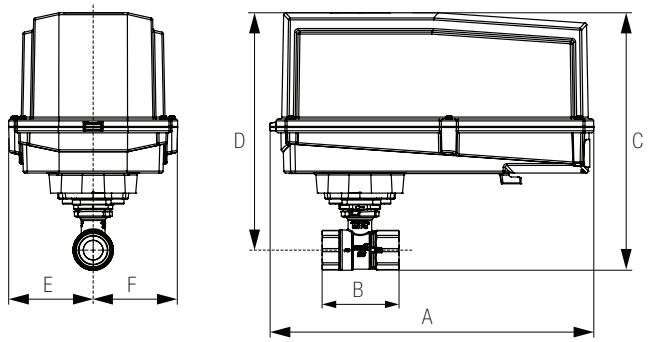
Dimensions (Inches [mm])



TR

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

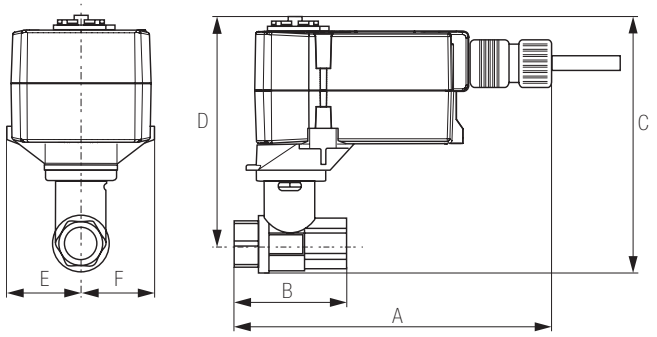
Dimensions (Inches [mm])



ARB N4, ARX N4, NRB N4, NRX N4

A	B	C	D	E	F
11.4” [289]	2.4” [60]	7.7” [196]	7.0” [179]	3.1” [80]	

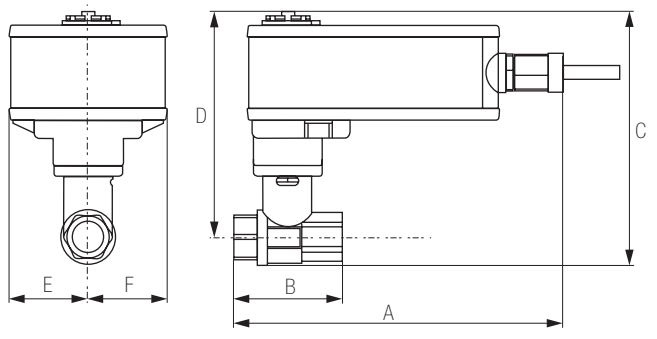
Dimensions (Inches [mm])



TFRB, TFRX

A	B	C	D	E	F
6.6” [167]	2.4” [60]	5.5” [139]	4.7” [120]	1.5” [39]	

Dimensions (Inches [mm])



LF

A	B	C	D	E	F
7.9” [200]	2.4” [60]	6.1” [154]	5.5” [140]	1.8” [46]	

NRX24-SR-T N4 Technical Data Sheet

NEMA 4X, Modulating Control, Non-Spring Return, 24 V, for DC 2…10 V or 4…20 mA

5-year warranty

Technical Data	
Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
Power consumption in operation	3.5 W
Power consumption in rest position	0.6 W
Transformer sizing	5 VA (class 2 power source)
Electrical Connection	Screw terminal (for 26 to 14 GA wire), 1/2" conduit connector
Overload Protection	electronic throughout 0...95° rotation
Operating Range	2...10 V, 4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
Input Impedance	100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA
Position Feedback	2...10 V
Angle of rotation	Max. 90°, adjustable with mechanical stop
Direction of motion motor	selectable with switch 0/1
Position indication	pointer
Manual override	external push button
Running Time (Motor)	90 s
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP66/67, NEMA 4X, UL Enclosure Type 4X
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level, motor	45 dB(A)
Servicing	maintenance-free
Quality Standard	ISO 9001
Weight	2.8 lb [1.3 kg]

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

NRX24-SR-T N4 Technical Data Sheet

NEMA 4X, Modulating Control, Non-Spring Return, 24 V, for DC 2...10 V or 4...20 mA

Wiring Diagrams

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 24 VDC.

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

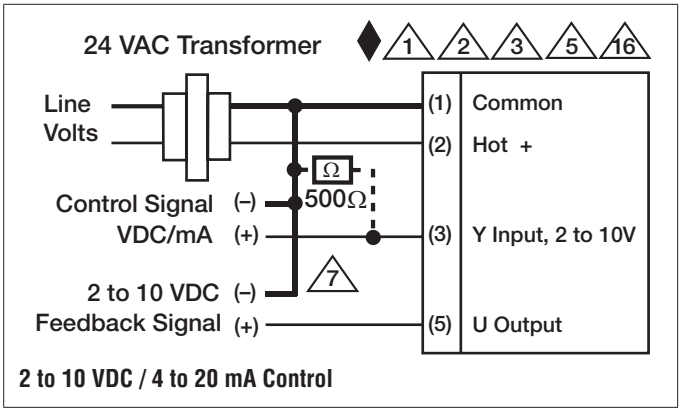
7 A 500 Ω resistor (ZG-R01) converts the 4 to 10 mA control signal to 2 to 10 VDC.

16 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.



2 to 10 VDC / 4 to 20 mA Control