









Technical data

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Valve Size	0.5" [15]	
Fluid	chilled or hot water, up to 60% glycol	
Fluid Temp Range (water)	0250°F [-18120°C]	
Body Pressure Rating	600 psi	
Close-off pressure ∆ps	200 psi	
Flow characteristic	equal percentage	
Servicing	maintenance-free	
Flow Pattern	2-way	
Leakage rate	0% for A – AB	
Controllable flow range	75°	
Cv	1.9	
Body pressure rating note	600 psi	
Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv	
Valve body	Nickel-plated brass body	
Stem seal	EPDM (lubricated)	

Materials

Valve body	Nickel-plated brass body	
Stem seal	EPDM (lubricated)	
Seat	PTFE	
Pipe connection	NPT female ends	
O-ring	EPDM (lubricated)	
Ball	stainless steel	
Non-Spring	TR	
	LRB(X)	

Suitable actuators

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

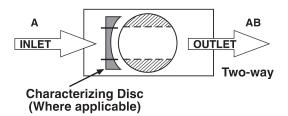
NR

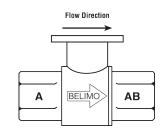
Product features

Application

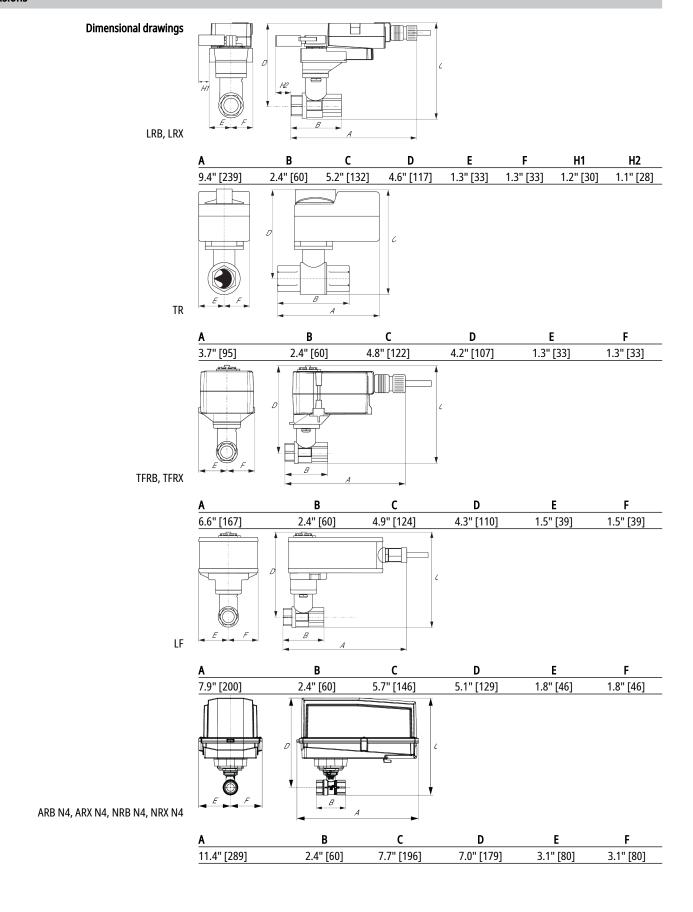
This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

Flow/Mounting details

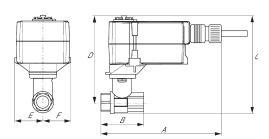




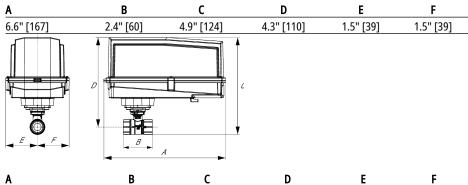








TFRB, TFRX



ARB N4, ARX N4, NRB N4, NRX N4

A	В	С	D	E	F
11.4" [289]	2.4" [60]	7.7" [196]	7.0" [179]	3.1" [80]	3.1" [80]









Technical data

Electrical data	Nominal voltage	AC/DC 24 V		
	Nominal voltage frequency	50/60 Hz		
	Power consumption in operation	2 W		
	Power consumption in rest position	1.3 W		
	Transformer sizing	5 VA (class 2 power source)		
	Auxiliary switch	1 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, adjustable 095°		
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V		
	Electrical Connection	(2) 18 GA appliance cables, 3 ft [1 m], 10 ft [3 m] or 16ft [5 m], with 1/2" conduit connectors		
	Overload Protection	electronic throughout 095° rotation		
Functional data	Position feedback U note	No Feedback		
	Direction of motion motor	selectable by ccw/cw mounting		
	Direction of motion fail-safe	reversible with cw/ccw mounting		
	Angle of rotation	Max. 95°, max. 95°, adjustable with mechanical st		
	Angle of rotation note	max. 95°, adjustable with mechanical stop		
	Running Time (Motor)	75 s		
	Running time fail-safe	<75 s tamb = 68°F [20°C]		
	Noise level, motor	50 dB(A)		
	Noise level, fail-safe	50 dB(A)		
	Position indication	Mechanical		
Safety data	Degree of protection IEC/EN	IP42		
	Degree of protection NEMA/UL	NEMA 2 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		
	Ambient temperature	-22122°F [-3050°C]		
	Storage temperature	-40176°F [-4080°C]		
	Ambient humidity	max. 95% r.H., non-condensing		
	Servicing	maintenance-free		

Electrical installation



Materials

Housing material

INSTALLATION NOTES

A Actuators with appliance cables are numbered.
Provide overload protection and disconnect as required.

UL94-5VA



Technical data sheet TFRX24-S

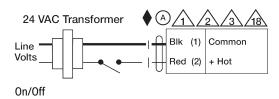
Actuators may be connected in parallel. Power consumption and input impedance must be observed. Actuators may also be powered by 24 VDC.

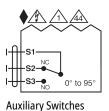
△ One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc. Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.

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.





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