Technical data sheet





Type overview	
Туре	DN
B220HT464	20

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Functional data	Valve size [mm]	0.75" [20]
	Fluid	high temperature hot water/low pressure steam, up to 60% glycol
	Fluid Temp Range (water)	60266°F [16130°C]
	Fluid Temp Range (steam)	250°F [120°C]
	Body Pressure Rating	600 psi
	Close-off pressure Δps	200 psi
	Flow characteristic	A-port equal percentage
	Servicing	maintenance-free
	Max Differential Pressure (Steam)	15 psi
	Flow Pattern	2-way
	Leakage rate	0%
	Controllable flow range	75°
	Cv	4.64
	Maximum Inlet Pressure (Steam)	15 psi
Materials	Valve body	Nickel-plated brass (DZR) P-CuZn35Pb2
	Stem	stainless steel
	Stem seal	Vition O-ring
	Seat	ETFE
	Characterized disc	ETFE
	Pipe connection	NPT
	O-ring	EPDM (lubricated)
	Ball	stainless steel
Suitable actuators	Non-Spring	LRB(X)
	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

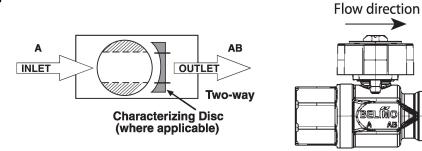


Product features

Application

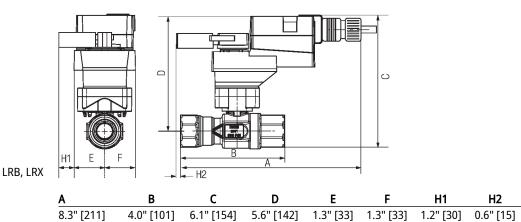
This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include unit ventilators, VAV box reheat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow. This valve is designed to fit in compact areas where on/off, floating point and modulating control is required using 24 VAC.

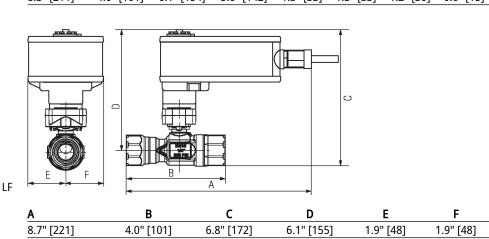
Flow/Mounting details



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Туре	DN	Weight	
B220HT464	20	0.88 lb [0.40 kg]	







Technical data sheet LF24-S US



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	5 W
Power consumption in rest position	2.5 W
Transformer sizing	7 VA
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, 1 m, with 1/2" conduit connectors
Overload Protection	electronic throughout 095° rotation
Direction of motion motor	selectable with switch 0/1
Direction of motion fail-safe	reversible with cw/ccw mounting
Angle of rotation	90°
Running Time (Motor)	75 s / 90°
Running time fail-safe	<25 s @ -4122°F [-2050°C], <60 s @ -22°F [-30°C]
Noise level, motor	50 dB(A)
Noise level, fail-safe	62 dB(A)
Position indication	Mechanical
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 UL 873 and CAN/CSA C22.2 No 24-93
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	-22122°F [-3050°C]
Storage temperature	-40176°F [-4080°C]
Servicing	maintenance-free
Weight	3.4 lb [1.6 kg]
	Nominal voltage frequency Nominal voltage range Power consumption in operation Power consumption in rest position Transformer sizing Auxiliary switch Switching capacity auxiliary switch Electrical Connection Overload Protection Direction of motion motor Direction of motion fail-safe Angle of rotation Running Time (Motor) Running time fail-safe Noise level, motor Noise level, fail-safe Position indication Power source UL Degree of protection IEC/EN Degree of protection NEMA/UL Enclosure Agency Listing Quality Standard UL 2043 Compliant Ambient humidity Ambient temperature Storage temperature Servicing

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



Electrical installation

X INSTALLATION NOTES

A Actuators with appliance cables are numbered.

 \sum Provide overload protection and disconnect as required.

Actuators may also be powered by DC 24 V.

Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

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

