



5-year warranty



Technical data

<b>Functional data</b>	Valve Size	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
	Body pressure rating note	600 psi
	Close-off pressure Δps	200 psi
	Flow characteristic	A-port Equal percentage; B-port modified linear for constant flow
	Servicing	maintenance-free
	Flow Pattern	3-way Mixing/Diverting
	Leakage rate	0% for A – AB, <2.0% for B – AB
	Controllable flow range	75°
	Cv	4.7
	Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv
	<b>Materials</b>	Valve body
Stem		nickel-plated brass
Stem seal		EPDM (lubricated)
Seat		PTFE
Characterizing disk		TEFZEL®
Pipe connection		NPT female ends
O-ring		EPDM (lubricated)
Ball		chrome plated brass
<b>Suitable actuators</b>	Non-Spring	TR LRB(X)
	Spring	TFB(X) LF

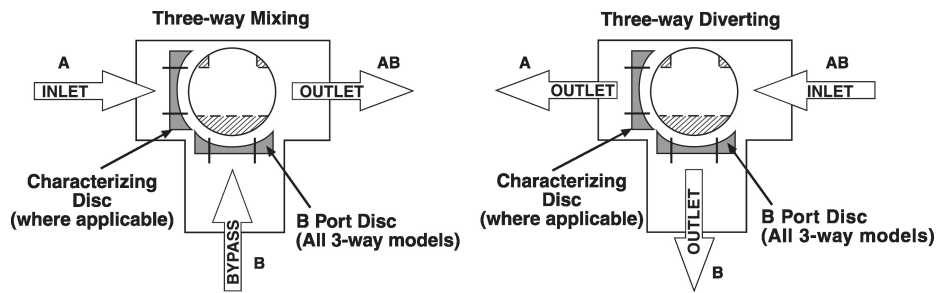
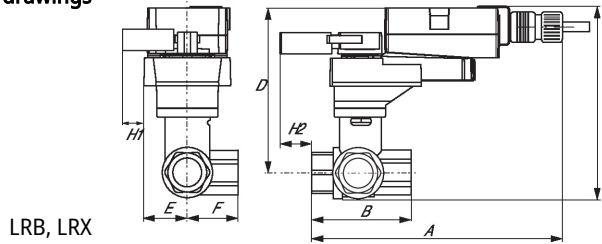
Safety notes



- 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](http://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 or constant flow.

**Flow/Mounting details**

**Dimensions**
**Dimensional drawings**


LRB, LRX

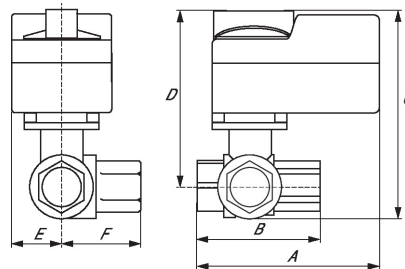
**Type**
**DN**
**Weight [kg]**  
[kg]

B313B

15

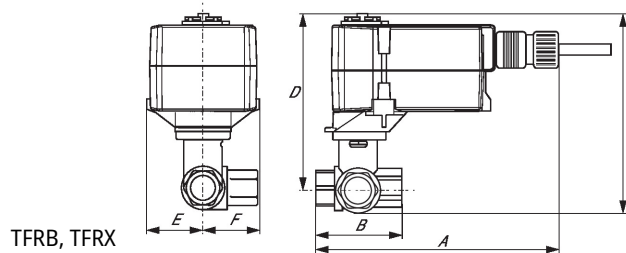
0.30

A	B	C	D	E	F	H1	H2
8.5" [216]	2.4" [60]	5.2" [132]	5.0" [127]	1.3" [33]	1.3" [33]	1.2" [30]	1.1" [28]



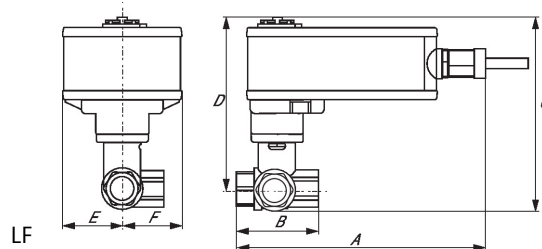
TR

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



TFRB, TFRX

A	B	C	D	E	F
6.6" [167]	2.4" [60]	4.9" [124]	4.7" [120]	1.5" [39]	1.3" [33]



LF

A	B	C	D	E	F
7.9" [200]	2.4" [60]	6.1" [154]	5.5" [140]	1.8" [46]	1.9" [48]



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## Technical data

<b>Electrical data</b>	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	1.5 W
	Power consumption in rest position	0.4 W
	Power consumption for wire sizing	3 VA
	Transformer sizing	3 VA (class 2 power source)
	Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector
	Overload Protection	electronic throughout 0...90° rotation
<b>Functional data</b>	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 2...10 V (0.1 mA), 500 Ω for 4...20 mA
	Position feedback U	2...10 V
	Position feedback U note	Max. 1 mA
	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)	90 s
	Noise level, motor	35 dB(A)
	Position indication	Mechanically, pluggable
<b>Safety data</b>	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 Listed to UL 2043 - suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	Max. 95% RH, non-condensing
	Servicing	maintenance-free
	<b>Weight</b>	Weight

## Product features

**Mode of operation** Local Control SY2~12, 24vac Mod

