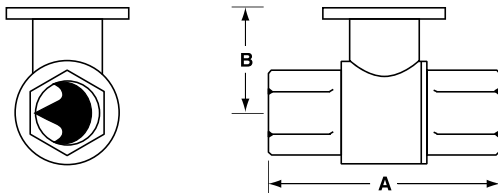




Technical Data	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	½", ¾", 1", 1¼", 1½", 2", 2½", 3"
Type of end fitting	NPT female ends
Materials:	
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	Tefzel®
Packing	2 EPDM O-rings, lubricated
Body pressure rating	
600 psi	½" - 1¼" (B230)
400 psi	1¼" (B231) - 3"
Media temp. range	0°F to 212°F [-18°C to 100°C]
Close off pressure	
200 psi	½" - 2" (B250)
100 psi	2" (B251) - 3"
Maximum differential pressure (ΔP)	30 psi for typical applications
Leakage	0% for A to AB
External leakage	according to EN 12266-1:2003
C _v rating	A-port: see product chart for values

Tefzel® is a registered trademark of DuPont

Dimensions



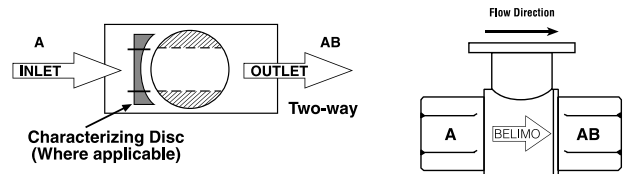
2WayValve-B207-B220

Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
B207-B211	½"	15	2.41" [61.1]	1.39" [35.2]
B212-B215	½"	15	2.38" [60.4]	1.78" [45.2]
B217-B220	¾"	20	2.73" [69.3]	1.87" [47.4]
B222-B225	1"	25	3.09" [78.4]	1.87" [47.4]
B229-B230	1¼"	32	3.72" [94.6]	1.87" [47.4]
B231-B232	1¼"	32	3.72" [94.6]	2.04" [51.9]
B238-B240	1½"	40	3.88" [98.5]	2.04" [51.9]
B248-B250	2"	50	4.21" [107.0]	2.27" [57.7]
B251-B254	2"	50	4.93" [125.2]	2.73" [69.5]
B261-B265	2½"	65	5.55" [140.9]	2.73" [69.5]
B277-B280	3"	80	5.82" [147.9]	2.73" [69.5]

C _v	Valve Nominal Size		Type	Suitable Actuators	
	Inches	DN [mm]	2-Way NPT	Non-Spring	Spring
0.3	½"	15	B207	TR Series	
0.46	½"	15	B208		
0.8	½"	15	B209		
1.2	½"	15	B210		
1.9	½"	15	B211		
3	½"	15	B212		
4.7	½"	15	B213		
7.4	½"	15	B214		
10	½"	15	B215*		
4.7	¾"	20	B217		
7.4	¾"	20	B218		
10	¾"	20	B219		
24	¾"	20	B220*		
7.4	1"	25	B222		
10	1"	25	B223		
19	1"	25	B224		
30	1"	25	B225*		
10	1¼"	32	B229		
19	1¼"	32	B230*		
25	1¼"	32	B231		
37	1¼"	32	B232*		
19	1½"	40	B238		
29	1½"	40	B239		
37	1½"	40	B240*		
29	2"	50	B248		
46	2"	50	B249		
57	2"	50	B250*		
65	2"	50	B251		
85	2"	50	B252		
120	2"	50	B253		
240	2"	50	B254*		
60	2½"	65	B261		
75	2½"	65	B262		
110	2½"	65	B263		
150	2½"	65	B264		
210	2½"	65	B265*		
70	3"	80	B277		
130	3"	80	B278		
170	3"	80	B280*		

*Models without characterizing disc

Flow Patterns



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TR24-SR Actuators, Proportional



Models

TR24-SR-T US

TR24-SR US	TR24-SR-T US with 3 ft plenum rated cable
TR24-SR/300 US	TR24-SR-T US with 10 ft plenum rated cable
TR24-SR/500 US	TR24-SR-T US with 16 ft plenum rated cable

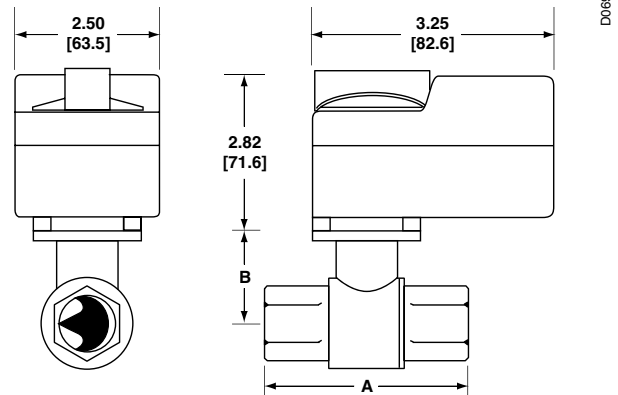
Technical Data

Control	proportional
Nominal voltage	24 VAC 50/60 Hz, 24 VDC
Nominal voltage range	19.2...28.8 VAC, 21.6...28.8 VDC
Power consumption	0.5 W
Transformer sizing	1VA (class 2 power source)
Electrical connection	screw terminals accessible after removal of small cover (3 ft, 10 ft, 16 ft cables optional)
Input impedance	100 kΩ
Angle of rotation	90°
Direction of rotation	reversible with switch under cover
Position indication	integrated into handle
Manual override	push down handle
Running time	90 seconds
Humidity	5 to 95% non-condensing
Ambient temperature	-22°F to 122°F (-30°C to 50°C)
Storage temperature	-40°F to 176°F (-40°C to 80°C)
Housing	NEMA 1/IP40
Housing rating	UL94-5V(B)
Agency listing†	cULus according to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE according to 2004/108/EC and 2006/95/EC for line voltage and/or -S versions
Noise level	max. 35 db (A)
Quality standard	ISO 9001

† Rated impulse voltage 500V, Control pollution degree 2, Type of action 1

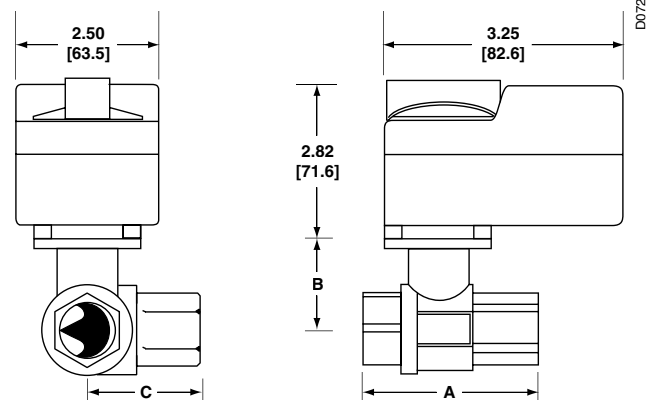
NOTE: Response sensitivity is 75mV

Dimensions with 2-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
B207(B)-B211(B)	½"	15	2.41" [61.1]	1.39" [35.2]
B212(B)-B215(B)	½"	15	2.38" [60.4]	1.78" [45.2]
B217(B)-B220(B)	¾"	20	2.73" [69.3]	1.87" [47.4]

Dimensions with 3-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
B307(B)-B311(B)	½"	15	2.41" [61.1]	1.39" [35.2]	1.20" [30.6]
B312(B)-B315(B)	½"	15	2.38" [60.4]	1.78" [45.2]	1.29" [32.8]
B317(B)-B320(B)	¾"	20	2.73" [69.3]	1.87" [47.4]	1.47" [37.3]

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Wiring Diagrams

✂️ INSTALLATION NOTES

△² Actuators with color coded wires are optional. Wire numbers are provided for reference.

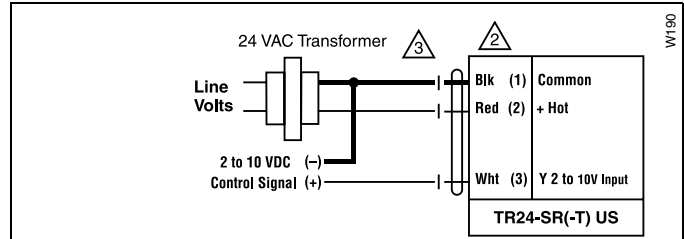
CAUTION Equipment damage!

Actuators may be connected in parallel. Power consumption and input impedance must be observed.

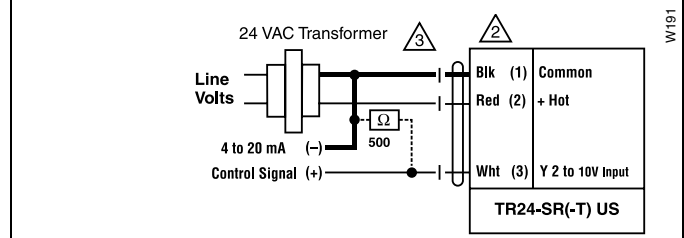
△³ Actuators may also be powered by 24 VDC.

⚠️ 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 Control of TR24-SR(-T) US



4 to 20 mA Control of TR24-SR(-T) US

Direct/Reverse acting switch is under wiring cover.
 R = CW with decrease in signal
 L = CCW with decrease in signal
 No feedback