







#### **Technical data**

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Valve Size	2" [50]
Fluid	chilled or hot water, up to 60% glycol
Fluid Temp Range (water)	0250°F [-18120°C]
Body Pressure Rating	400 psi
Body pressure rating note	400 psi
Close-off pressure Δps	200 psi
Flow characteristic	A-port equal percentage, B-port modified for constant common port 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	57
Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv
Valve body	Nickel-plated brass body
Stem	stainless steel
Stem seal	EPDM (lubricated)
Seat	PTFE
Characterizing disk	TEFZEL®
Pipe connection	NPT female ends
O-ring	EPDM (lubricated)
Ball	stainless steel

## Suitable actuators

Materials

Non-Spring	ARB(X)	
Spring	AF	

## 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

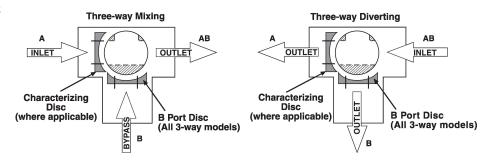
#### **Product features**

### **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 or constant flow.



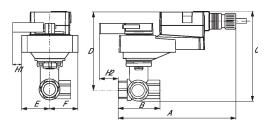
#### Flow/Mounting details



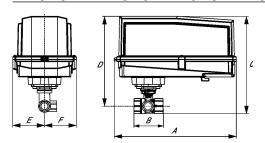
### **Dimensions**



ARB, ARX

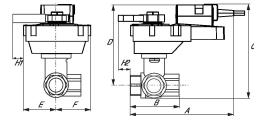


Weight [kg] Type DN [kg] B350 50 2.5 В C D Ε F H1 10.5" [267] 4.9" [125] 7.7" [196] 6.0" [152] 1.7" [44] 2.6" [66] 0.8" [20]



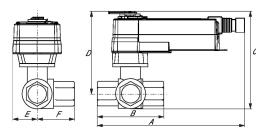
ARB N4, ARX N4

Α	В	С	D	E	F
11.4" [289]	4.9" [125]	9.8" [249]	8.0" [203]	3.1" [80]	3.1" [80]



ARQB, ARQX

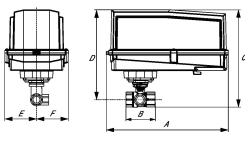
Α	В	C	D	E	F	H1	H2
9.9" [251]	4.9" [125]	8.3" [211]	6.6" [168]	2.3" [58]	2.6" [66]	0.8" [20]	0.6" [15]



AFRB, AFRX

Α	В	С	D	E	F
11.3" [286]	4.9" [125]	8.3" [211]	6.6" [168]	2.6" [66]	2.6" [66]





AFRB N4, AFRX N4

Α	В	C	D	E	F
13.0" [330]	4.9" [125]	11.8" [300]	9.9" [251]	3.7" [95]	3.7" [95]



Technical data		
Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	5 W
	Power consumption in rest position	2.5 W
	Power consumption for wire sizing	7.5 VA
	Transformer sizing	7.5 VA (class 2 power source)
	Electrical Connection	18 GA appliance cable, 3 ft [1 m], with 1/2" conduit connector
	Overload Protection	electronic throughout 095° rotation
Functional data	Direction of motion motor	selectable by ccw/cw mounting
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	90°
	Running Time (Motor)	75 s
	Running time fail-safe	<20 s tamb = 68°F [20°C]
	Noise level, motor	45 dB(A)
	Noise level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	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 and 2014/35/EU; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC
	Quality Standard	ISO 9001
	Ambient temperature	-22122°F [-3050°C]
	Storage temperature	-40176°F [-4080°C]
	Ambient humidity	max. 95% RH, non-condensing
	Servicing	maintenance-free

## **Electrical installation**



Weight

Weight

Actuators with appliance cables are numbered.

Provide overload protection and disconnect as required.

5.3 lb [2.4 kg]

Actuators may also be powered by DC 24 V.



**Technical data sheet** AFRB24

Actuators may be powered in parallel. Power consumption must be observed. Parallel wiring required for piggy-back applications.

Meets cULus requirements without the need of an electrical ground connection.



## Marning! 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



