BELIMO

2-way, Characterized Control Valve, Stainless Steel Ball and Stem

Technical data sheet B264

5-year warranty

Type overview

Type	DN
B264	65

Technical data

Functional data	Valve size [mm]	2.5" [65]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	0...212°F [-18...100°C]
	Body Pressure Rating	400 psi
	Close-off pressure Δps	100 psi
	Flow characteristic	equal percentage
	Pipe connection type	Internal thread NPT (female)
	Servicing	maintenance-free
	Flow Pattern	2-way
	Leakage rate	0% for A – AB
	Controllable flow range	75°
	Cv	150
Materials	Valve body	Nickel-plated brass body
	Stem	stainless steel
	Stem seal	EPDM (lubricated)
	Seat	PTFE
	Characterized disc	TEFZEL®
	O-ring	EPDM (lubricated)
	Ball	stainless steel
Suitable actuators	Non-Spring	ARB(X)
	Spring	AFRB(X)

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

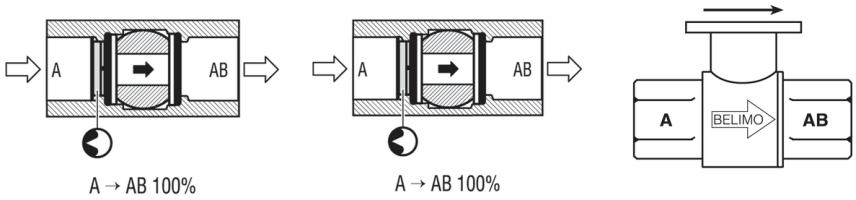
Product features

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 re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

Flow/Mounting details

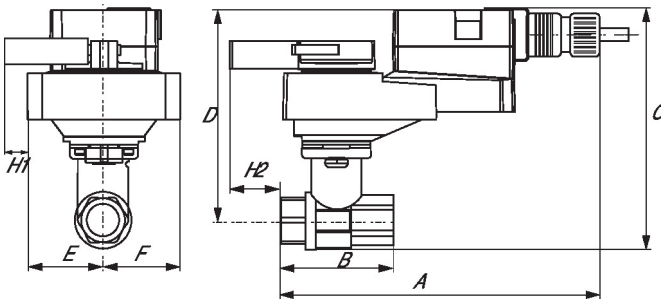
Two-way valves should be installed with the disc upstream.



Dimensions

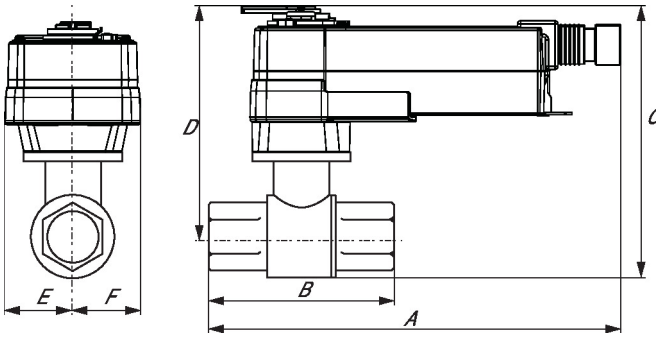
Type	DN	Weight
B264	65	8.1 lb [3.7 kg]

ARB, ARX



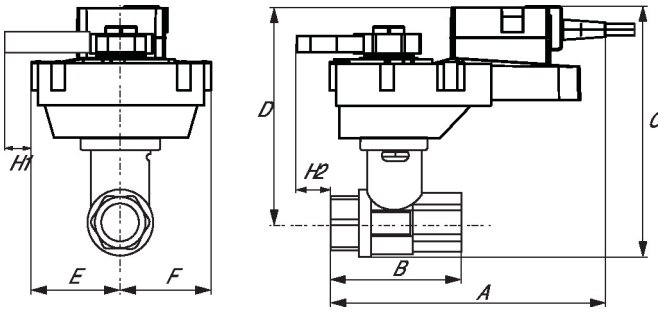
A	B	C	D	E	F	H1
10.1" [257]	5.6" [141]	8.0" [203]	6.0" [152]	2.8" [71]	2.8" [71]	1.9" [48]

AFRB, AFRX



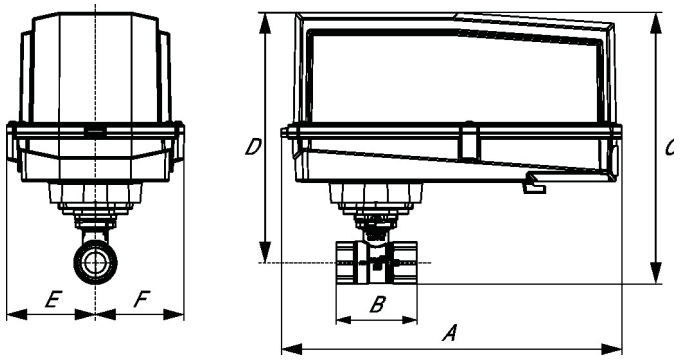
A	B	C	D	E	F
11.5" [293]	5.6" [141]	8.6" [219]	6.6" [168]	2.0" [51]	2.0" [51]

ARQB, ARQX



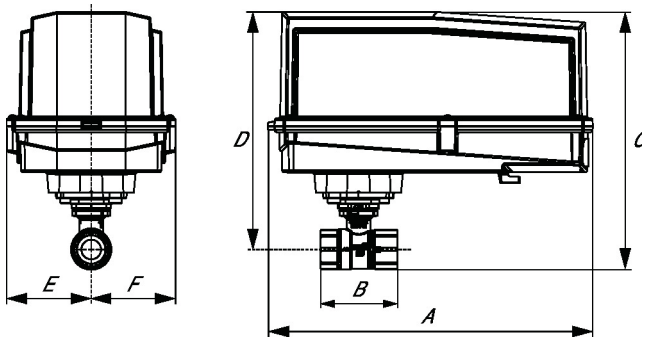
A	B	C	D	E	F	H1	H2
9.9" [251]	4.2" [107]	8.1" [206]	6.1" [155]	2.3" [58]	2.3" [58]	0.8" [20]	0.6" [15]

AFRB N4, AFRX N4



A	B	C	D	E	F
13.0" [330]	5.6" [141]	10.3" [262]	9.3" [235]	3.4" [86]	3.4" [86]

ARB N4, ARX N4, NRB N4, NRX N4



A	B	D	E	F
11.4" [289]	5.6" [141]	8.0" [203]	3.1" [80]	3.1" [80]

BELIMO

MFT/programmable, Spring return, 24 V

Technical data sheet AFRX24-MFT-S

5-year warranty

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	7.5 W
	Power consumption in rest position	3 W
	Transformer sizing	10 VA
	Auxiliary switch	2x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V, one set at 10°, one adjustable 10...90°
	Switching capacity auxiliary switch	1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V
	Electrical Connection	(2) 18 GA appliance cables, 1 m, with 1/2" NPT conduit connectors
	Overload Protection	electronic throughout 0...95° rotation
Functional data	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, 1500 Ω for PWM, On/Off and Floating point
	Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V
	Operating modes optional	variable (VDC, PWM, on/off, floating point)
	Position feedback U	2...10 V
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Direction of motion motor	selectable with switch
	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)	150 s / 90°
	Running time motor variable	70...220 s
	Running time fail-safe	<20 s @ 20°C
	Adaptation Setting Range	off (default)
	Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%
	Noise level, motor	45 dB(A)
	Noise level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2

Safety data	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02 CE acc. to 2014/30/EU and 2014/35/EU
	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	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	5.4 lb [2.4 kg]
Materials	Housing material	Galvanized steel and plastic housing

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

Accessories

	Description	Type
Gateways	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON

	Description	Type
Electrical accessories	Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

	Description	Type
Tools	Connecting cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

Electrical installation

INSTALLATION NOTES

A Actuators with appliance cables are numbered.

1 Provide overload protection and disconnect as required.

3 Actuators may also be powered by DC 24 V.

4 Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.

5 Only connect common to negative (-) leg of control circuits.

7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.

8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line.

10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.

46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.

47 Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).

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

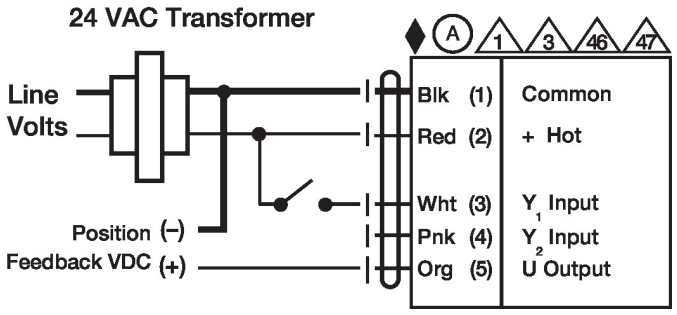
Warning! Live electrical components!

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.

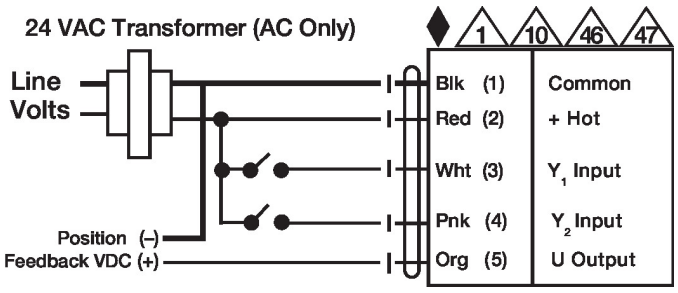
Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.

Wiring diagrams

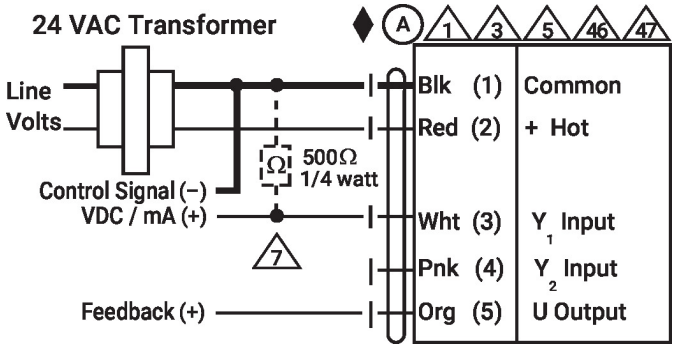
On/Off



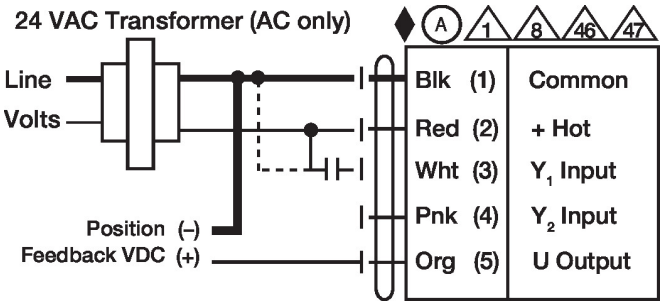
Floating Point



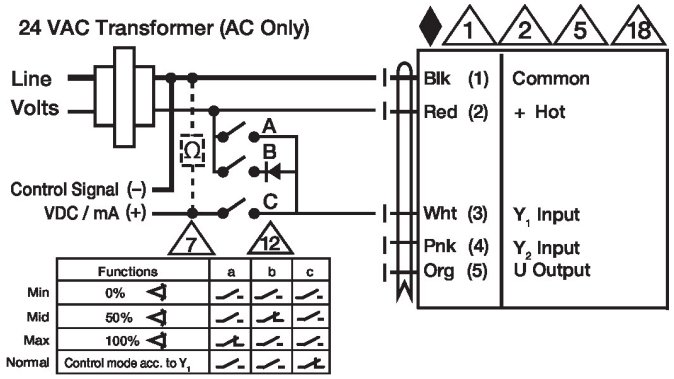
VDC/mA Control



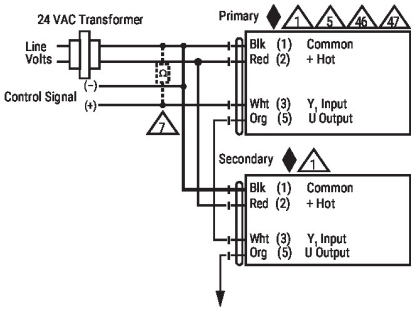
PWM Control



Override Control



Primary - Secondary



Auxiliary Switches