



5-year warranty

Type overview

Type	DN
B6250S-070-250	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...250°F [-18...120°C]	
Body Pressure Rating	ANSI Class 250, raised-face	
Close-off pressure Δp_s	310 psi	
Flow characteristic	equal percentage	
Pipe connection type	Flange for use with ASME/ANSI class 250	
Servicing	maintenance-free	
Maximum differential pressure (water)	50 psi [345 kPa]	
Flow Pattern	2-way	
Leakage rate	0% for A – AB	
Controllable flow range	75°	
Cv	70	
Materials	Valve body	Cast iron - GG 25
	Stem	stainless steel
	Stem seal	EPDM (lubricated)
	Seat	PTFE
	Characterized disc	stainless steel
	O-ring	EPDM (lubricated)
	Ball	stainless steel
Suitable actuators	Non-Spring	ARB(X)
	Spring	AFRB(X)

Safety notes

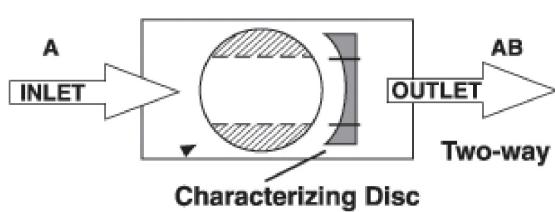


- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

Product features

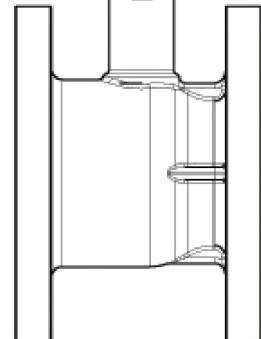
Application	This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box reheat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.
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Flow/Mounting details



Upstream A
Downstream AB

Flow Direction



Dimensions

Type

B6250S-070-250

DN

65

Weight

29 lb [13 kg]

ARB, ARX	Dimensions							Number of Bolt Holes
	A	B	C	D	E	F	G	
	8.3" [211]	5.8" [148]	11.6" [294]	7.8" [198]	3.7" [95]	3.7" [95]	5.9" [149]	0.9" [22] 8

AFRB, AFRX	Dimensions							Number of Bolt Holes
	A	B	C	D	E	F	G	
	8.3" [211]	5.8" [148]	12.2" [309]	9.4" [239]	3.7" [95]	3.7" [95]	5.9" [149]	0.9" [22] 8

ARX	A	B	C	D	E	F	G	I	Number of Bolt Holes
	13.0" [330]	5.8" [148]	15.0" [380]	7.8" [198]	3.7" [95]	3.7" [95]	5.9" [149]	0.9" [22]	8
AFRX	A	B	C	D	E	F	G	I	Number of Bolt Holes
	14.5" [368]	5.8" [148]	16.6" [422]	11.9" [302]	3.7" [95]	3.7" [95]	5.9" [149]	0.9" [22]	8

MFT/programmable, Spring return, 24 V



5-year warranty

**MFT**

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	
Electrical Connection	18 AWG appliance cable, 1 m, with 1/2" NPT conduit connector	
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	
Adaptation Setting Range	off (default)	
Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%	

Functional data	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	IP66
	Degree of protection NEMA/UL	NEMA 4X
	Housing	UL Enclosure Type 4X
	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
	Ambient humidity	Max. 100% RH
	Ambient temperature	-22...122°F [-30...50°C]
	Ambient temperature note	-40...50°C [104...122°F] for actuator with integrated heating
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	6.7 lb [3.0 kg]
Materials	Housing material	Die cast aluminium and plastic casing

Footnotes †Rated Impulse Voltage 800V, Type of Action 1, Control Pollution Degree 2.

Product features

Default/Configuration	Default parameters for 2 to 10 VDC applications of the AF..-MFT actuator are assigned during manufacturing. If required, custom versions of the actuator can be ordered. The parameters are variable and can be changed by three means: Factory pre-set or custom configuration, set by the customer using PC-Tool software or the handheld ZTH US.
Factory settings	Default parameters for 2 to 10 VDC applications of the AF..-MFT actuator are assigned during manufacturing. If required, custom versions of the actuator can be ordered. The parameters are variable and can be changed by three means: Factory pre-set or custom configuration, set by the customer using PC-Tool software or the handheld ZTH US.

Accessories

	Gateways	Description	Type
		Gateway MP to BACnet MS/TP	UK24BAC
		Gateway MP to Modbus RTU	UK24MOD
		Gateway MP to LonWorks	UK24LON
	Tools	Description	Type
		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 configurable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
	Factory add-on option only	Description	Type
		Heater, with adjustable thermostat	ACT_PACK_H

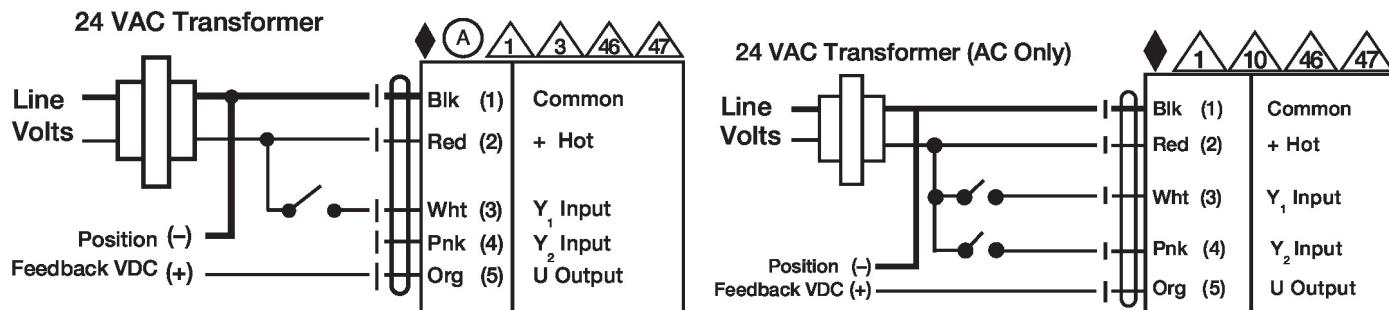
Electrical installation

INSTALLATION NOTES

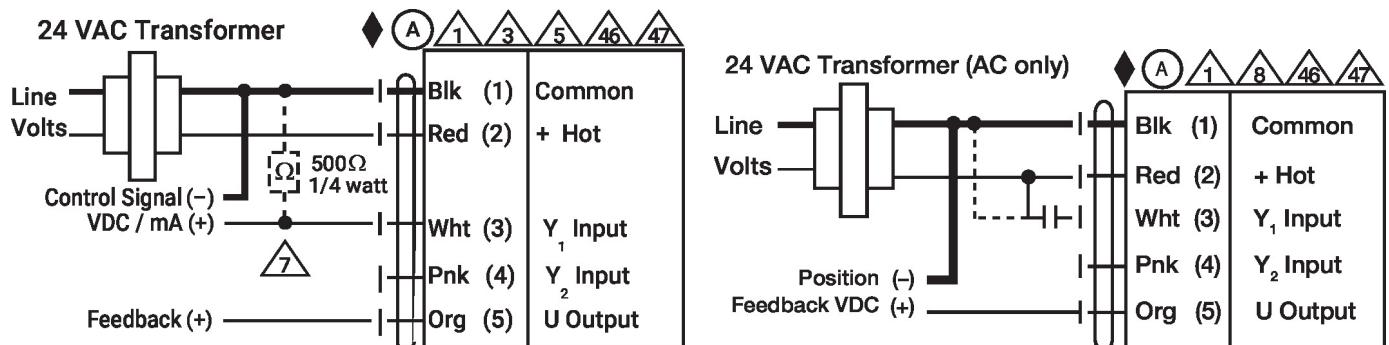
- A** Actuators with appliance cables are numbered.
- 1** Provide overload protection and disconnect as required.
- 3** Actuators may also be powered by DC 24 V.
- 5** Only connect common to negative (-) leg of control circuits.
- 7** A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 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.
- 12** IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- 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.

Wiring diagrams

On/Off



VDC/mA Control



Electrical installation

Wiring diagrams

Override Control

