



5-year warranty

## Type overview

Type	DN
G7100S-250	100

## Technical data

Functional data	Valve size [mm]	4" [100]
Fluid		chilled or hot water, up to 60% glycol
Fluid Temp Range (water)		32...350°F [0...176°C]
Body Pressure Rating		ANSI Class 250, up to 280 psi below 350°F
Flow characteristic		linear
Servicing		repack/rebuild kits available
Rangeability Sv		50:1
Flow Pattern		3-way Mixing
Leakage rate		ANSI Class III
Controllable flow range		stem up - open B – AB
Cv		190
Materials	Valve body	Cast iron - ASTM A126 Class B
	Valve plug	Stainless steel
	Spindle	316 stainless steel
	Spindle seal	NLP EPDM (no lip packing)
	Seat	Stainless steel AISI 316
	Pipe connection	250 lb flanged
Suitable actuators	Non-Spring	EVB(X) RVB(X)
	Spring	(2*AFB(X))
	Electrical fail-safe	(2*GKB(X))

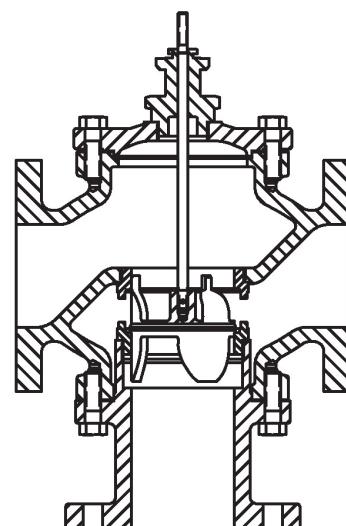
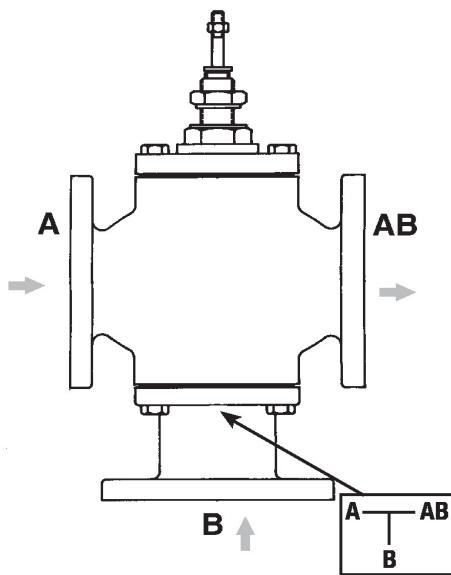
## Safety notes



- **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](http://www.p65warnings.ca.gov)
- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The valve does not contain any parts that can be replaced or repaired by the user.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.

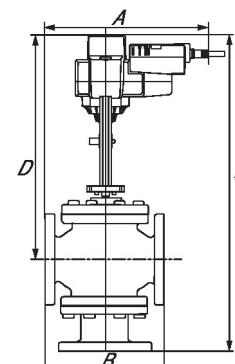
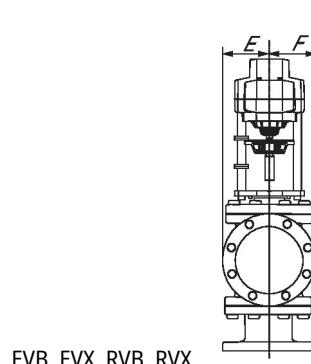
## Product features

## Flow/Mounting details

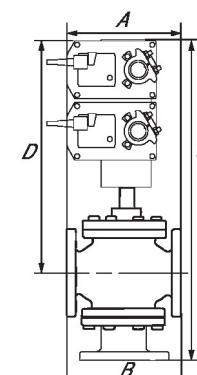
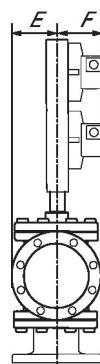


## Dimensions

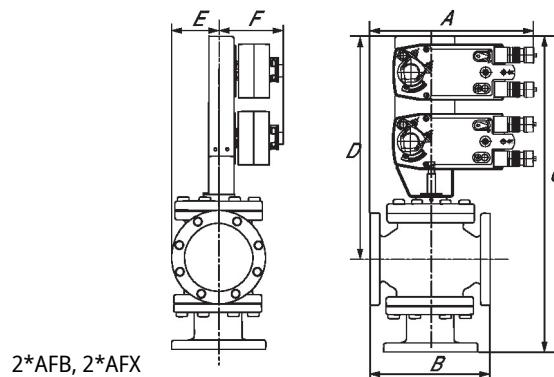
Type	DN
G7100S-250	100



A	B	C	D	E	F	Number of Bolt Holes
14.0" [356]	13.6" [346]	29.3" [743]	19.0" [483]	5.0" [127]	5.0" [127]	8



A	B	C	D	E	F	Number of Bolt Holes
14.0" [356]	13.6" [346]	33.2" [844]	23.4" [594]	5.0" [127]	5.0" [127]	8



A	B	C	D	E	F	Number of Bolt Holes
14.0" [356]	13.6" [346]	33.7" [857]	23.4" [594]	5.0" [127]	5.3" [135]	8



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**Technical data**

<b>Electrical data</b>	
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	20 VA
Electrical Connection	18 GA appliance cable, 1 m, 3 m or 5 m, with 1/2" conduit connector, degree of protection NEMA 2 / IP54
Overload Protection	electronic throughout 0...95° rotation
<b>Functional data</b>	
Operating range Y	0...135 Ω
Operating range Y note	Honeywell Electronic Series 90, input 0...135 Ω
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 0/1
Direction of motion fail-safe	reversible with cw/ccw mounting
Manual override	5 mm hex crank (3/16" Allen), supplied
Angle of rotation	95°
Angle of rotation note	adjustable with mechanical end stop, 35...95°
Running Time (Motor)	150 s / 90°
Running time motor variable	70...220 s
Running time fail-safe	<20 s
Override control	MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100%
Noise level, motor	40 dB(A)
Noise level, fail-safe	62 dB(A)
Position indication	Mechanical
<b>Safety data</b>	
Power source UL	Class 2 Supply
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
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

<b>Safety data</b>	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
<b>Weight</b>	Weight	9.26 lb [4.2 kg]
<b>Materials</b>	Housing material	Galvanized steel and plastic housing

**Footnotes** \*Variable when configured with MFT options.

## Accessories

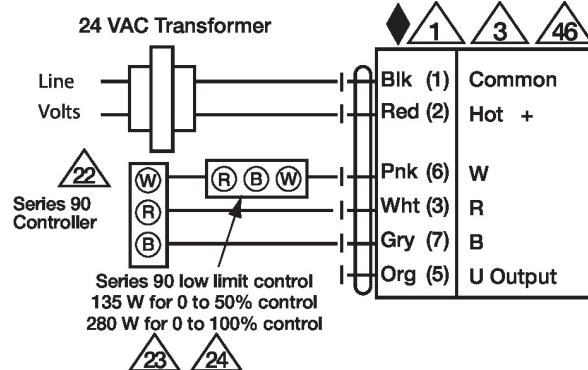
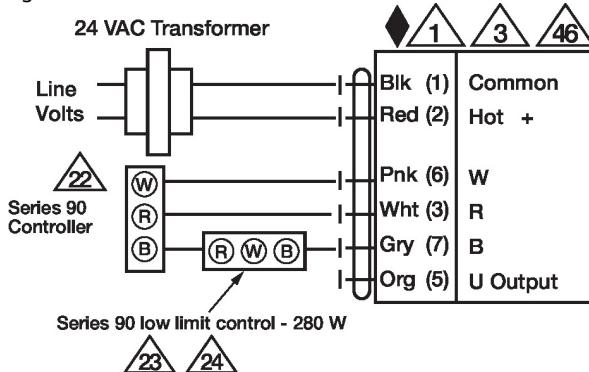
<b>Gateways</b>	<b>Description</b>	<b>Type</b>
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
	Gateway MP to LonWorks	UK24LON
<b>Electrical accessories</b>	<b>Description</b>	<b>Type</b>
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
<b>Tools</b>	<b>Description</b>	<b>Type</b>
	Connection 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

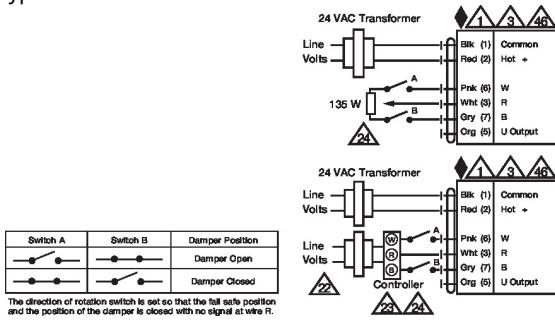
- ◆ Meets cULus requirements without the need of an electrical ground connection.
- ▲ Provide overload protection and disconnect as required.
- ▲ 3 Actuators may also be powered by DC 24 V.
- ▲ 22 Actuators and controller must have separate transformers.
- ▲ 23 Consult controller instruction data for more detailed information.
- ▲ 24 Resistor value depends on the type of controller and the number of actuators. No resistor is used for one actuator. Honeywell® resistor kits may also be used.
- ▲ 25 To reverse control rotation, use the reversing switch.
- ▲ 46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.

## Wiring diagrams

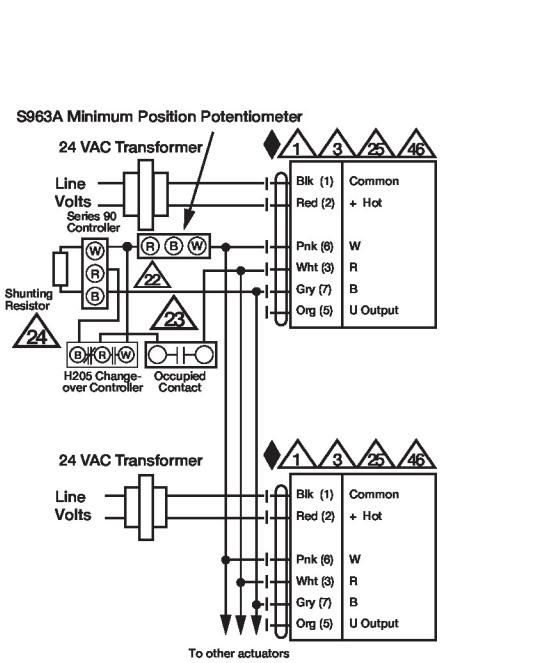
## High Limit Control



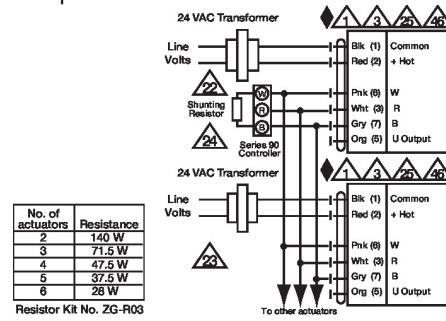
## Typical and Override Control



## Multiple Actuators with Minimum Position Potentiometer



## Multiple Actuators



## Multiple Actuators Used with W973, W7100 and T775

