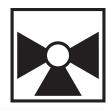






5-year warranty



### **Technical data**

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Valve Size	4" [100]
Fluid	chilled or hot water, up to 60% glycol
Fluid Temp Range (water)	32300°F [0149°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 Diverting
Leakage rate	ANSI Class III
Controllable flow range	stem up - open AB – B
Cv	154
ANSI Class	250
Body pressure rating note	up to 280 psi below 350°F
Valve body	Cast iron - ASTM A126 Class B
Valve plug	Stainless steel
Stem seal	NLP EPDM (no lip packing)
Seat	Stainless steel AISI 316
Pipe connection	250 lb flanged

# Safety notes



Suitable actuators

Non-Spring

Electronic fail-safe

Materials

 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

EVB(X)

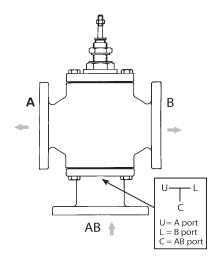
AVKB(X)

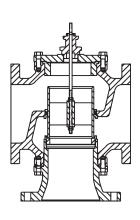
- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and
  must not be used outside the specified field of application, especially in aircraft or in any other airborne
  means of transport.
- Only authorised specialists may carry out installation. All 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**



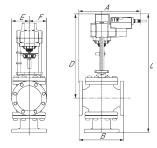
### Flow/Mounting details



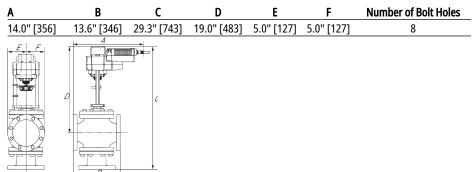


### **Dimensions**

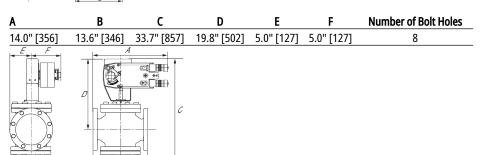
## **Dimensional drawings**



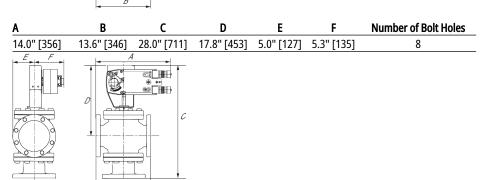
EVB, EVX, RVB, RVX



AVKB, AVKX



AFB, AFX



AFB, AFX



Technical data sheet G7100DS-250

 A
 B
 C
 D
 E
 F
 Number of Bolt Holes

 14.0" [356]
 13.6" [346]
 28.0" [711]
 17.8" [453]
 5.0" [127]
 5.3" [135]
 8

**Technical data sheet** 

**AVKB24-MFT** 

Modulating, Fail-Safe Operation, Linear, 24 V, Multi-Function Technology®









IAChr	2162	M ata
16(111	ша	data

CI	ectr	ادعا	4-	+-
CI	ecu	IC.dI	Ud	II.d

Nominal voltage	AC/DC 24 V
Nominal voltage frequency	50/60 Hz
Power consumption in operation	5 W
Power consumption in rest position	2 W
Transformer sizing	9.5 VA (class 2 power source)
Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54
Overload Protection	electronic throughout full stroke
Electrical Protection	actuators are double insulated
Actuating force motor	450 lbf [2000 N]

### **Functional data**

Electrical Protection	actuators are double insulated
Actuating force motor	450 lbf [2000 N]
Operating range Y	210 V
Operating range Y note	420 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
Input Impedance	100 k $\Omega$ for 210 V (0.1 mA), 500 $\Omega$ for 420 mA, 1500 $\Omega$ for PWM, On/Off and Floating point
Operating range Y variable	Start point 0.530 V End point 2.532 V
Options positioning signal	variable (VDC, PWM, on/off, floating point)
Position feedback U	210 V
Bridging time	2 s delay before fail-safe activates
Pre-charging time	520 s
Direction of motion motor	selectable with switch
Direction of motion fail-safe	reversible with switch
Manual override	5 mm hex crank (3/16" Allen), supplied
Stroke	1.25" [32 mm]
Running Time (Motor)	default 90 s, variable 90150 s
Running time motor variable	90150 s
Running time fail-safe	<35 s
Noise level, motor	60 dB(A)
Noise level, fail-safe	60 dB(A)
Position indication	Mechanically, with pointer
Degree of protection IEC/EN	IP54
Dograp of protection NEMA/III	NEMA 2 III. Enclosuro Typo 2

### Safety data

Degree of protection IEC/EN	IP54
Degree of protection NEMA/UL	NEMA 2 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
Quality Standard	ISO 9001
Ambient temperature	-22122°F [-3050°C]
Storage temperature	-40176°F [-4080°C]
Ambient humidity	max. 95% r.H., non-condensing
Servicing	maintenance-free



Weight	<b>ht</b> Weight 6.39 lb [2.9 kg]	
Materials	Housing material	Die cast aluminium and plastic casing

### Safety notes



- PVC W'Shld for GV w/UGLK (GM)
- Battery Back Up System for SY(7~10)-110
- 120 to 24 VAC, 40 VA transformer.
- 50% voltage divider kit (resistors with wires).
- PC Tool computer programming interface, serial port.

#### **Accessories**

Gateways	Description	туре
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to LonWorks	UK24LON
	Gateway MP to Modbus RTU	UK24MOD
Service tools	Description	Туре
	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 parametrisable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

### **Electrical installation**

# > INSTALLATION NOTES

Description

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

■ Constant Served

■ Cons

∧ Actuators may also be powered by 24 VDC.

 $\Lambda$  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.

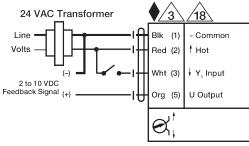
For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.

Actuators with plenum cable do not have numbers; use color codes instead.

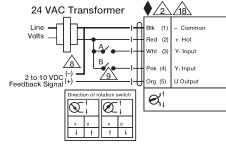
Meets cULus requirements without the need of an electrical ground connection.

# **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.

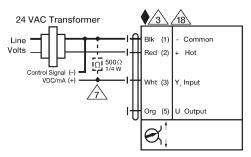


On/Off

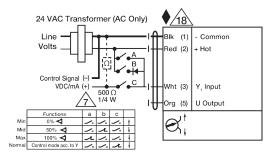


Floating Point





VDC / 4 to 20 mA



Override Control Min, Mid, Max Positions