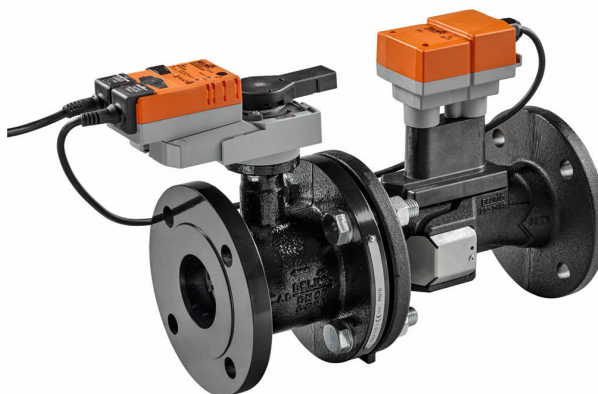


- Nominal voltage AC/DC 24 V
- Control communicative
- Communication via BACnet MS/TP, Modbus RTU, Belimo-MP-Bus or conventional control
- Conversion of active sensor signals and switching contacts



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	9.5 W
Data bus communication	Communicative control	BACnet MS/TP MP-Bus Modbus RTU
	Number of nodes	Max. 32 (without repeater)
Functional data	Valve size [mm]	4" [100]
	Operating range Y	2...10 V
	Operating range Y note	Hybrid via 2...10 V
	Input Impedance	100 kΩ (0.1 mA), 500 Ω
	Options positioning signal	VDC variable
	Position feedback U	2...10 V
	Position feedback U variable	VDC variable
	Running Time (Motor)	90 s
	Sound power level Motor	45 dB(A)
	Control accuracy	±5%
	Min. controllable flow	1% of V'nom
	Fluid	chilled or hot water, up to 60% glycol max (open loop/steam not allowed)
	Fluid Temp Range (water)	14...250°F [-10...120°C]
	Close-off pressure Δps	310 psi
	Differential Pressure Range	5...50 psi or 1...50 psi see flow reductions chart in tech doc
	Flow characteristic	equal percentage or linear
	Body Pressure Rating	ANSI Class 250, standard class B, raised-face
	GPM	317
	Servicing	maintenance-free
	Manual override	external push button
Flow measurement	Measuring accuracy flow	±2%*
	Measurement Repeatability	±0.5% (Flow)
	Sensor Technology	Ultrasonic with glycol and temperature compensation
Safety data	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2

Safety data	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	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
Materials	Ambient humidity	Max. 95% RH, non-condensing
	Valve body	Cast iron - GG 25
	Flow measuring pipe	Ductile cast iron - GGG50
	Spindle	stainless steel
	Spindle seal	EPDM (lubricated)
	Characterized disc	stainless steel
	Seat	PTFE
	Pipe connection	pattern to mate with ANSI 250 flange
	O-ring	EPDM (lubricated)
	Ball	stainless steel

Safety notes



- This device 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.
- Outdoor application: only possible in case that no (sea) water, snow, ice, insulation or aggressive gases interfere directly with the actuator and that is ensured that the ambient conditions remain at any time within the thresholds according to the data sheet.
- Only authorized specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

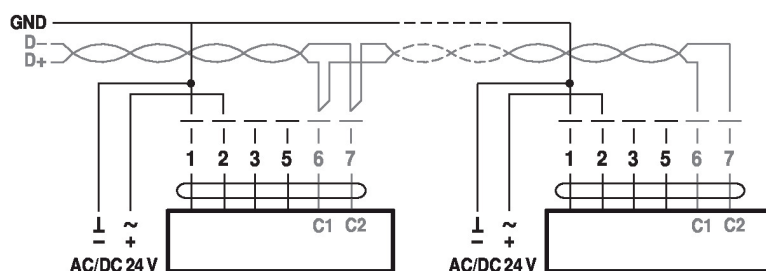
Flow measurement *All flow tolerances are at 68°F [20°C] & water.

Accessories

Electrical accessories	Description	Type
	Replacement flow sensor for EPIV, electromagnetic	EPIVFS-60
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

Electrical installation

BACnet MS/TP / Modbus RTU



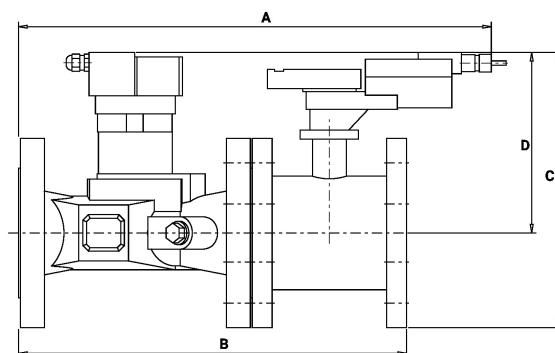
Cable colors:

- 1= black
 - 2 = red
 - 3 = white
 - 5 = orange
 - 6 = pink
 - 7 = grey
- BACnet / Modbus signal assignment:
C1 = D- = A
C2 = D+ = B

The diagram illustrates the power supply circuit for the 1000W power amplifier. It features an AC/DC 24V input connected to a transformer with taps 1 through 7. The secondary winding is connected to a bridge rectifier (C1, C2). The output of the rectifier is connected to a filter capacitor (C3) and a load resistor (R1). The output voltage is labeled as DC(0) 2...10V and DC 2...10V.

The diagram shows a control system with a horizontal busbar at the bottom, labeled 'MFT' and 'C1 C2'. Above the busbar are seven vertical lines numbered 1 through 7. Line 1 is labeled '1' and line 2 is labeled '2'. Line 3 is connected to a 'Sensor' (indicated by a single-headed arrow) and line 5 is connected to an 'MP' (indicated by a double-headed arrow). Lines 4, 6, and 7 are not connected to anything. A legend on the right shows a single-headed arrow for 'Sensor' and a double-headed arrow for 'MP'.

Technical drawing of a circular machine component. The drawing shows a top view of a circular base with a central hole. A vertical shaft or rod passes through the center. The diameter of the central hole is labeled $\varnothing I$. The diameter of the circular base is labeled G . The distance from the center of the base to the center of the shaft is labeled J . The distance from the center of the base to the center of the shaft is also labeled E and F .



A	B	C	D	E	F	G	I	J
21.7" [551]	18.7" [474]	13.3" [337]	8.3" [212]	5.0" [127]	5.0" [127]	7.9" [200]	0.9" [22]	3.9" [100]