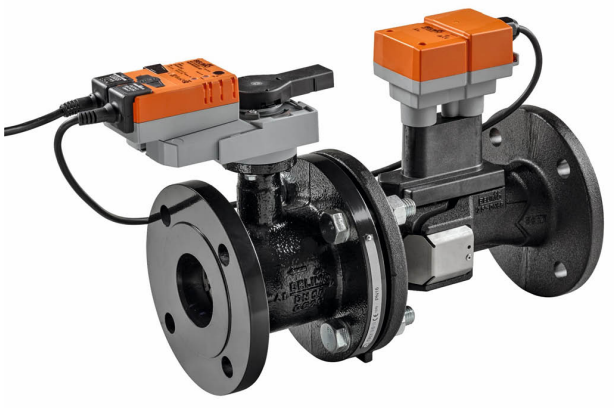
BELIMO

Electronic Pressure Independent Valve, 2-way, Flange, (EPIV)

- Nominal voltage AC/DC 24 V
- Control MFT/programmable
- Communication via Belimo MP-Bus or conventional control
- Conversion of active sensor signals and switching contacts

Technical data sheet P6300SU-180+AKRX24-EP2



5-year warranty

MP-BUS

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	8 W
Functional data	Valve Size	3" [80]
	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 (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
	Running time fail-safe	<35 s
	Noise level, Motor	45 dB(A)
	Noise level, fail-safe	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	175 psi
	Differential Pressure Range	5...50 psi or 1...50 psi see flow reductions chart in tech doc
	GPM	180
	Servicing	maintenance-free
	Manual override	external push button
Flow measurement	Measuring accuracy flow	±2%*
	Flow Measurement Repeatability	±0.5%
	Sensor Technology	ultrasonic with glycol and temperature compensation
Safety data	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 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

Safety data	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	Max. 95% RH, non-condensing
Materials	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 125 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, insolation 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

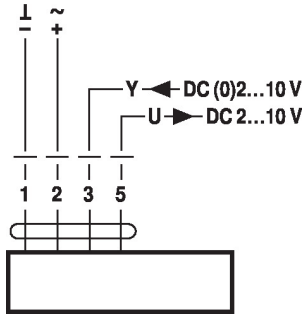
Flow measurement *All flow tolerances are at 68°F [20°C] & water.

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
Mechanical accessories	**Description**	**Type**
	Weather shield for Belimo Energy Valve™, 65...80, Ultrasonic models only	ZS-EPIV-EV-80U

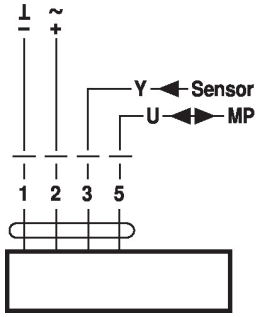
Electrical installation

AC/DC 24 V, modulating



Cable colors:
1 = black
2 = red
3 = white
5 = orange

Operation on the MP-Bus



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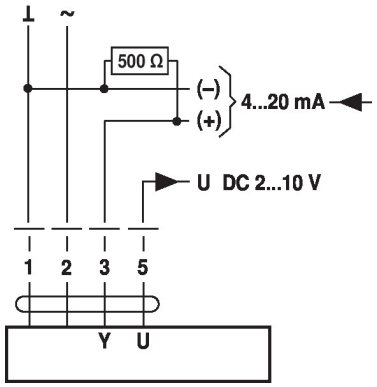
Control with 4...20 mA via external resistor

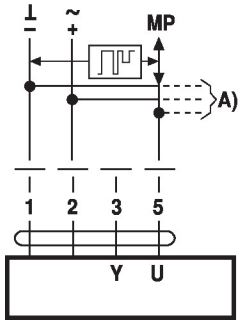


Caution:
The operating range must be set to DC 2...10 V.
The 500 Ohm resistor converts the 4...20 mA current signal to a voltage signal DC 2...10 V.

Functions

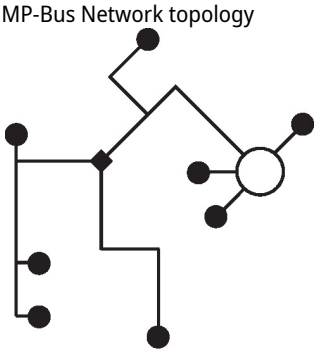
Functions when operated on MP-Bus

Connection on the MP-Bus



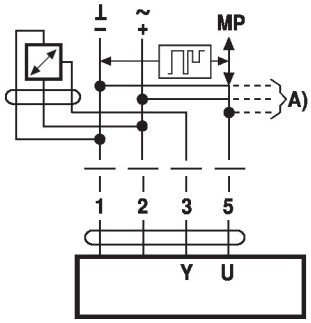
A) additional MP-Bus nodes (max. 8)

MP-Bus Network topology



There are no restrictions for the network topology (star, ring, tree or mixed forms are permitted).
Supply and communication in one and the same 3-wire cable
• no shielding or twisting necessary
• no terminating resistors required

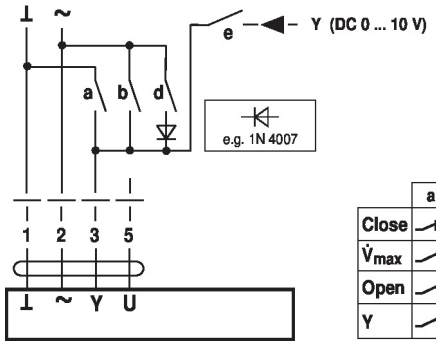
Connection of active sensors



A) additional MP-Bus nodes (max. 8)
• Supply AC/DC 24 V
• Output signal DC 0...10 V (max. DC 0...32 V)
• Resolution 30 mV

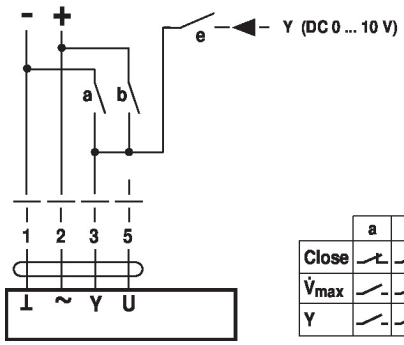
Functions for actuators with specific parameters (Parametrisation necessary)

Override control and limiting with AC 24 V with relay contacts



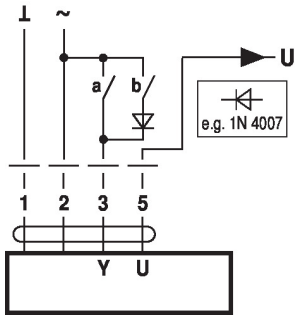
	a	b	d	e
Close	⌐	_	_	_
$\dot{V}_{max}$	_	⌐	_	_
Open	_	_	⌐	_
Y	_	_	_	⌐

Override control and limiting with DC 24 V with relay contacts



	a	b	d	e
Close	⌐	_	_	_
$\dot{V}_{max}$	_	⌐	_	_
Y	_	_	_	⌐

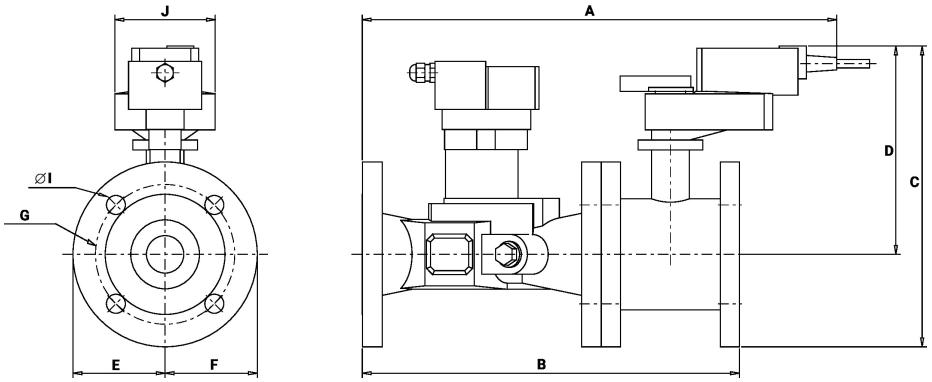
Control floating point



Position control: 90° = 100s
Flow control: Vmax = 100s

Dimensions

Dimensional drawings



A	B	C	D	E	F	G	I	J
20.1" [510]	16.9" [430]	12.1" [307]	8.2" [208]	3.9" [100]	3.9" [100]	6" [152]	0.8" [20]	4" [102]