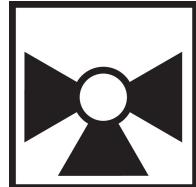


## Butterfly Valve with Grooved types

- Disc electroless nickel coated ductile iron
- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with AWWA (c606) & MSS-SP-67
- Completely assembled and tested, ready for installation
- VIC-300 Masterseal is manufactured by the Victaulic Company.



5-year warranty



## Type overview

Type	DN
F765VIC	65

## Technical data

<b>Functional data</b>	Valve size [mm]	2.5" [65]
Fluid	chilled or hot water, up to 60% glycol	
Fluid Temp Range (water)	-30...120°C [-22...250°F]	
Body Pressure Rating	ANSI Class Grooved AWWA, 300 psi	
Close-off pressure Δps	200 psi	
Flow characteristic	modified linear	
Leakage rate	0%	
Pipe connection	Grooved ANSI/AWWA (c606)	
Servicing	maintenance-free	
Flow Pattern	3-way Mixing/Diverting	
Controllable flow range	90° rotation	
Cv	260	
Maximum Velocity	20 FPS	
<b>Materials</b>	Valve body	Ductile cast iron ASTM A536
	Body finish	black alkyd enamel
	Stem	416 stainless steel
	Stem seal	fiberglass with TFE lining
	Seat	EPDM
	Disc	electroless nickel coated ductile iron
<b>Suitable actuators</b>	Non Fail-Safe	GMB(X) PRB(X)
	Spring	2*AFB(X)
	Electrical fail-safe	GKRB(X) PKRB(X)

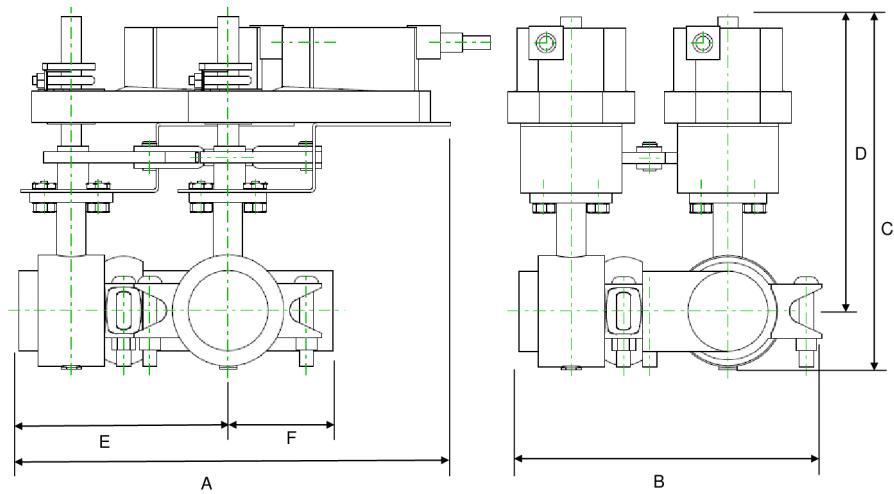
## Product features

## Flow/Mounting details



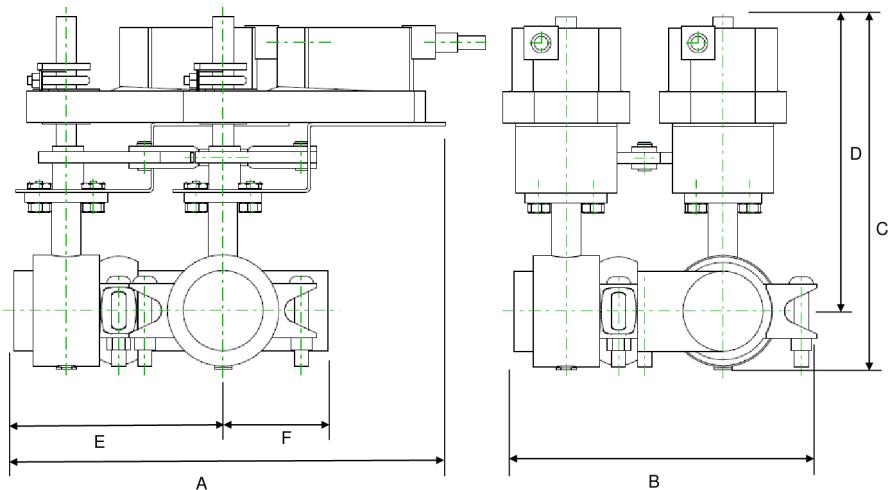
## Dimensions

Type	DN	Weight
F765VIC	65	42 lb [19 kg]



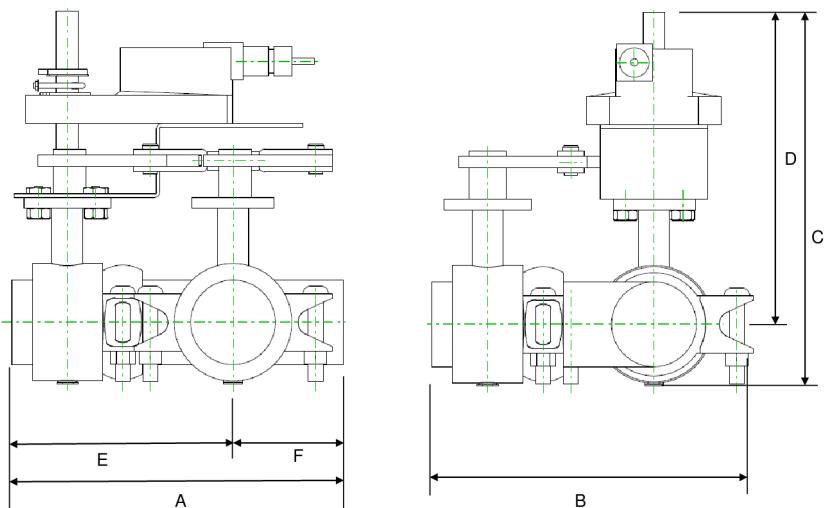
2GK

A	B	C	D	E	F
13.0" [330]	10.9" [277]	14.0" [356]	11.9" [302]	9.7" [246]	3.8" [97]



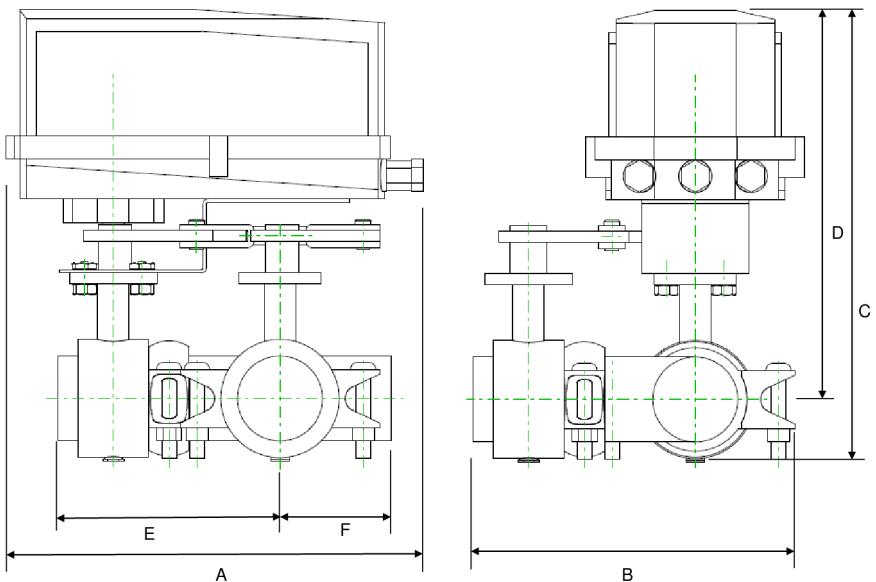
2GM

A	B	C	D	E	F
13.0" [330]	10.9" [277]	14.0" [356]	11.9" [302]	9.7" [246]	3.8" [97]



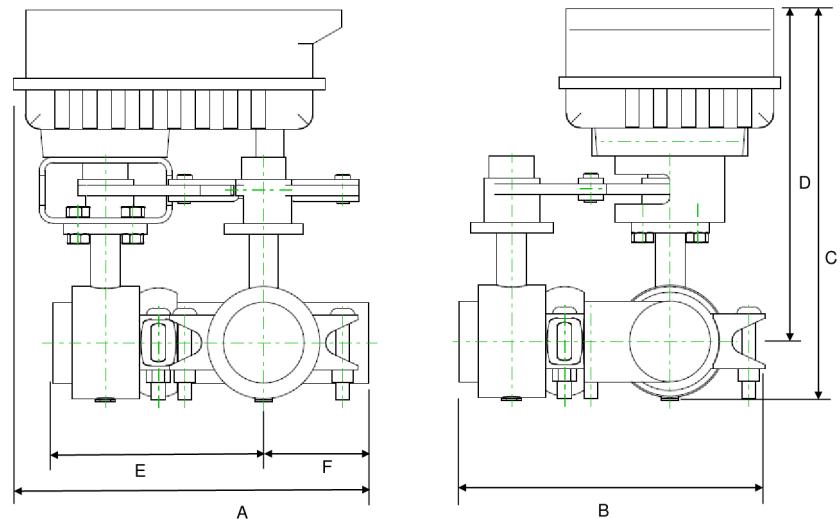
GM

A	B	C	D	E	F
14.1" [358]	10.9" [277]	15.3" [389]	10.6" [269]	9.7" [246]	3.8" [97]



GM N4

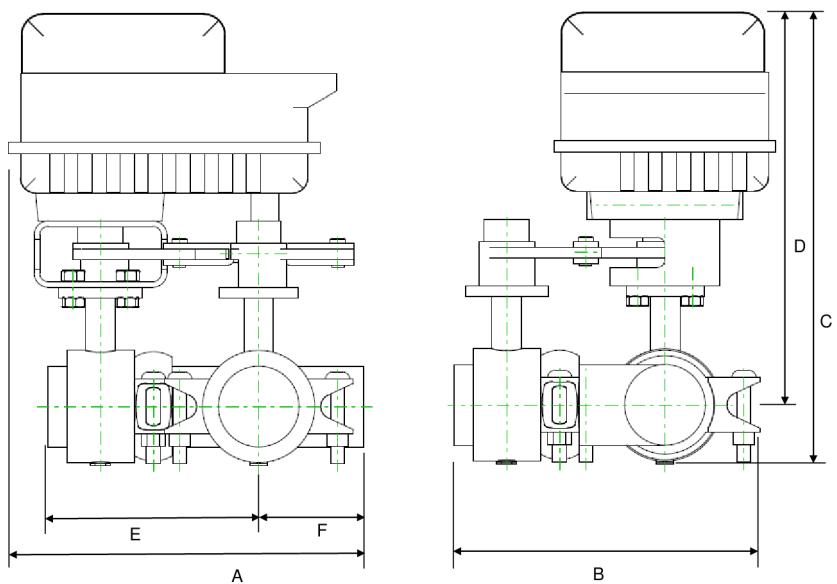
A	B	C	D	E	F
14.1" [358]	10.9" [277]	15.3" [389]	13.1" [334]	9.7" [246]	3.8" [97]



PRB(X)

A	B	C	D	E	F
13.0" [330]	10.9" [277]	14.0" [356]	14.4" [366]	9.7" [246]	3.8" [97]

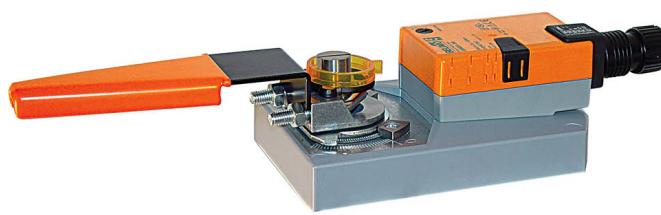
## Dimensions



PK

A	B	C	D	E	F
13.0" [330]	10.9" [277]	16.5" [419]	14.4" [366]	9.7" [246]	3.8" [97]

MFT/programmable, Non fail-safe, 24 V



## 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	15 W
	Power consumption in rest position	4 W
	Transformer sizing	12 VA
	Electrical Connection	18 GA appliance cables, 3 ft [1 m], 10 ft [3 m] or 16 ft [5 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, 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 0/1
	Manual override	external push button
	Angle of rotation	Max. 95°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	150 s / 90°
	Running time motor note	constant, independent of load
	Running time motor variable	75...290 s
	Noise level, motor	45 dB(A)
	Position indication	Mechanical, 30...65 mm stroke
Safety data	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 and 2014/35/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
	Ambient temperature	-22...122°F [-30...50°C]

## Technical data

<b>Safety data</b>	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
<b>Weight</b>	Weight	□
<b>Materials</b>	Housing material	Galvanized steel and plastic housing

**Footnotes** †Rated Impulse Voltage 800V, Type action 1, Control Pollution Degree 3.

## Accessories

	<b>Description</b>	<b>Type</b>
<b>Gateways</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>
	Battery backup system, for non-spring return models	NSV24 US
	Battery, 12 V, 1.2 Ah (two required)	NSV-BAT
	Auxiliary switch 1x SPDT add-on	S1A
	Auxiliary switch 2x SPDT add-on	S2A
	Feedback potentiometer 140 Ω add-on, grey	P140A GR
	Feedback potentiometer 1 kΩ add-on, grey	P1000A GR
	Feedback potentiometer 10 kΩ add-on, grey	P10000A GR
	Feedback potentiometer 2.8 kΩ add-on, grey	P2800A GR
	Feedback potentiometer 500 Ω add-on, grey	P500A GR
	Feedback potentiometer 5 kΩ add-on, grey	P5000A GR
<b>Tools</b>	<b>Description</b>	<b>Type</b>
	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 programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

## Electrical installation

 **INSTALLATION NOTES**

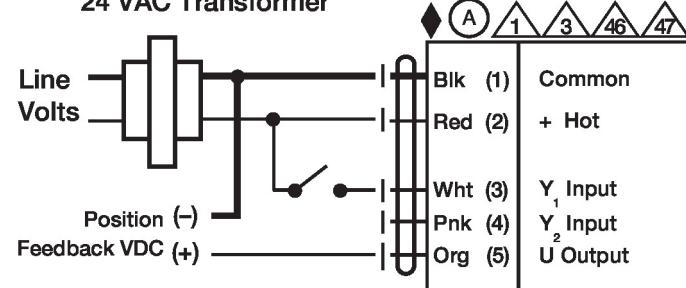
-  Actuators with appliance cables are numbered.
-  Provide overload protection and disconnect as required.
-  Actuators may also be powered by DC 24 V.
-  Only connect common to negative (-) leg of control circuits.
-  A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
-  Control 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. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
-  Actuators may be controlled in parallel. Current draw and input impedance must be observed.
-  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.

## Electrical installation

## Wiring diagrams

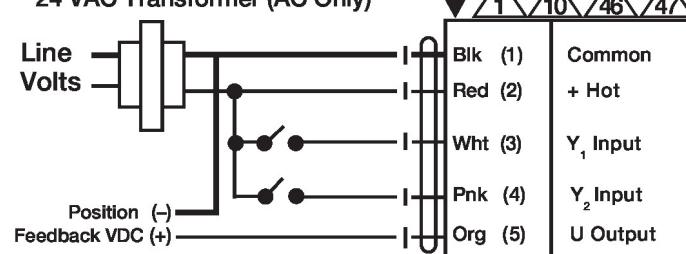
On/Off

## 24 VAC Transformer



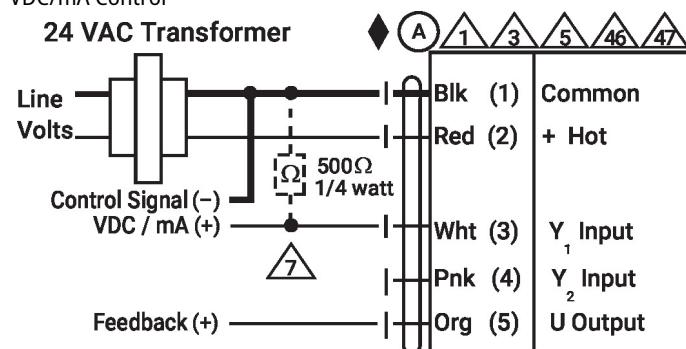
## Floating Point

## 24 VAC Transformer (AC Only)



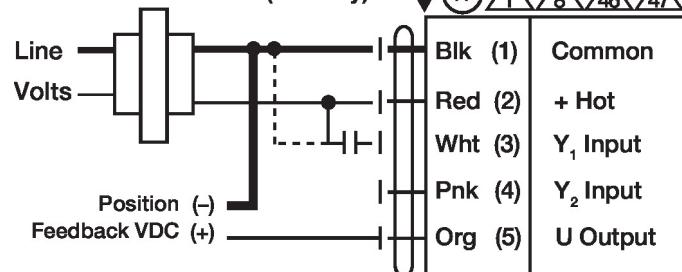
## VDC/mA Control

## 24 VAC Transformer



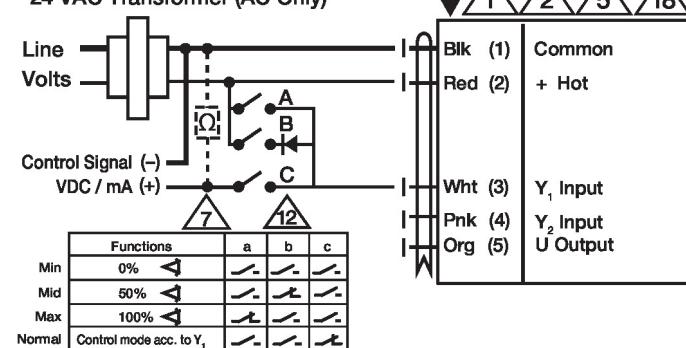
## PWM Control

## 24 VAC Transformer (AC only)



## Override Control

## 24 VAC Transformer (AC Only)



## Primary - Secondary

