

Features

- Industrial grade PVC ball valve with PTFE/EPDM seals
- Visual valve position indicator
- Rugged aluminum Type 4X weatherproof enclosure
- Heavy duty motors with overload protection
- Anti-condensation heater, thermostatically controlled
- Manual override with end of travel mechanical stops
- Two auxiliary limit switches for confirming valve position
- Energized PTFE ball seats for lower torque and longer life
- Union nut locking device prevents back-off
- Actuator CSA listed per UL429 and CSA C22.2
- Certified safe per NSF61 for potable/drinking water

Applications

Electric actuated 3-way full port PVC ball valves are typically used as a diverter valve to control the flow of water and other media compatible with the materials of construction (not suitable for air or gas). Ideal for industrial applications and where NSF approved construction is required for potable drinking water. Actuator designed for 70% duty cycle.

Operation

Electric actuated valve uses power-to-open (Pos. 2) and power-to-close (Pos.1), stays in the last known position with power failure. On receipt of a continuous voltage signal, the motor runs and via a rugged all metal gear drive rotates the ball 90°. The motor is automatically stopped by internal cams striking limit switches. On receipt of a reversing continuous signal, the motor turns in the opposite direction reversing the valve position. Electrical wiring is directly to terminal strip via included cable connector or optional 1/2" NPT conduit adapters. Standard manual override can be used for setup and power failure situations.

Construction

Valve Body	PVC cell class 12454 per ASTM D1784 (dark gray)
Ball/Stem	PVC cell class 12454 per ASTM D1784
Ball Seats	PTFE (Teflon) energized with EPDM
Stem Seals	Dual EPDM seals
Gear Drive	Heavy duty alloy steel and aluminium bronze worm
Actuator Enclosure	Aluminum polyester powder coated, Type 4X, IP67
Visual Valve Position Indicator	Clear polycarbonate cover, red/yellow open-closed
Fasteners	Stainless Steel
Auxiliary Limit Switches	2 x SPDT 3A@125/250VAC, 30VDC resistive load



Description

Electric actuated 3-way PVC ball valve is typically used as a flow diverter function. Energized PTFE ball seats are used to extended cycle life, compensate for wear and lower the operating torque. Rugged Type 4X, IP67 corrosion resistant actuator includes a manual override, position confirm limit switches, thermostatically controlled anti-condensation heater, and over-torque protection.

Approvals

Actuators

- CSA Listed to:
 - UL429 and CSA C22.2 no 139
 - Type 4X, IP67 weatherproof enclosure
- CE conformance
 - ISO5211 Mounting

Valves

- NSF International certified to:
 - NSF/ANSI 61 G
 - NSF/ANSI 372 Drinking Water
- ANSI B1.20.1
- ASTM D1784, cell class 12454



Construction Features



Pressure-Temperature

Valve Pressure Rating*: 232 PSI (16 Bar) at 73°F (23°C)

Vacuum 29inHg

Valve Temperature Rating: 32 to 140° F (0 to 60° C)

Actuator Temperature Rating: -22 to +130° F (-30 to 60° C)

*See P/T chart



Visual Valve Position Indicator

Pressure/Temperature Charts

P/T Chart (PSI/°F)							
PSI	232	232	232	180	150	100	35
°F	32	50	70	90	110	120	140

P/T Chart (Bar/°C)							
Bar	16	16	16	12	10	7	2.4
°C	0	10	21	32	43	49	60

Specifications (English units)

Stock Number	Pipe Size (inch)*	Pipe O.D. (inch)	Cv Flow Factor	Pressure Max.(PSI)**	Cycle Time /90° (sec) +/-10%	Voltage	Current F.L. Amps	Duty Cycle	Electrical Wiring Drawing
120 VAC ELECTRIC 3-WAY PVC BALL VALVE PTFE/EPDM: T-PORT									
565604C	1/2	0.8	4.6	232	25/21	110 VAC, 50/60Hz	0.27	70%	B
565606C	3/4	1.1	10.0	232	25/21	110 VAC, 50/60Hz	0.27	70%	B
565608C	1	1.3	17.0	232	25/21	110 VAC, 50/60Hz	0.27	70%	B
565610C	1-1/4	1.7	32.0	232	25/21	110 VAC, 50/60Hz	0.27	70%	B
565612C	1-1/2	1.9	42.0	232	25/21	110 VAC, 50/60Hz	0.27	70%	B
565616C	2	2.4	84.0	232	25/21	110 VAC, 50/60Hz	0.27	70%	B
24 VDC ELECTRIC 3-WAY PVC BALL VALVE PTFE/EPDM: T-PORT									
565646C	1/2	0.8	4.6	232	20	DC24	1.28	70%	G
565647C	3/4	1.1	10.0	232	20	DC24	1.28	70%	G
565649C	1	1.3	17.0	232	20	DC24	1.28	70%	G
565650C	1-1/4	1.7	32.0	232	20	DC24	1.28	70%	G
565651C	1-1/2	1.9	42.0	232	20	DC24	1.28	70%	G
565652C	2	2.4	84.0	232	20	DC24	1.28	70%	G

Cv is the GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

*Valves include both IPS glue sockets and NPT end connectors

** See Pressure/Temperature charts, maximum allowable pressure decreases as temperature increases

Specifications (Metric units)

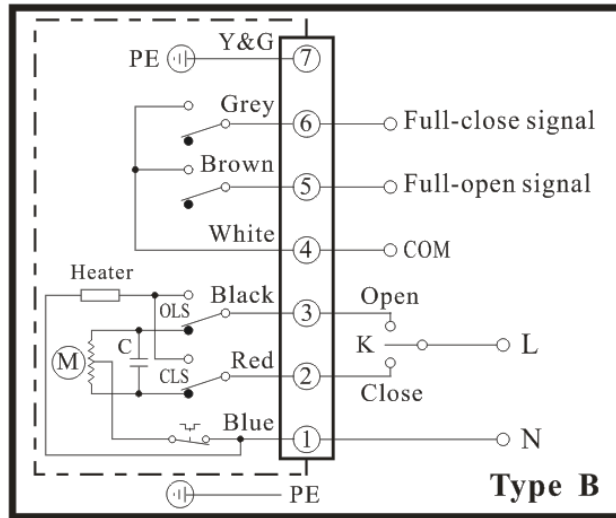
Stock Number	Pipe Size (inch)*	Pipe O.D. (mm)	Kv Flow Factor	Pressure Max.(Bar)**	Cycle Time /90° (sec) +/-10%	Voltage	Current F.L. Amps	Duty Cycle	Electrical Wiring Drawing
120 VAC ELECTRIC 3-WAY PVC BALL VALVE PTFE/EPDM: T-PORT									
565604C	1/2	21.3	4.0	16	25/21	110 VAC, 50/60Hz	0.27	70%	B
565606C	3/4	26.7	8.6	16	25/21	110 VAC, 50/60Hz	0.27	70%	B
565608C	1	33.5	15.0	16	25/21	110 VAC, 50/60Hz	0.27	70%	B
565610C	1-1/4	42.2	27.5	16	25/21	110 VAC, 50/60Hz	0.27	70%	B
565612C	1-1/2	48.3	36.0	16	25/21	110 VAC, 50/60Hz	0.27	70%	B
565616C	2	60.5	72.0	16	25/21	110 VAC, 50/60Hz	0.27	70%	B
24 VDC ELECTRIC 3-WAY PVC BALL VALVE PTFE/EPDM: T-PORT									
565646C	1/2	21.3	4.0	16	20	DC24	1.28	70%	G
565647C	3/4	26.7	8.6	16	20	DC24	1.28	70%	G
565649C	1	33.5	15.0	16	20	DC24	1.28	70%	G
565650C	1-1/4	42.2	27.5	16	20	DC24	1.28	70%	G
565651C	1-1/2	48.3	36.0	16	20	DC24	1.28	70%	G
565652C	2	60.5	72.0	16	20	DC24	1.28	70%	G

*Valves include both IPS glue sockets and NPT end connectors

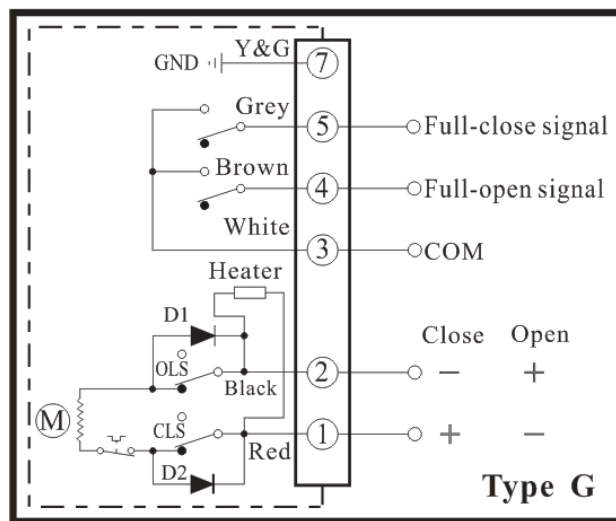
** See Pressure/Temperature charts, maximum allowable pressure decreases as temperature increases

Electrical Wiring Diagram

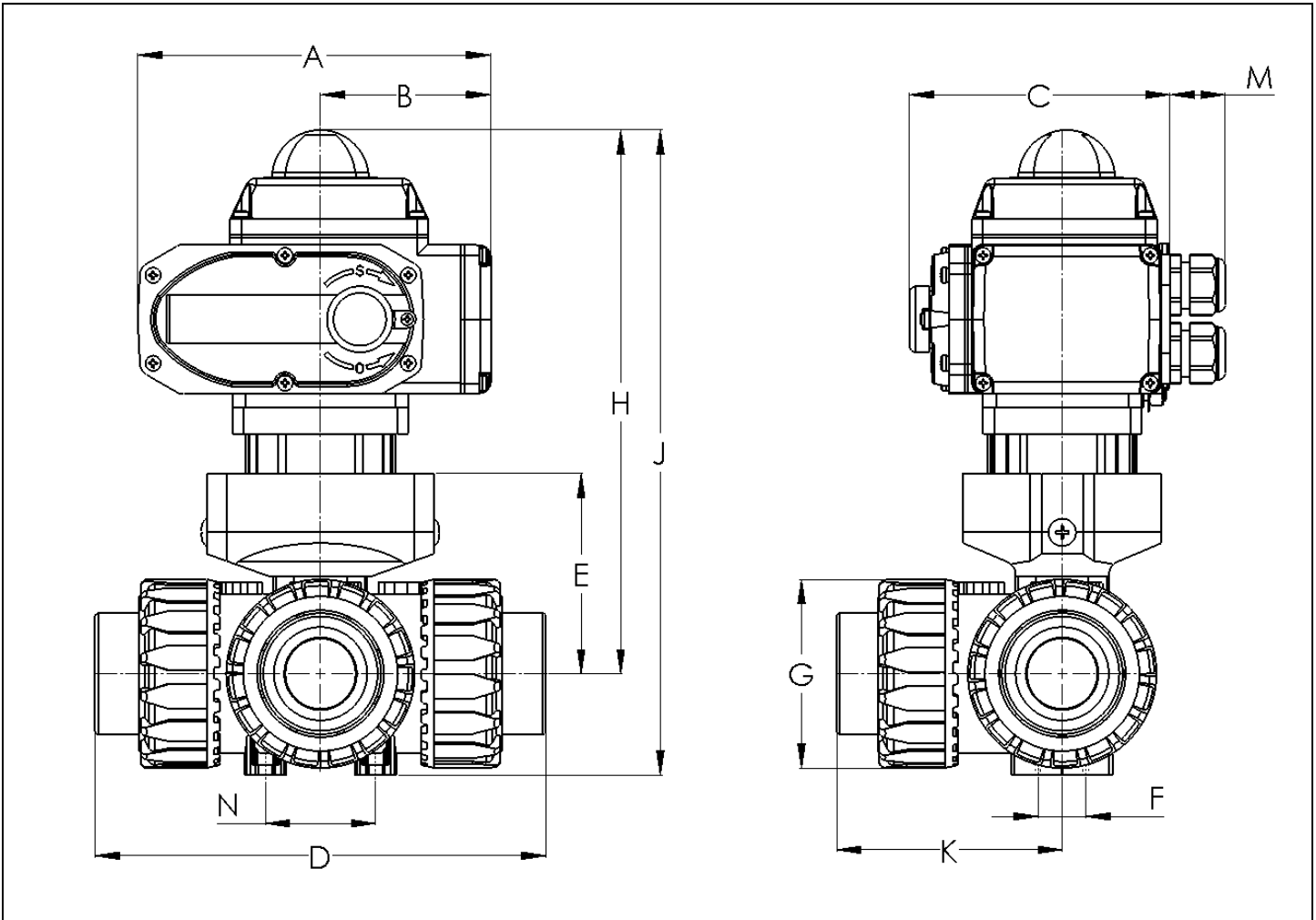
AC Voltages



DC Voltages



Dimensions:



Pipe Size (NPT)		A	B	C	D	E	F	G	H	J	K	M	N	Weight AC/DC
1/2	inch	6.4	3.2	4.7	5.2	2.3	0.8	2.1	8.5	9.5	2.6	0.9	1.2	6.9/ 5.9 lbs
	mm	162.0	82.0	118.5	132.3	57.9	20.0	53.9	214.9	241.8	66.0	23.0	31.0	3.1/ 2.7 kg
3/4	inch	6.4	3.2	4.7	6.3	2.7	0.8	2.6	8.9	10.2	3.1	0.9	1.2	7.6/ 6.6 lbs
	mm	162.0	82.0	118.5	159.2	69.5	20.0	65.0	226.5	259.0	80.0	23.0	31.0	3.5/ 3.0 kg
1	inch	6.4	3.2	4.7	6.6	2.9	0.8	2.9	9.1	10.5	3.3	0.9	1.2	8.0/ 7.0 lbs
	mm	162.0	82.0	118.5	168.4	74.0	20.0	73.0	231.0	267.5	84.2	23.0	31.0	3.6/ 3.2 kg
1-1/4	Inch	6.4	3.2	4.7	8.1	3.6	1.2	3.4	9.8	11.5	4.0	0.9	2.0	9.3/ 8.3 lbs
	mm	162.0	82.0	118.5	205.0	91.0	30.0	85.7	248.0	290.9	102.0	23.0	50.0	4.2/ 3.7 kg
1-1/2	inch	6.4	3.2	4.7	9.0	3.8	1.2	3.9	10.0	11.9	4.5	0.9	2.0	10.3/ 9.3 lbs
	mm	162.0	82.0	118.5	227.6	97.2	30.0	98.2	254.2	303.3	114.0	23.0	50.0	4.7/ 4.2 kg
2	inch	6.4	3.2	4.7	10.5	4.5	1.2	4.8	10.6	13.0	5.3	0.9	2.0	13.0/ 12.0 lbs
	mm	162.0	82.0	118.5	267.0	113.0	30.0	121.4	270.0	330.7	134.0	23.0	50.0	5.9/ 5.4 kg