



Type: EJ-4200ES-SS Electric actuator direct mounted

Main J+J Smart electric actuator features:

- LED light for continual visual actuator status feedback.
- Fully weatherproof smart industrial actuator.
- Multi-voltage 24V-240V capable actuator.
- All external electrical connections, no need to remove cover .
- Selectable manual override facility.
- Thermostatic anti-condensation heater.
- Electronic torque limiter.
- End of travel switches for remote open/ closed indication.
- CE marked.
- EU manufactured by J+J.

Applications:

Various water applications, oil, air and many corrosive media, subject to compatibility with wetted parts in contact with media. J+J Electric actuators are sized on a maximum differential pressure of 150 psi wet service, operated at least once per day. If the intended duty differs from these parameters, or is dry (air or gas) call to check the actuator sizing as a larger output J+J valve actuator may be required.

Maximum working temperature of a direct mounted assembly is +158F. For higher working temperatures , consider models that have a mounting kit or stem extension between the valve and actuator which uses air cooling to dissipate the rising heat from the valve away from the actuator. Should the J+J smart actuator be exposed to more than +158F it will malfunction.

Typical KV Values

Valve Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
KV	17	38	62	115	150	250	410	900	145	3700

Kv = m³ per hour with a 1 bar pressure drop across the valve. CV = US gallons per hour with a 1psi pressure drop across the valve . Cv = Kv / 0.86

J+J Electric Actuator Overview

The J+J electric actuator range starts with the standard on-off model which can have this power open, power close operation changed to failsafe and/or modulating by installing internally fitted, user friendly plug and play function conversion kits. The housing dimensions therefore remain the same for all of the different functions.

Failsafe is achieved with a constantly trickle charged battery back-up system, modulation uses a digital positioner using magnetic position sensing technology.

In most cases AVS will fit and test these conversion kits, but they can be retro-fitted.

Specifications:	
Actuator housing	UV Protected Polyamide
Supply voltage range	24V-240V AC or DC
IP Rating	Similar to NEMA 4X (IP67)
Actuator temp limits	-4 to +158°F
Assembly temp limits	Direct mounted actuator +158°F
	Actuator mounted via kit +266°F
Valve body	CF8M Cast Stainless Steel
Valve ball	316SS
Valve seats	RPTFE
Valve Pressure rating	ANSI B16.5 CL150 at ambient temp
Valve temp limits	-4 to +390F
Size range	1/2" to 6"

Stainless Steel Ball valve information (Non fire-safe) :

Full bore 2 piece construction, flanged ASA150 providing full unrestricted flow and a very low pressure drop across the valve. Designed for automation with integrally cast ISO5211 actuator mounting platform.

Turning the ball through 90° fully opens the valve, turning back through 90° fully closes the valve and isolates the flow. End connections are flanged according to ANSI B16.5 Class 150.

J+J ON OFF ELECTRIC ACTUATOR - STANDARD OPERATION

Power open, power close, stays put on loss of external power.

How this electric 1/4 turn valve works (on-off):

Electrically operated valves are driven by a motor and gearbox. On receipt of a continuous voltage signal the motor runs and, via a gearbox in the J+J smart electric actuator, rotates the valve stem. The motor stops at the desired position (usually 0° or 90°) by internal cams striking micro-switches. The smart valve actuator remains in this position, with the voltage still applied continuously, until switched and a continuous voltage reversing signal is applied, which runs the motor in the opposite direction, reversing the rotation until separate set of internal cams strike separate set of micro-switches.

Alternate Function Options:

It is possible to change the J+J actuator's function by installing user friendly plug and play function conversion kits. These will provide the following alternative functions:

Failsafe J+J Actuator

J+J actuator fails to pre-set position using our BSR (Battery 'Spring Return') system which creates an alternate power supply should the external power fail.

Modulating J+J Actuator

Movement of the J+J actuator is proportional to an input control signal, typically 4-20mA or 0-10V, by installing our DPS (Digital Positioning System) user friendly plug and play kit. There are options for how the J+J modulating actuator reacts to loss of the control signal, but it will stay put on loss of external power.

Configuration options:

- 1) Closes on loss of control signal
- 2) Opens on loss of control signal
- 3) Stays put on loss of control signal

Failsafe Modulating J+J Actuator

Failsafe modulating by installing the J+J BSR (Battery 'Spring Return') plug and play kit, operates functionally as a modulating electric actuator as described above, but will fail as per the DPS setting on loss of external power, as follows:

Configuration options:

- 1) Closes on loss of control signal, or on loss of external power
- 2) Opens on loss of control signal, or on loss of external power
- 3) Stays put on loss of control signal

Installing J+J Plug & Play function conversion kits

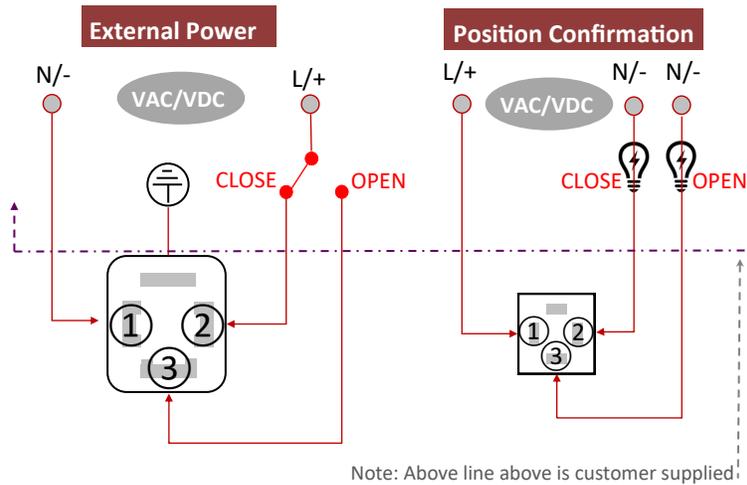
Failsafe and/or modulating function is quick and easy to achieve in the J+J smart electric actuator by the fitting of the user friendly failsafe and/or modulating plug & play function conversion kits to the standard on-off J+J smart valve actuator. When actuated valves are ordered with failsafe, modulating or failsafe modulating function, AVS install and test the plug and play function conversion kits, they can however be easily retro-fitted to J+J smart electric actuators should the on-off function requirement (supplied as standard function), change.



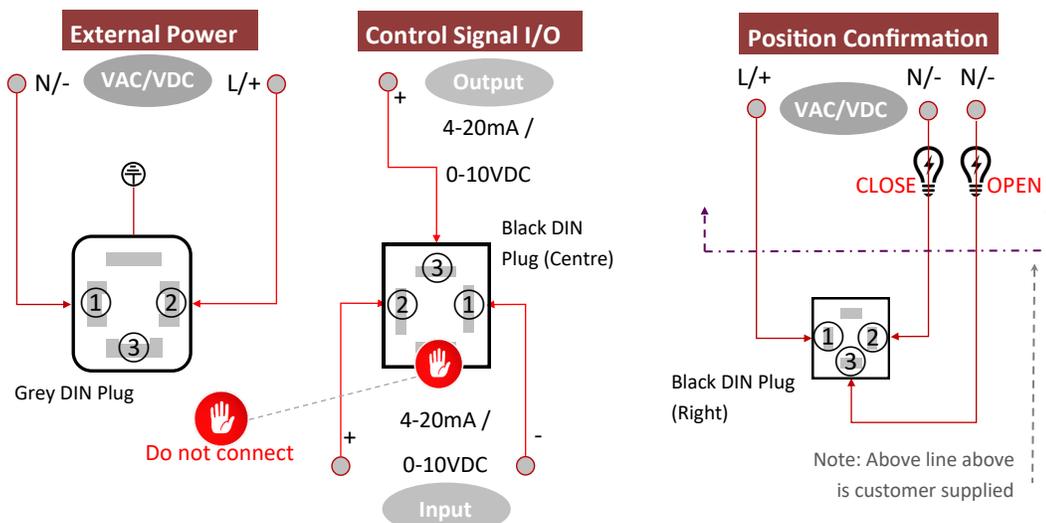
NOTE ABOUT WIRING:

In J+J electric actuators all electrical connections are made externally using the external DIN plugs supplied with the actuator. There is no need to remove the valve actuator's cover to connect electrically. There are no terminals internally to connect to.

J+J ON-OFF & FAILSAFE WIRING (Same connection for either)

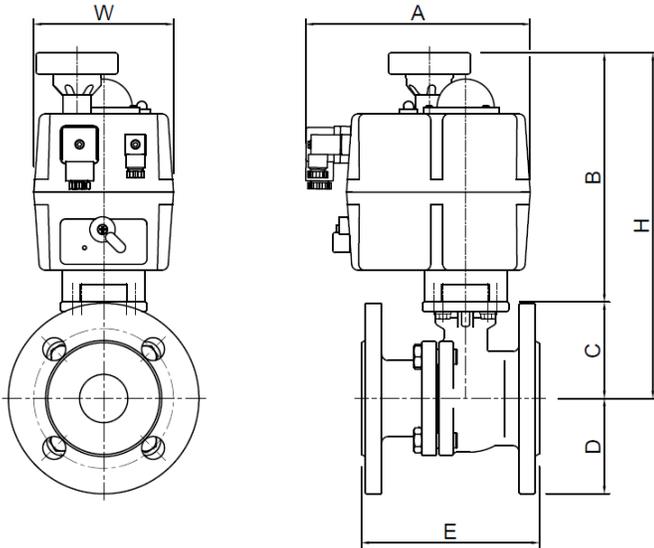


J3CS MODULATING & FAILSAFE MODULATING WIRING



Type: EJ-4200ES Actuator direct mounted to valve

Typical Dimensions in mm:

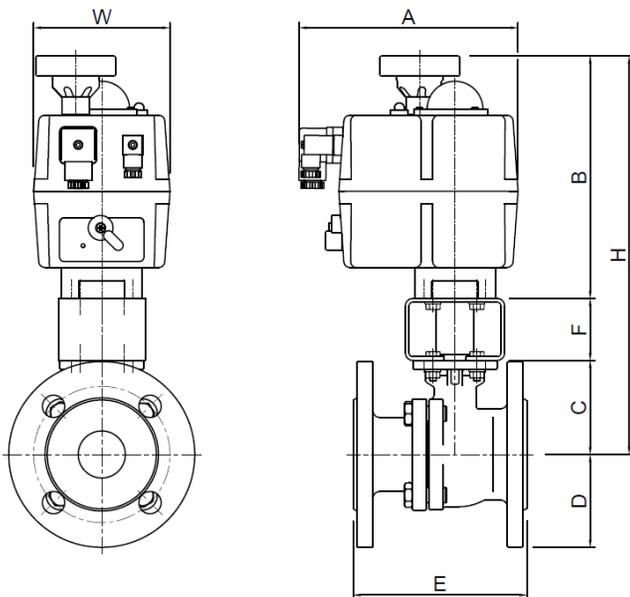


EJ-4200ES Dimensions remain unchanged for all versions						
- On-off, failsafe, modulating and failsafe modulating						
	Model	A	F	H	W	Kilos
1/2"	20	177	108	197	110	3.6
3/4"	20	177	117	202	110	4.4
1"	20	177	127	208	110	5.2
1 1/4"	20	177	140	220	110	6.8
1 1/2"	35	177	165	247	110	8.9
2"	35	177	178	256	110	11.5
2 1/2"	85	177	190	290	128	15.5
3"	85	177	203	299	128	19.5
4"	*140	235	229	386	214	30.8
6"	*300	235	394	439	214	74.0

*140 = J3C-140

*300 = J3C-300

Type: EJ-4210ES Actuator fitted to valve via a bracket and machined drive adapter



EJ-4200ES Dimensions remain unchanged for all versions							
- on-off, failsafe, modulating & failsafe modulating							
	Model	A	E	F	H	W	Kilos
1/2"	20	177	50	108	207	110	3.8
3/4"	20	177	50	117	252	110	4.6
1"	20	177	50	127	258	110	5.4
1 1/4"	20	177	50	140	270	110	7.0
1 1/2"	35	177	50	165	322	110	9.0
2"	35	177	50	178	331	110	11.7
2 1/2"	85	177	70	190	340	128	15.7
3"	85	177	70	203	427	128	20.5
4"	*140	235	70	229	456	214	31.8
6"	*300	235	70	394	534	214	75.8