

J3CS Smart Electric Actuator Function: POWER OPEN - POWER CLOSE , STAYS PUT ON POWER FAILURE



Type: E4104S

Electric actuator direct mounted



Type: E4114S

Electric actuator fitted via kit

Main J3CS Smart electric actuator features:

- LED light for continual visual actuator status feedback.
- Fully weatherproof smart industrial actuator.
- Multi-voltage 24-240V 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:

Potable water (valve is not WRAS approved), oil, air and most non-corrosive media, subject to compatibility with wetted parts in contact with media.

Electrical actuators sized on a maximum differential pressure of 10 bar 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 JJ actuator sizing as a larger output valve actuator may be required.

Maximum working temperature of a direct mounted assembly is +70C. For higher working temperatures , consider models that have a mounting kit or TSM 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 J3CS smart actuator see more than +70C it will malfunction.

Specifications:	
Actuator housing	UV Protected Polyamide
Supply voltage range	24-240V AC or DC
IP Rating	IP67
Actuator temp limits	-20 to +70°C
Assembly temp limits	E4103S +70°C Direct mounted
	E4113S +130°C Mounted via kit
	E4123S +100°C Mounted via ext'n
Valve body	CF8M (Cast 316SS)
Valve ball	316SS
Valve seats	RPTFE
Valve Pressure rating	UTI 2" 40 bar at ambient temp
	2 1/2" and above PN16 at ambient
Valve temp limits	-20 to +190°C
Size range	1/2" to 4"

Ball valve information:

Full bore 2 piece construction, flanged PN16, 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 PN16 (PN40 up to and including 2")

These ball valves are ideal for general service applications. Should you require fire safe approved actuated flanged PN16 ball valves, see our Type: 4200

Typical KV Values

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
KV	6.5	14	34	60	95	206	344	602	843

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J3CS ON - OFF ELECTRIC ACTUATOR

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

Options:

It is possible to change the J3CS actuator's function by installing user friendly plug and play function conversion kits. These will provide the following alternative functions:

Failsafe J3CS Actuator

J3CS fails to pre-set position using our BSR (Battery 'Spring Return' system which creates an alternate power supply should the external power fail.

Modulating J3CS Actuator

Movement of the J3CS 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 J3CS modulating 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 J3CS 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 power
- 2) Opens on loss of control signal, or on loss of power
- 3) Stays put on loss of control signal

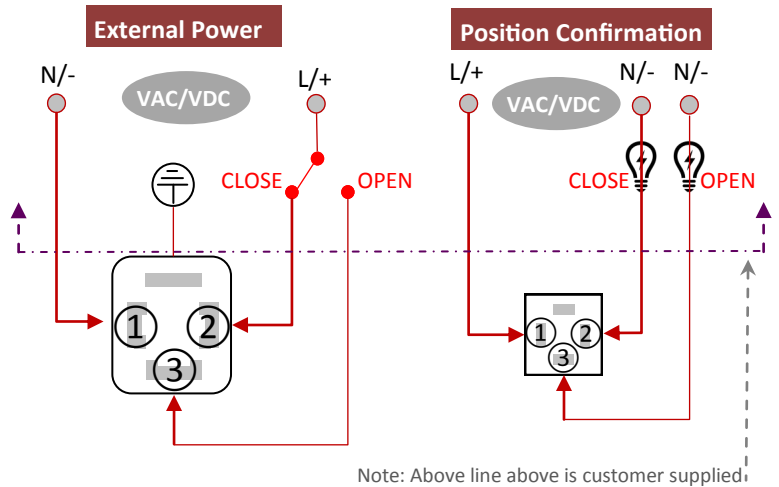
Installing J+J Plug & Play function conversion kits

Failsafe and/or modulating function is quick and easy to achieve in the J3CS smart electric actuator by the fitting of the user friendly failsafe and/or modulating plug & play function conversion kits to the standard on-off J3CS smart valve actuator. When actuated valves are ordered with failsafe, modulating or failsafe modulating function, J+J install and test the plug and play function conversion kits. They can however be easily retro-fitted to J3CS smart electric actuators should the on-off function requirement (supplied as standard function), change.

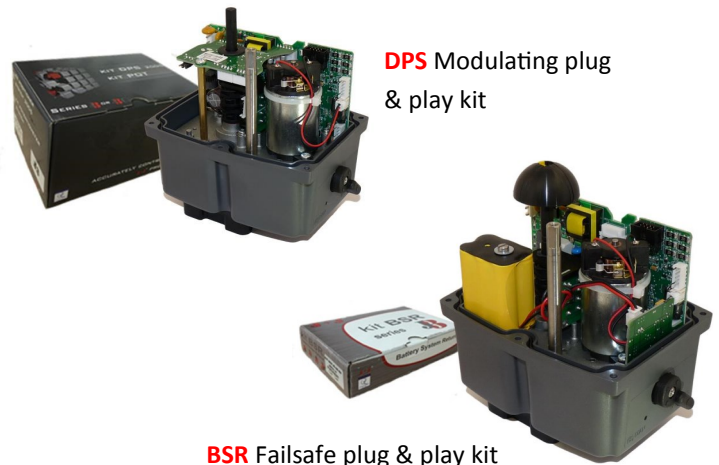
Electrical Connection - Wiring of DIN Plugs

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.

J3CS ON-OFF & FAILSAFE WIRING (Same connection for either)

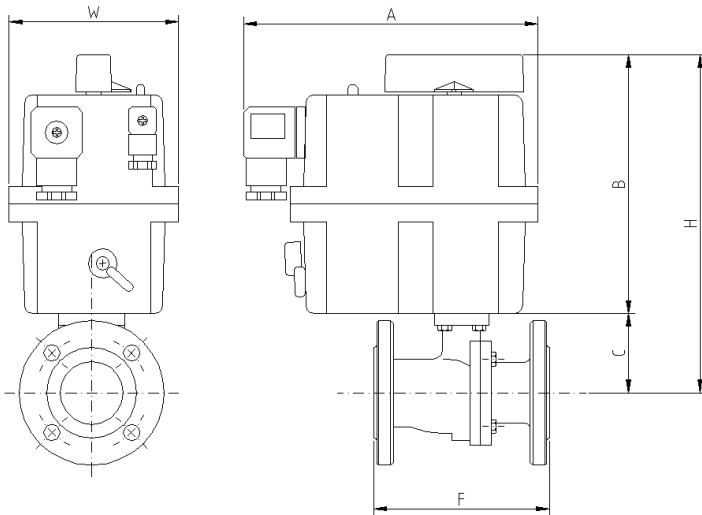


Optional Plug & Play Function Conversion Kits



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Type: **E4103S** Actuator direct mounted to valve



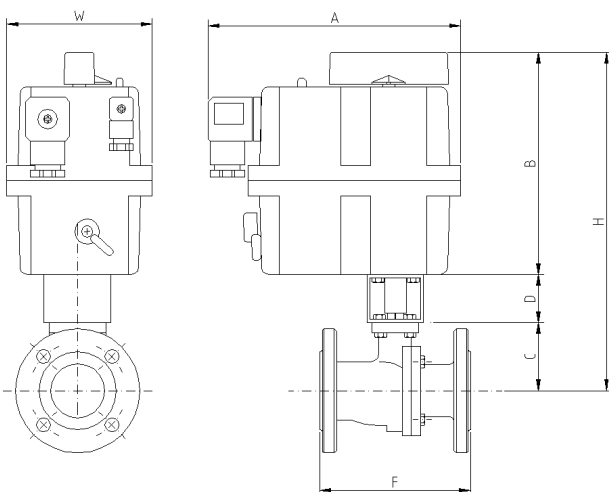
Note: Drawing shows J3 actuator, awaiting updated drawing showing the J3CS, released in late 2016.

Typical Dimensions:

E4104S Dimensions remain unchanged for all versions
- On-off, failsafe, modulating and failsafe modulating

	Model	A	F	H	W	Kilos
1/2"	20	177	115	197	110	3.6
3/4"	20	177	120	202	110	4.4
1"	20	177	125	208	110	5.2
1 1/4"	20	177	130	220	110	6.8
1 1/2"	35	177	140	247	110	8.9
2"	35	177	150	256	110	11.5
2 1/2"	85	177	170	290	128	15.5
3"	85	177	180	299	128	19.5
4"	*140	235	190	386	214	30.8

Type: **E4113S** Actuator fitted to valve via a bracket and drive adapter



Note: Drawing shows J3 actuator, awaiting updated drawing showing the J3CS, released in late 2016.

E4114S Dimensions remain unchanged for all versions
- on-off, failsafe, modulating & failsafe modulating

	Model	A	E	F	H	W	Kilos
1/2"	20	177	50	115	247	110	3.8
3/4"	20	177	50	120	252	110	4.6
1"	20	177	50	125	258	110	5.4
1 1/4"	20	177	50	130	270	110	7.0
1 1/2"	35	177	50	140	297	110	9.0
2"	35	177	50	150	306	110	11.7
2 1/2"	85	177	70	170	340	128	15.7
3"	85	177	70	180	369	128	20.5
4"	*140	235	70	190	456	214	31.8