# Electric 6000psi Stainless 3 Way Ball Valve

## Failsafe Modulating Actuator Type: E2916S

**J3CS Smart Electric Actuator Function: MODULATING CONTROL , FAILS SAFE ON POWER FAILURE**

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

Type: E2916S

Electric actuator fitted via kit

BALL VALVE MADE IN BRITAIN

### 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.

| 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 | E2916S +130°C |
| Valve body | 316 S11 to NACE |
| Valve ball | 316 S11 to NACE |
| Valve seats | PVDF (x2) |
| Valve Pressure rating | UTI 2" 414 bar at max +150°C |
| Valve temp limits | -20 to +150°C |
| Size range | 1/4" to 1" |

### Applications:

Water, oil, air and many corrosive medias, subject to compatibility with wetted parts in contact with media.

J3CS Electric 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 electric actuator may be required.

Maximum working temperature of a direct mounted assembly is +130C. For higher working temperatures , contact us for options on mounting kit height, which uses air cooling to dissipate the rising heat from the valve away from the actuator. The taller the kit, the higher the working temperature. Should the J3CS smart actuator see more than +70C it will malfunction.

### Ball valve information:

Block body 3 piece 2 seat 3 way diverting ball valve. High quality parts produced, assembled and tested in the UK. These valves have a special configuration of stem to allow them to be used with electric actuators. End connections are threaded BSP female. NPT ends available as an option. Turning the ball through 90° fully opens the valve, turning back through 90° fully closes the valve and isolates the flow.

As standard 316 stainless steel construction is offered, but other materials, including super duplex, hasteloy, incoloy, 6M0, titanium and monel are available on request. Certs to EN 10204 3.1b.


**Flow path: 'L' port (diverting) only**

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### J3CS FAILSAFE MODULATING ELECTRIC ACTUATOR

The J3CS Modulating is used where the position of the actuator is required to be set by a control input signal. Unlike an on-off electric actuator, a modulating actuator will rarely travel from open to closed in one movement, it may only be required to alter its position by a few degrees. This is achieved by installing our DPS (Digital Positioning System) - in stalled by J+J when ordered as a modulating electric actuator.

### How this electric 1/4 turn valve works:

With external power permanently connected, movement of the J3CS actuator is then proportional to an input signal, typically 4-20mA or 0-10V. The DPS processor continually compares the physical position of the J3CS output shaft to the input signal, and if a difference exists, controls the motor to eliminate the difference. An output signal is provided as standard. The reaction from the J3CS actuator to a loss of control signal can be set as below.

Configuration options:

1) Closes on loss of control signal

2) Opens on loss of control signal

3) Stays put on loss of control signal

The DPS in the J3CS uses the latest magnetic position sensing technology which, when combined with digital processing, produces very accurate modulating control.

Adding the BSR (Battery 'Spring Return') plug and play function conversion kit to the J3CS modulating actuator, it becomes a J3CS failsafe modulating electric actuator.

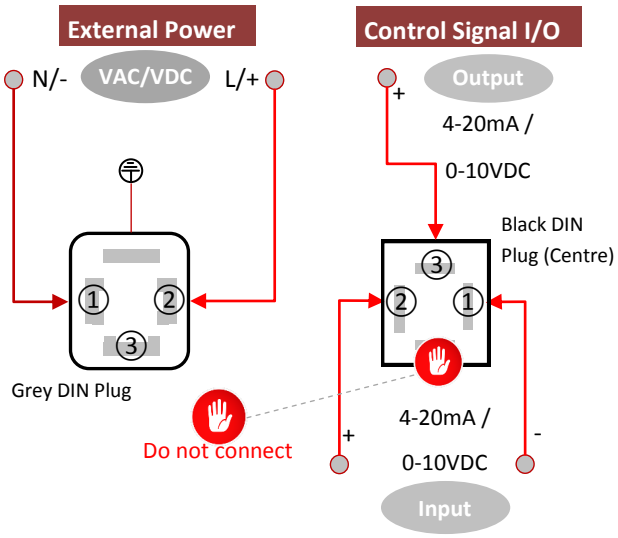
The advantage this gives is that the actuator will fail to either the open or closed position, depending on how the DPS positioner is configured, in the event of an external power failure.

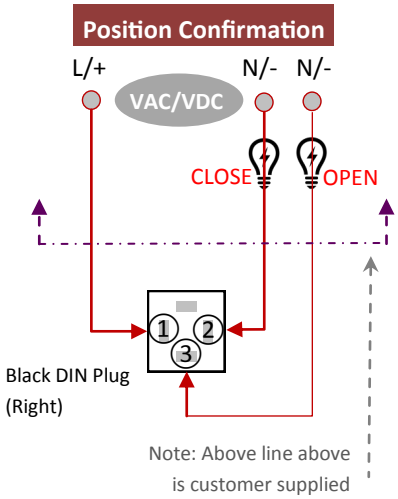
The BSR failsafe system comprises of an industrial rechargeable NiCad battery and a PCB containing a trickle charger and control circuitry.

Whilst generally the J3CS failsafe modulating electric actuators are supplied with the BSR failsafe and DPS modulating kits pre-installed and function tested by J+J, the BSR and DPS kits can be supplied to be installed by the user into an on-off J3CS as they are very user friendly, simple to install and are plug and play. The DPS is self calibrating so no complex set-up procedure is necessary.

This is a very Smart Red Box.

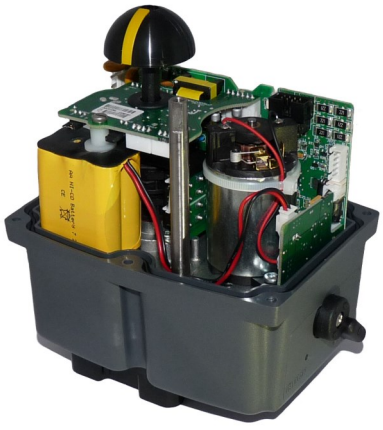
### J3CS FAILSAFE MODULATING WIRING




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.

BSR Failsafe plug & play kit pre-installed to create failsafe modulating function.



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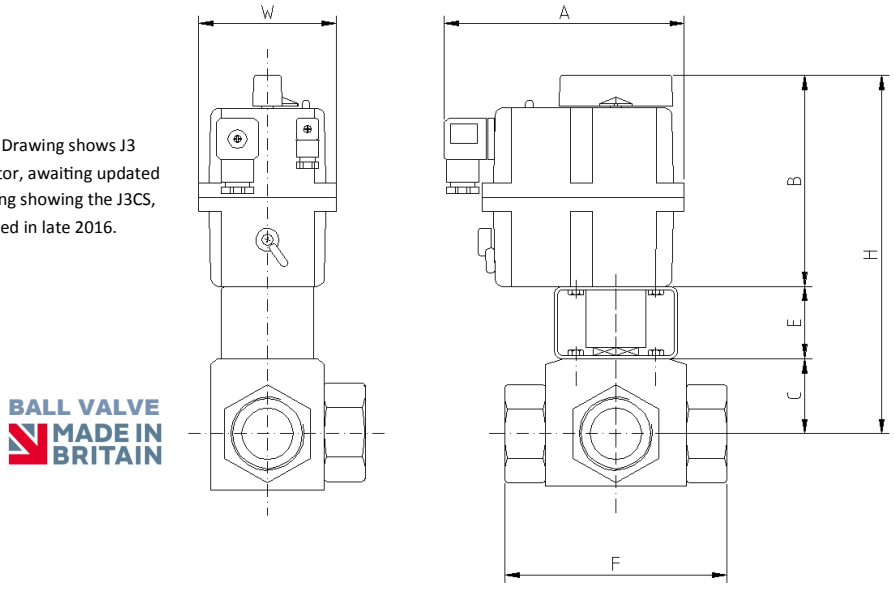
### Typical Dimensions:

Type: E2916S 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.

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Note: Available with bottom entry style valve, details on request.

E2916S Dimensions remain unchanged for all versions

- on-off, failsafe, modulating & failsafe modulating

| | Model | A | E | F | H | W | Kilos |
|---|---|---|---|---|---|---|---|
| 1/4” | 20 | 177 | 50 | 71 | 215 | 110 | 2.2 |
| 3/8” | 20 | 177 | 50 | 77 | 215 | 110 | 2.2 |
| 1/2” | 20 | 177 | 50 | 85 | 215 | 110 | 2.3 |
| 3/4” | 20 | 177 | 50 | 90 | 218 | 110 | 2.6 |
| 1” | 35 | 177 | 50 | 111 | 246 | 110 | 3.7 |