

J3CS Smart Electric Actuator Function: PROPORTIONAL CONTROL - STAYS PUT ON POWER FAILURE



Type: E3015HS

Electric actuator fitted via mounting kit

Main J3 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	E3015HS +60°C
Valve body	uPVC
Valve ball	uPVC
Valve seats	PTFE with EPDM seals
Valve Pressure rating	UTI 2" 16 bar at +20C 2 1/2" - 3" 10 bar
Valve temp limits	0 to +60°C
Size range	1/2" to 3"

Applications:

The 3010H is well suited in water, food and general service applications, and is used extensively around the world in water, irrigation, swimming pools, foodstuffs and general service applications. Can be used with potable water (but not WRAS approved in the UK), and many corrosive media, subject to compatibility with wetted parts in contact with media.

Actuators sized on a maximum differential pressure of 10 bar wet service, operated at least once per day. If the intended duty is above this differential, or dry (eg: some solvents) call to check actuator sizing as a larger output actuator may be required.

Maximum working temperature of this assembly is +60C. For temperatures in excess of this please contact us - we may still be able to offer a plastic valve, say PVDF or cPVC, depending upon the working temperature required, and the working pressure.

Ball valve information:

The 3010H is an economy, mass produced PVC ball valve.

The double union design allows the centre section to quickly and easily be removed for replacing the seats and seals. These economy PVC ball valves have a blow-out proof ball & stem. Standard seals are EPDM but Viton (FKM) is available. Automation is made quick and easy when using the manufacturers' purpose designed mounting kit that is usually available from stock.

PVC information:

PVC is odourless and tasteless and is used in many applications such as water processing, conveying potable water and food processing.. It has good chemical resistance and resists most solutions of acids, alkalis and salts, and also solvents that can be diluted with water.

It is not resistant to aromatic and chlorinated carbons.

PVC is not suitable in applications where the installation can see negative ambient temperatures, and care must be taken when working above 20C as the allowable working pressure drops significantly as the working temperature increases.

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J3CS 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) - installed by J+J when ordered as a modulating electric actuator.

How this electric 1/4 turn valve works (Modulating):

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, 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

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

Options:

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

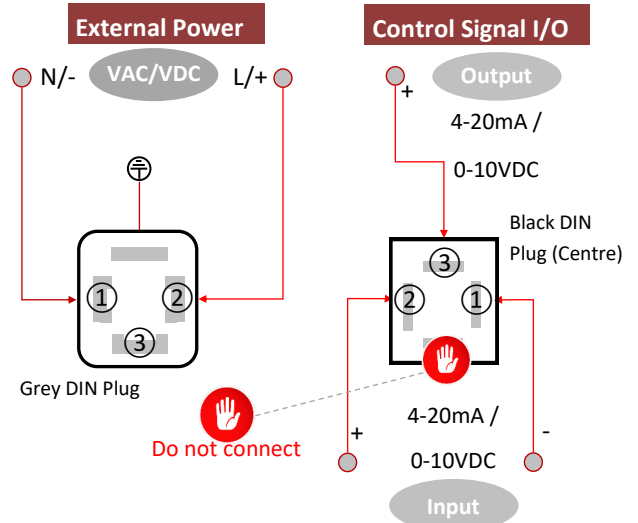
Failsafe Modulating J3CS Actuator

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.

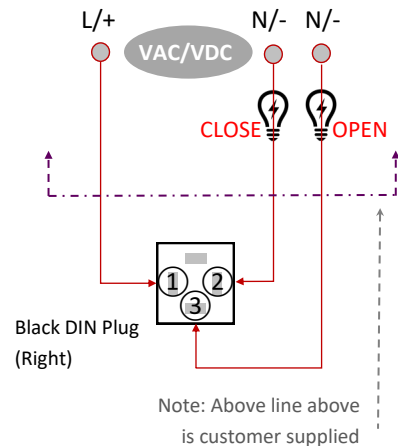
The advantage this gives is that the actuator will fail to either the open or closed position, depending on how the DPS positioner is configured, in the event of an external power failure.

The BSR failsafe system comprises of an industrial rechargeable NiCad battery and a PCB containing a trickle charger and control circuitry. It can either be installed by J+J on original supply, or retro-fitted.

J3CS MODULATING WIRING



Position Confirmation



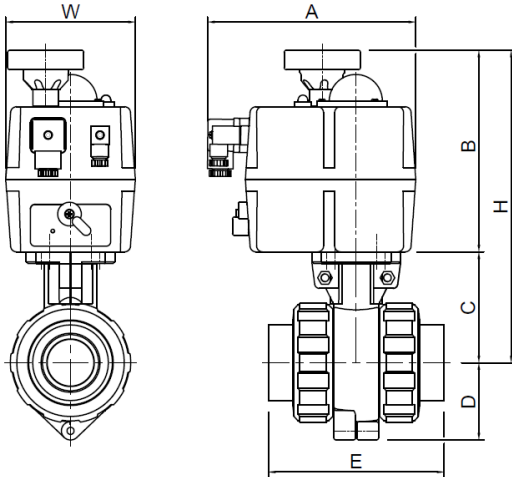
In J+J electric actuators all electrical connections are made externally using the external DIN plugs supplied with the actuator. There is no need to remove the valve actuator's cover to connect electrically. There are no terminals internally to connect to.



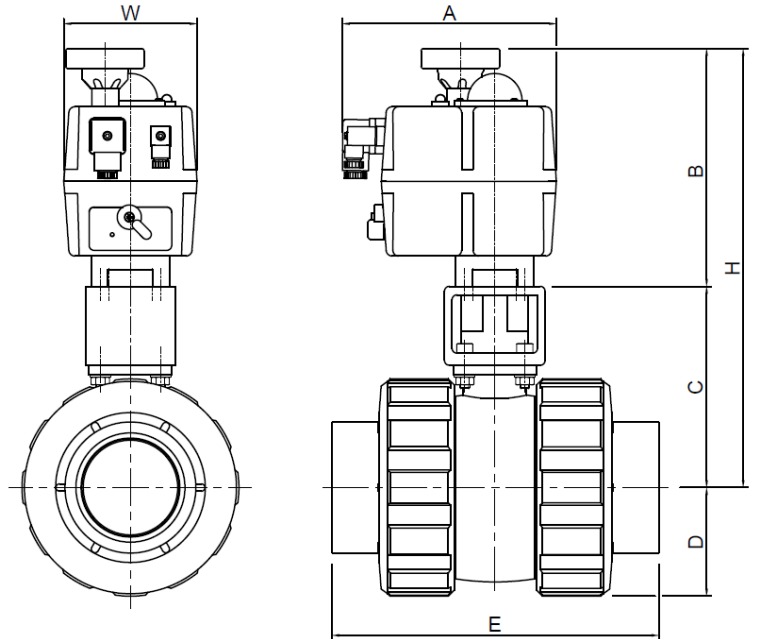
BSR Failsafe plug & play kit can be added to create failsafe modulating function.

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Typical Dimensions:



Valve sizes up to 1 1/2"



Valve sizes 2" - 3"

Type: E3013H Actuator fitted to valve via the manufacturers' mounting kit

E3013H Dimensions remain unchanged for all versions							
- on-off, failsafe, modulating & failsafe modulating							
	Model	A	B	C	E	H	W
≤1/2"	20	181	169	60	86	229	110
3/4"	20	181	169	64	94	233	110
1"	20	181	169	72	122	241	110
1 1/4"	20	181	169	82	131	251	110
1 1/2"	20	181	169	94	150	263	110
2"	20	181	169	142	177	311	110
2 1/2"	55	181	196	153	216	349	110
3"	55	181	196	165	257	361	110