

**READ THESE INSTRUCTIONS BEFORE CONNECTING THE ACTUATOR DAMAGE CAUSED BY NON COMPLIANCE TO THESE INSTRUCTIONS IS NOT COVERED BY OUR WARRANTY.**

**J3C** Electric actuators operate with the use of live electricity. It is recommended that only qualified electrical engineers be allowed to connect or adjust these actuators. Always ensure that the power supply is disconnected prior to removing the top cover by disconnecting the DIN power input plug. It is strongly recommended that each actuator has its own independent fuse system to protect it from the electrical influence of other electrical devices (EG:pumps).

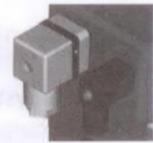


FIGURE 1

J3C-20/85

**1.- ELECTRICAL CONNECTORS:**

**Warning:**

Before connecting ensure that the voltage to be applied to the actuator is within the range shown on the identification label. The supplied electrical connectors used to connect to the actuator are DIN plugs. Ensure the diameter of cable to be used conforms to the maximum and minimum requirements of the DIN plugs to maintain water tightness.

- 1 Gasket
- 2 Terminal strip
- 3 Cable fixing screws
- 4 Housing
- 5 Grommet
- 6 Washer
- 7 Gland - nut
- 8 Fixing screw
- 9 Oring
- 10 Gasket

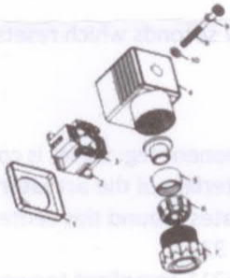


FIGURE 2

Model	BLACK SMALL CONNECTOR		GREY BIG CONNECTOR	
	diameter min	diameter max	diameter min	diameter max
J3C 20 to J3C 85	5mm	6mm	8mm	10.5mm

**Electrical connection: All models.**

The power supply is connected to the large grey DIN plug. (See Fig.3)

NEUTRAL $\alpha$ (-)	PHASE $\alpha$ (+)	MANEUVER
PIN 1	PIN 2	CLOSE
PIN 1	PIN 3	OPEN
THE TOP FLAT PIN IS THE EARTH/GROUND CONNECTION		

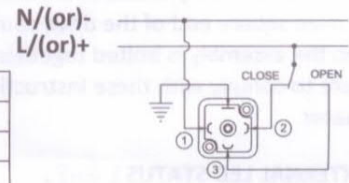


FIGURE 3

The volt free connection is made to the small black DIN plug placed on the right. (See fig.4)

PIN 1	PIN 2	PIN 3
OPENED COMMON	CLOSED POSITION CONFIRMATION	OPENED POSITION CONFIRMATION

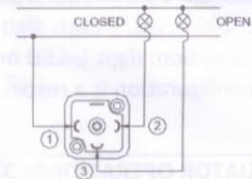


FIGURE 4

\* For other connection options please contact the vendor.

**Warning:** Ensure that the square rubber seal is in place when fixing each DIN plug to the actuator. Failure to do so could allow water ingress and damage caused by this installation error will invalidate any warranty. The DIN plugs are fixed to their respective bases on the actuator housing with a screw. Do not overtight the screw when assembling.

**Anti-condensation protection:**

The J3C actuator has an integral thermostatically controlled anti-condensation heater that is automatically activated whilst mains power is applied. The heater does not require a separate supply.

**2.- LOCAL VISUAL POSITION INDICATOR:**

All J3C actuators are supplied with a local visual position indicator comprises of a black base with a yellow insert that shows both the position and direction of rotation. (see Fig.5)

The opened and closed positions have the following logos moulded in to the top cover OPENED 90 and CLOSED 0.

- Opening = ↺
- Closing = ↻

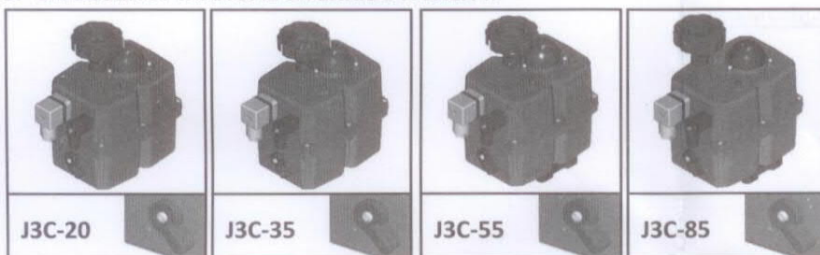


J3C 20/35/55/85

FIGURE 5

**3.- EMERGENCY MANUAL OVERRIDE FACILITY:**

FIGURE 6



The J3C has operating modes, automatic and manual, the required mode is selected by using a lever on the lower half of the actuator housing (see Fig 6).

The 2 position are marked:  
 AUTO=Automatic operation  
 MAN=Manual operation



**Warning:** Do not remove the selector lever securing cross head screw as this will allow its internal mechanism to become loose and will cause irreparable damage to the actuator's gearbox. Removing this screw will invalidate the warranty.

When "MAN" function is selected:

- 1-The electronic system cuts the power to the motor after a few seconds.
- 2-The motor to output shaft drive is disconnected.
- 3-The desired position can be achieved by using the manual override lever or handwheel.
- 4-There are two ways to re-activate the motor after being isolated whilst in "MAN" position:

a) With the actuator in "MAN" function, turn the handwheel to one of the endpositions (opened or closed). If the endposition switch is activated the motor stops. Now change the manual override from "MAN" to "AUTO", and the actuator is ready to operate automatically again.

b) Change from "MAN" mode to "AUTO". Desactivate the supply voltage for a few seconds which resets the actuator and it is then change to operate automatically again.

**4-MOUNTING TO COMPONENT BEING ACTUATED (Eg:1/4 turn valve).**

It is vital that the mounting kit used to connect the electric actuator to the component (eg: valve) is correctly manufactured and assembled. The mounting bracket's holes must be drilled to ensure that the centerline of the actuator's drive is perfectly in line with the component's drive-centerline, and that the drive coupling/ adaptor rotates around this centerline. The mounting holes of the actuator conform to ISO 5211, and the female output drive conforms to DIN 3337.

We strongly recommend that valves/components to be actuated that have ISO 5211 compliant topworks are used wherever possible as it greatly assists in ensuring the concentricity of mounting the actuator to the valve.

The male square end of the drive coupling MUST NOT be longer than the maximum depth of the actuator female output drive when the assembly is bolted together.

Failure to comply with these instructions will cause uneven wear and dramatically reduce the working life of the valve and actuator.

**5-EXTERNAL LED STATUS LIGHT :**

The LED status light provides visual communication between the actuator and the user.

The current operational status of the actuator is shown by either solidly lit, or different flashing sequences of the LED light:

Time: 200 mSec. X each digit of the configuration.

Configuration: digit 1=LED on, digit 0= LED off

The configuration is a respective sequence of 4 columns of 4 digits.

ACTUATOR OPERATIONAL STATUS	TIME	CONFIGURATION
Actuator without power being supplied	100%	0000 0000 0000 0000
Actuator with power being supplied	100%	1111 1111 1111 1111
Actuator with torque limiter activated	200 mSeg.	1010 1010 1010 1010
Actuator in MANUAL mode	200 mSeg.	1111 0111 1000 0000
Actuator in MANUAL but with an internal cam operating an internal micro-switch	200 mSeg.	1110 1111 1111 1110
Actuator without power and working with the BSR system. MAX. 3 minutes	200 mSeg.	1000 0000 0000 0000
Battery protection. Danger - The battery needs recharging. BSR disabled.	200 mSeg.	1010 1000 0000 0000



External led status light

FIGURE 7

**6-OPCION BSR:**

If the actuator is fitted with the BSR (Battery Spring Return) plug-in failsafe system upon electrical failure the actuator will go to the predetermined position: NO (normally opened) or NC (normally closed).

**7 - KITS BSR / KIT DPS2005**

To assemble the kits, consult the manuals on [www.jjbcn.com](http://www.jjbcn.com)



FIGURE 8