



ELECTRIC ACTUATOR FOR 1/4 TURN VALVES

Control your valves automatically
with precision and safety



20^{to}300
Nm

20 to 300 Nm



Automatic
temperature

75%

75% Duty
rating



Electronic torque
operation

IP67

IP67



Battery system
returns



Digital positioner
system



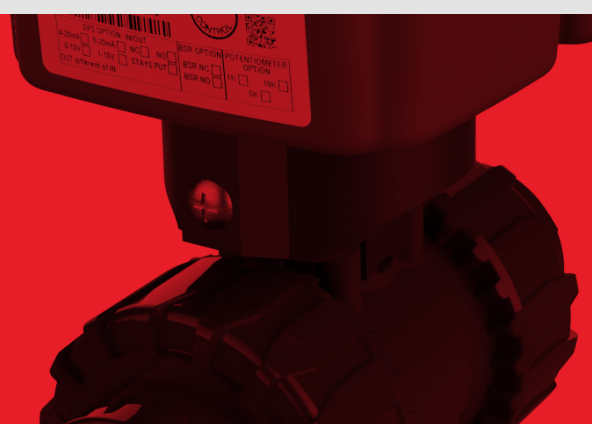
Bluetooth



Modbus system

J+J

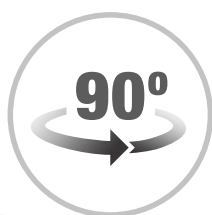
J.J. BCN INTERNACIONAL S.A.



INDEX

INTRODUCTION	03
MATERIALS	03
ACTUATOR PART LIST	
· Models: S20, S35, S55, S85, B20, B35, B55, B85	04
· Models: S140, S300, B140, B300	05
BRUSHLESS TECHNOLOGY	06
SIZES	06
SPECIFICATIONS	
· J4C 20/35	07
· J4C 55/85	08
· J4C 140/300	09
EXTERNAL CONNECTING DIAGRAM	10
KITS ADDITIONAL OPTIONS	11
SOLUTIONS	12
DOWNLOADS & CONTACT	13

THE J4C ACTUATOR IS DESIGNED TO AUTOMATE MAINLY 1/4 TURN VALVES



Without leaving our philosophy of total multivoltage actuators, we would like to introduce, in our range of electric actuators, the new **J4C series**, which works, for the first time, with a brushless motor. The **brushless motor** is stronger, more efficient and with less maintenance than a brushed motor. It definitely contributes to enlarge our actuators life.

Its high level technology, makes our actuators capable to intelligently communicate, using both the **MODBUS** protocol or via **BLUETOOTH**. The mentioned communication systems appear as "factory options" in our catalogue.

We are launching a complete range of torques, from 20Nm to 300Nm, which B models work at 12 VDC/VAC and S models do the same from 24 to 240 VDC/VAC 50/60Hz.

MATERIALS

Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Zamak and Zinc plated	Zamak and TEFLON coated
Main external shaft	Anticorrosive Polyamide (J4C20) Stainless Steel (J4C 35 to 300)	-
External screws	Stainless Steel	-
Gears	Steel and Polyamide	-
Visual position indicator	Polyamide	-
Dome	Polycarbonate	-
Adjustable internal cams	Polyamide	-

ACTUATOR PART LIST

MODELS

S20, S35, S55, S85, B20, B35, B55, B85



ACTUATOR PART LIST

MODELS

S140, S300, B140, B300





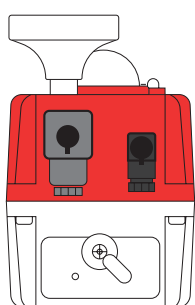
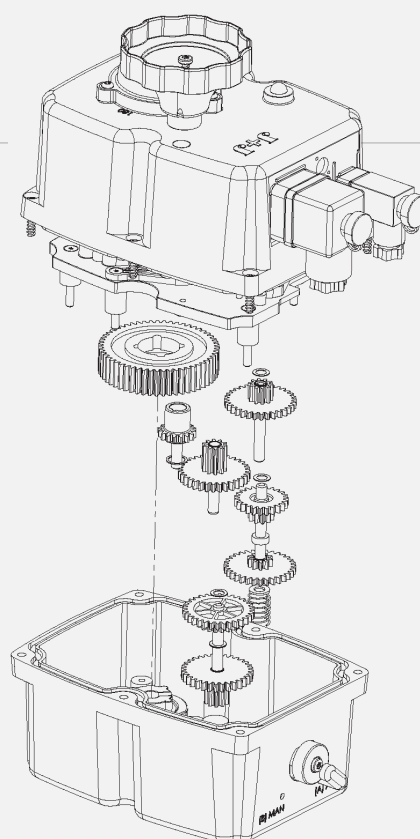
BRUSHLESS TECHNOLOGY

Since there are no brushes rubbing against anything, no energy is lost due to friction. **That means brushless motors are more energy efficient than brushed ones.**

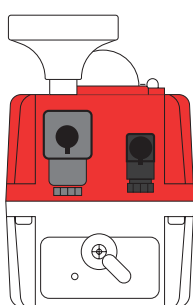
This type of brushless motor allows us to guarantee the actuators for 60,000 operations or 3 years from the date of shipment.

In short, brushless motors are better than brushed units. Users can take advantage of reduced maintenance, improved efficiency, and reduced heat and noise.

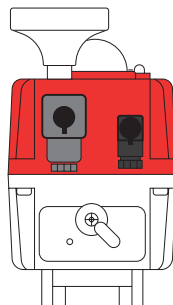
Brushless motors are synchronous units with one or more permanent magnets. Power tools with brushless motors are now considered high-end products.



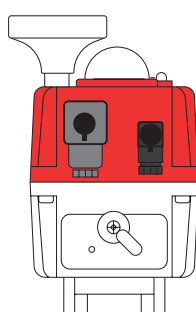
J4C 20



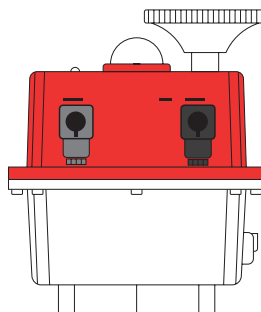
J4C 35



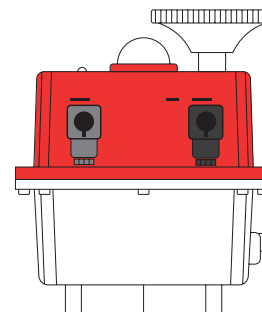
J4C 55



J4C 85



J4C 140



J4C 300

SIZES

OPERATING TORQUE

20 Nm to 300 Nm

Voltage VDC/VAC 50/60Hz -0%+5%

S 24-240 VDC/VAC**B** 12 VDC/VAC ONLY

SPECIFICATIONS J4C 20/35

MODEL	J4C 20	J4C 35
Operation time unload	9 Sec. /90° (+/- 10%)	9 Sec. /90° (+/- 10%)
Maximum torque break	25 Nm / 221 lb/in	38 Nm / 359,3 lb/in
Maximum operational torque	20 Nm / 177 lb/in	35 Nm / 309 lb/in
Duty rating	75%	75%
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmations)	4 SPST NO micro (2 motor stop and 2 confirmations)
Automatic heater	3,5 W	3,5 W
Big Plug	EN 175301-803 FORM A	EN 175301-803 FORM A
Small Plug	DIN43650/C	DIN43650/C
Protection IEC 60529 rating	IP67	IP67
Temperature	-20°C +70°C / -4°F +158°F	-20°C +70°C / -4°F +158°F
ISO 5211 Plate	Standard: F03/F04/F05 Optional: F07 *17mm	Standard: F03/F04/F05 Optional: F07 *17mm
DIN 3337 Female output drive	Standard: *14 Optional: *9, *11mm	Standard: *14 Optional: *9, *11mm
Weight	1,75 kg	1,79 kg

OPTIONS	J4C 20	J4C 35
J4C 20/85 DPS KIT digital positioner	4-20mA, 0-20mA, 0-10V or 1-10V	4-20mA, 0-20mA, 0-10V or 1-10V
J4C 20/85 BSR KIT emergency fail safe kit system by battery	NC - NO	NC - NO
Potentiometer	1K, 5K or 10K	1K, 5K or 10K
3 position actuator	0°-45°-90° or 0°-90°-180°	0°-45°-90° or 0°-90°-180°

J4C 20 consumption		Unload		Max. Operational Torque 20 Nm		Max. Torque Break 25 Nm	
VOLATGE	MODEL	A	W	A	W	A	W
12 VDC	B20	0,75	9,06	1,80	21,60	1,95	23,36
24 VDC	S20	0,45	10,77	0,90	21,49	0,97	23,39
48 VDC	S20	0,21	9,93	0,42	20,38	0,46	22,07
110 VDC	S20	0,07	8,00	0,13	14,30	0,14	15,70
12 VAC	B20	1,04	12,51	1,85	22,18	2,28	27,32
24 VAC	S20	0,59	14,20	1,12	26,77	1,28	30,62
48 VAC	S20	0,34	16,37	0,69	33,16	0,75	36,22
110 VAC	S20	0,14	15,73	0,27	29,52	0,30	32,67
240 VAC	S20	0,10	23,76	0,15	36,43	0,16	39,07

J4C 35 consumption		Unload		Max. Operational Torque 35 Nm		Max. Torque Break 38 Nm	
VOLATGE	MODEL	A	W	A	W	A	W
12 VDC	B35	0,75	9,06	2,38	28,62	2,62	31,50
24 VDC	S35	0,45	10,77	1,28	30,78	1,37	32,79
48 VDC	S35	0,21	9,93	0,56	26,72	0,59	28,20
110 VDC	S35	0,07	7,70	0,17	18,90	0,18	20,10
12 VAC	B35	1,04	12,51	2,75	33,00	3,19	38,28
24 VAC	S35	0,59	14,20	1,58	37,80	1,67	40,13
48 VAC	S35	0,34	16,37	0,92	44,04	0,99	47,31
110 VAC	S35	0,14	15,73	0,36	39,45	0,38	41,87
240 VAC	S35	0,10	23,76	0,19	45,41	0,20	47,52

SPECIFICATIONS J4C 55/85

Voltage VDC/VAC 50/60Hz -0%+5%

S 24-240 VDC/VAC

B 12 VDC/VAC ONLY

MODEL	J4C 55	J4C 85
Operation time unload	13 Sec. /90° (+/- 10%)	29 Sec. /90° (+/- 10%)
Maximum torque break	60 Nm / 530 lb/in	90 Nm / 796,3 lb/in
Maximum operational torque	55 Nm / 486 lb/in	85 Nm / 752 lb/in
Duty rating	75%	75%
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmations)	4 SPST NO micro (2 motor stop and 2 confirmations)
Automatic heater	3,5 W	3,5 W
Big Plug	EN 175301-803 FORM A	EN 175301-803 FORM A
Small Plug	DIN43650/C	DIN43650/C
Protection IEC 60529 rating	IP67	IP67
Temperature	-20°C +70°C / -4°F +158°F	-20°C +70°C / -4°F +158°F
ISO 5211 Plate	Standard: F05/F07	Standard: F05/F07
DIN 3337 Female output drive	Standard: *17 Optional: *11, *14mm	Standard: *17 Optional: *14mm
Weight	2,32 kg	2,84 kg

OPTIONS	J4C 55	J4C 85
J4C 20/85 DPS KIT digital positioner	4-20mA, 0-20mA, 0-10V or 1-10V	4-20mA, 0-20mA, 0-10V or 1-10V
J4C 20/85 BSR KIT emergency fail safe kit system by battery	NC - NO	NC - NO
Potentiometer	1K, 5K or 10K	1K, 5K or 10K
3 position actuator	0°-45°-90° or 0°-90°-180°	0°-45°-90° or 0°-90°-180°

J4C 55 consumption		Unload		Max. Operational Torque 55 Nm		Max. Torque Break 60 Nm	
VOLATGE	MODEL	A	W	A	W	A	W
12 VDC	B55	0,70	8,45	3,04	36,43	3,42	41,05
24 VDC	S55	0,42	10,19	1,55	37,17	1,63	39,02
48 VDC	S55	0,20	9,72	0,61	29,25	0,67	32,31
110 VDC	S55	0,07	7,50	0,19	20,80	0,21	23,20
12 VAC	B55	0,94	11,30	3,43	41,18	3,78	45,41
24 VAC	S55	0,58	13,89	1,87	44,88	1,98	47,52
48 VAC	S55	0,33	15,73	1,10	52,80	1,21	58,29
110 VAC	S55	0,14	15,73	0,40	43,80	0,43	46,95
240 VAC	S55	0,09	22,70	0,20	47,52	0,21	50,16

J4C 85 consumption		Unload		Max. Operational Torque 85 Nm		Max. Torque Break 90 Nm	
VOLATGE	MODEL	A	W	A	W	A	W
12 VDC	B85	0,62	7,42	2,11	25,34	2,28	27,32
24 VDC	S85	0,36	8,55	1,08	25,87	1,22	29,30
48 VDC	S85	0,17	8,24	0,48	22,92	0,53	25,56
110 VDC	S85	0,05	5,80	0,14	15,20	0,16	17,90
12 VAC	B85	0,81	9,69	2,38	28,51	2,65	31,81
24 VAC	S85	0,50	11,88	1,36	32,74	1,50	36,01
48 VAC	S85	0,25	11,83	0,77	37,07	0,86	41,18
110 VAC	S85	0,12	12,83	0,31	33,64	0,33	36,54
240 VAC	S85	0,08	20,06	0,17	40,13	0,18	42,77

SPECIFICATIONS J4C 140/300

Voltage VDC/VAC 50/60Hz -0%+5%

S 24-240 VDC/VAC

B 12 VDC/VAC ONLY

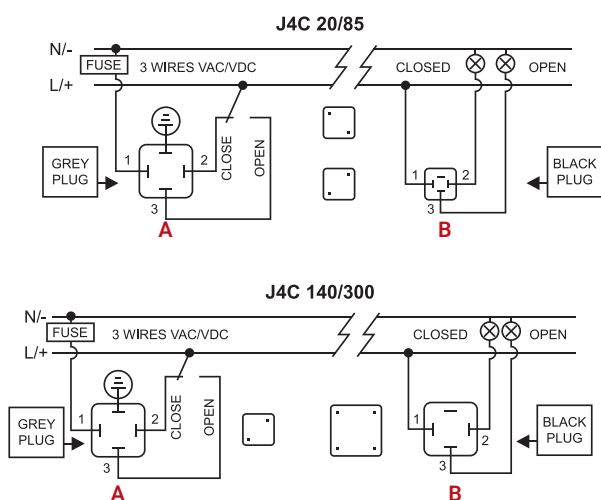
MODEL	J4C 140	J4C 300
Operation time unload	34 Sec. /90° (+/- 10%)	58 Sec. /90° (+/- 10%)
Maximum torque break	170 Nm / 1504,5 lb/in	350 Nm / 3097,5 lb/in
Maximum operational torque	140 Nm / 1239 lb/in	300 Nm / 2655 lb/in
Duty rating	75%	75%
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmations)	4 SPST NO micro (2 motor stop and 2 confirmations)
Automatic heater	3,5 W	3,5 W
Big Plug	EN 175301-803 FORM A	EN 175301-803 FORM A
Small Plug	DIN43650/C	DIN43650/C
Protection IEC 60529 rating	IP67	IP67
Temperature	-20°C +70°C / -4°F +158°F	-20°C +70°C / -4°F +158°F
ISO 5211 Plate	Standard: F07/F10 Optional: F12	Standard: F07/F10 Optional: F12
DIN 3337 Female output drive	Standard: *22 Optional: *17mm	Standard: *22 Optional: *17mm
Weight	4,72 kg	4,72 kg

OPTIONS	J4C 140	J4C 300
J4C 140/300 DPS KIT digital positioner	4-20mA, 0-20mA, 0-10V or 1-10V	4-20mA, 0-20mA, 0-10V or 1-10V
J4C 140/300 BSR KIT emergency fail safe kit system by battery	NC - NO	NC - NO
Potentiometer	1K, 5K or 10K	1K, 5K or 10K
3 position actuator	0°-45°-90° or 0°-90°-180°	0°-45°-90° or 0°-90°-180°

J4C 140 consumption		Unload		Max. Operational Torque 140 Nm		Max. Torque Break 170 Nm	
VOLATGE	MODEL	A	W	A	W	A	W
12 VDC	B140	1,93	23,10	4,73	56,76	5,39	64,68
24 VDC	S140	0,66	15,84	2,15	51,48	2,53	60,72
48 VDC	S140	0,30	14,25	0,88	42,24	1,10	52,80
110 VDC	S140	0,10	10,89	0,28	30,25	0,39	42,35
12 VAC	B140	2,75	33,00	6,60	79,20	8,47	101,64
24 VAC	S140	0,83	19,80	2,59	62,04	3,30	79,20
48 VAC	S140	0,48	23,23	1,43	68,64	1,79	86,06
110 VAC	S140	0,23	25,41	0,63	68,97	0,72	78,65
240 VAC	S140	0,18	42,24	0,39	90,40	0,44	105,60

J4C 300 consumption		Unload		Max. Operational Torque 300 Nm		Max. Torque Break 350 Nm	
VOLATGE	MODEL	A	W	A	W	A	W
12 VDC	B300	1,32	15,84	5,17	62,04	5,45	65,34
24 VDC	S300	0,50	11,88	2,31	55,44	2,70	64,68
48 VDC	S300	0,22	10,56	1,10	52,80	1,19	57,02
110 VDC	S300	0,09	9,68	0,33	36,30	0,39	42,35
12 VAC	B300	1,98	23,76	7,26	87,12	8,64	103,62
24 VAC	S300	0,66	15,84	2,75	66,00	3,30	79,20
48 VAC	S300	0,36	17,42	1,65	79,20	1,87	89,76
110 VAC	S300	0,19	20,57	0,66	72,60	0,77	84,70
240 VAC	S300	0,15	36,96	0,42	100,32	0,47	113,52

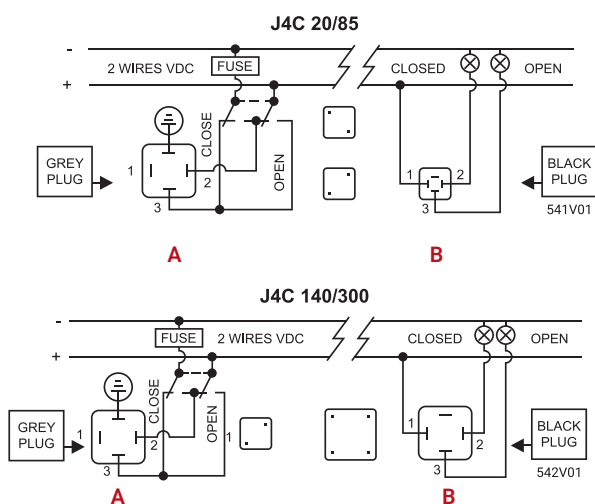
EXTERNAL CONNECTING DIAGRAM (STANDARD)



ON - OFF VAC

A = Power supply plug (Grey plug)
 Neutral PIN 1 + Phase PIN 2 = Close actuator.
 Neutral PIN 1 + Phase PIN 3 = Open actuator.
 Earth/ground connection - Flat PIN $\oplus$

B = Volt free contact plug (Black plug)
 Common PIN 1 + PIN 2 = Close confirmation of position.
 Common PIN 1 + PIN 3 = Open confirmation of position.

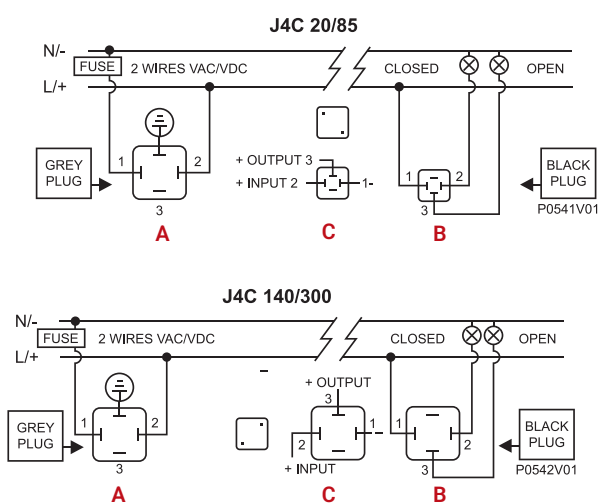


ON - OFF VDC

A = Power supply plug (Grey plug)
 Negative PIN 3 + Positive PIN 2 = Close actuator.
 Negative PIN 2 + Positive PIN 3 = Open actuator.
 Earth/ground connection - Flat PIN $\oplus$

B = Volt free contact plug (Black plug)
 Common PIN 1 + PIN 2 = Close confirmation of position.
 Common PIN 1 + PIN 3 = Open confirmation of position.

STANDARD POSITIONER EXTERNAL CONNECTING DIAGRAM



POSITIONER VAC VDC

A = Power supply plug (Grey plug)
 Neutral/negative PIN 1 + Phase/positive PIN 2 - Power supply.
 Earth/ground connection - Flat PIN $\oplus$

B = Volt free contact plug (Black plug)
 Common PIN 1 + PIN 2 = Close confirmation of position.
 Common PIN 1 + PIN 3 = Open confirmation of position.

C = Input/output signal (Black plug)
 Negative PIN 1 + positive PIN 2 = Input signal.
 Negative PIN 1 + positive PIN 3 = Output signal.



C = Instrumentation signal MAX 10V



Important! Earth connector on DPS plug should not be connected (risk of self adjustment)

KITS ADDITIONAL OPTIONS

The J4C actuator kits from J+J have been developed as complementary solutions to the standard J4C actuators, enabling the expansion of their functionality in a practical and adaptable way. These kits include the DPS KIT, the BSR KIT, the Interface KIT, the Bluetooth KIT, and the Modbus KIT. With a versatile design, each kit can be factory-installed, while the DPS KIT, the BSR KIT, and the Interface KIT also offer the option of installation directly at the client's location for added convenience and system customization.

These kits are designed to maximize the efficiency and adaptability of J4C actuators in industrial and automation settings, providing advanced control and safety options.



DPS KIT

Digital Positioner System

Digital positioner for our J4C models. Instrumentation signal 4-20 mA, 0-20 mA, 0-10 V or 1-10 V.

This DPS digital positioner is suitable for S and B models.



BSR KIT

Battery System Returns

BSR system for our J4C models. It is an emergency fail safe kit system by battery which is common to S and B models.

The BSR system for our models 140 Nm and 300 Nm it is the same but with a bigger capacity battery.



INTERFACE KIT

Interface System

Using the Interface KIT cable we communicate with the actuator, read parameters and change the actuators configuration.



BLUETOOTH

We have introduced the Bluetooth communication system in our actuators, in order to communicate with our actuators, from any Android devices. This system appears in our catalogue as a factory option. From our mobile phone or tablet we could order our actuator to open/close or stop.



MODBUS

- Plug and play
- Each device could be operated manually.
- Could be seen from the control panel PC.
- Fast and flexible, starting by 3 actuators up to 255.
- Up to 1.200 m distance range.



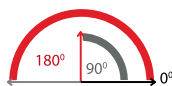
Option assembled in Factory



Option Self-Assembling

SPECIAL CONFIGURATIONS FOR J4C ACTUATORS

In response to the diverse needs of our customers, we have developed various configurations and operating modes for the J4C actuator range, offering options that enhance the capabilities of the standard models, among many others.



J4C 3-Position Actuator

The J4C electric actuator by J+J, in its 3-position version, provides advanced functionality by stopping at three distinct points, tailored to your application needs. These positions can be configured as:

0°-90°-180°, ideal for 3-way valves.

0°-45°-90°, perfect for damper control or similar systems.

Additionally, it's important to note that the J4C electric actuator is fully adjustable between 0° and 270°, ensuring precise adaptability for a wide range of industrial systems and applications.



J4C with Timer: Equipped with an adjustable timer, this model allows you to schedule specific opening or closing times, ensuring precise operation at programmed intervals. This functionality is ideal for applications requiring automation with predefined timings, enhancing operational efficiency in automated systems.



Adjustable Operating Time Option for J4C Actuators: The J4C range of electric actuators includes a configurable option to adjust operating times within the speed limits supported by the actuator. This feature allows the actuator to be set for faster operation or slower movements, adapting to the specific requirements of each application. A versatile solution to ensure efficiency and precision in any process.

SOLUTIONS FOR EVERY TYPE OF APPLICATIONS





MORE TECHNICAL INFORMATION ABOUT THE J4 ACTUATOR

[Handbook EN](#)
[Start-up instructions](#)
[Images](#)
[3D Files](#)

CERTIFICATIONS



IP 67
[Document link](#)



Declaration of
Conformity EMC
[Document link](#)



Reach Certificate
of Compliance
[Document link](#)



Rohs Certificate
of Compliance
[Document link](#)



CE Certificate
J4C 20 to 85
[Document link](#)



CE Certificate
J4C 140 to 300
[Document link](#)



ISO 9001:2015
[Document link](#)



Vibration Test
[Document link](#)



UK CA
[Document link](#)



Korean Register
[Document link](#)



CONTACT



Polígono Industrial Sud
Carrer de l'Orfeó Català, 7 • 08440 Cardedeu • Barcelona (Spain)



(+34) 93 871 33 04



info@jjbcn.com



www.jjbcn.com