

J4+

HANDBOOK



INDEX

> [01. Actuator Part List](#)

- S20, S35, S55, S85, B20, B35, B55, B85
- S140, S300, B140

> [02. J4C Series](#)

- Voltage
- Electrical Connectors
- ID Actuator Label
- Local Visual Position Indicator
- Emergency Manual Override Facility
- Adjustment of the Cams
- Table of Consumptions
- External Connecting Diagram
- Actuator Operational Status

> [03. Datasheet](#)

- J4C 20
- J4C 35
- J4C 55
- J4C 85
- J4C 140
- J4C 300

> [04. Options](#)

- DPS
- BSR
- Bluetooth
- Modbus

> [05. Kits](#)

- DPS
- BSR
- INTERFACE

> [06. Certifications](#)

> [07. Guarantee](#)

> [08. Contact](#)



01 ACTUATOR PART LIST

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



MODELS: S140, S300, B140, B300



02 J4C SERIES

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

J4C 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.

VOLTAGE TO BE CONNECTED

All our actuators model S20 to S300 are ready to work from 24-240 VDC/VAC.

All our actuators model B20 to B300 are ready to work at 12 VDC/VAC ONLY.

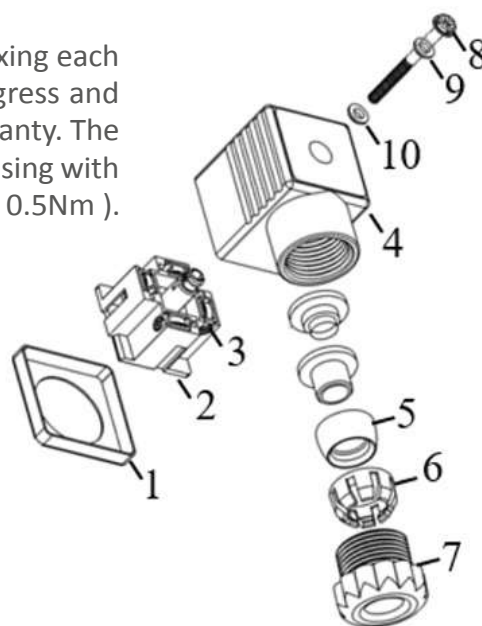
ELECTRICAL CONNECTORS

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 (Fig.1).

| CONNECTOR | SMALL BLACK | | BIG GREY or BLACK | |
|--------------|-------------|--------|---------------------|--------|
| | DIN43650/C | | EN175301-803 FORM A | |
| MODEL | min Ø | máx. Ø | min Ø | máx. Ø |
| J4C 20 a 300 | 5mm | 6mm | 8mm | 10,5mm |

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 over tight the screw (8) when assembling (Max. 0.5Nm).

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



ID ACTUATOR LABEL

MOD: S20 **SERIE: J4C**

VOLTAGE: 24-240 DC OR AC (50/60HZ) (PATENTED)

TEMPERATURE: -20°C + 70°C **DUTY: 75%**

WORKING TIME: 9 SEC / 90°

WORKING ANGLE: 0°-90°

14 F03/04/05 IP67

MAX. TORQUE: 25Nm

SERIAL N°: 00000000000

QUALITY CONTROL **CE UK CA** **Made In Spain**

| | | |
|---|---------------------------------|--|
| DPS OPTION: IN/OUT | BSR OPTION | POTENTIOMETER OPTION |
| 4-20mA <input type="checkbox"/> 0-20mA <input type="checkbox"/> NC <input type="checkbox"/> NO <input type="checkbox"/> | BSR NC <input type="checkbox"/> | 1K <input type="checkbox"/> 10K <input type="checkbox"/> |
| 0-10V <input type="checkbox"/> 1-10V <input type="checkbox"/> STAYS PUT <input type="checkbox"/> | BSR NO <input type="checkbox"/> | 5K <input type="checkbox"/> |
| OUT different of IN: | | |

- 1 - Actuator Model.
- 2 - Voltage to be connected.
- 3 - Actuator ready to bear between -20°C & + 70°C.
- 4 - Time the actuator needs to run to the indicated degrees.
- 5 - Working angle.
- 6 - Plate to fix the valve to the actuator, following ISO 5211.
- 7 - Actuator with the IP67 protection.
- 8 - Maximum Operational torque.
- 9 - Actuator serial number.
- 10 - Bar code of the serial number.
- 11 - Actuator Series.
- 12 - Duty: 75%. Example: S20 Model -
Maneuver time = 10sec.
Time between maneuvers = 3.3 sec.
- 13 - QR code for manufacturing.
- 14 - Actuator with the CE certificate.
- 15 - This product should not be disposed of as unsorted waste.
- 16 - UK Conformity Assessed.
- 17 - Quality Control Conformity.
- 18 - Country where the equipment was manufactured.
- 19 - DPS options.
- 20 - BSR options.
- 21 - POTENTIOMETER options.



LOCAL VISUAL POSITION INDICATOR

All **J4C actuators** are supplied with a local visual position indicator comprises a black base with a yellow insert that shows, both the position and direction of rotation (**Fig.6**).

The open and close positions have the following logos molded into the top cover OPEN 90 and CLOSE 0. **Opening = ↶** **Closing = ↷**



Fig. 6 0 = CLOSE



Fig. 6 90 = OPEN

LOCAL VISUAL POSITION INDICATOR



TWO YELLOW INDICATORS:
For 3 way ball valve, L port.



THREE YELLOW INDICATORS:
For 3 way ball valve, T port.



EMERGENCY MANUAL OVERRIDE FACILITY:

The **J4C** has 2 operating modes, automatic and manual, the required mode is selected by using a lever on the lower half of the actuator housing (Fig 7).

The 2 positions are marked:

AUTO = Automatic operation

MAN = Manual operation

Warning: Do not remove the selector lever securing 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 **“AUTO”** position is selected:

The hand wheel, of models 20,35,55, and 85 rotates automatically, it is very important not to block it, otherwise the actuator could suffer unreparable damages.



Fig. 7 J4C 20 TO 85

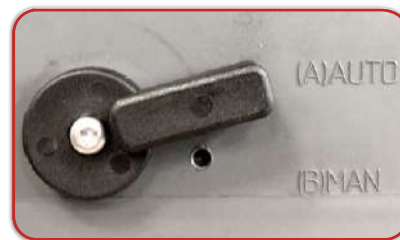
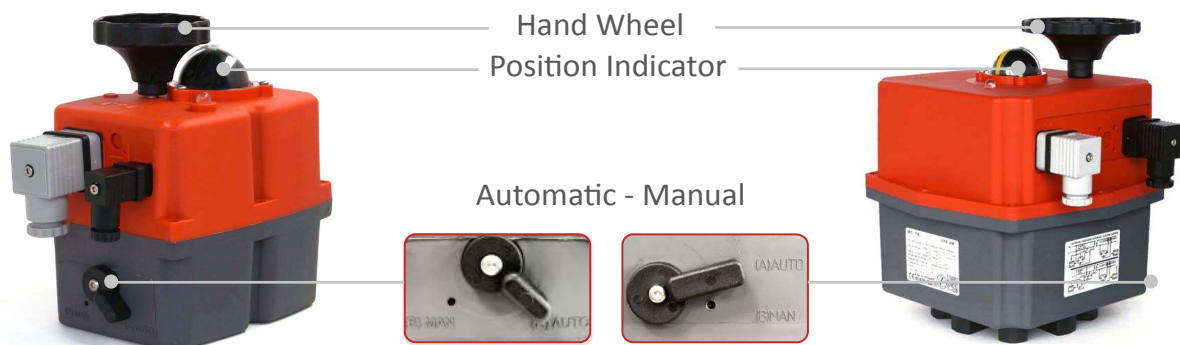


Fig. 7 J4C 140 TO 300

J4C 20 TO 85

J4C 140 TO 300



When “MAN” function is selected:

- 1 - The electronic system cuts the power to the motor after a few minutes.
- 2 - The mechanical connection between the motor and the output shaft is disconnected.
- 3 - The desired position can be achieved by using the hand wheel.
- 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 hand wheel to one of the end positions (open or close). If the end position 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”. Deactivate the supply voltage for a few seconds which resets the actuator and it could operate automatically again.



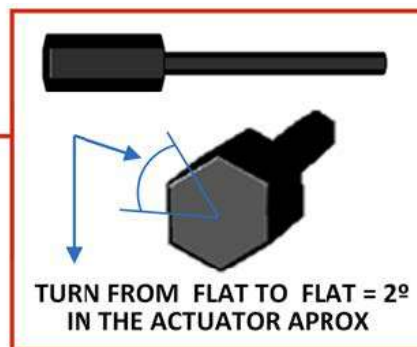
!WARNING! RISK OF ELECTRIC SHOCK INSIDE THE ACTUATOR. AUTHORIZED PERSONNEL ONLY

ADJUSTMENT OF THE CAMS

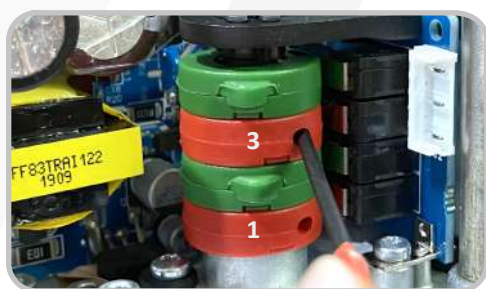
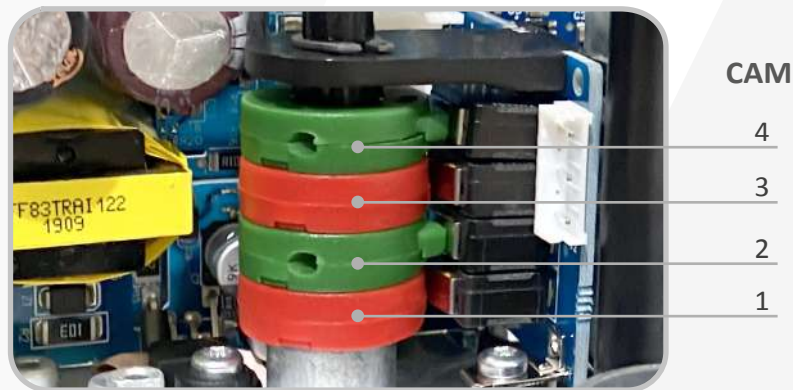
Under normal conditions, the actuator may only be operated with the closed cover. If work is performed on the actuator with the removed cover, the supply and control voltage must first be disconnected. Adjustments, which need to be done in the energized state, should be carried out with special insulated tools.

How to do it: Tolling: One special plastic wrench (is supplied together with the actuator). The wrench is tied together with the motor by using one plastic clamp.

To move the cams, introduce the special plastic wrench in the hole of the cam and turn it round (see both options on the enclosed pictures).



POSITION OF THE CAMS



Cams 1 and 3

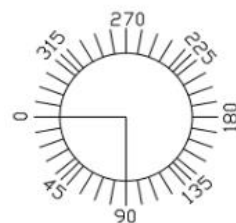


Cams 2 and 4

- 1) Cam 1 is to adjust the close position.
- 2) Cam 2 is to adjust the open position.
- 3) Cam 3 is to adjust the close position confirmation.
- 4) Cam 4 is to adjust the open position confirmation.

To ensure that the position confirmation works, adjust the confirmation cams (3 & 4) 3° ($\pm 1^\circ$) before the motor stop.

The standard actuators are always adjusted at 0° (close) and 90° (open).



1) To adjust the close position at less than 0°.

Turn the wrench to clockwise direction - cams 1 and 3.

The cam 3 (confirmation) should press the lever of the micro switch a bit earlier than the cam 1.

cams 1 / 3



2) To adjust the close position at more than 0°.

Turn the wrench to anti-clockwise direction - cams 1 and 3.

The cam 3 (confirmation) should press the lever of the micro switch a bit earlier than the cam 1.

cams 1 / 3



3) To adjust the open position to more than 90°.

Turn the wrench to anti-clockwise direction - cams 2 and 4.

The cam 4 (confirmation) should press the lever of the micro switch a bit earlier than the cam 2.

cams 2 / 4



4) To adjust the open position to less than 90°.

Turn the wrench to clockwise direction - cams 2 and 4.

The cam 4 (confirmation) must press the lever of the micro switch a bit earlier than the cam 2.

cams 2 / 4



TABLE OF CONSUMPTIONS - ON-OFF ACTUATOR

| J4C 20 Consumption | | Unload | | Max. Operational Torque 20Nm | | Max. Torque Break 25Nm | |
|--------------------|-------|--------|-------|------------------------------|-------|------------------------|-------|
| Voltage | 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 35Nm | | Max. Torque Break 38Nm | |
|--------------------|-------|--------|-------|------------------------------|-------|------------------------|-------|
| Voltage | 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 |

| J4C 55 Consumption | | Unload | | Max. Operational Torque 55Nm | | Max. Torque Break 60Nm | |
|--------------------|-------|--------|-------|------------------------------|-------|------------------------|-------|
| Voltage | 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 |



TABLE OF CONSUMPTIONS - ON-OFF ACTUATOR

| J4C 85 Consumption | | Unload | | Max. Operational Torque -85Nm | | Max. Torque Break -90Nm | |
|--------------------|-------|--------|-------|-------------------------------|-------|-------------------------|-------|
| Voltage | 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 |

| J4C 140 Consumption | | Unload | | Max. Operational Torque 140Nm | | Max. Torque Break 170Nm | |
|---------------------|-------|--------|-------|-------------------------------|-------|-------------------------|--------|
| Voltage | 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 300Nm | | Max. Torque Break 350Nm | |
|---------------------|-------|--------|-------|-------------------------------|--------|-------------------------|--------|
| Voltage | 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 |



TABLE OF CONSUMPTIONS - DPS ACTUATOR

| J4C 20 Consumption | | Unloaded | | Max. Operational Torque 20Nm | | Max. Torque Break 25Nm | |
|--------------------|-------|----------|-------|------------------------------|-------|------------------------|-------|
| Voltage | Model | DPS | | DPS | | DPS | |
| | | A | W | A | W | A | W |
| 12 VDC | B20 | 0,84 | 10,08 | 2,02 | 24,19 | 2,18 | 26,21 |
| 24 VDC | S20 | 0,50 | 12,10 | 1,01 | 24,19 | 1,09 | 26,07 |
| 48 VDC | S20 | 0,24 | 11,29 | 0,47 | 22,58 | 0,52 | 24,73 |
| 110 VDC | S20 | 0,08 | 8,62 | 0,15 | 16,02 | 0,16 | 17,25 |
| 12 VAC | B20 | 1,16 | 13,98 | 2,07 | 24,86 | 2,55 | 30,64 |
| 24 VAC | S20 | 0,66 | 15,86 | 1,25 | 30,11 | 1,43 | 34,41 |
| 48 VAC | S20 | 0,38 | 18,28 | 0,77 | 37,09 | 0,84 | 40,32 |
| 110 VAC | S20 | 0,16 | 17,25 | 0,30 | 33,26 | 0,34 | 36,96 |
| 240 VAC | S20 | 0,11 | 26,88 | 0,17 | 40,32 | 0,18 | 43,01 |

| J4C 35 Consumption | | Unloaded | | Max. Operational Torque 35Nm | | Max. Torque Break 38Nm | |
|--------------------|-------|----------|-------|------------------------------|-------|------------------------|-------|
| Voltage | Model | DPS | | DPS | | DPS | |
| | | A | W | A | W | A | W |
| 12 VDC | B35 | 0,84 | 10,08 | 2,67 | 31,99 | 2,93 | 35,21 |
| 24 VDC | S35 | 0,50 | 12,10 | 1,43 | 34,41 | 1,53 | 36,83 |
| 48 VDC | S35 | 0,24 | 11,29 | 0,63 | 30,11 | 0,66 | 31,72 |
| 110 VDC | S35 | 0,08 | 8,62 | 0,19 | 20,94 | 0,20 | 22,18 |
| 12 VAC | B35 | 1,16 | 13,98 | 3,08 | 36,96 | 3,57 | 42,87 |
| 24 VAC | S35 | 0,66 | 15,86 | 1,77 | 42,47 | 1,87 | 44,89 |
| 48 VAC | S35 | 0,38 | 18,28 | 1,03 | 49,46 | 1,11 | 53,22 |
| 110 VAC | S35 | 0,16 | 17,25 | 0,40 | 44,35 | 0,43 | 46,82 |
| 240 VAC | S35 | 0,11 | 26,88 | 0,21 | 51,07 | 0,22 | 53,76 |

| J4C 55 Consumption | | Unloaded | | Max. Operational Torque 55Nm | | Max. Torque Break 60Nm | |
|--------------------|-------|----------|-------|------------------------------|-------|------------------------|-------|
| Voltage | Model | DPS | | DPS | | DPS | |
| | | A | W | A | W | A | W |
| 12 VDC | B55 | 0,78 | 9,41 | 3,40 | 40,86 | 3,83 | 45,96 |
| 24 VDC | S55 | 0,47 | 11,29 | 1,74 | 41,66 | 1,83 | 43,81 |
| 48 VDC | S55 | 0,22 | 10,75 | 0,68 | 32,79 | 0,75 | 36,02 |
| 110 VDC | S55 | 0,08 | 8,62 | 0,21 | 23,41 | 0,24 | 25,87 |
| 12 VAC | B55 | 1,05 | 12,63 | 3,84 | 46,10 | 4,23 | 50,80 |
| 24 VAC | S55 | 0,65 | 15,59 | 2,09 | 50,27 | 2,22 | 53,22 |
| 48 VAC | S55 | 0,37 | 17,74 | 1,23 | 59,14 | 1,36 | 65,05 |
| 110 VAC | S55 | 0,16 | 17,25 | 0,45 | 49,28 | 0,48 | 52,98 |
| 240 VAC | S55 | 0,10 | 24,19 | 0,22 | 53,76 | 0,24 | 56,45 |



TABLE OF CONSUMPTIONS - DPS ACTUATOR

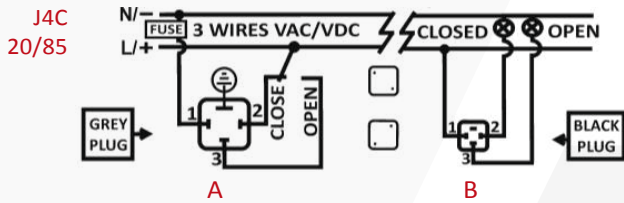
| J4C 85 Consumption | | Unloaded | | Max. Operational Torque 85Nm | | Max. Torque Break 90Nm | |
|--------------------|-------|----------|-------|------------------------------|-------|------------------------|-------|
| Voltage | Model | DPS | | DPS | | DPS | |
| | | A | W | A | W | A | W |
| 12 VDC | B85 | 0,69 | 8,33 | 2,36 | 28,36 | 2,55 | 30,64 |
| 24 VDC | S85 | 0,40 | 9,68 | 1,21 | 29,03 | 1,37 | 32,79 |
| 48 VDC | S85 | 0,19 | 9,14 | 0,54 | 25,80 | 0,59 | 28,49 |
| 110 VDC | S85 | 0,06 | 6,16 | 0,16 | 17,25 | 0,18 | 19,71 |
| 12 VAC | B85 | 0,91 | 10,89 | 2,67 | 31,99 | 2,97 | 35,62 |
| 24 VAC | S85 | 0,56 | 13,44 | 1,52 | 36,56 | 1,68 | 40,32 |
| 48 VAC | S85 | 0,28 | 13,44 | 0,86 | 41,40 | 0,96 | 46,23 |
| 110 VAC | S85 | 0,13 | 14,78 | 0,35 | 38,19 | 0,37 | 40,66 |
| 240 VAC | S85 | 0,09 | 21,50 | 0,19 | 45,70 | 0,20 | 48,38 |

| J4C 140 Consumption | | Unloaded | | Max. Operational Torque 140Nm | | Max. Torque Break 170Nm | |
|---------------------|-------|----------|-------|-------------------------------|--------|-------------------------|--------|
| Voltage | Model | DPS | | DPS | | DPS | |
| | | A | W | A | W | A | W |
| 12 VDC | B140 | 2,16 | 25,94 | 5,30 | 63,57 | 6,04 | 72,44 |
| 24 VDC | S140 | 0,74 | 17,74 | 2,41 | 57,79 | 2,83 | 68,01 |
| 48 VDC | S140 | 0,34 | 16,13 | 0,99 | 47,31 | 1,23 | 59,14 |
| 110 VDC | S140 | 0,11 | 12,32 | 0,31 | 34,50 | 0,44 | 48,05 |
| 12 VAC | B140 | 3,08 | 36,96 | 7,39 | 88,70 | 9,49 | 113,84 |
| 24 VAC | S140 | 0,93 | 22,31 | 2,90 | 69,62 | 3,70 | 88,70 |
| 48 VAC | S140 | 0,54 | 25,80 | 1,60 | 76,88 | 2,00 | 96,23 |
| 110 VAC | S140 | 0,26 | 28,34 | 0,71 | 77,62 | 0,81 | 88,70 |
| 240 VAC | S140 | 0,20 | 48,38 | 0,44 | 104,83 | 0,49 | 118,27 |

| J4C 300 Consumption | | Unloaded | | Max. Operational Torque 300Nm | | Max. Torque Break 350Nm | |
|---------------------|-------|----------|-------|-------------------------------|--------|-------------------------|--------|
| Voltage | Model | DPS | | DPS | | DPS | |
| | | A | W | A | W | A | W |
| 12 VDC | B300 | 1,48 | 17,74 | 5,79 | 69,48 | 6,10 | 73,25 |
| 24 VDC | S300 | 0,56 | 13,44 | 2,59 | 62,09 | 3,02 | 72,58 |
| 48 VDC | S300 | 0,25 | 11,83 | 1,23 | 59,14 | 1,33 | 63,97 |
| 110 VDC | S300 | 0,10 | 11,09 | 0,37 | 40,66 | 0,44 | 48,05 |
| 12 VAC | B300 | 2,22 | 26,61 | 8,13 | 97,57 | 9,68 | 116,1 |
| 24 VAC | S300 | 0,74 | 17,74 | 3,08 | 73,92 | 3,70 | 88,70 |
| 48 VAC | S300 | 0,40 | 19,35 | 1,85 | 88,70 | 2,09 | 100,53 |
| 110 VAC | S300 | 0,21 | 23,41 | 0,74 | 81,31 | 0,86 | 94,86 |
| 240 VAC | S300 | 0,17 | 40,32 | 0,47 | 112,90 | 0,53 | 126,34 |



EXTERNAL CONNECTING DIAGRAM (STANDARD)



STANDARD MODE · 3 WIRES ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Close

PIN 1 = Neutral + PIN 3 = Phase = Open

A: VDC 3 WIRES (Grey plug)

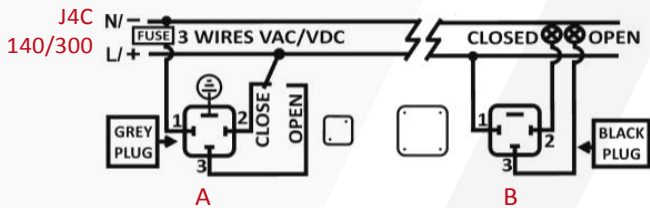
PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close

PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open

B = Volt free contact, plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open



STANDARD MODE · 2 WIRES ON - OFF

A = Power supply plug

A: VDC 2 WIRES (Grey plug)

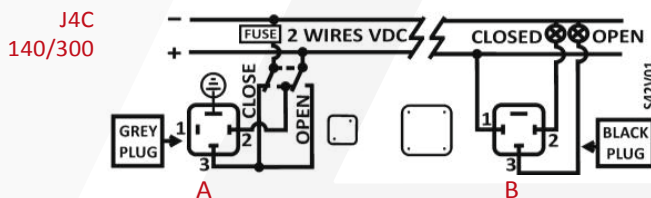
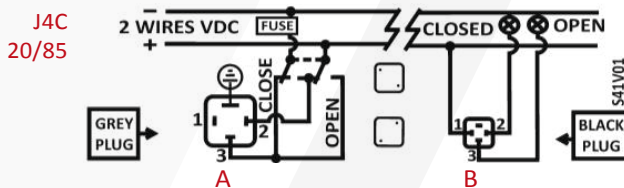
PIN 2 = (+) Positive + PIN 3 = (-) Negative = Close

PIN 2 = (-) Negative + PIN 3 = (+) Positive = Open

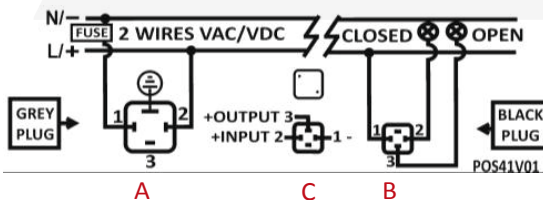
B = Volt free contact plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open



J4C 20/85



POSITIONER

A = Power supply plug

A: VAC 2 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Power supply plug

A: VDC 2 WIRES (Grey plug)

PIN1=(-) Negative + PIN 2=(+) Positive = Power supply plug

B = Volt free contact plug

PIN 1 / PIN 2 = Closed

PIN 1 / PIN 3 = Open

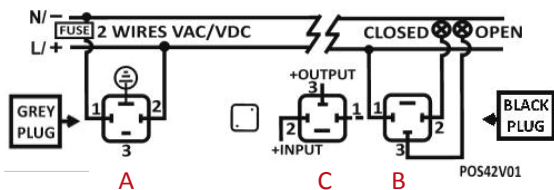
C = Instrumentation Signal

C: Input signal : 4/20mA or 0/10V

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Input signal

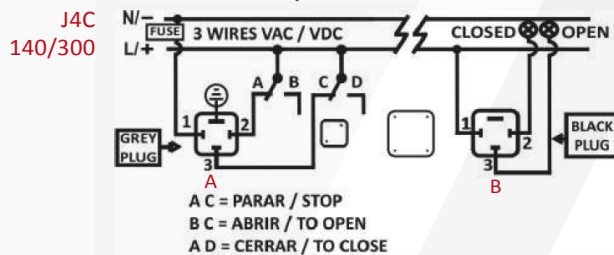
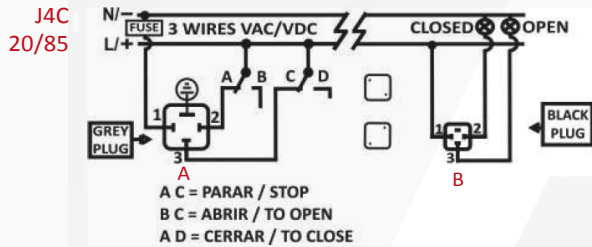
PIN 1 = (-) Negative + PIN 3 = (+) Positive = Output signal

J4C 140/300



INSTRUMENTATION SIGNAL
NO VOLTAGE

EXTERNAL CONNECTING DIAGRAM (OPTIONAL)



STANDARD MODE · 3 WIRES ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Close

PIN 1 = Neutral + PIN 3 = Phase = Open

PIN 1 = Neutral + PIN 2+3 = Phase = Stop

A: VDC 3 WIRES (Grey plug)

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close

PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open

PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Stop

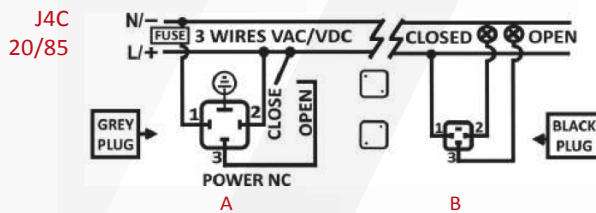
B = Volt free contact, plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open

Other options for external connection diagrams:

These options can be configured by the manufacturer or can be configured by the customer, using our J4C interface kit.



2 MODE ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Close

PIN 1 = Neutral + PIN 2+3 = Phase = Open

A: VDC 3 WIRES (Grey plug)

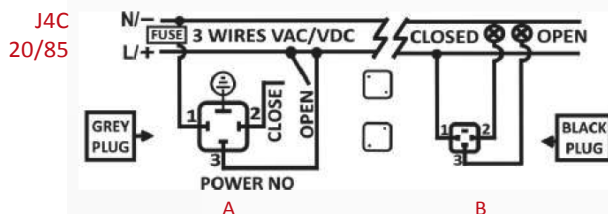
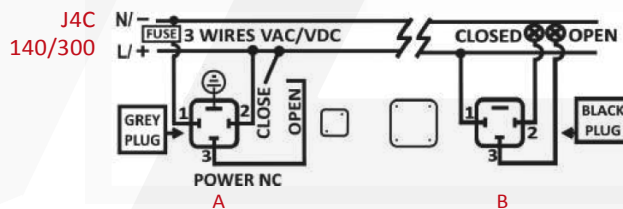
PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close

PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Open

B = Volt free contact plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open



3 MODE ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2+3 = Phase = Close

PIN 1 = Neutral + PIN 3 = Phase = Open

A: VDC 3 WIRES (Grey plug)

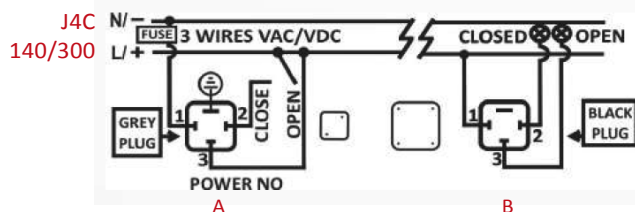
PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Close

PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open

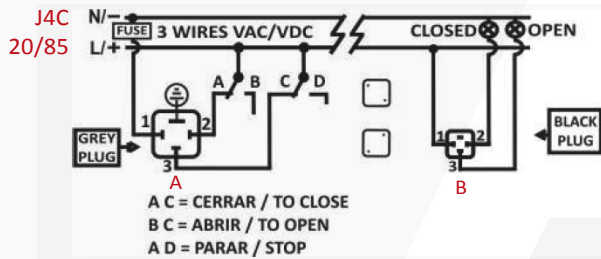
B = Volt free contact plug

PIN 1 / PIN 2 = Closed

PIN 1 / PIN 3 = Open



EXTERNAL CONNECTING DIAGRAM (OPTIONAL)



4 MODE ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Stop

PIN 1 = Neutral + PIN 3 = Phase = Open

PIN 1 = Neutral + PIN 2+3 = Phase = Close

A: VDC 3 WIRES (Grey plug)

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Stop

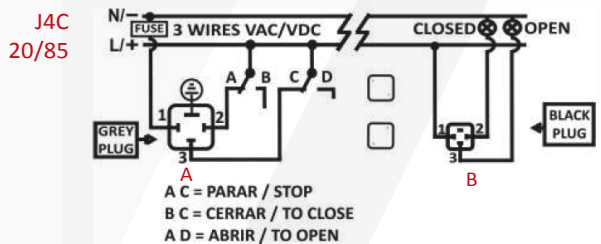
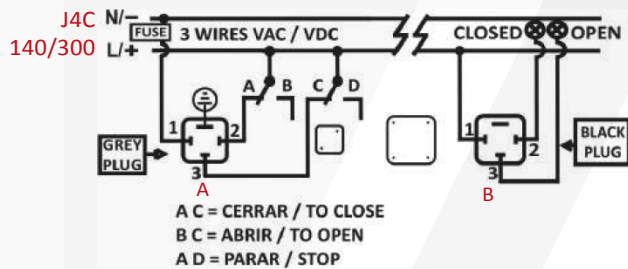
PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open

PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Close

B = Volt free contact, plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open



6 MODE ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Open

PIN 1 = Neutral + PIN 3 = Phase = Close

PIN 1 = Neutral + PIN 2+3 = Phase = Stop

A: VDC 3 WIRES (Grey plug)

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Open

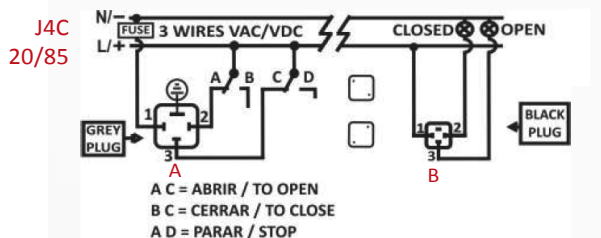
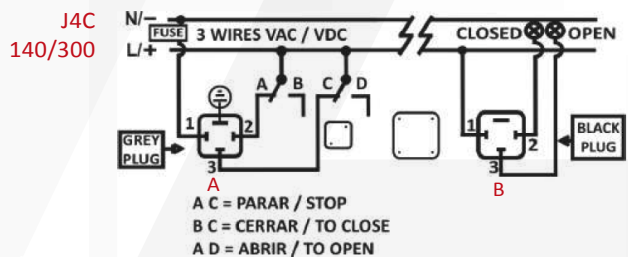
PIN 1 = (-) Negative + PIN 3 = (+) Positive = Close

PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Stop

B = Volt free contact plug

PIN 1 / PIN 2 = Close

PIN 1 / PIN 3 = Open



8 MODE ON - OFF

A = Power supply plug

A: VAC 3 WIRES (Grey plug)

PIN 1 = Neutral + PIN 2 = Phase = Stop

PIN 1 = Neutral + PIN 2+3 = Phase = Open

PIN 1 = Neutral + PIN 3 = Phase = Close

A: VDC 3 WIRES (Grey plug)

PIN 1 = (-) Negative + PIN 2 = (+) Positive = Stop

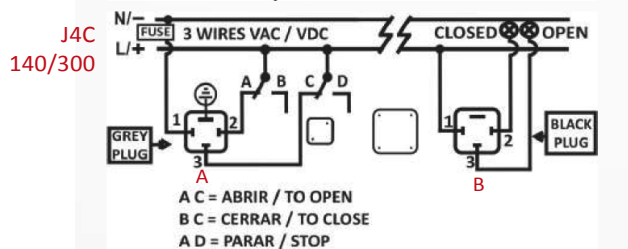
PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Open

PIN 1 = (-) Negative + PIN 3 = (+) Positive = Close

B = Volt free contact plug

PIN 1 / PIN 2 = Closed

PIN 1 / PIN 3 = Open



ACTUATOR OPERATIONAL STATUS

MODELS: 20, 35, 55, 85, 140 & 300

The **LED Light** provides visual communication between the actuator and the user. The current operational **status** is shown by **different LED colors**.



ON-OFF ACTUATOR

ACTUATOR OPERATIONAL STATUS

| | |
|---|---------------------------------|
| Without power supply | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| In open position | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| In close position | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| Opening | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| Closing | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| Torque limiter function on, moving from close to open | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| Torque limiter function on, moving from open to close | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| Actuator in MANUAL mode (Exceeded time) | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| The actuator has stopped (*) | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |
| In middle position (for a 3 position actuator only) | ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● |

(*) Actuator powered on to Open and Close position at the same time.



ACTUATOR WITH BSR
ACTUATOR OPERATIONAL STATUS

| | |
|--|--|
| Without power supply | |
| In open position | |
| In close position | |
| Opening | |
| Closing | |
| Torque limiter function on, moving from close to open | |
| Torque limiter function on, moving from open to close | |
| Actuator in MANUAL mode (Exceeded time) | |
| The actuator has stopped (*) | |
| In middle position (for a 3 position actuator only) | |
| Actuator without power, working with the BSR NO system. Max.3 min., (led off) | |
| Actuator without power, working with the BSR NC system. Max.3 min., (led off) | |
| Battery protection. Danger, the battery needs recharging. BSR blocked | |

(*) Actuator powered on to Open and Close position at the same time.

ACTUATOR WITH DPS
ACTUATOR OPERATIONAL STATUS

| | |
|--|--|
| Without power supplied | |
| Motor stop | |
| Opening | |
| Closing | |
| Self adjusting configuration | |
| Torque limiter function on, moving from close to open | |
| Torque limiter function on, moving from open to close | |
| Instrum. Signal overpassed. Blocked actuator. Need a re-set. | |
| Actuator in MANUAL mode (exceeded time) | |
| No Instrum. Signal pick-up. 4-20mA and 1-10V only. | |

03 Datasheet - J4C 20



GENERAL CHARACTERISTICS

MATERIAL:

Body: Anticorrosive Polyamide, Grey colour / **Optional:** Polypropilene V0, Black colour.
Cover: Anticorrosive Polyamide, Red colour / **Optional:** Polypropilene V0, Natural colour.
Output drive: Zamak, Zinc plated / **Optional:** Zamak, TEFLON coated
Flange: ZamaK and Zinc plated / **Optional:** Zamak and TEFLON coated.
Main external shaft: Anticorrosive Polyamide
External screws: Stainless Steel
Gears: Steel and Polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide

Electronic Torque Limiter function
Electric motor: 24VDC Brushless motor
Insulation: Class B
(IEC 60034) Service: S4

| Modelo | S20 | B20 |
|-------------------------------|----------------|-----------------|
| Voltage VDC/VAC 50/60Hz-0/+5% | 24-240 VDC/VAC | 12 VDC/VAC ONLY |

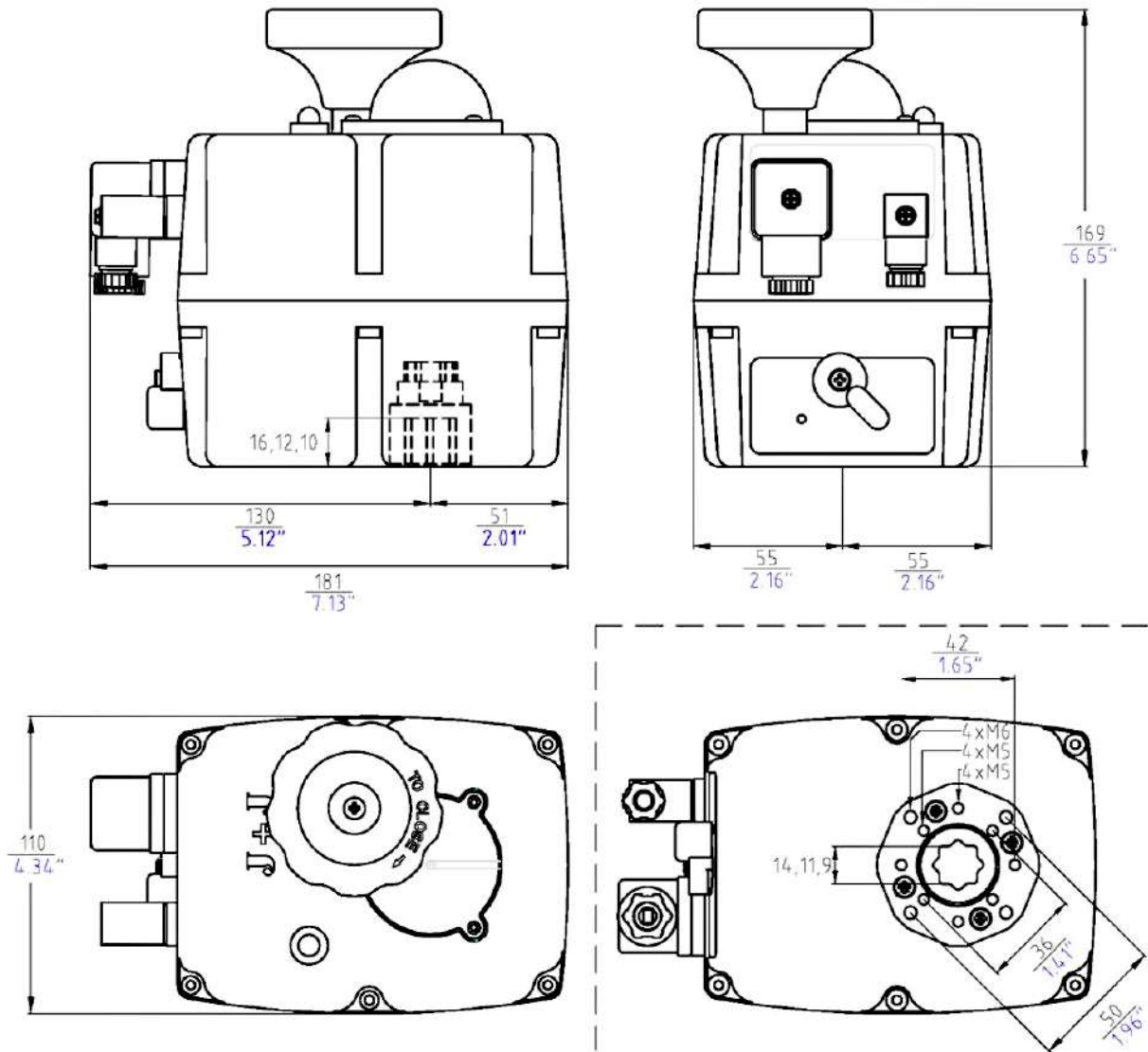
| Model | S20/B20 |
|------------------------------|--|
| Operation time unload | 9 Sec./90° |
| Maximum torque break | 25 Nm / 221 lb/in |
| Maximum operational torque | 20 Nm / 177 lb/in |
| Duty rating | 75 % |
| Max. Working angle | 0° to 270° |
| Limit switch | 4 SPST NO micro (2 motor stop and 2 confirmations) |
| Automatic heater | 3,5 W |
| Big Plug | EN175301-803 FORM A |
| Small Plug | DIN43650/C |
| Protection IEC 60529 rating | IP67 |
| Temperature | -20°C +70°C / -4°F +158°F |
| ISO 5211 Plate | Standard: F03/F04/F05 Optional: F07 *17mm |
| DIN 3337 Female output drive | Standard: *14 Optional: *9, *11mm |
| Weight | 1,8 Kg |

Options

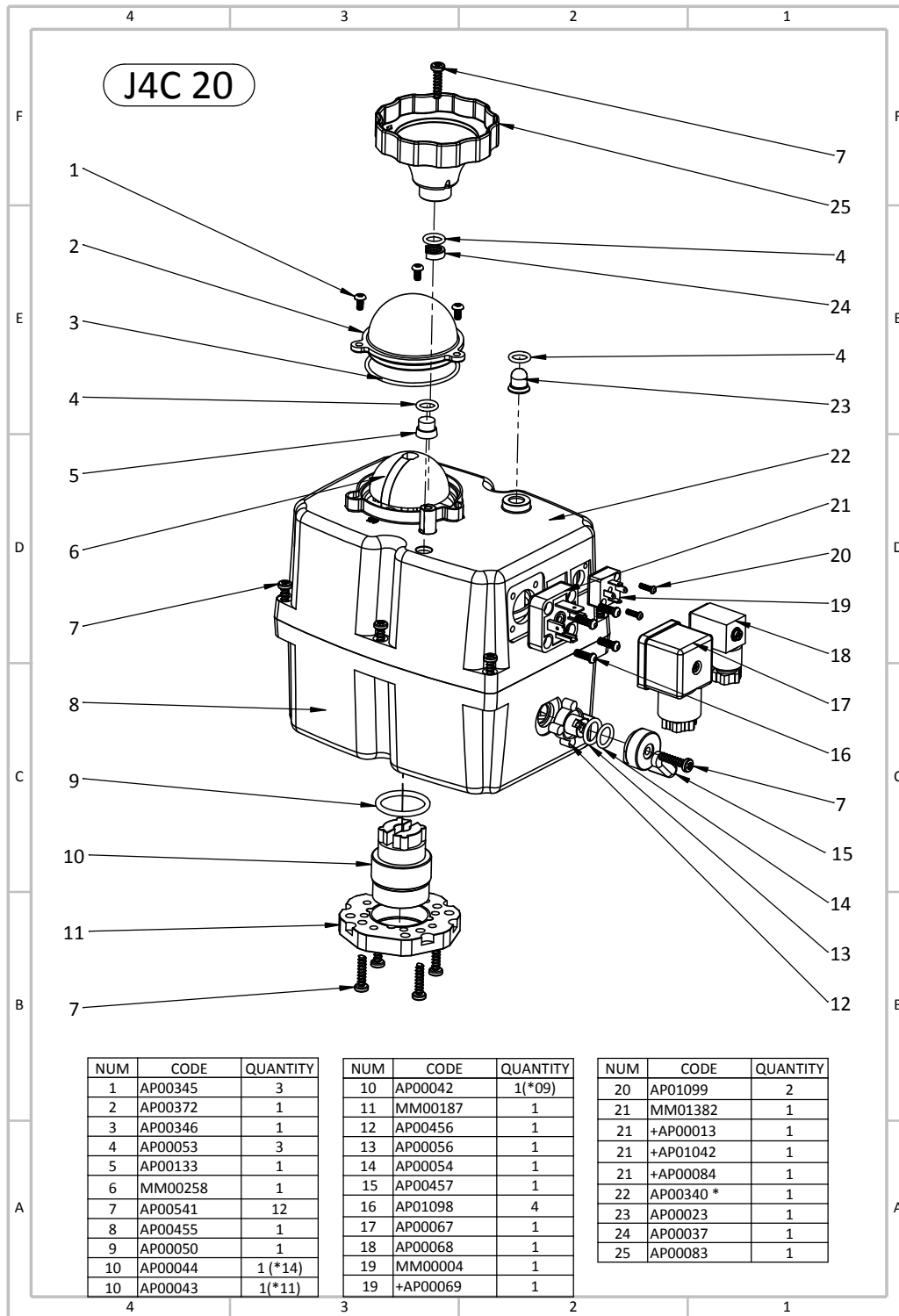
| | |
|---|--------------------------------|
| J4C 20/85 KIT DPS digital positioner: | 4-20mA, 0-20mA, 0-10V or 1-10V |
| J4C 20/85 KIT BSR emergency fail safe kit system by battery | NC- NO |
| Potentiometer | 1K, 5K or 10K |
| 3 position actuator | 0°-45°-90° or 0°-90°-180° |

Note: Technical data are the same despite the different casings.

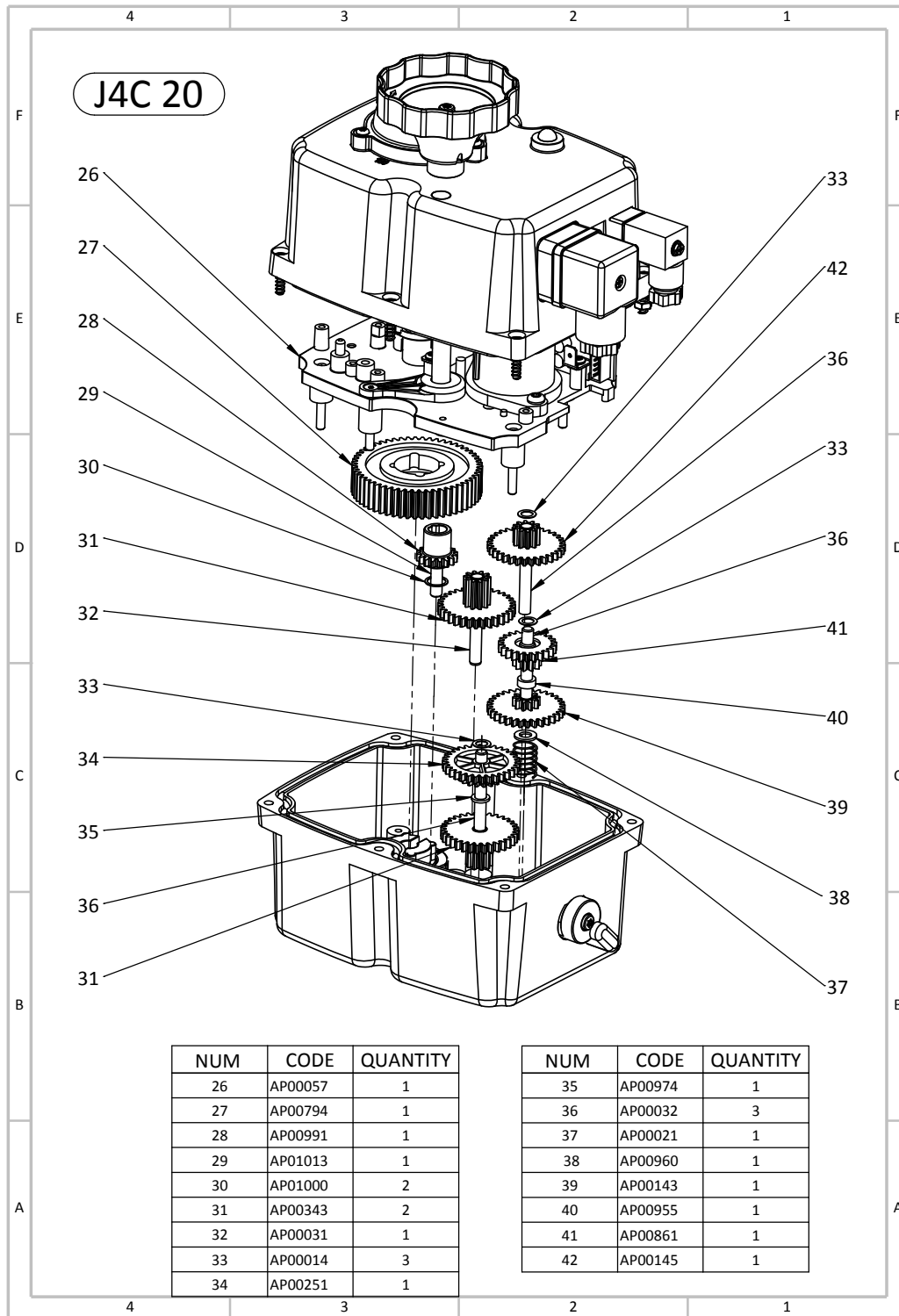
J4C 20 SIZES



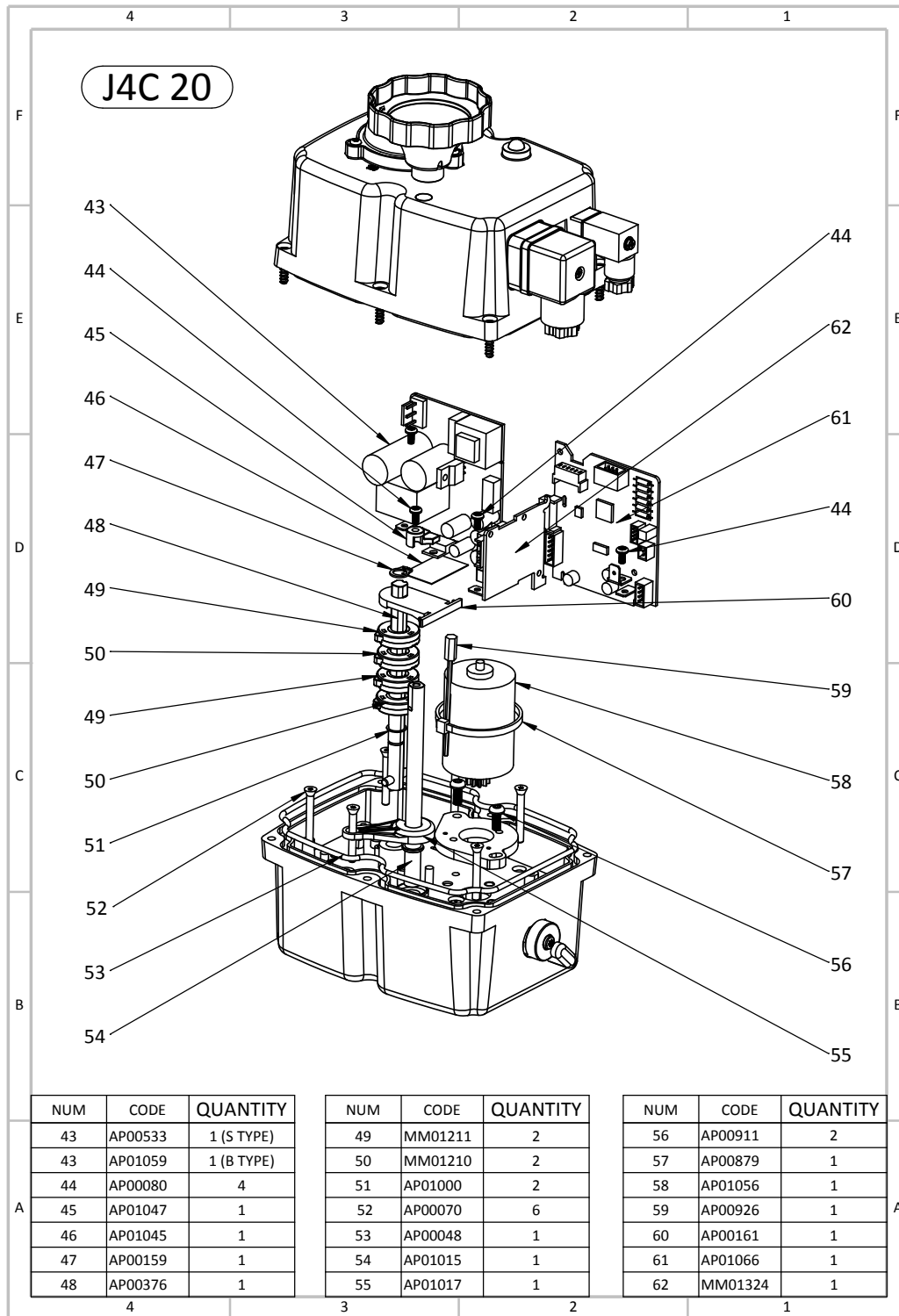
Exploded View



Exploded View



Exploded View



Datasheet - J4C 35

GENERAL CHARACTERISTICS

MATERIAL:

Body: Anticorrosive Polyamide, Grey colour / **Optional:** Polypropilene V0, Black colour.
Cover: Anticorrosive Polyamide, Red colour / **Optional:** Polypropilene V0, Natural colour.
Output drive: Zamak, Zinc plated / **Optional:** Zamak, TEFLON coated
Flange: ZamaK and Zinc plated / **Optional:** Zamak and TEFLON coated.
Main external shaft: Stainless Steel
External screws: Stainless Steel
Gears: Steel and Polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide



Electronic Torque Limiter function
Electric motor: 24VDC Brushless motor
Insulation: Class B
(IEC 60034) Service: S4

| Modelo | S35 | B35 |
|-------------------------------|----------------|-----------------|
| Voltage VDC/VAC 50/60Hz-0/+5% | 24-240 VDC/VAC | 12 VDC/VAC ONLY |

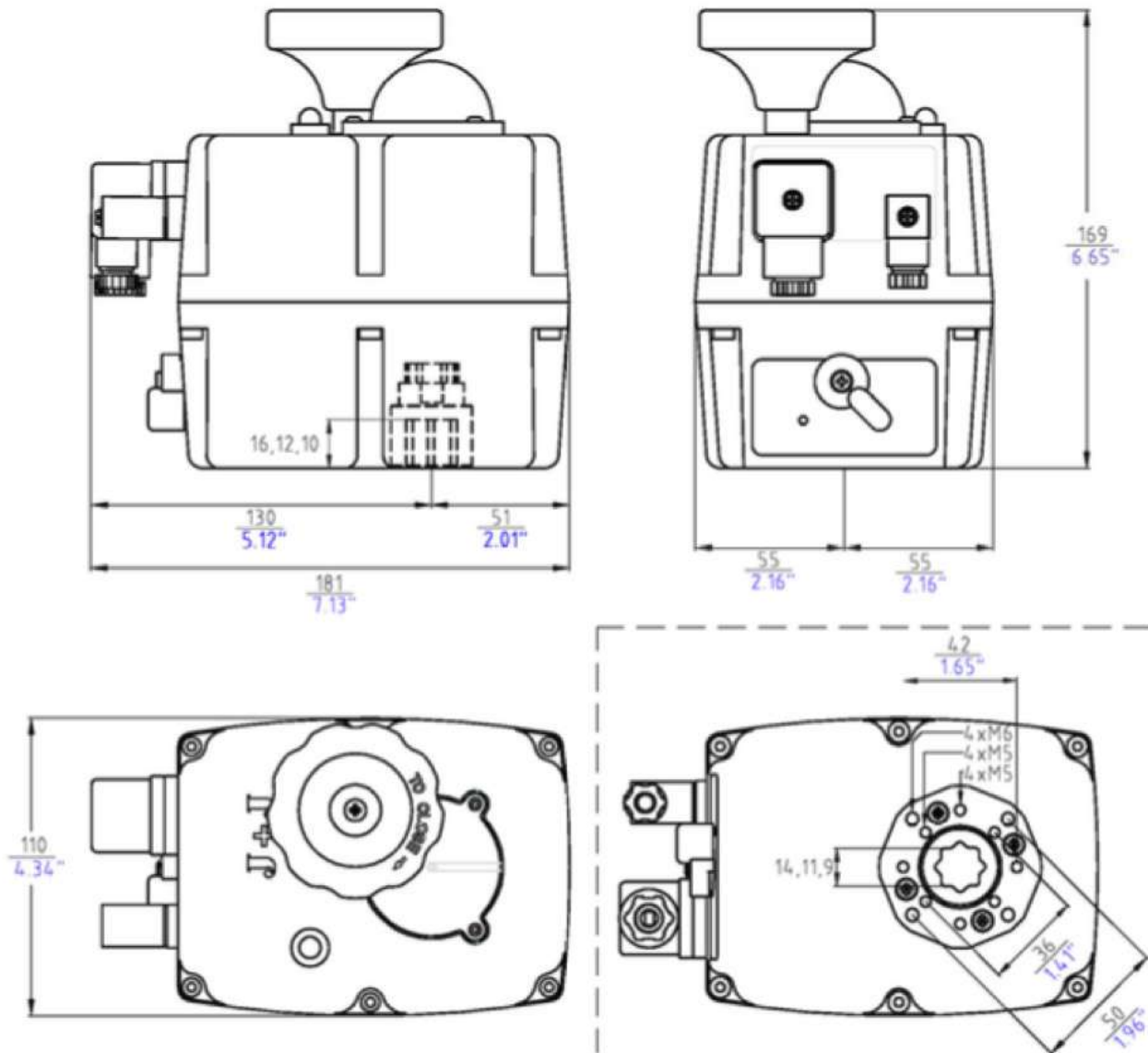
| Model | S35/B35 |
|------------------------------|--|
| Operation time unload | 9 Sec./90° |
| Maximum torque break | 38 Nm / 359,3 lb/in |
| Maximum operational torque | 35 Nm / 309 lb/in |
| Duty rating | 75 % |
| Max. Working angle | 0° to 270° |
| Limit switch | 4 SPST NO micro (2 motor stop and 2 confirmations) |
| Automatic heater | 3,5 W |
| Big Plug | EN175301-803 FORM A |
| Small Plug | DIN43650/C |
| Protection IEC 60529 rating | IP67 |
| Temperature | -20°C +70°C / -4°F +158°F |
| ISO 5211 Plate | Standard: F03/F04/F05 Optional: F07 *17mm |
| DIN 3337 Female output drive | Standard: *14 Optional: *9, *11mm |
| Weight | 1,8 Kg |

Options

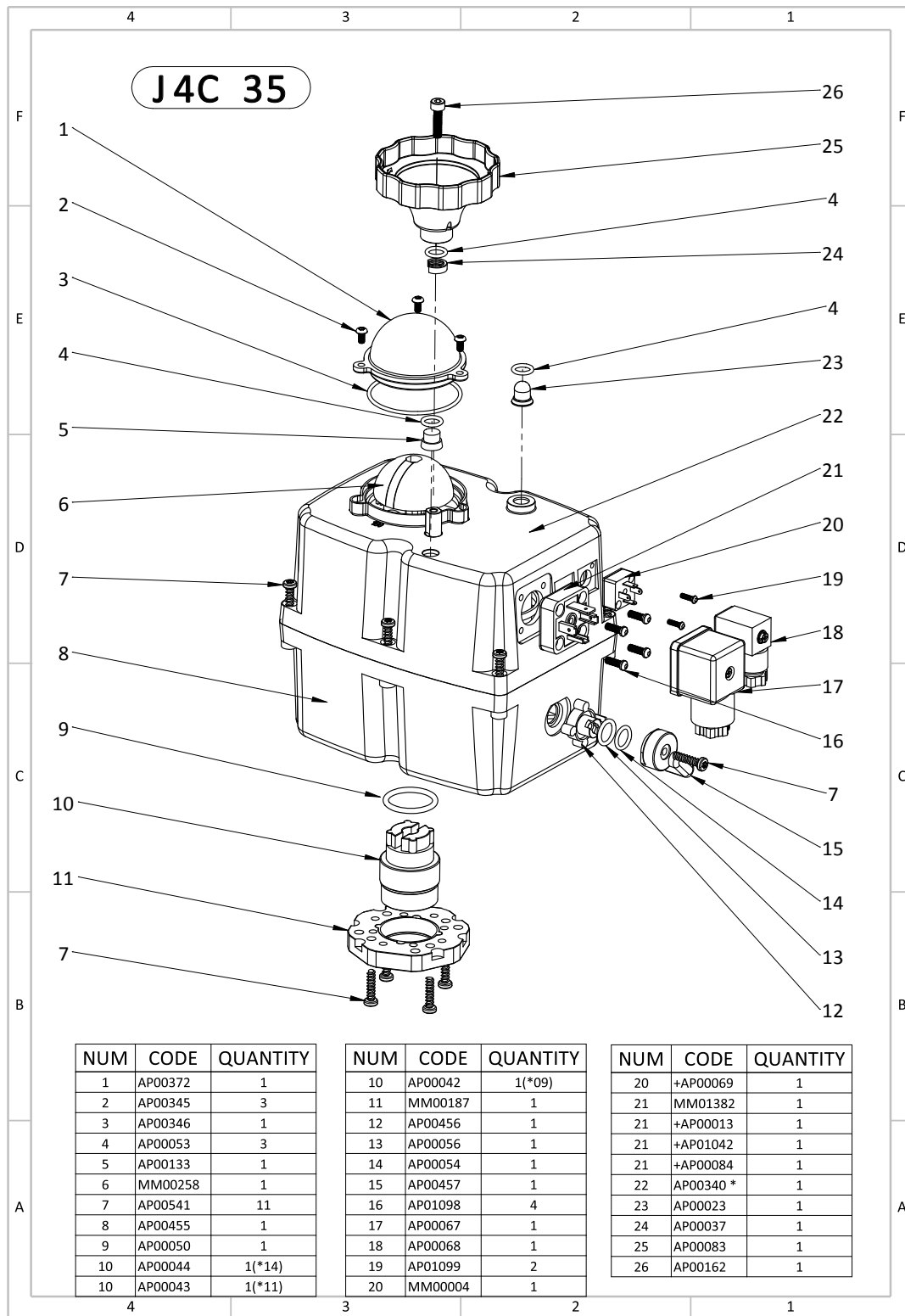
| | |
|---|--------------------------------|
| J4C 20/85 KIT DPS digital positioner: | 4-20mA, 0-20mA, 0-10V or 1-10V |
| J4C 20/85 KIT BSR emergency fail safe kit system by battery | NC- NO |
| Potentiometer | 1K, 5K or 10K |
| 3 position actuator | 0°-45°-90° or 0°-90°-180° |

Note: Technical data are the same despite the different casings.

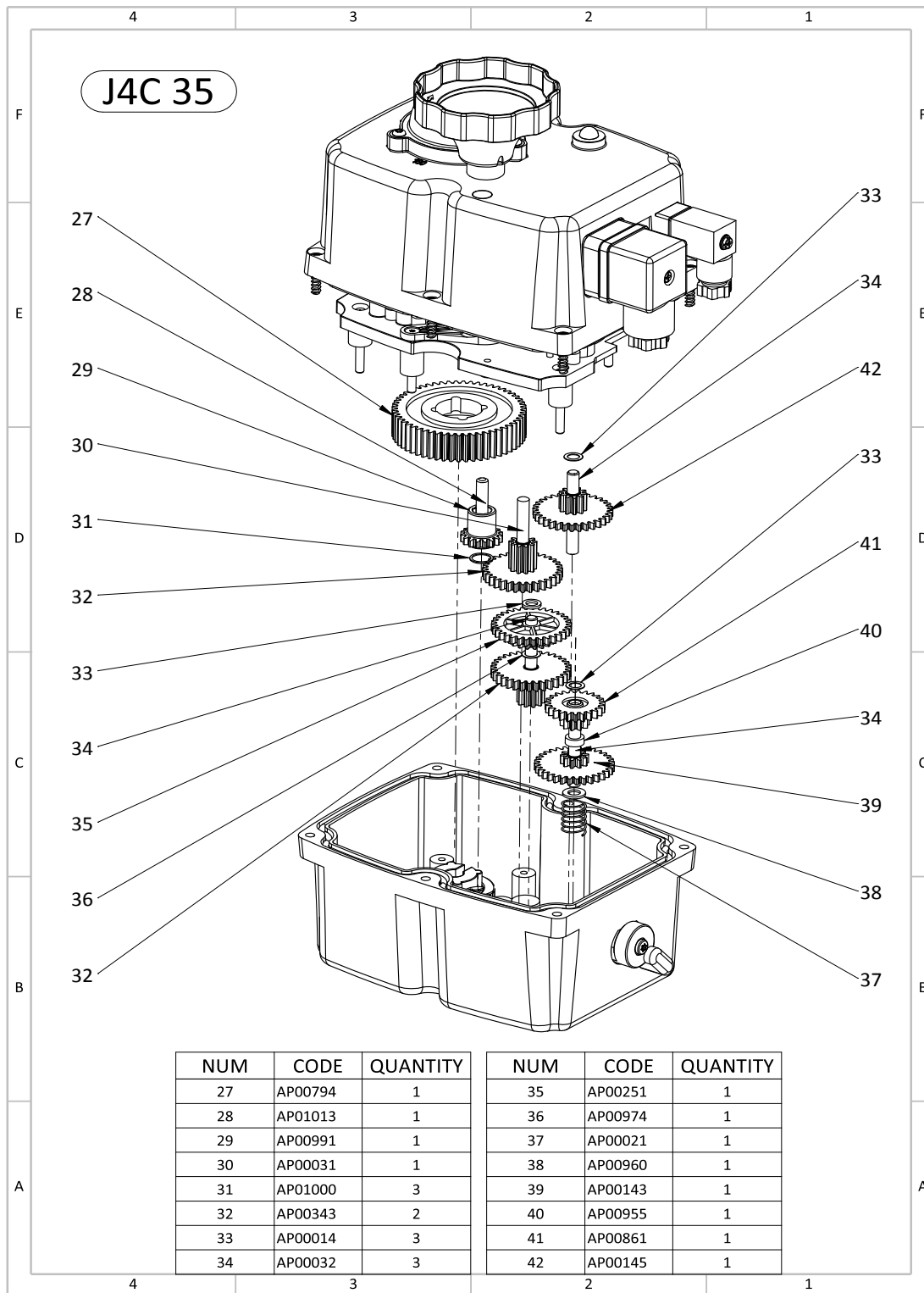
J4C 35 SIZES



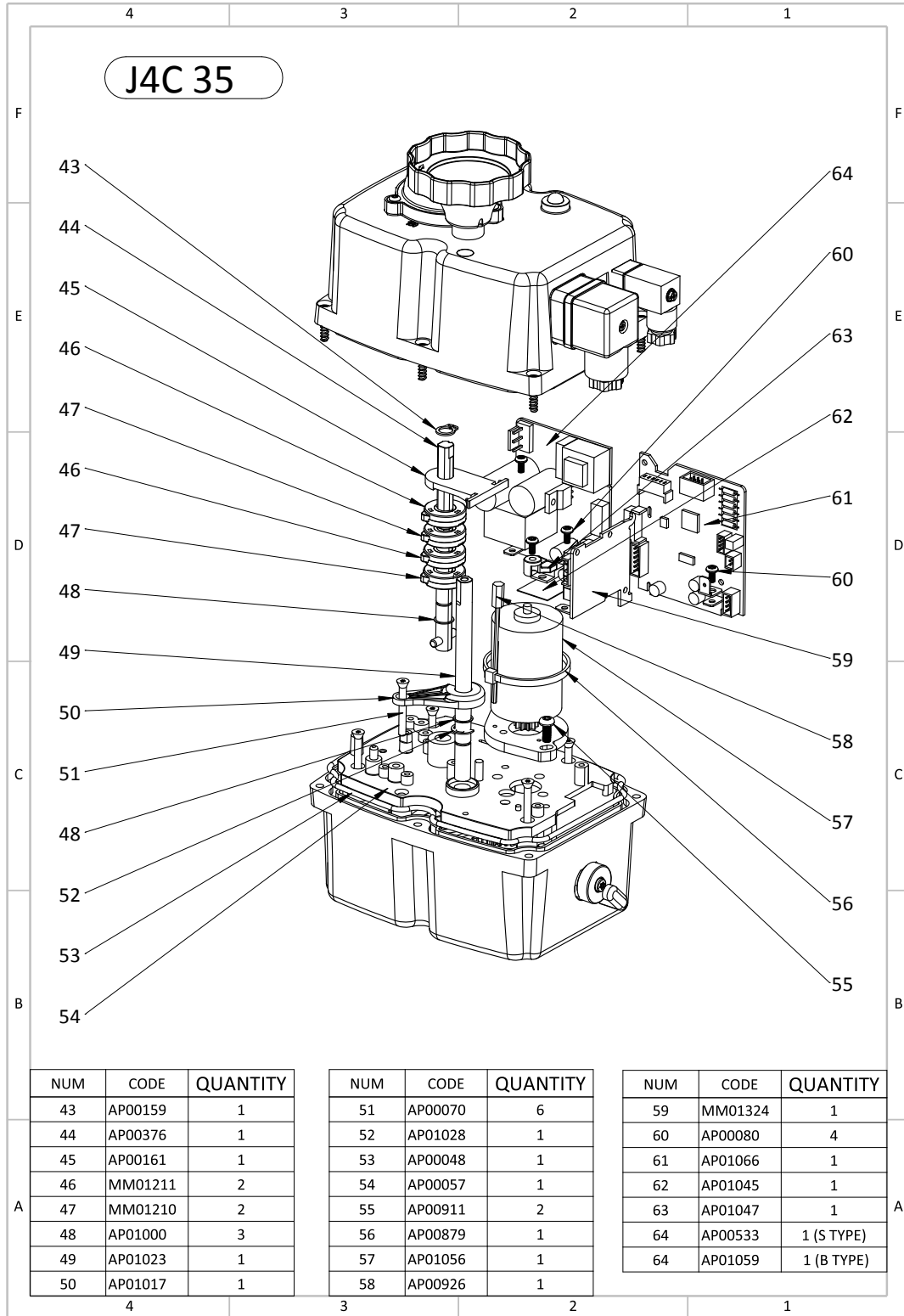
Exploded View



Exploded View



Exploded View



Datasheet - J4C 55



GENERAL CHARACTERISTICS

MATERIAL:

Body: Anticorrosive Polyamide, Grey colour / **Optional:** Polypropilene V0, Black colour.
Cover: Anticorrosive Polyamide, Red colour / **Optional:** Polypropilene V0, Natural colour.
Output drive: Zamak, Zinc plated / **Optional:** Zamak, TEFLON coated
Flange: Aluminum and Cataphoresis / **Optional:** Aluminum and TEFLON coated.
Main external shaft: Stainless Steel
External screws: Stainless Steel
Gears: Steel and Polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide

Electronic Torque Limiter function

Electric motor: 24VDC Brushless motor

Insulation: Class B

(IEC 60034) Service: S4

| Modelo | S55 | B55 |
|-------------------------------|----------------|-----------------|
| Voltage VDC/VAC 50/60Hz-0/+5% | 24-240 VDC/VAC | 12 VDC/VAC ONLY |

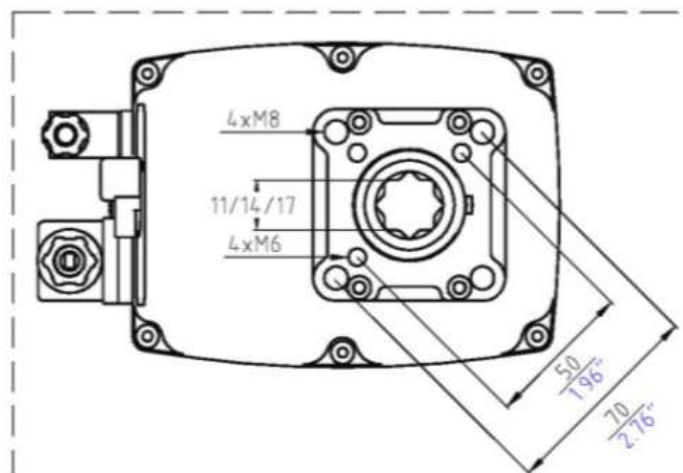
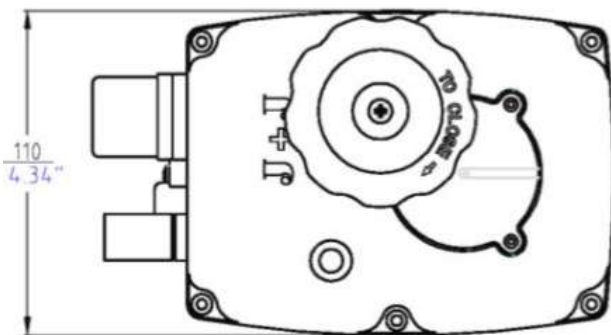
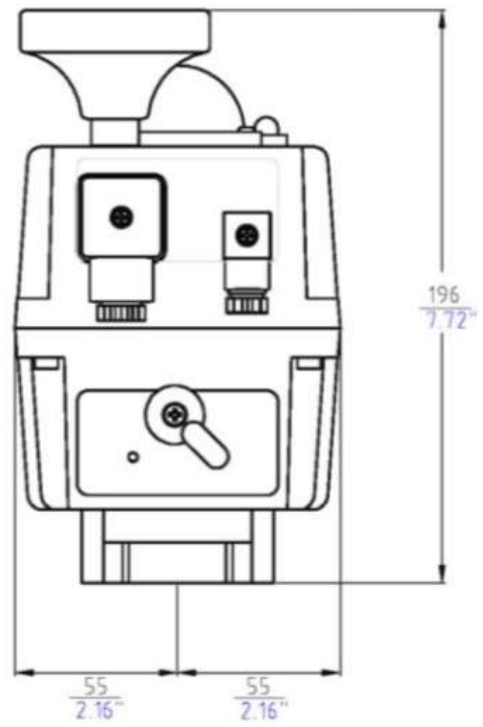
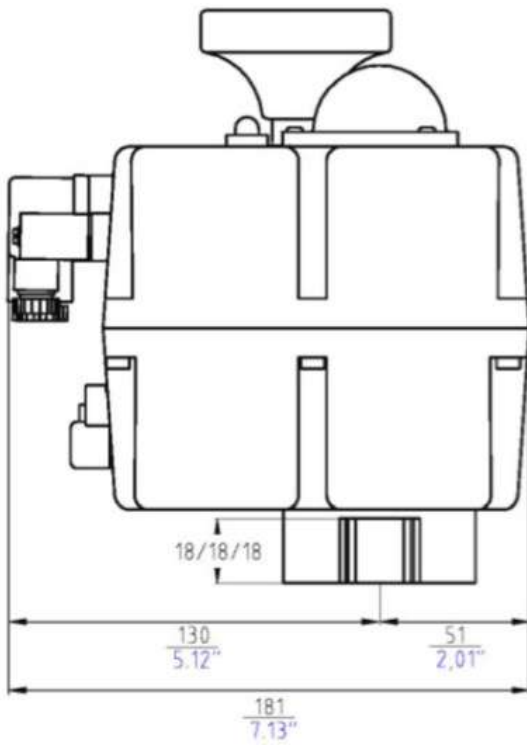
| Model | S55/B55 |
|------------------------------|--|
| Operation time unload | 13 Sec./90° |
| Maximum torque break | 60 Nm / 530 lb/in |
| Maximum operational torque | 55 Nm / 486 lb/in |
| Duty rating | 75 % |
| Max. Working angle | 0° to 270° |
| Limit switch | 4 SPST NO micro (2 motor stop and 2 confirmations) |
| Automatic heater | 3,5 W |
| Big Plug | EN175301-803 FORM A |
| Small Plug | DIN43650/C |
| Protection IEC 60529 rating | IP67 |
| Temperature | -20°C +70°C / -4°F +158°F |
| ISO 5211 Plate | Standard: F05/F07 |
| DIN 3337 Female output drive | Standard: *17 Optional: *11, *14mm |
| Weight | 2,4 Kg |

Options

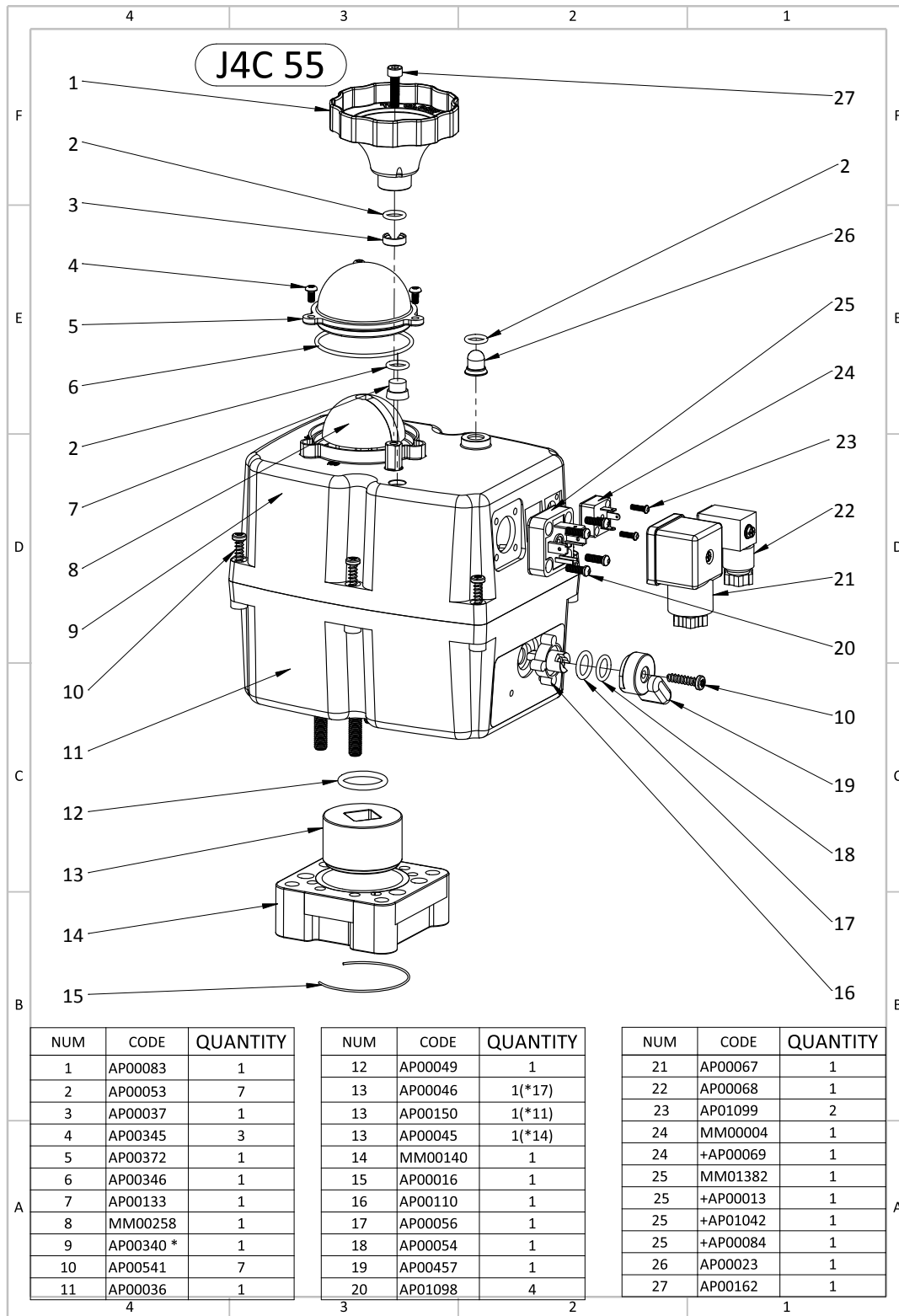
| | |
|---|--------------------------------|
| J4C 20/85 KIT DPS digital positioner: | 4-20mA, 0-20mA, 0-10V or 1-10V |
| J4C 20/85 KIT BSR emergency fail safe kit system by battery | NC - NO |
| Potentiometer | 1K, 5K or 10K |
| 3 position actuator | 0°-45°-90° or 0°-90°-180° |

Note: Technical data are the same despite the different casings.

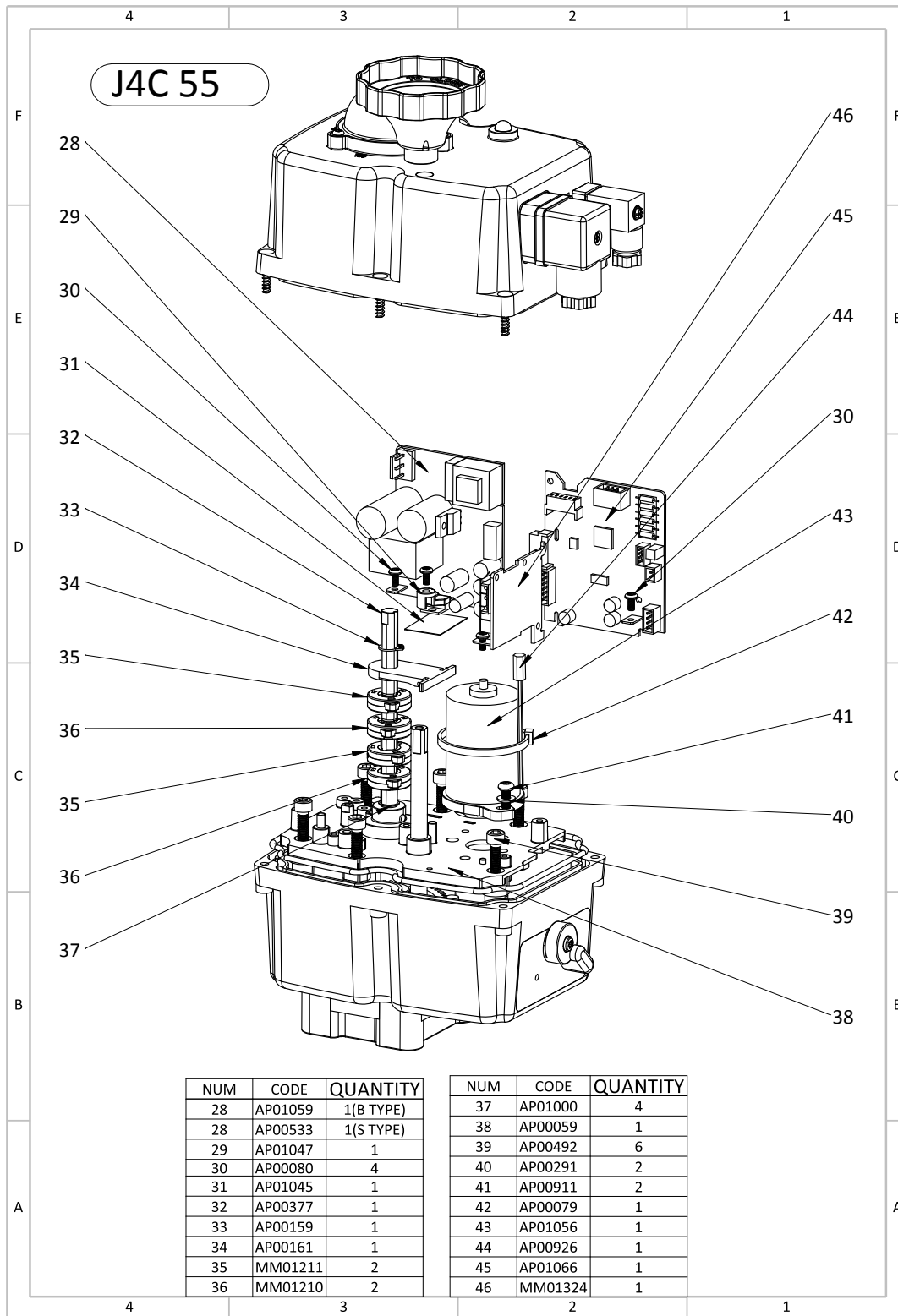
J4C 55 SIZES



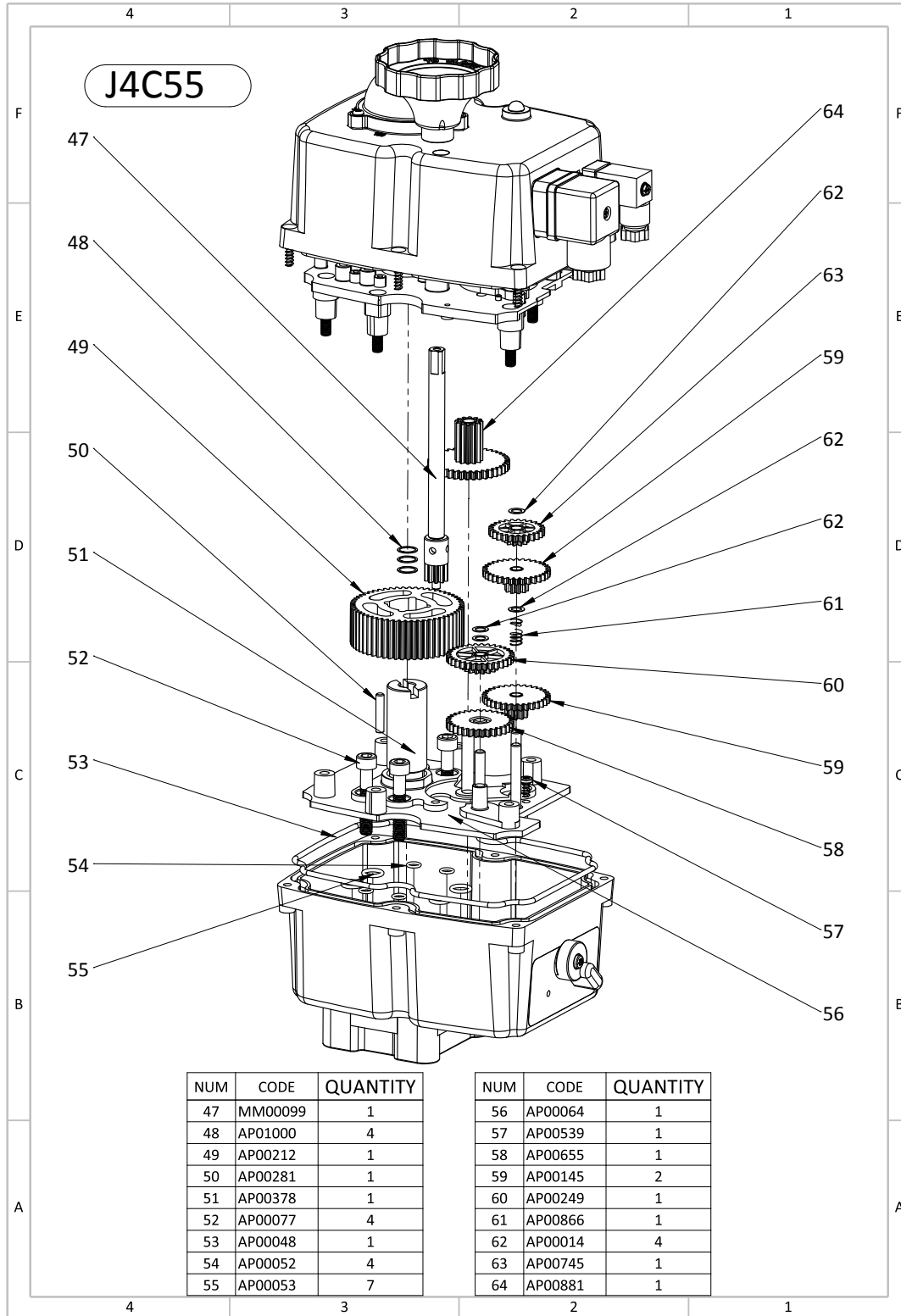
Exploded View



Exploded View



Exploded View



Datasheet - J4C 85



GENERAL CHARACTERISTICS

MATERIAL:

Body: Anticorrosive Polyamide, Grey colour / **Optional:** Polypropilene V0, Black colour.
Cover: Anticorrosive Polyamide, Red colour / **Optional:** Polypropilene V0, Natural colour.
Output drive: Zamak, Zinc plated / **Optional:** Zamak, TEFLON coated
Flange: Aluminum and Cataphoresis / **Optional:** Aluminum and TEFLON coated.
Main external shaft: Stainless Steel
External screws: Stainless Steel
Gears: Steel and Polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide

Electronic Torque Limiter function
Electric motor: 24VDC Brushless motor
Insulation: Class B
(IEC 60034) Service: S4

| Modelo | S85 | B85 |
|-------------------------------|----------------|-----------------|
| Voltage VDC/VAC 50/60Hz-0/+5% | 24-240 VDC/VAC | 12 VDC/VAC ONLY |

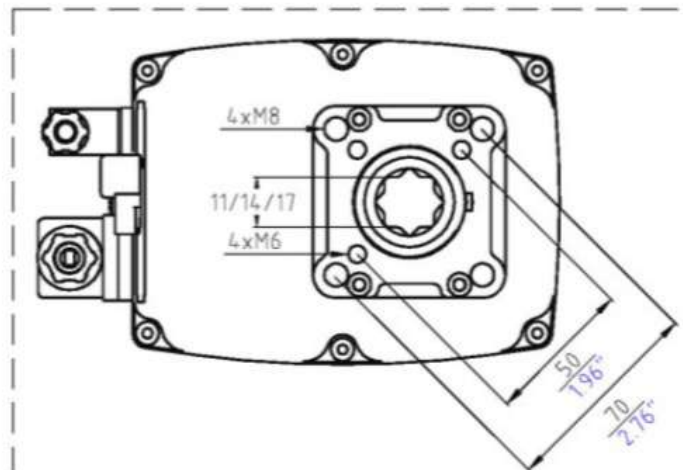
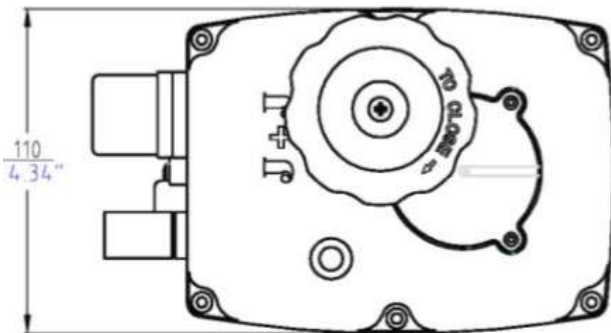
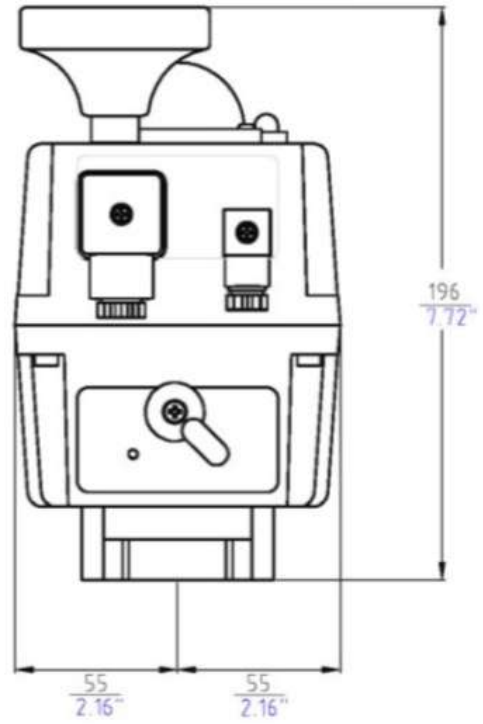
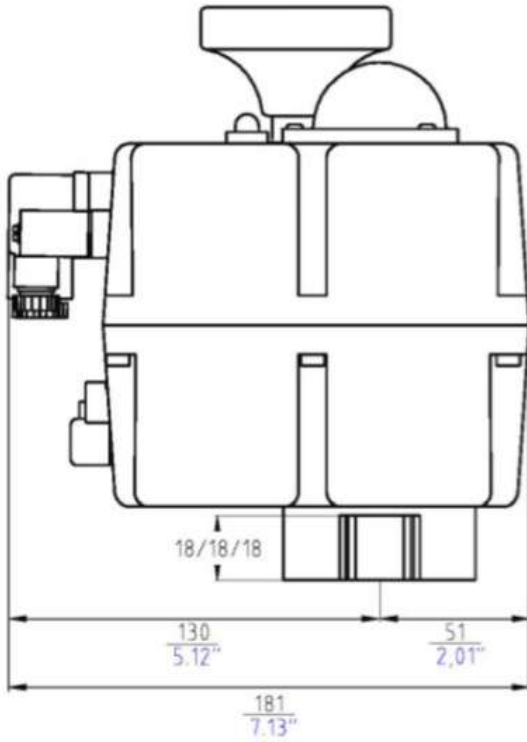
| Model | S85/B85 |
|------------------------------|--|
| Operation time unload | 29 Sec./90° |
| Maximum torque break | 90 Nm / 796,3 lb/in |
| Maximum operational torque | 85 Nm / 752 lb/in |
| Duty rating | 75 % |
| Max. Working angle | 0° to 270° |
| Limit switch | 4 SPST NO micro (2 motor stop and 2 confirmations) |
| Automatic heater | 3,5 W |
| Big Plug | EN175301-803 FORM A |
| Small Plug | DIN43650/C |
| Protection IEC 60529 rating | IP67 |
| Temperature | -20°C +70°C / -4°F +158°F |
| ISO 5211 Plate | Standard: F05/F07 |
| DIN 3337 Female output drive | Standard: *17 Optional: *14mm |
| Weight | 3 Kg |

Options

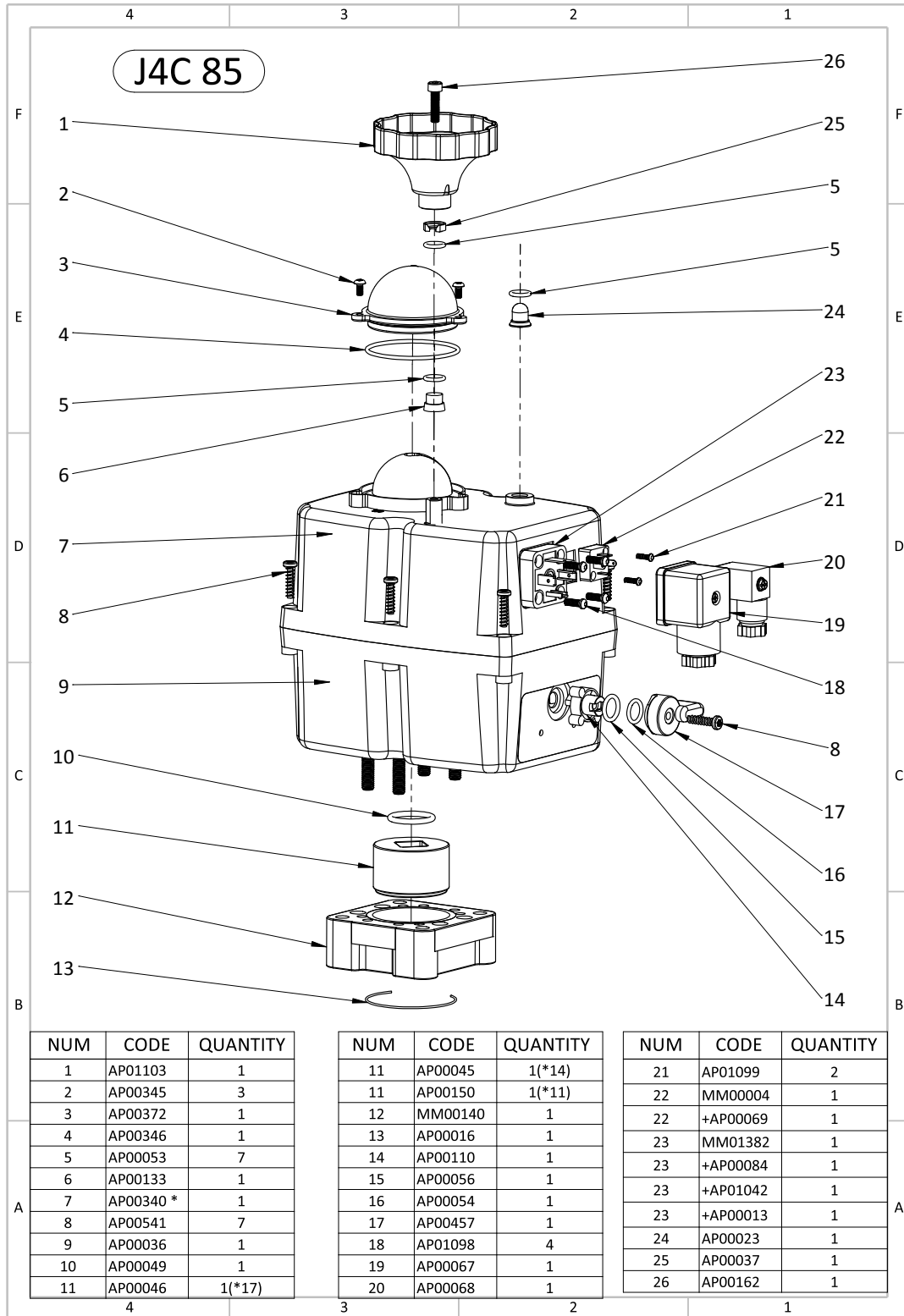
| | |
|---|--------------------------------|
| J4C 20/85 KIT DPS digital positioner: | 4-20mA, 0-20mA, 0-10V or 1-10V |
| J4C 20/85 KIT BSR emergency fail safe kit system by battery | NC- NO |
| Potentiometer | 1K, 5K or 10K |
| 3 position actuator | 0°-45°-90° or 0°-90°-180° |

Note: Technical data are the same despite the different casings.

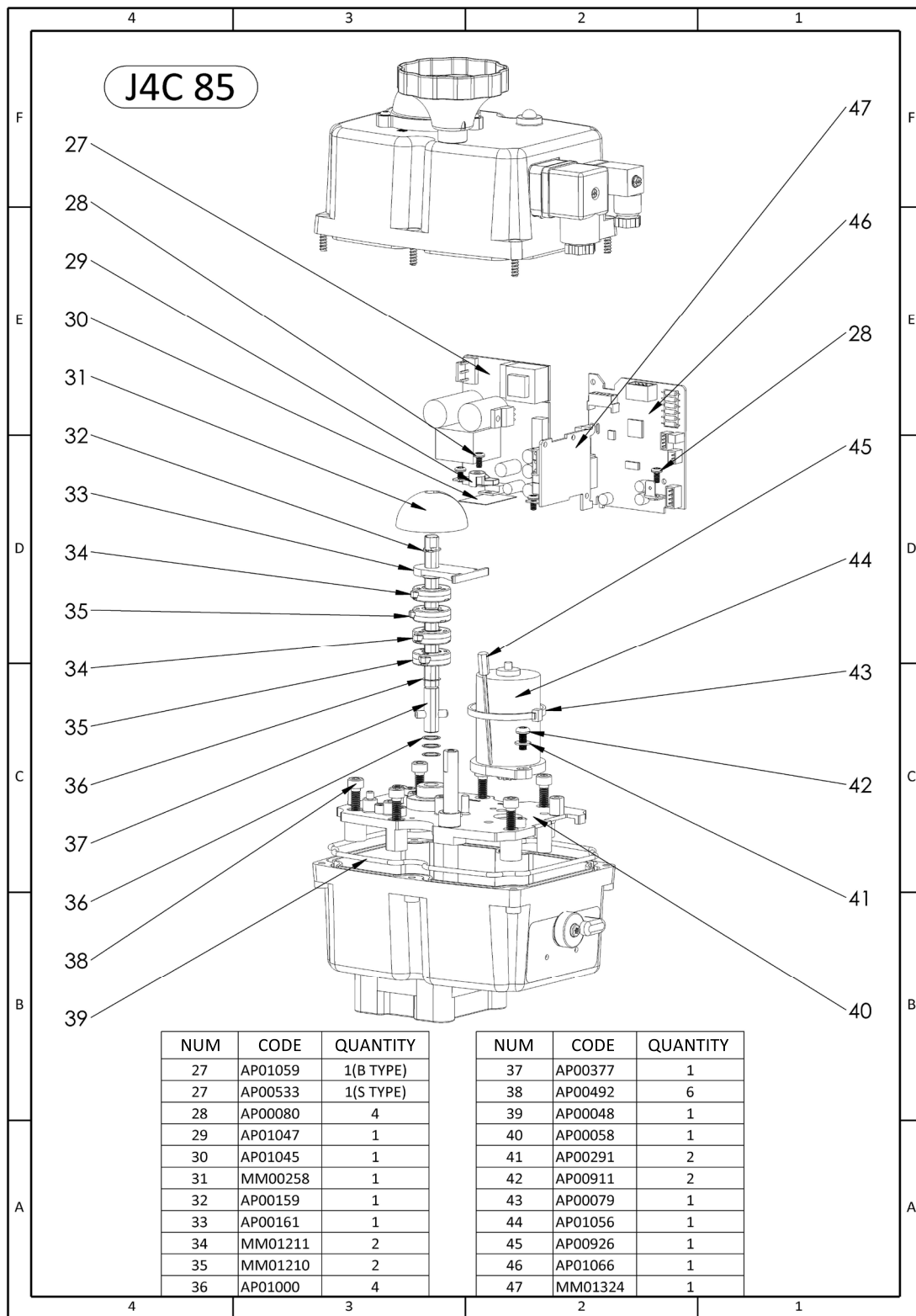
J4C 85 SIZES



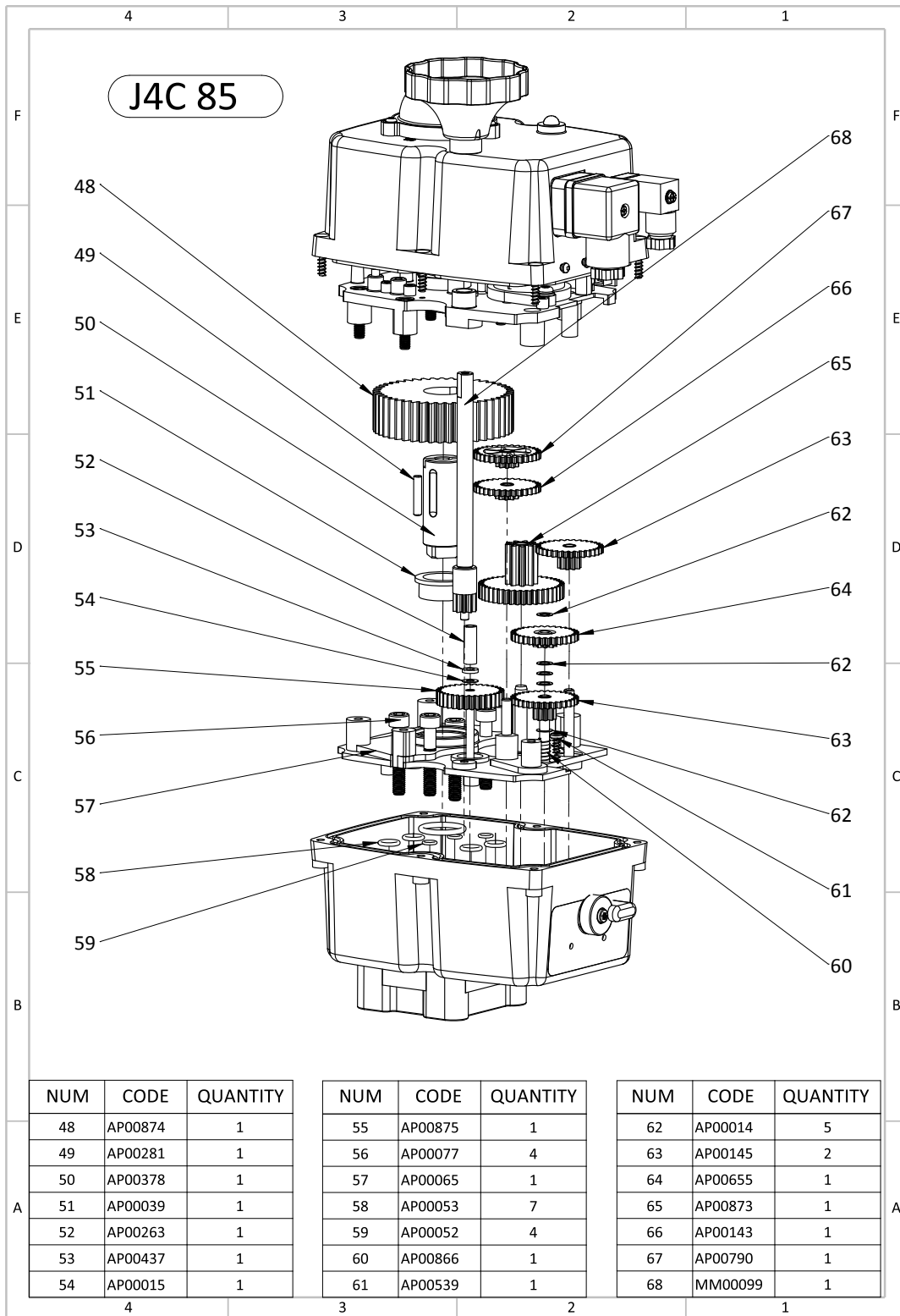
Exploded View



Exploded View



Exploded View

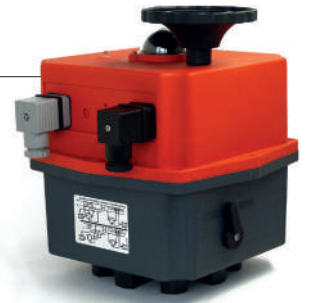


Datasheet - J4C 140

GENERAL CHARACTERISTICS

MATERIAL:

Body: Anticorrosive Polyamide, Grey colour / **Optional:** Polypropilene V0, Black colour.
Cover: Anticorrosive Polyamide, Red colour / **Optional:** Polypropilene V0, Natural colour.
Output drive: Zamak, Zinc plated / **Optional:** Zamak, TEFLON coated
Flange: Aluminum and Cataphoresis / **Optional:** Aluminum and TEFLON coated.
Main external shaft: Stainless Steel
External screws: Stainless Steel
Gears: Steel and Polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide



Electronic Torque Limiter function

Electric motor: 24VDC Brushless motor

Insulation: Class B

(IEC 60034) Service: S4

| Modelo | S140 | B140 |
|-------------------------------|----------------|-----------------|
| Voltage VDC/VAC 50/60Hz-0/+5% | 24-240 VDC/VAC | 12 VDC/VAC ONLY |

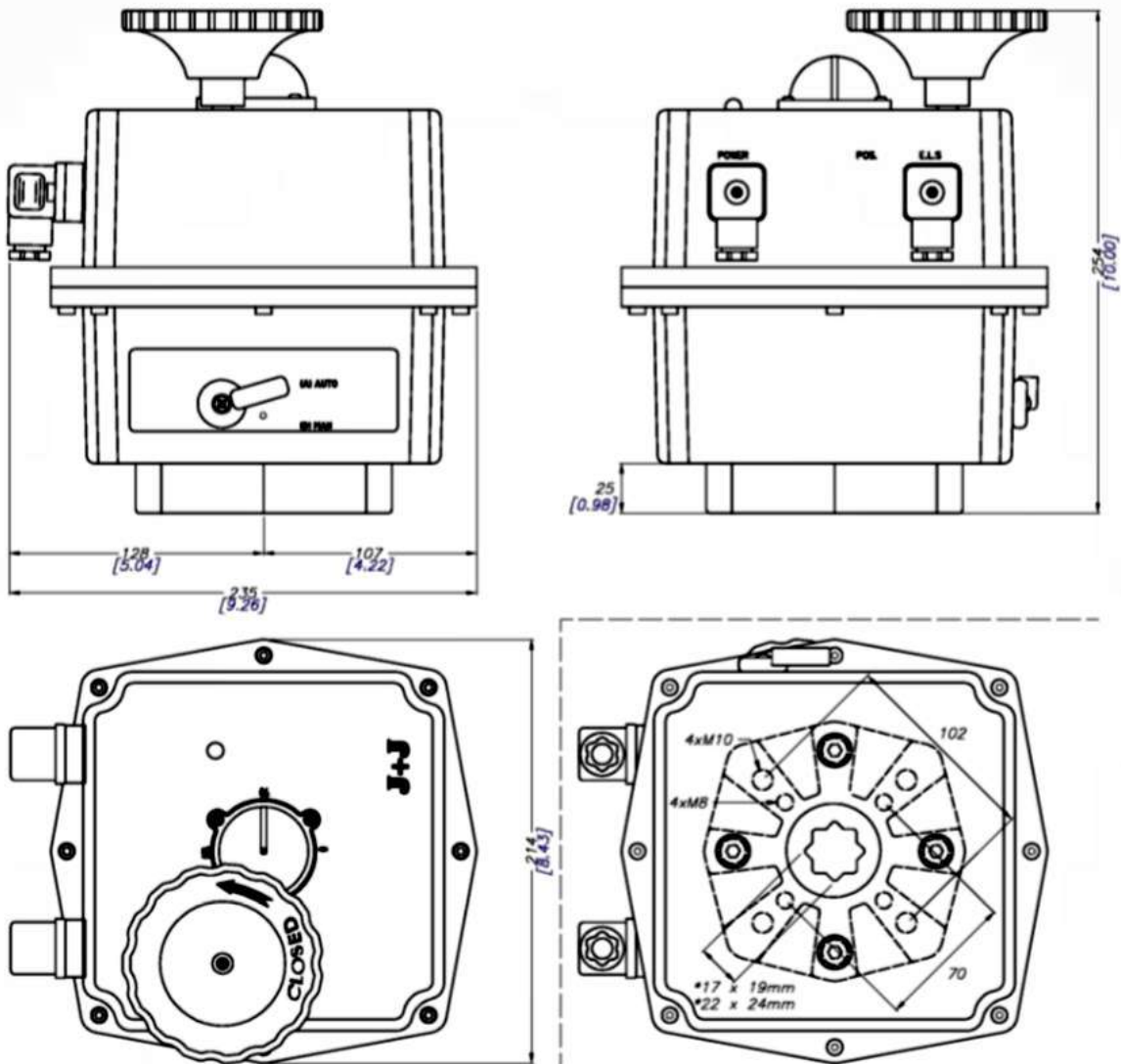
| Model | S140/B140 |
|------------------------------|--|
| Operation time unload | 34 Sec./90° |
| Maximum torque break | 170 Nm / 1504,5 lb/in |
| Maximum operational torque | 140 Nm / 1239 lb/in |
| Duty rating | 75 % |
| Max. Working angle | 0° to 270° |
| Limit switch | 4 SPST NO micro (2 motor stop and 2 confirmations) |
| Automatic heater | 3,5 W |
| Big Plug | EN175301-803 FORM A |
| Small Plug | DIN43650/C |
| Protection IEC 60529 rating | IP67 |
| Temperature | -20°C +70°C / -4°F +158°F |
| ISO 5211 Plate | Standard: F07/F10 Optional: F12 |
| DIN 3337 Female output drive | Standard: *22 Optional: *17mm |
| Weight | 5,2 Kg |

Options

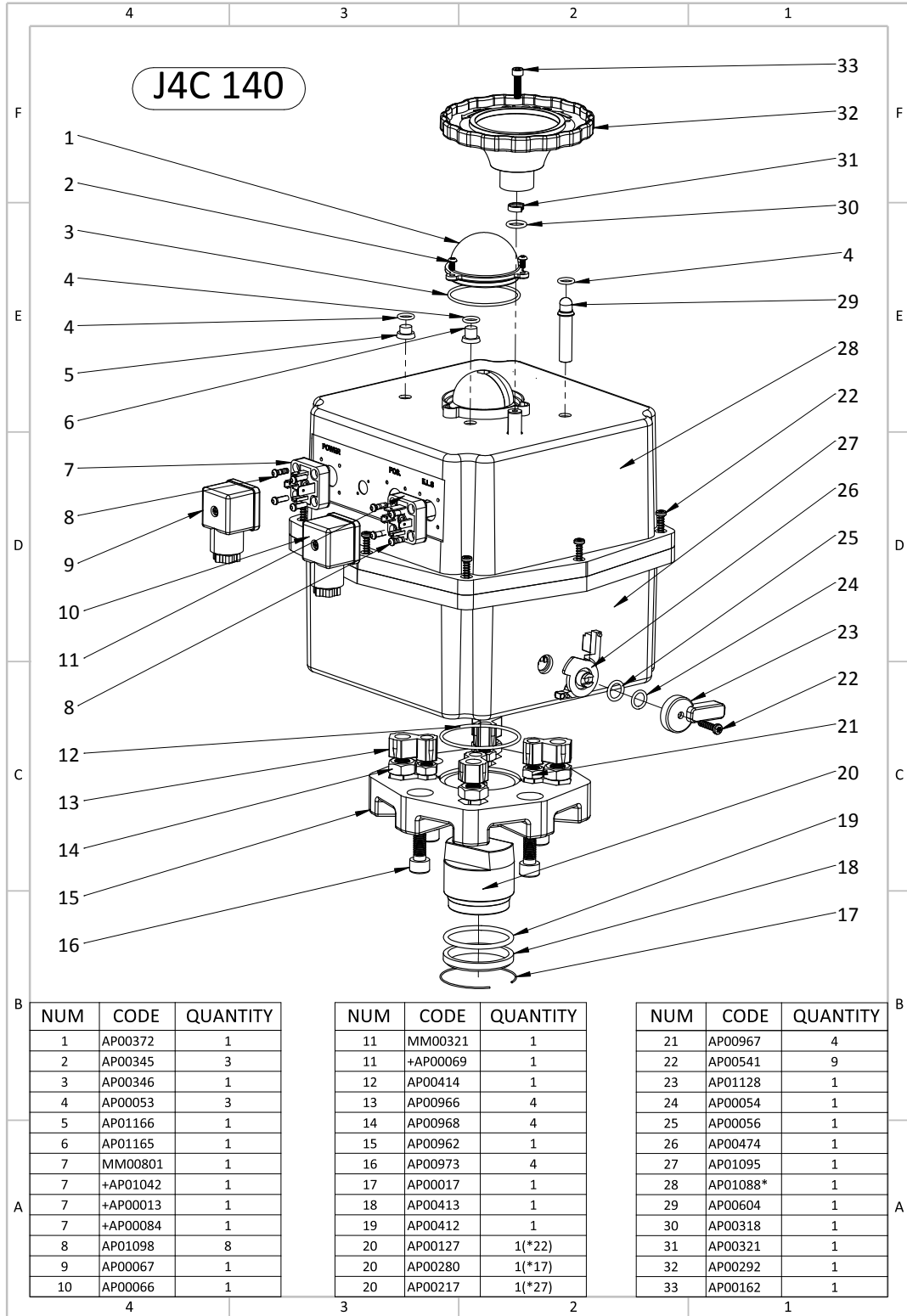
| | |
|---|--------------------------------|
| J4C 20/85 KIT DPS digital positioner: | 4-20mA, 0-20mA, 0-10V or 1-10V |
| J4C 20/85 KIT BSR emergency fail safe kit system by battery | NC- NO |
| Potentiometer | 1K, 5K or 10K |
| 3 position actuator | 0°-45°-90° or 0°-90°-180° |

Note: Technical data are the same despite the different casings.

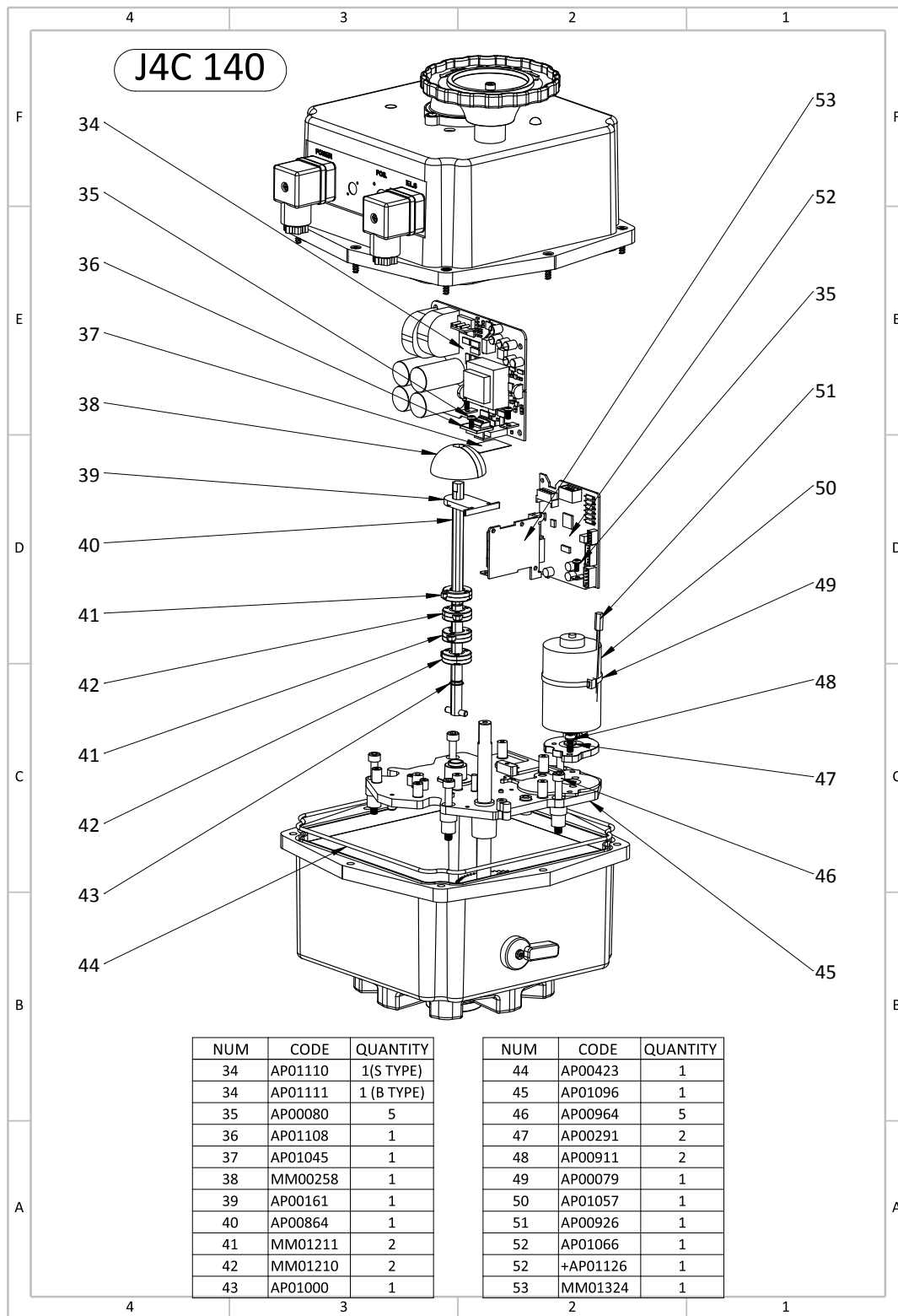
J4C 140 SIZES



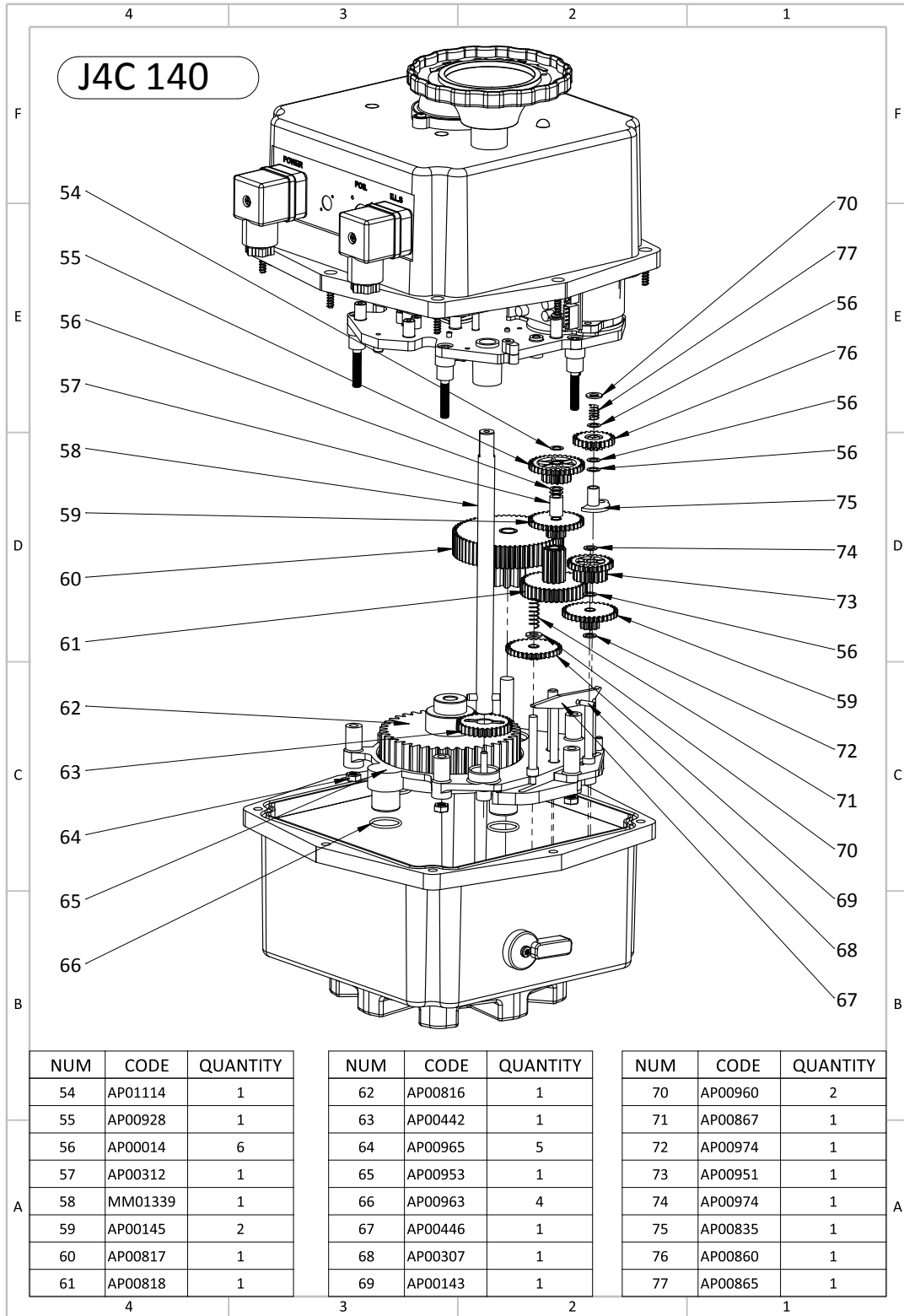
Exploded View



Exploded View



Exploded View



Datasheet - J4C 300



GENERAL CHARACTERISTICS

MATERIAL:

Body: Anticorrosive Polyamide, Grey colour / **Optional:** Polypropilene V0, Black colour.
Cover: Anticorrosive Polyamide, Red colour / **Optional:** Polypropilene V0, Natural colour.
Output drive: Zamak, Zinc plated / **Optional:** Zamak, TEFLON coated
Flange: Aluminum and Cataphoresis / **Optional:** Aluminum and TEFLON coated.
Main external shaft: Stainless Steel
External screws: Stainless Steel
Gears: Steel and Polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide

Electronic Torque Limiter function

Electric motor: 24VDC Brushless motor
Insulation: Class B
(IEC 60034) Service: S4

| Modelo | S300 | B300 |
|-------------------------------|----------------|-----------------|
| Voltage VDC/VAC 50/60Hz-0/+5% | 24-240 VDC/VAC | 12 VDC/VAC ONLY |

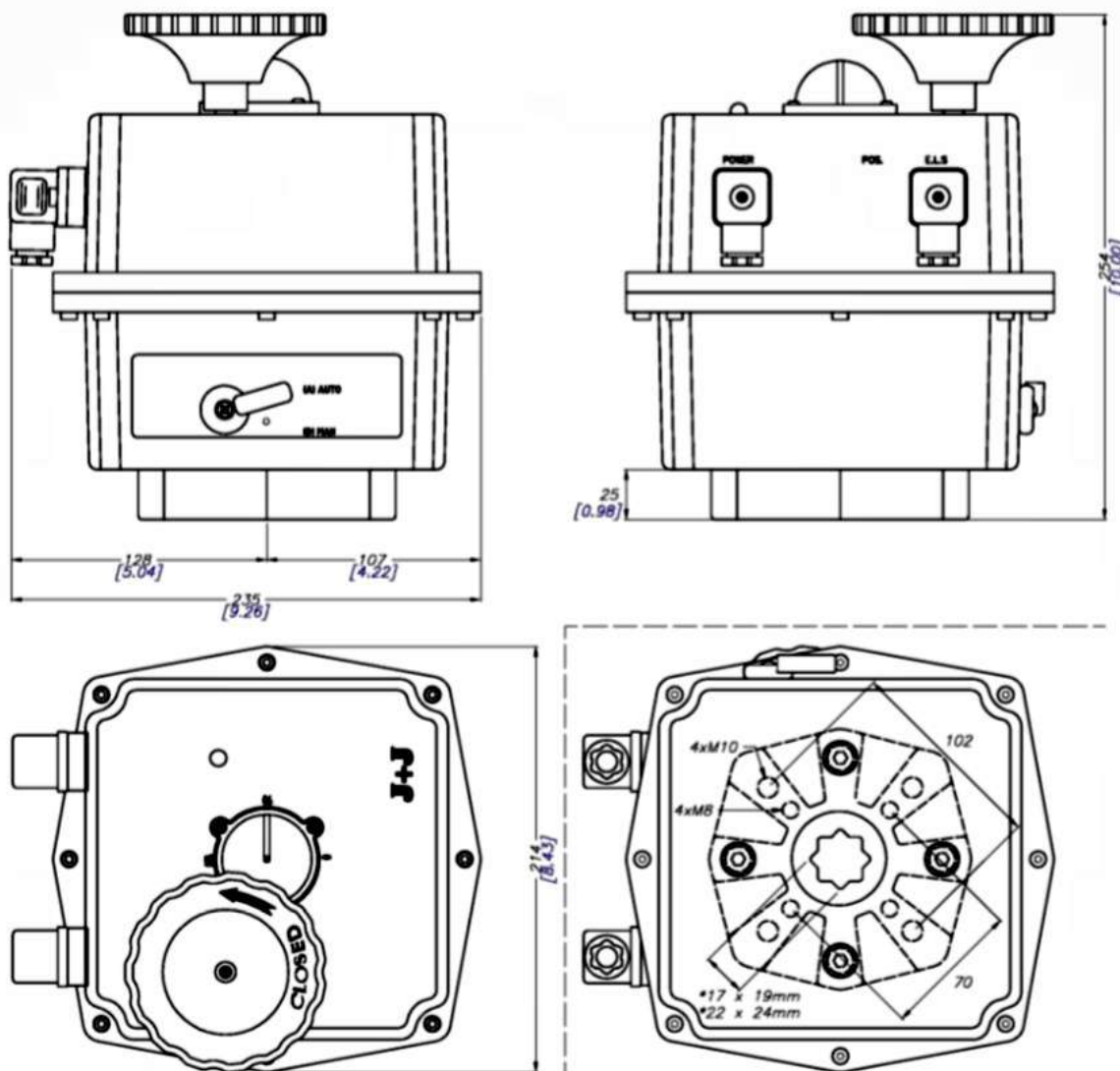
| Model | S300/B300 |
|------------------------------|--|
| Operation time unload | 58 Sec./90° |
| Maximum torque break | 350 Nm / 3097,5 lb/in |
| Maximum operational torque | 300 Nm / 2655 lb/in |
| Duty rating | 75 % |
| Max. Working angle | 0° to 270° |
| Limit switch | 4 SPST NO micro (2 motor stop and 2 confirmations) |
| Automatic heater | 3,5 W |
| Big Plug | EN175301-803 FORM A |
| Small Plug | DIN43650/C |
| Protection IEC 60529 rating | IP67 |
| Temperature | -20°C +70°C / -4°F +158°F |
| ISO 5211 Plate | Standard: F07/F10 Optional: F12 |
| DIN 3337 Female output drive | Standard: *22 Optional: *17mm |
| Weight | 5,2 Kg |

Options

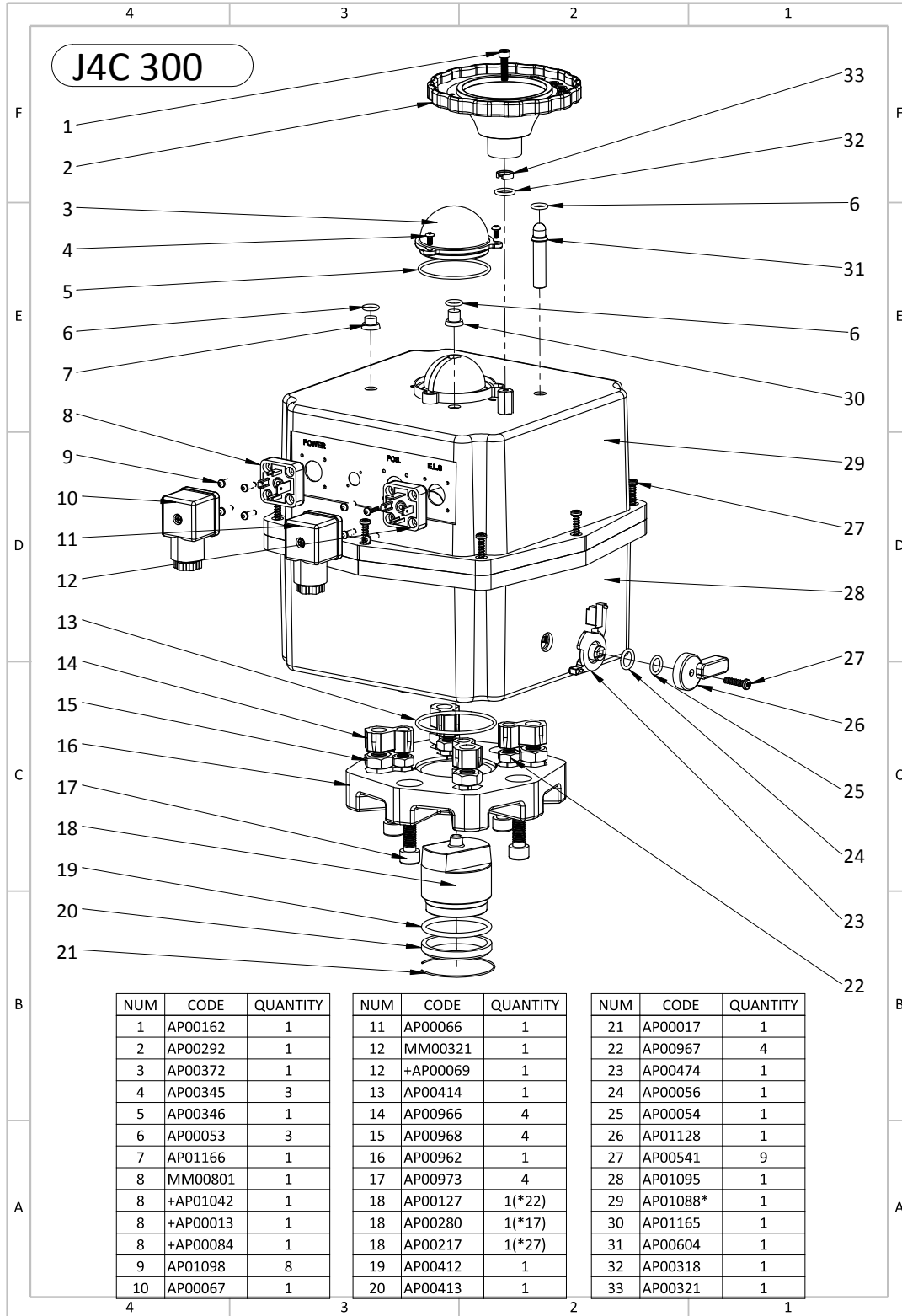
| | |
|---|--------------------------------|
| J4C 20/85 KIT DPS digital positioner: | 4-20mA, 0-20mA, 0-10V or 1-10V |
| J4C 20/85 KIT BSR emergency fail safe kit system by battery | NC- NO |
| Potentiometer | 1K, 5K or 10K |
| 3 position actuator | 0°-45°-90° or 0°-90°-180° |

Note: Technical data are the same despite the different casings.

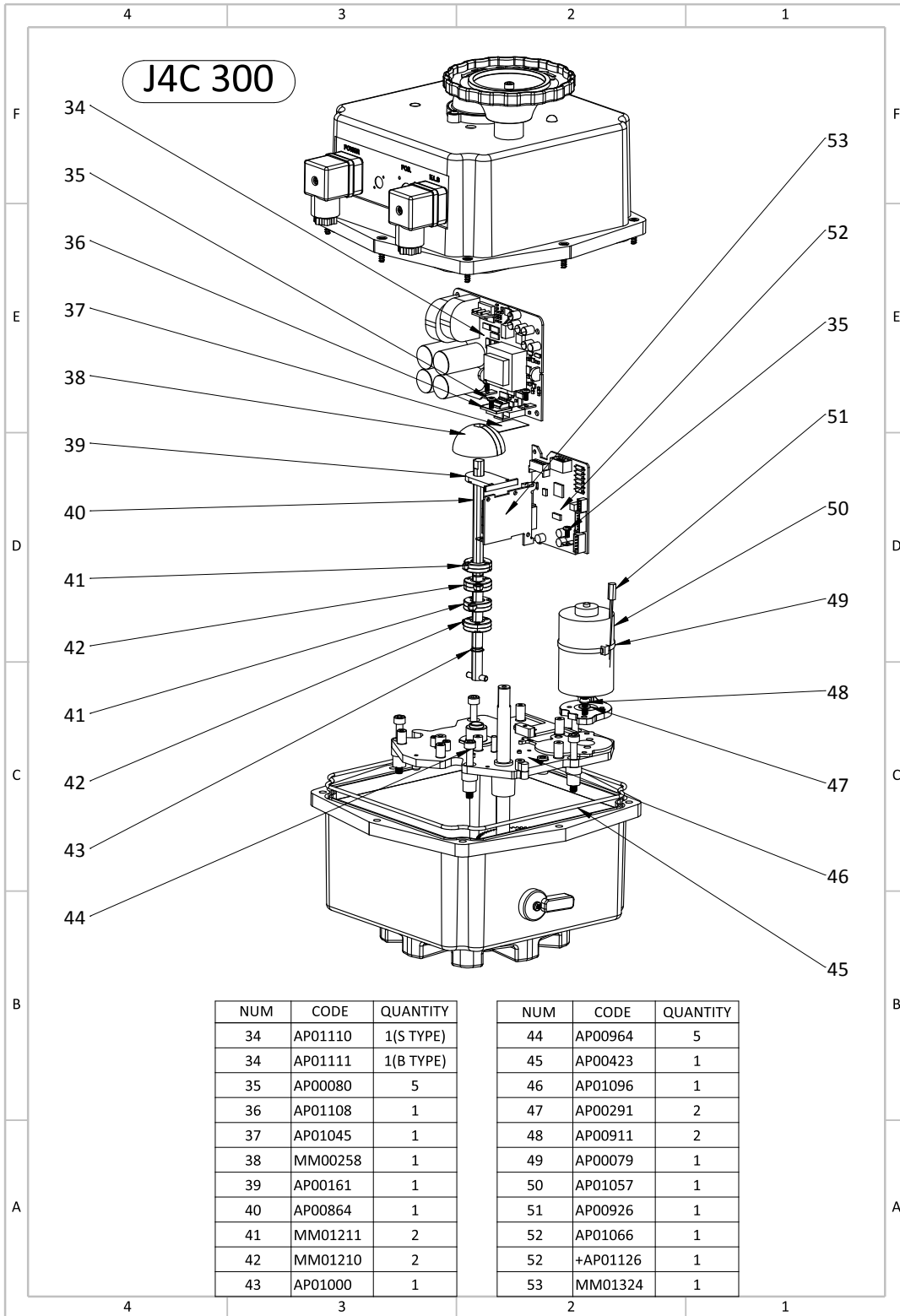
J4C 300 SIZES



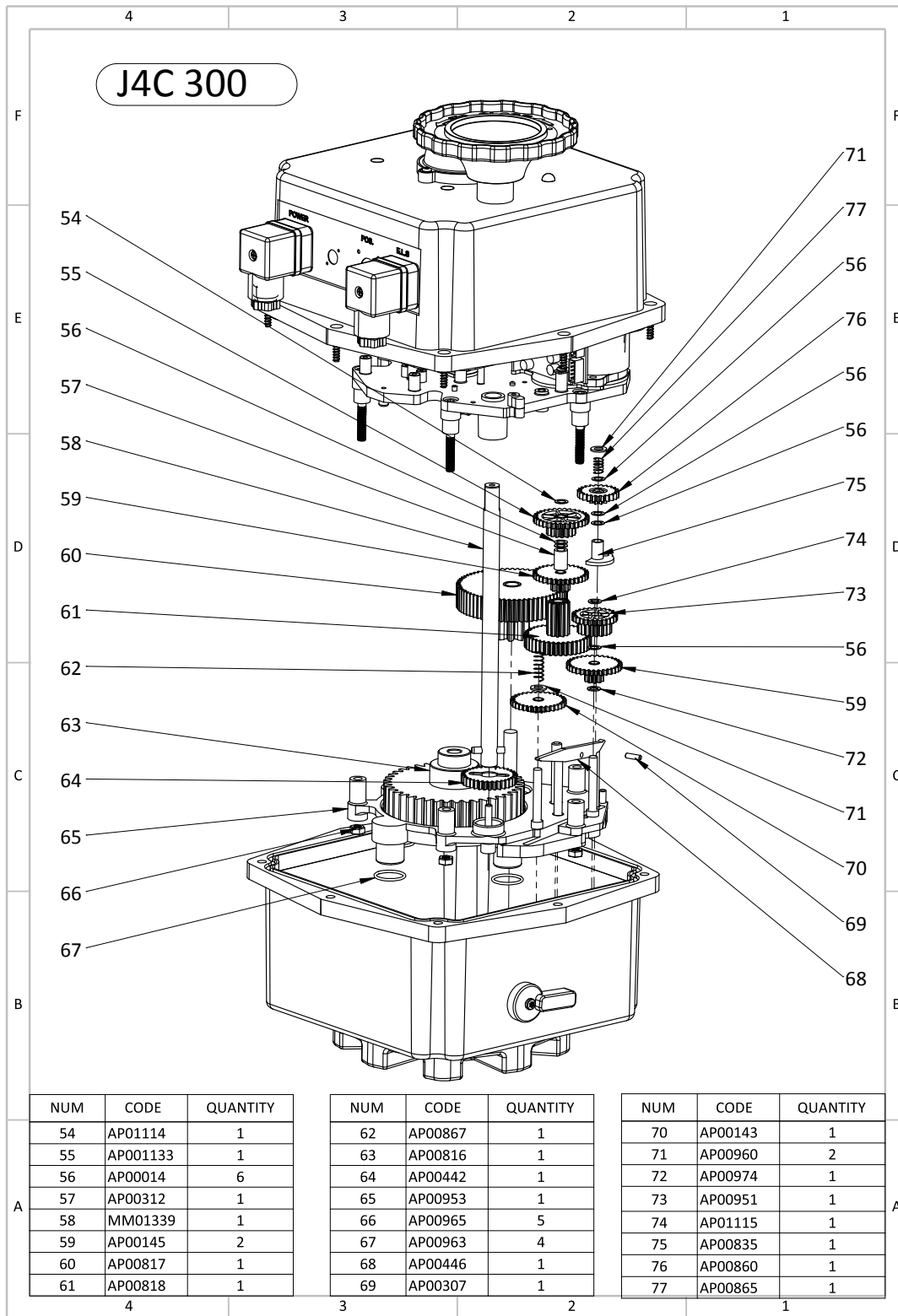
Exploded View



Exploded View



Exploded View



04 Electric actuators with POSITIONER

DPS J4C 20/85



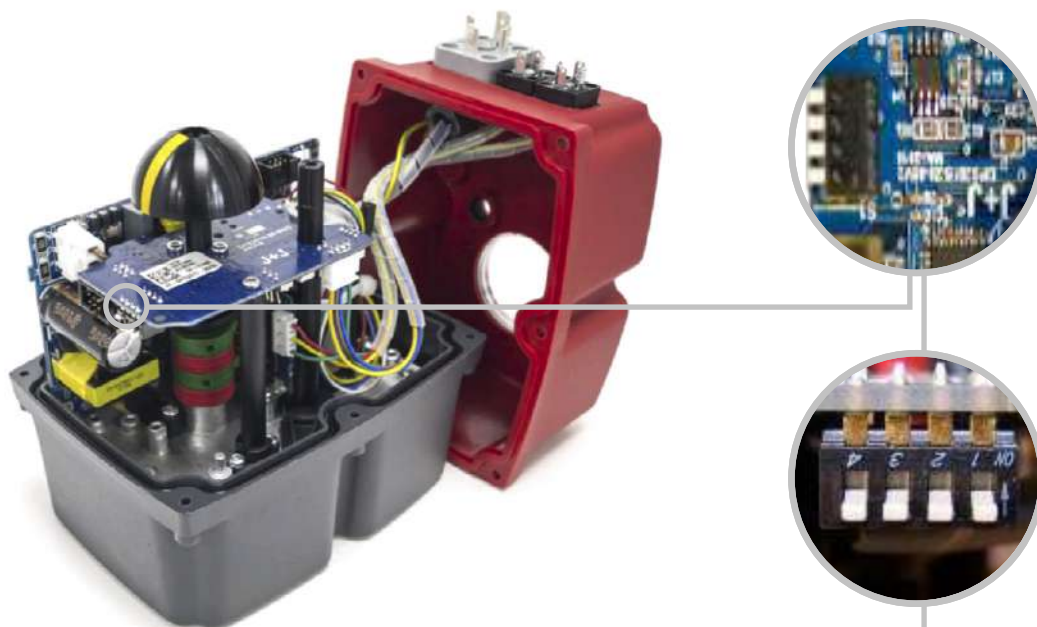
SPECIFICATIONS

| MODEL | S20-B20 | S35-B35 | S55-B55 | S85-B85 |
|---|--|-------------------|-------------------|-------------------|
| Accuracy | 3 % F.S. | 3 % F.S. | 3 % F.S. | 3 % F.S. |
| Linearity | 2 % F.S. | 2 % F.S. | 2 % F.S. | 2 % F.S. |
| Hysteresis | 3 % F.S. | 3 % F.S. | 3 % F.S. | 3 % F.S. |
| Steps at 4/20mA | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 0/10V | Min.98 steps 90° | Min.98 steps 90° | Min.98 steps 90° | Min.98 steps 90° |
| Steps at 0/20mA | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 1/10V | Min.87 steps 90° | Min.87 steps 90° | Min.87 steps 90° | Min.87 steps 90° |
| 4/20mA or 0/20mA Input signal impedance | 100 Ohm | 100 Ohm | 100 Ohm | 100 Ohm |
| 0/10V or 1/10V Input signal impedance | 25 KOhm | 25 KOhm | 25 KOhm | 25 KOhm |
| CLASS | B+C to E DIN EN 15714 Inching + Modulation | | | |
| WEIGHT | 1,852 Kg | 1,852 Kg | 2,340 Kg | 2,840 Kg |

F.S. Full scale



DPS J4C 20/85



Use the configuration you need by moving the DIPs:
Different possibilities of configuration:

| | | | | | |
|--|---------------|--|--------------|--|--------------|
| | 4/20 mA NC | | 0/10 V NC | | 1/10 V NC |
| | 4/20 mA NO | | 0/10 V NO | | 1/10 V NO |

Configurations set up by using DIPs, should have the same Input and Output Signal.

I.e.: If Set up Input signal 4/20mA-Output signal 4/20 mA.

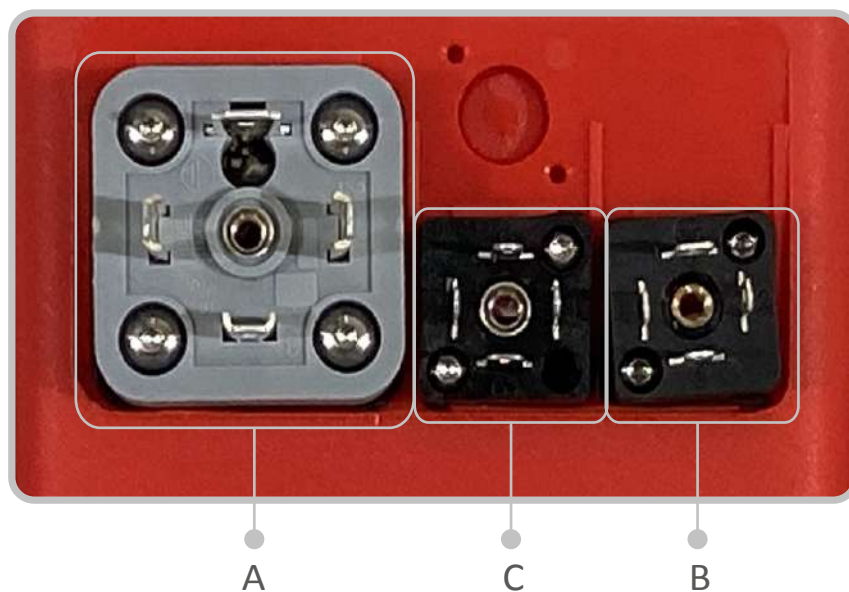
Other possibilities are available to work with, but they should be configured from the manufacturer.

| OTHER OPTIONS TO BE SET-UP BY THE MANUFACTURER OR WITH A J4C INTERFACE | |
|--|----------------------------------|
| OUTPUT ONLY | 4/20 mA, 0/10 V, 0/20 mA, 1/10 V |
| INPUT & OUTPUT | 4/20mA, 0/10V, 0/20mA, 1/10V |
| MOTOR STOP, WITHOUT INSTRUMENTATION | 4/20mA, 1/10V. |

If need Output signal different from Input signal, please ask the manufacturer.



DPS EXTERNAL SELF-ADJUSTMENT



A- Power supply plug.

B- Volt free contact plug.

C- Input / Output signal (4/20mA,0/10V,0/20mA o 1/10V) plug.

1-C plug - connect a cable between PIN 1 (on the left side) and PIN Earth (on the bottom).

2-A plug - connect:

VAC: PIN1 (neutral) and PIN2 (phase).

VDC: PIN1 (negative) and PIN2 (positive).

***VERY IMPORTANT: BEFORE CONNECTING "A" PLUG TO THE ACTUATOR, CHECK THAT THE VOLTAGE IS THE SAME AS THE ONE SPECIFIED ON THE LABEL (CARTER).**

3-C plug - disconnect the cable between PIN 1 (on the left side) and PIN Earth (on the bottom).

The actuator will make a complete maneuver and stay in the close position.

The actuator is ready to connect the (4/20mA,0/10V,0/20mA o 1/10V) signal to the **C** plug.



DPS J4C 140/300



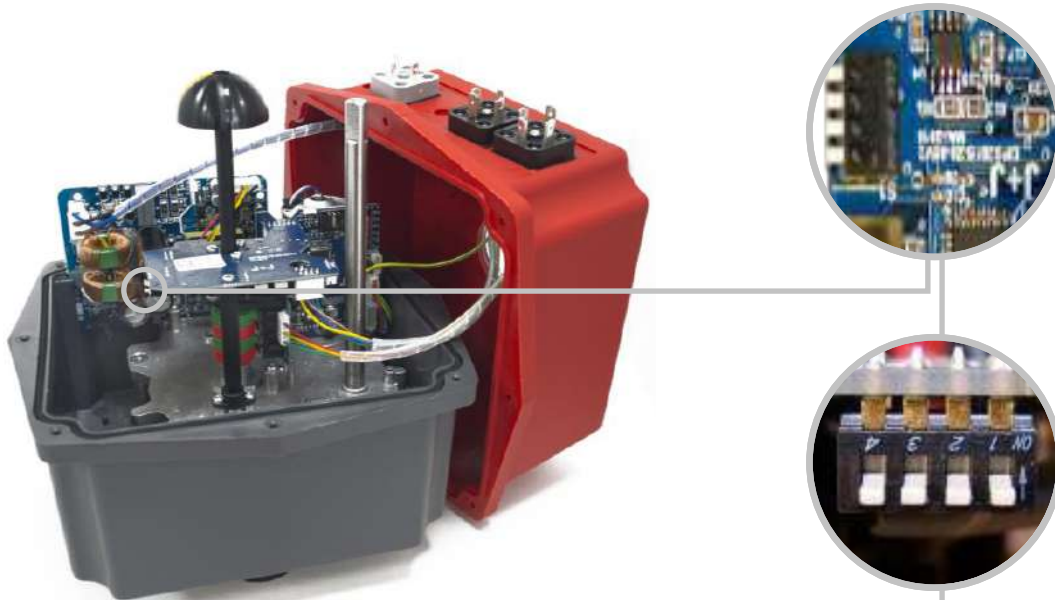
SPECIFICATIONS

| MODEL | S140-B140 | S300-B300 |
|---|--|-------------------|
| Accuracy | 3 % F.S. | 3 % F.S. |
| Linearity | 2 % F.S. | 2 % F.S. |
| Hysteresis | 3 % F.S. | 3 % F.S. |
| Steps at 4/20mA | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 0/10V | Min.98 steps 90° | Min.98 steps 90° |
| Steps at 0/20mA | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 1/10V | Min.87 steps 90° | Min.87 steps 90° |
| 4/20mA or 0/20mA Input signal impedance | 100 Ohm | 100 Ohm |
| 0/10V or 1/10V Input signal impedance | 25 KOhm | 25 KOhm |
| CLASS | B+C to E DIN EN 15714 Inching + Modulation | |
| WEIGHT | 4,750 Kg | |

F.S. Full scale



DPS J4C 140/300



Use the configuration you need by moving the DIPs:
Different possibilities of configuration:

| | | | | | |
|--|----------------------|--|---------------------|--|---------------------|
| | 4/20 mA NC | | 0/10 V NC | | 1/10 V NC |
| | 4/20mA NO | | 0/10 V NO | | 1/10 V NO |

Configurations set up by using DIPs, should have the same Input and Output Signal.

I.e.: If Set up Input signal 4/20mA-Output signal 4/20 mA.

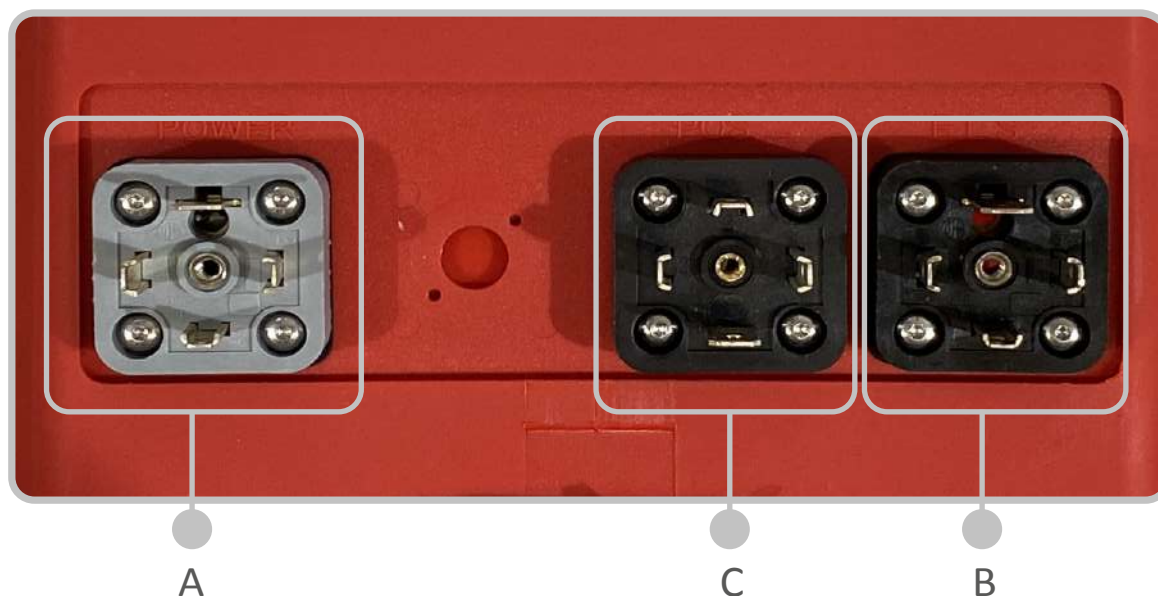
Other possibilities are available to work with, but they should be configured from the manufacturer.

| OTHER OPTIONS TO BE SET-UP BY THE MANUFACTURER OR WITH A J4C INTERFACE | |
|--|----------------------------------|
| OUTPUT ONLY | 4/20 mA, 0/10 V, 0/20 mA, 1/10 V |
| INPUT & OUTPUT | 4/20mA, 0/10V, 0/20mA, 1/10V |
| MOTOR STOP, WITHOUT INSTRUMENTATION | 4/20mA, 1/10V. |

If need Output signal different from Input signal, please ask the manufacturer.



DPS EXTERNAL SELF-ADJUSTMENT



A- Power supply plug.

B- Volt free contact plug.

C- Input / Output signal (4/20mA,0/10V,0/20mA o 1/10V) plug.

1-C plug - connect a cable between PIN 1 (on the left side) and PIN Earth (on the bottom).

2-A plug - connect:

VAC: PIN1 (neutral) and PIN2 (phase).

VDC: PIN1 (negative) and PIN2 (positive).

***VERY IMPORTANT: BEFORE CONNECTING "A" PLUG TO THE ACTUATOR, CHECK THAT THE VOLTAGE IS THE SAME AS THE ONE SPECIFIED ON THE LABEL (CARTER).**

3-B plug - disconnect the cable between PIN 1 (on the left side) and PIN Earth (on the bottom).

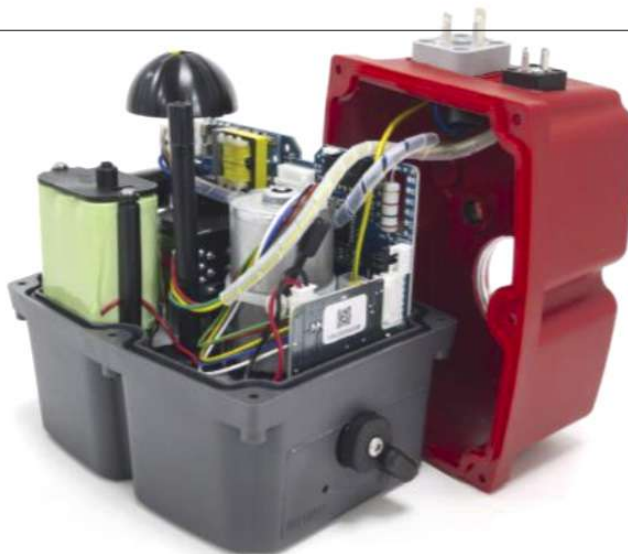
The actuator will make a complete maneuver and stay in the close position.

The actuator is ready to connect the (4/20mA,0/10V,0/20mA o 1/10V) signal to the **B** plug.



OPTIONS BSR

BSR J4C 20/85



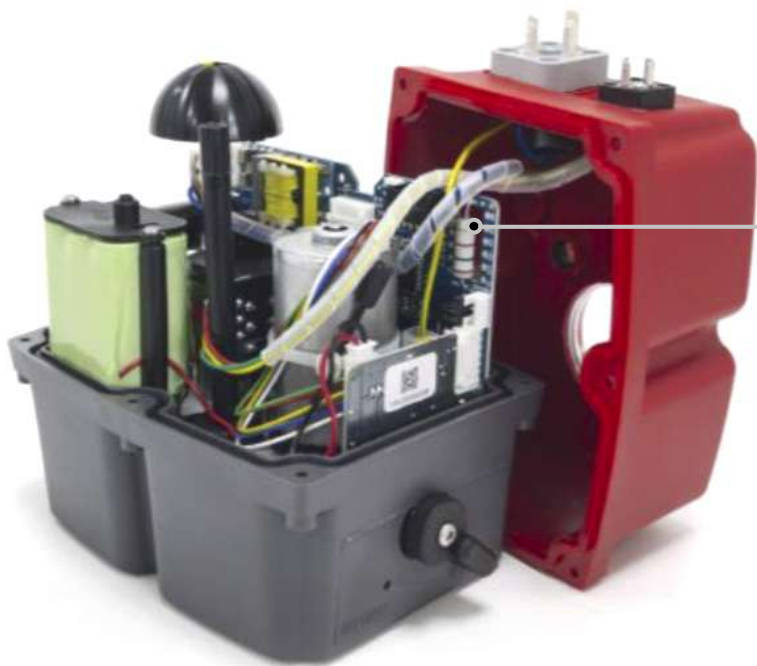
SPECIFICATIONS

| ACTUATOR MODEL | S20-B20 | S35-B35 | S55-B55 | S85-B85 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| No Working operation without recharge, with 100% battery charge | Until battery discharged | Until battery discharged | Until battery discharged | Until battery discharged |
| Recharge time/working operation | 15 min | 21 min | 48 min | 58 min |
| Battery consumption/working operation | 2,2 W | 3,0 W | 6,8 W | 8,3 W |
| Full charge time 100% | 28 h | 28 h | 28 h | 28 h |
| Nominal capacity +/- 5% | 2200 mA | 2200 mA | 2200 mA | 2200 mA |
| NO or NC Features (*) | Jumper | Jumper | Jumper | Jumper |
| Current/one working operation with battery | 10,1 mA | 14 mA | 31,6 mA | 38,6 mA |
| Battery charge | 40 mA/h | 40 mA/h | 40 mA/h | 40 mA/h |
| Weight | 2,000 Kg | 2,000 Kg | 2,500 Kg | 3,000 Kg |



CONFIGURATIONS

| | A | B |
|---|---------------------|--------------------|
| PREFERRED POSITION IN CASE OF POWER CUT | (NC) NORMALLY CLOSE | (NO) NORMALLY OPEN |



Jumper 1 SELDIR

NC Set-Up

NC- If, in case of a power supply failure, we need the actuator go to the CLOSE position, we need to put the jumper 1 on the SELDIR position.

NO Set-Up

NO- If, in case of a power supply failure, we need the actuator go to the OPEN position, be sure that the jumper 1 is not on the SELDIR position.

(*) NO or NC Set-Up



BSR J4C 140/300



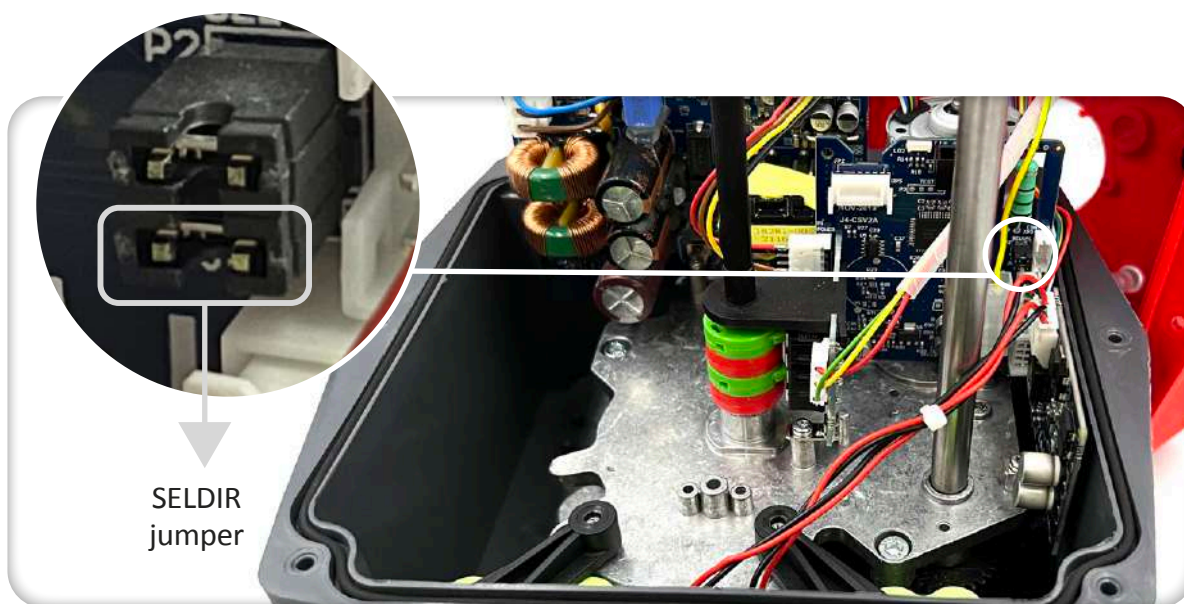
SPECIFICATIONS

| ACTUATOR MODEL | S140-B140 | S300-B300 |
|---|--------------------------|--------------------------|
| Nº Working operation without recharge, with 100% battery charge | Until battery discharged | Until battery discharged |
| Recharge time/working operation | 30 min | 50 min |
| Battery consumption/working operation | 23 W | 23 W |
| Full charge time 100% | 54 h | 54 h |
| Nominal capacity +/- 5% | 2200 mA | 2200 mA |
| NO or NC Features (*) | Jumper | Jumper |
| Current/one working operation with battery | 15,1 mA | 25,7 mA |
| Battery charge | 40 mA/h | 40 mA/h |
| Weight | 5,090 Kg | |



CONFIGURATIONS

| | A | B |
|---|---------------------|--------------------|
| PREFERRED POSITION IN CASE OF POWER CUT | (NC) NORMALLY CLOSE | (NO) NORMALLY OPEN |



(*) NO or NC Set-Up

NC Set-Up

NC- If, in case of a power supply failure, we need the actuator go to the CLOSE position, we need to put the jumper 1 on the SELDIR position.

NO Set-Up

NO- If, in case of a power supply failure, we need the actuator go to the OPEN position, be sure that the jumper 1 is not on the SELDIR position.



05 KIT DPS J4C 20/85

The **DPS** is a device for the J4C electric actuator that turns the actuator into a servo controlled valve positioner.

The **DPS** is a modulus with a microprocessor (CPU) which digitally manages the analogical input and output and compare them with the position of the actuator to establish a uniform relation.

The analogical inputs are sent to the CPU where they are processed for his continuous comparison with the position of the actuator, this allows to obtain a very high sensitivity next to a very high repetitivity of the position (see characteristics).

The **DPS** in communication with the electronic system of the actuator provides an integral management of the motion of the actuator.



OUTSIDE BOX



INSIDE BOX

SPECIFICATIONS

| MODEL | S20-B20 | S35-B35 | S55-B55 | S85-B85 |
|---|--|-------------------|-------------------|-------------------|
| Accuracy | 3 % F.S. | 3 % F.S. | 3 % F.S. | 3 % F.S. |
| Linearity | 2 % F.S. | 2 % F.S. | 2 % F.S. | 2 % F.S. |
| Hysteresis | 3 % F.S. | 3 % F.S. | 3 % F.S. | 3 % F.S. |
| Steps at 4/20mA | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 0/10V | Min.98 steps 90° | Min.98 steps 90° | Min.98 steps 90° | Min.98 steps 90° |
| Steps at 0/20mA | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 1/10V | Min.87 steps 90° | Min.87 steps 90° | Min.87 steps 90° | Min.87 steps 90° |
| 4/20mA or 0/20mA Input signal impedance | 100 Ohm | 100 Ohm | 100 Ohm | 100 Ohm |
| 0/10V or 1/10V Input signal impedance | 25 KOhm | 25 KOhm | 25 KOhm | 25 KOhm |
| CLASS | B+C to E DIN EN 15714 Inching + Modulation | | | |
| WEIGHT | 0,577 Kg | | | |

F.S. Full scale



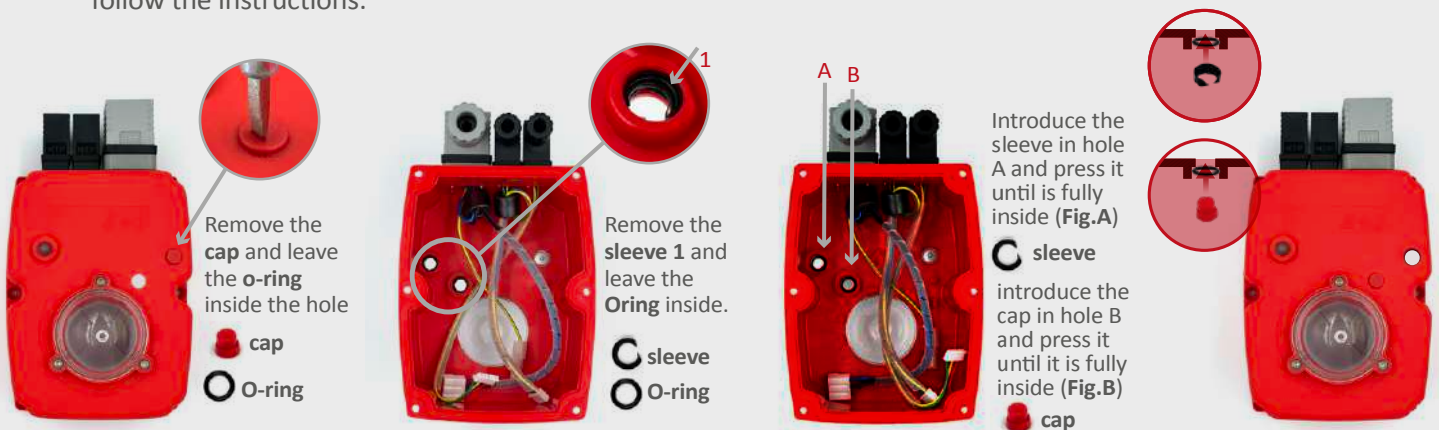
ASSEMBLY INSTRUCTIONS - DPS KIT 20/85



* Fill in the document inside the kit, and send it to the fax number or e-mail, shown in the document
The unit is ready to work.

PREPARING THE COVER:

The cover of the kit is for a J4C BLUE-20, 35 and 55 models. In case you want to mount a kit on a J4C85, follow the instructions:



PLEASE READ CAREFULLY BEFORE MOUNTING.

VERY IMPORTANT!!!! PLEASE FOLLOW THE INSTRUCTIONS STEP BY STEP. BEFORE CONNECTING "A" PLUG TO THE ACTUATOR,

CHECK THAT THE VOLTAGE IS THE SAME AS THE ONE SPECIFIED ON THE LABEL (CARTER).

TO CONVERT A STANDARD (ON-OFF) J4C BLUE ELECTRIC ACTUATOR INTO A MODULATING FUNCTION WITH POSITIONER, PROCEED AS FOLLOWS:





Remove the screw, which is fixing the hand wheel.



Remove the 6 screws, which are fixing the body to the cover of the actuator



Carefully lift the cover.



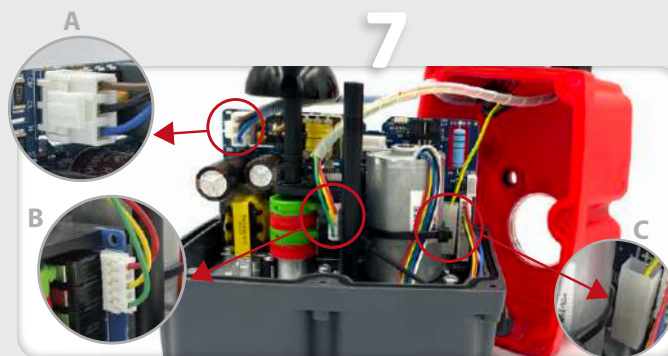
Remove the cables (from the cover) connected to the actuator PCB (Fig. A, B and C).



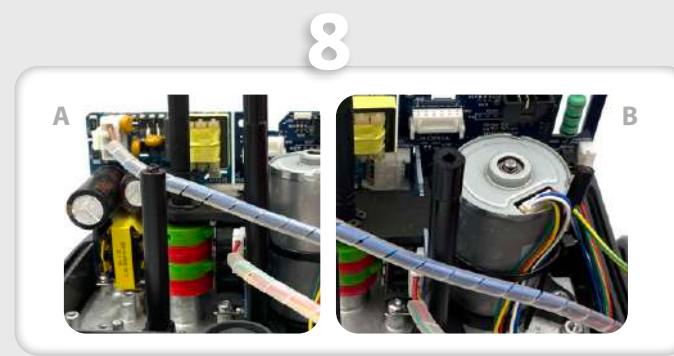
Carefully remove the position indicator.



Fix the plastic column (Element B) on the base plate, by using 2 sheet metal fixing screws (Element D) (Fig. A, B and C).



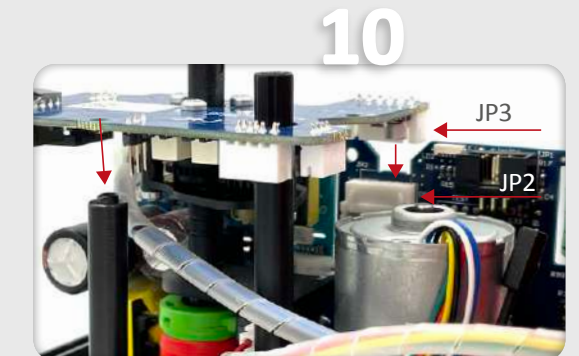
Take the DPS cover (Element A) and connect its cables, following (Fig. A, B, C).



Place the mentioned cables as per (Fig. A and B)



Mount the DPS positioner PCB (Element C), matching the cleft of the shaft with the key inside the DPS gear.



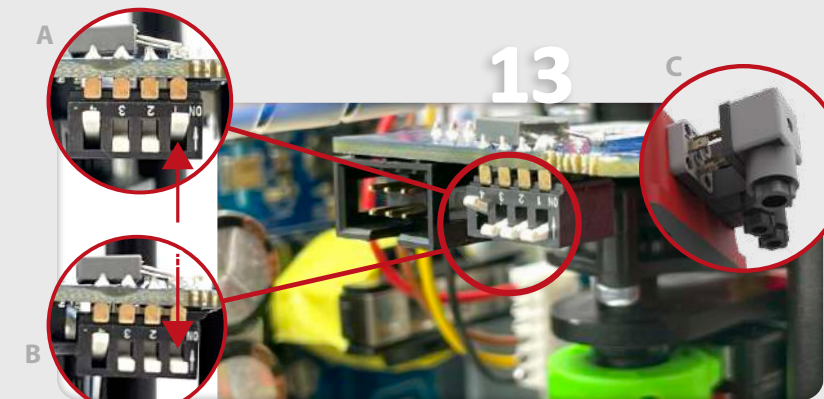
Press the DPS positioner PCB (Element C) along the shaft until the PCB connector (JP3) is plugged in the actuator PCB connector (JP2).



Fix the DPS positioner PCB (Element C) to the plastic column (Element B) with the plastic fixing screw (Element E) (Fig. A). Connect the remaining cable (Element A) to the connector base on the DPS PCB (Element C) (Fig. B).



Carefully insert the position indicator, matching its inner key with the cleft of the shaft.



In order to set the actuator up, use the DIPs shown in the picture. Put DIP 1 in ON position (Fig. A), connect the grey connector to the power supply (Fig. C). Put DIP 1 back to the prior position (Fig. B). Wait until the actuator make a complete maneuver.



Use the configuration you need by moving the DIPs, according to the instrumentation signal:

| | | | | | |
|--|---------------|--|--------------|--|--------------|
| | 4/20 mA NC | | 0/10 V NC | | 1/10 V NC |
| | 4/20mA NO | | 0/10 V NO | | 1/10 V NO |



Carefully mount the cover, minding the cables not to be pressed.



Fix the cover to the body by using the 6 screws.



Mount the hand wheel on the shaft and fix it by using the screw.



Mount the 3 outer connectors together with its rubber joints and fix them to the cover, by using the screws.

Outer Set-Up: Only if necessary.

- B plug - Connect a cable between PIN 1 and PIN Earth.
 - A plug - Connect it to the power supply.
 - B plug, disconnect the cable between PIN 1 and PIN Earth.
- The actuator will make a complete maneuver.
Connect B connector to the actuator. The actuator is ready to work.

KIT DPS J4C 140/300

The **DPS** is a device for the J4C electric actuator that turns the actuator into a servo controlled valve positioner.

The **DPS** is a modulus with a microprocessor (CPU) which digitally manages the analogical input and output and compare them with the position of the actuator to establish a uniform relation.

The analogical inputs are sent to the CPU where they are processed for his continuous comparison with the position of the actuator, this allows to obtain a very high sensitivity next to a very high repetitivity of the position (see characteristics).

The **DPS** in communication with the electronic system of the actuator provides an integral management of the motion of the actuator.



OUTSIDE BOX



INSIDE BOX

SPECIFICATIONS

| MODEL | S140-B140 | S300-B300 |
|---|--|-------------------|
| Accuracy | 3 % F.S. | 3 % F.S. |
| Linearity | 2 % F.S. | 2 % F.S. |
| Hysteresis | 3 % F.S. | 3 % F.S. |
| Steps at 4/20mA | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 0/10V | Min.98 steps 90° | Min.98 steps 90° |
| Steps at 0/20mA | Min.150 steps 90° | Min.150 steps 90° |
| Steps at 1/10V | Min.87 steps 90° | Min.87 steps 90° |
| 4/20mA or 0/20mA Input signal impedance | 100 Ohm | 100 Ohm |
| 0/10V or 1/10V Input signal impedance | 25 KOhm | 25 KOhm |
| CLASS | B+C to E DIN EN 15714 Inching + Modulation | |
| WEIGHT | 0,963 Kg | |

F.S. Full scale



ASSEMBLY INSTRUCTIONS - DPS KIT 140/300

KIT COMPONENTS

Element A - 1 Cover

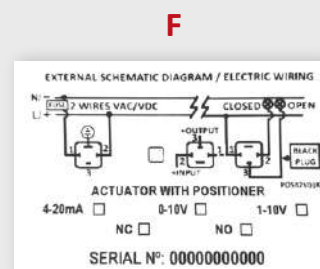
Element B - 1 Plastic column

Element C - 1 DPS positioner PCB

Element D - 2 Sheet metal Fixing screws

Element E - 1 Plastic Fixing screws

Element F - 1 Schematic diagram label



* Fill in the document inside the kit, and send it to the fax number (93 871 32 72) or e-mail: info@jjbcn.com, shown in the document.

* Remember to stick the (F) label on the actuator.

PLEASE READ CAREFULLY BEFORE MOUNTING.

VERY IMPORTANT!!!! PLEASE FOLLOW THE INSTRUCTIONS STEP BY STEP. BEFORE CONNECTING "A" PLUG TO THE ACTUATOR, CHECK THAT THE VOLTAGE IS THE SAME AS THE ONE SPECIFIED ON THE LABEL (CARTER).

TO CONVERT A STANDARD (ON-OFF) J4C ELECTRIC ACTUATOR INTO A MODULATING FUNCTION WITH POSITIONER, PROCEED AS FOLLOWS:





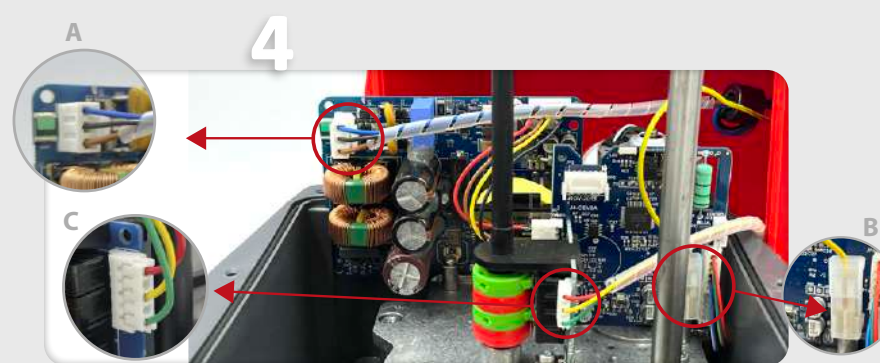
1 Remove the screw, which is fixing the hand wheel.



2 Remove the 8 screws, which are fixing the body to the cover of the actuator.



3 Carefully lift the cover.



4 Remove the cables (from the cover) connected to the actuator PCB (Fig. A, B and C).



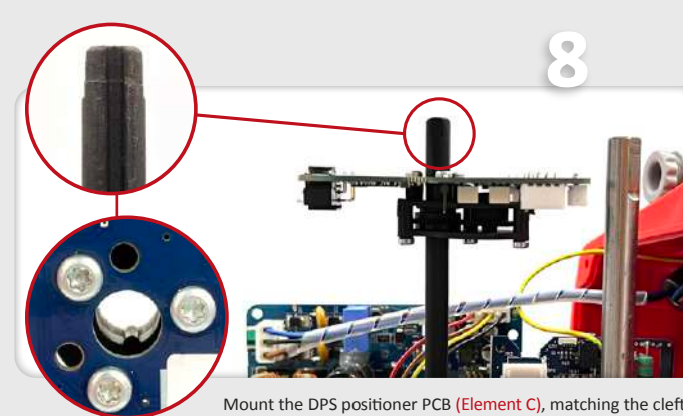
5 Carefully remove the position indicator.



6 Fix the plastic column (Element B) on the base plate, by using 2 sheet metal fixing screws (Element D) (Fig. A, B and C).



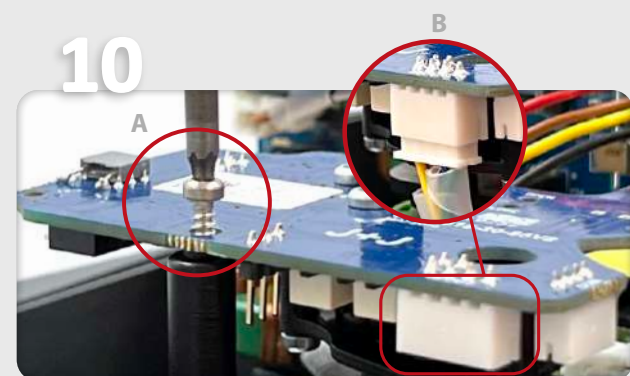
7 Take the DPS cover (Element A) and connect its cables, following (Fig. A, B and C).



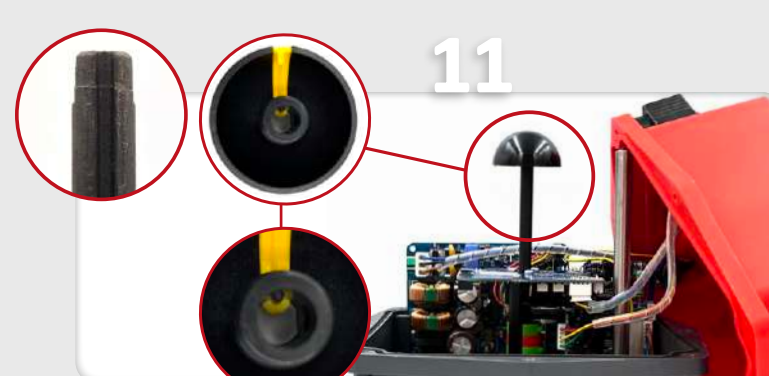
8 Mount the DPS positioner PCB (Element C), matching the cleft of the shaft with the key inside the DPS gear.



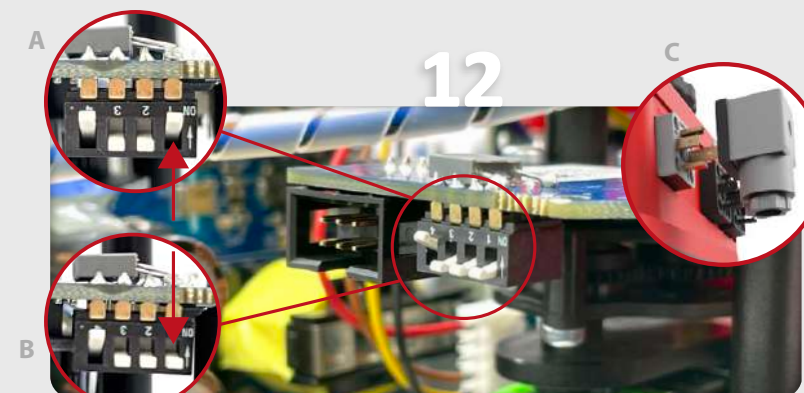
9 Press the DPS positioner PCB (Element C) along the shaft until the PCB connector (JP3) is plugged in the actuator PCB connector (JP2).



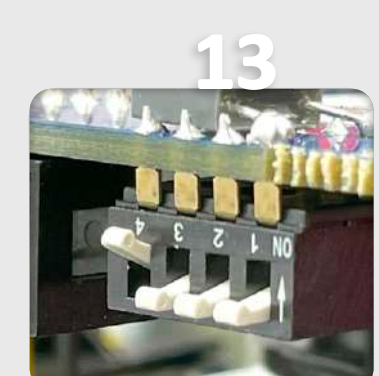
10 Fix the DPS positioner PCB (Element C) to the plastic column (Element B) with the plastic fixing screw (Element E) (Fig. A). Connect the remaining cable (Element A) to the connector base on the DPS PCB (Element C) (Fig. B).



11 Carefully insert the position indicator, matching its inner key with the cleft of the shaft.



12 In order to set the actuator up, use the DIPs shown in the picture. Put DIP 1 in ON position (Fig. A), connect the grey connector to the power supply (Fig. C). Put DIP 1 back to the prior position (Fig. B). Wait until the actuator make a complete maneuver.



13 Use the configuration you need by moving the DIPs, according to the instrumentation signal:

| | | | | | |
|--|---------------|--|--------------|--|--------------|
| | 4/20 mA NC | | 0/10 V NC | | 1/10 V NC |
| | 4/20mA NO | | 0/10 V NO | | 1/10 V NO |



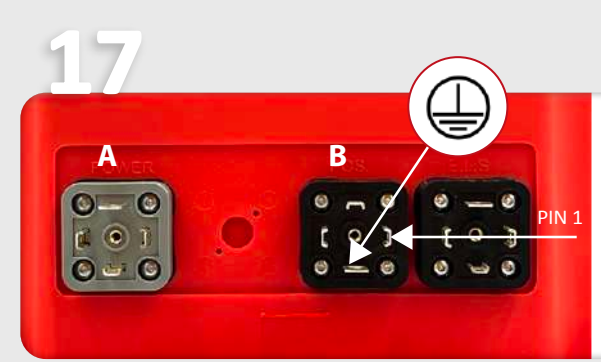
14 Carefully mount the cover, minding the cables not to be pressed.



15 Fix the cover to the body by using the 6 screws.



16 Mount the hand wheel on the shaft and fix it by using the screw.



17 Mount the 3 outer connectors together with its rubber joints and fix them to the cover, by using the screws.

Outer Set-Up: Only if necessary.

- B plug - Connect a cable between PIN 1 and PIN Earth.
 - A plug - Connect it to the power supply.
 - B plug, disconnect the cable between PIN 1 and PIN Earth.
- The actuator will make a complete maneuver.
Connect B connector to the actuator. The actuator is ready to work.

KIT BSR J4C 20/85

The **BSR** safety block system is an automatism that, when coupled to the J4C multi voltage electric actuators, lets the valve situate in a preferable position NC or NO, when there is a power supply failure. Inside of the housing there are a **BSR** print circuit board and a battery pack, which is kept in continuous charge.

In case of the valve is not in the preferable position and there is a power supply cut, the **BSR** system returns the valve back to the preferable position by means of the batteries tension, operating as a “single acting” actuator.



OUTSIDE BOX



INSIDE BOX

| ACTUATOR MODEL | S20-B20 | S35-B35 | S55-B55 | S85-B85 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| N° Working operation without recharge, with 100% battery charge | Until battery discharged | Until battery discharged | Until battery discharged | Until battery discharged |
| Recharge time/working operation | 15 min | 21 min | 48 min | 58 min |
| Battery consumption/working operation | 2,2 W | 3,0 W | 6,8 W | 8,3 W |
| Full charge time 100% | 28 h | 28 h | 28 h | 28 h |
| Nominal capacity +/- 5% | 2200 mA | 2200 mA | 2200 mA | 2200 mA |
| NO or NC Features (*) | Jumper | Jumper | Jumper | Jumper |
| Current/one working operation with battery | 10,1 mA | 14 mA | 31,6 mA | 38,6 mA |
| Battery charge | 40 mA/h | 40 mA/h | 40 mA/h | 40 mA/h |
| Weight | 0,309 Kg | | | |



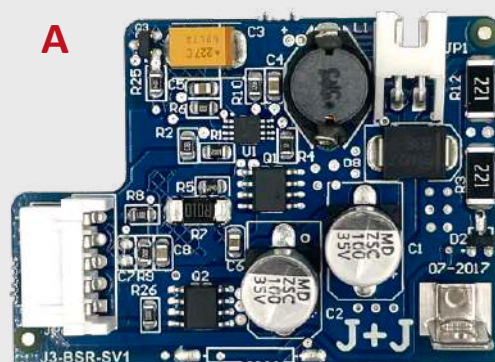
ASSEMBLY INSTRUCTIONS · BSR KIT 20/85

VERY IMPORTANT:

PLEASE, FOLLOW THESE INSTRUCTIONS STEP BY STEP. IF THE CONNECTOR OF THE BATTERY PACK IS PLUGGED INTO THE "BSR" PCB, BEFORE ARRIVING TO POINT 7, THE PCB COULD BE DAMAGED.

KIT COMPONENTS

- Element A** - 1 BSR PCB.
- Element B** - 1 Lower battery support.
- Element C** - 1 Battery pack.
- Element D** - 1 Upper battery support.
- Element E** - 3 Sheet metal Fixing screws
- Element F** - 2 Plastic Fixing screws


B

C

D

E

F


* Fill in the document inside the kit, and send it to the fax number (93 871 32 72) or e-mail: info@jjbcn.com, shown in the document.





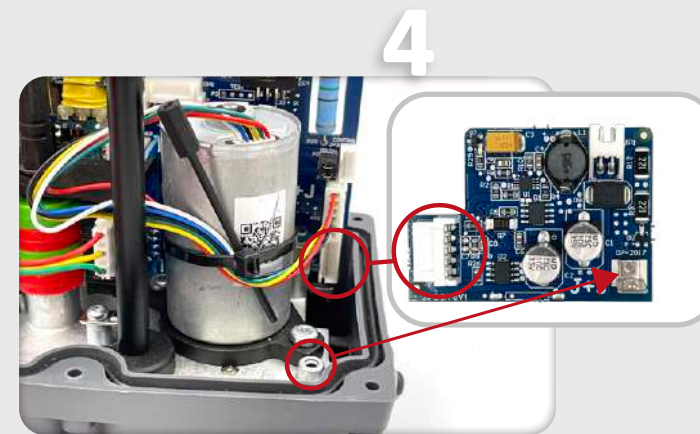
Remove the screw, which is fixing the hand wheel.



Remove the 6 screws between the cover and the body of the actuator.



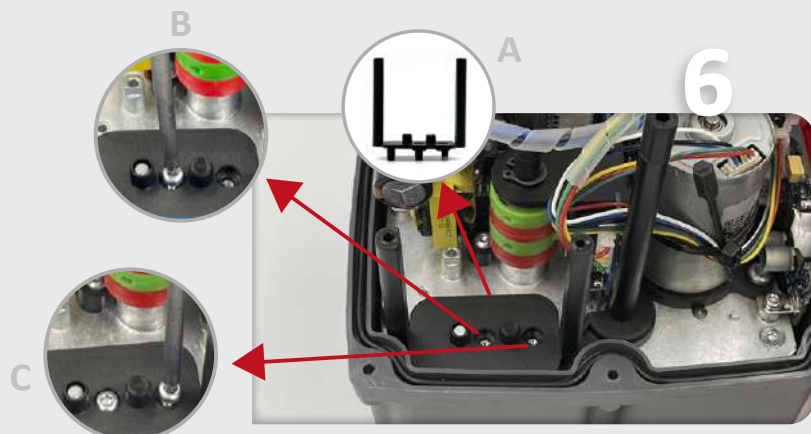
Carefully lift the cover.



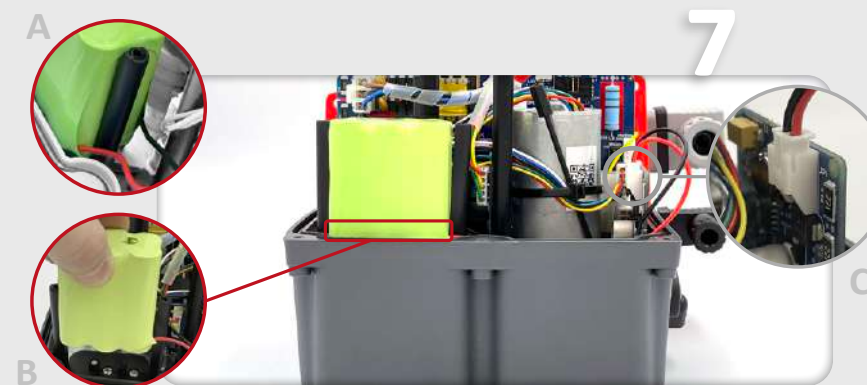
Take the BSR PCB (Element A) from the KIT and connect it to the actuator PCB, by using the connector shown in the picture.



Fix it to the actuator metal plate, by using the Sheet metal fixing screw (Element E).



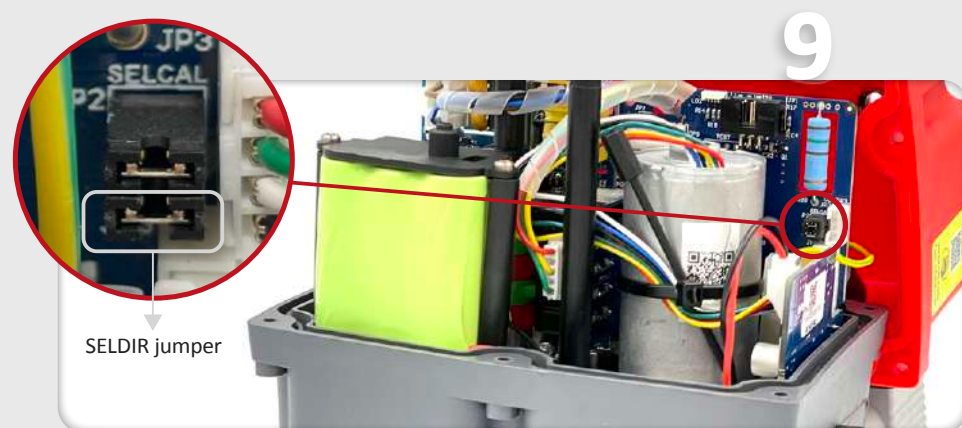
Put the lower battery support (Element B). See (Fig.6A). Fix it by using 2 Sheet metal fixing screws (Element E) (Fig.6B & 6C).



Place the battery pack (Element C) on the lower battery support (Element B) (Fig.7B). The battery cables should remain on the bottom part. Put the cables, as shown in the picture (Fig.7A). Connect the battery cables to the BSR PCB (Element A), as per (Fig.7C).



Place the upper battery support and fix it to the columns of the lower battery support (Element B), by using the Plastic fixing screws (Element F).



SELDIR jumper

BSR Configuration NO or NC:
 NC (normally close) SELDIR jumper ON.
 NO (normally open) SELDIR jumper OFF.



Carefully mount the cover, minding the cables not to be pressed.



Fix the cover to the body by using the 6 screws.



Mount the hand wheel on the shaft and fix it by using the screw.

KIT BSR J4C 140/300

The **BSR** safety block system is an automatism that, when coupled to the J4C multi voltage electric actuators, lets the valve situate in a preferable position NC or NO, when there is a power supply failure. Inside of the housing there are a **BSR** print circuit board and a battery pack, which is kept in continuous charge.

In case of the valve is not in the preferable position and there is a power supply cut, the **BSR** system returns the valve back to the preferable position by means of the batteries tension, operating as a “single acting” actuator.



OUTSIDE BOX



INSIDE BOX

| ACTUATOR MODEL | S140-B140 | S300-B300 |
|---|--------------------------|--------------------------|
| Nº Working operation without recharge, with 100% battery charge | Until battery discharged | Until battery discharged |
| Recharge time/working operation | 30 min | 50 min |
| Battery consumption/working operation | 23 W | 23 W |
| Full charge time 100% | 54 h | 54 h |
| Nominal capacity +/- 5% | 2200 mA | 2200 mA |
| NO or NC Features (*) | Jumper | Jumper |
| Current/one working operation with battery | 15,1 mA | 25,7 mA |
| Battery charge | 40 mA/h | 40 mA/h |
| Weight | 0,487 Kg | |



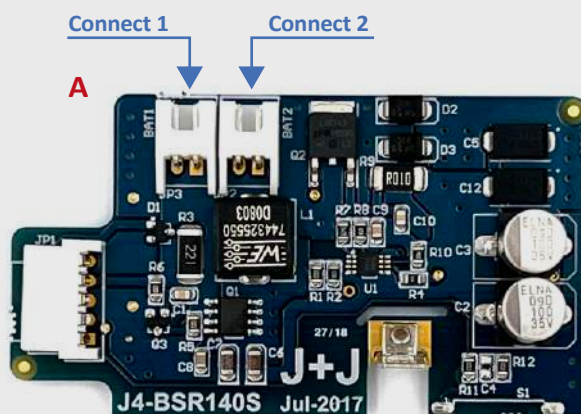
ASSEMBLY INSTRUCTIONS · BSR KIT 140/300

VERY IMPORTANT:

PLEASE, FOLLOW THESE INSTRUCTIONS STEP BY STEP. IF THE CONNECTOR OF THE BATTERY PACK IS PLUGGED TO THE "BSR" PCB, BEFORE ARRIVING TO POINT 4, THE PCB COULD BE DAMAGED.

KIT COMPONENTS

- Element A - 1 BSR PCB.
- Element B - 2 Battery support.
- Element C - 2 Battery pack.
- Element D - 3 Sheet metal Fixing screws
- Element E - 1 Plastic clamp



* Fill in the document inside the kit, and send it to the fax number (93 871 32 72) or e-mail: info@jjbcn.com, shown in the document.





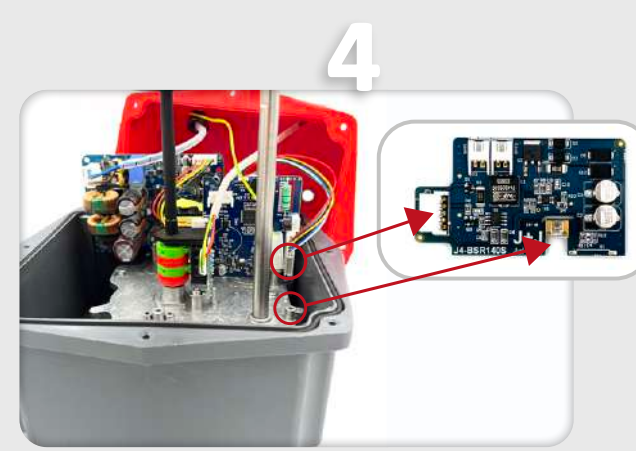
Remove the hand wheel screw and take it off.



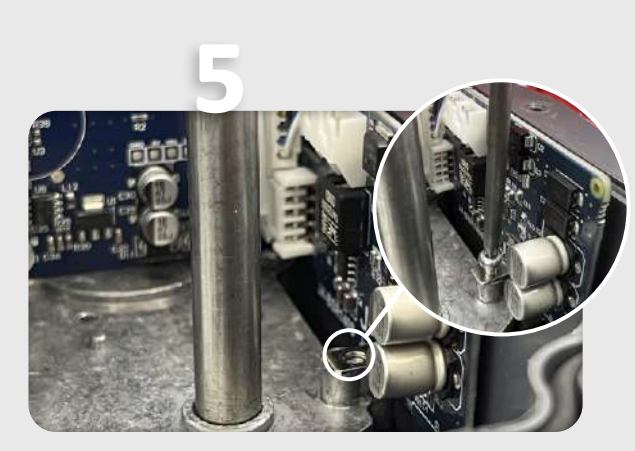
Remove the 8 screws between the cover and the body of the actuator.



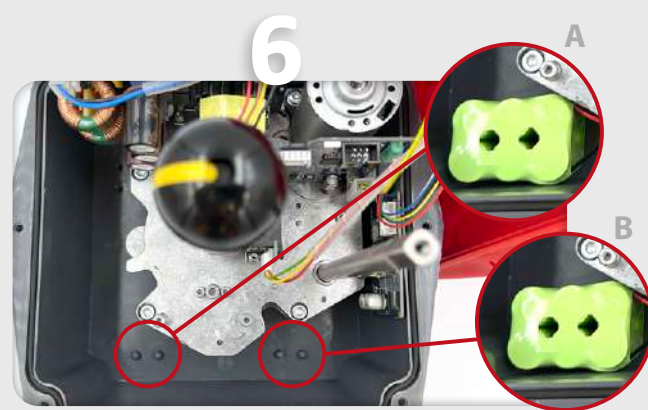
Carefully remove the cover, in order to install the kit.



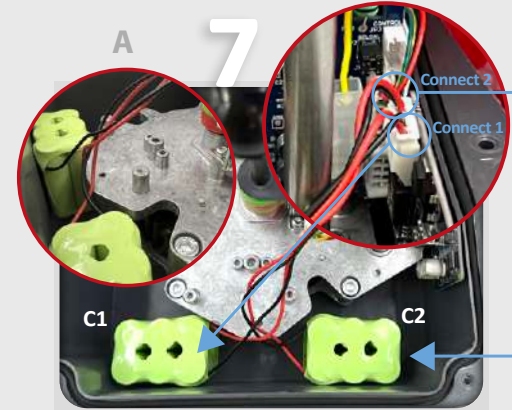
Take the BSR PCB (Element B) from the KIT and connect it to the actuator PCB, by using the connector shown in the picture.



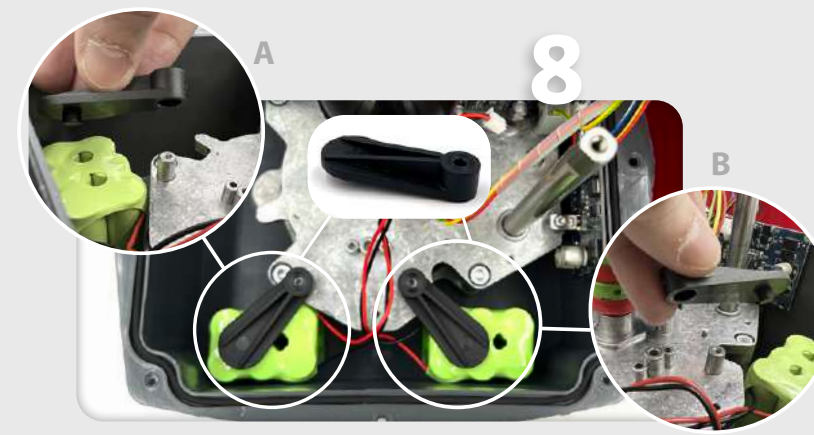
Fix it to the actuator metal plate, by using the Sheet metal fixing screw (Element D).



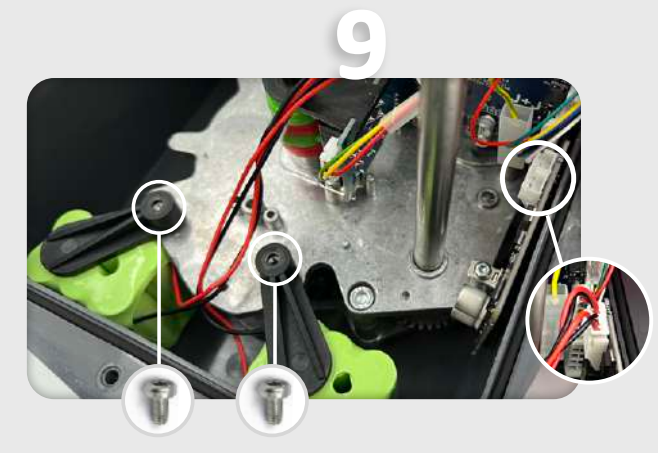
Place the 2 battery packs (Element C) as per picture (Fig. A & B).



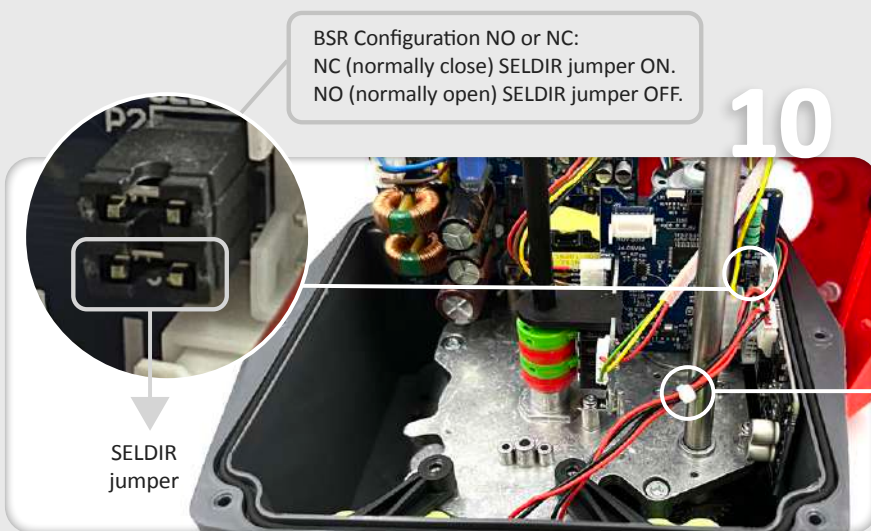
Place the battery cables so as they remain over the battery pack (fig. 7A).
Connect the C1 battery cable to connect 1.
Connect the C2 battery cable to connect 2.



Place the 2 battery supports (Element B) as per picture (Fig. A & B).



Fix the battery supports (Element B), with the sheet metal fixing screws (Element D). Connect the battery cables to the BSR PCB (Element A), as per (Element C).



Put both battery cables (Element C) together with the plastic clamp (Element E) (Fig. 8D).
Cut the remaining part of the plastic clamp (Element E).

BSR Configuration NO or NC:
NC (normally close) SELDIR jumper ON.
NO (normally open) SELDIR jumper OFF.

SELDIR jumper



Carefully replace the cover and be sure that the joint is correctly lodged in its place.
Be sure that any cable is not trapped between the cover and the body.



Fix the 8 screws, between the cover and the body.



Reassemble the hand wheel and fix it with the screw.

KIT INTERFACE

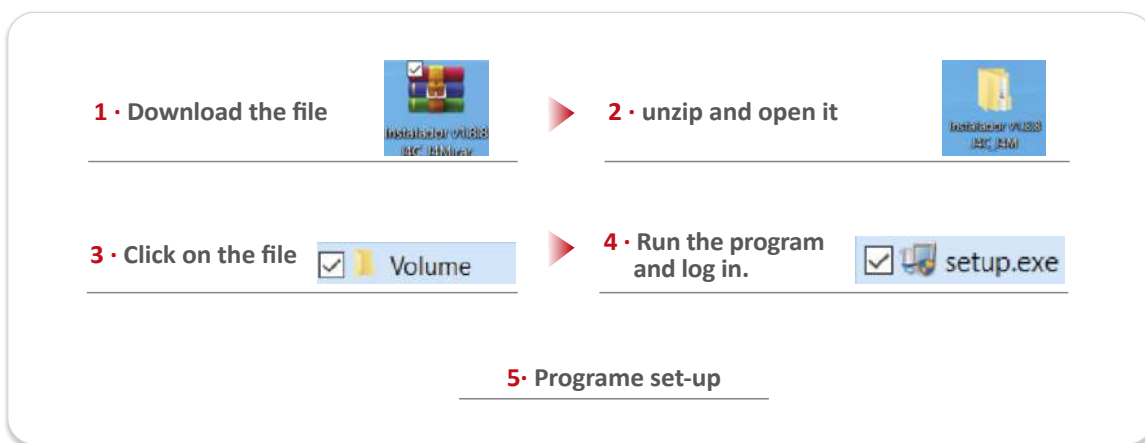
By using the INTERFACE KIT cable we establish communication with the actuator, read parameters and change the set-up values.



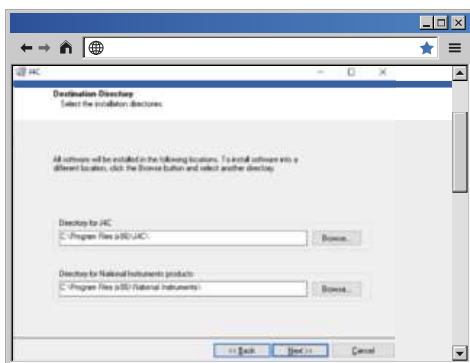
INTERFACE PROGRAM for PC INSTALLATION:

Download the Interface program from:

<https://www.dropbox.com/sh/4qgczg8zspwtehc/AABD0TkZouJ2-DXxidzk8Jera?dl=0>



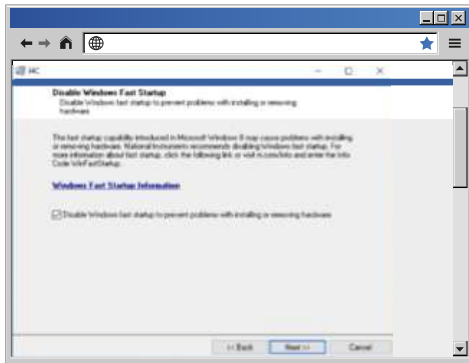
5.1 Click on “Next”



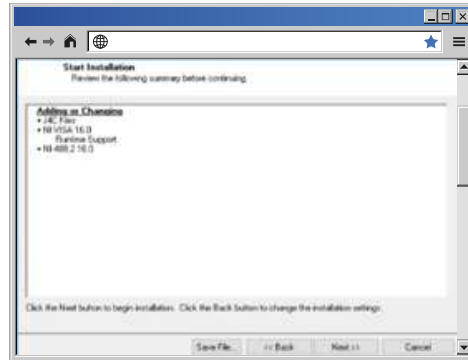
5.2 Click on “Next”



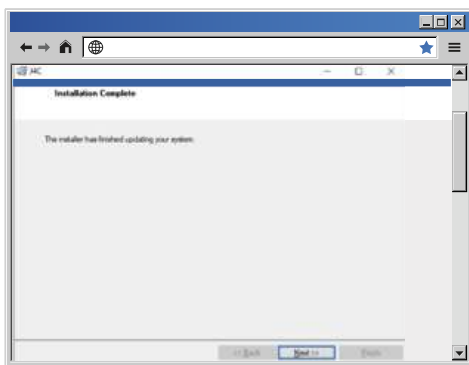
5.3 Click on “Next”



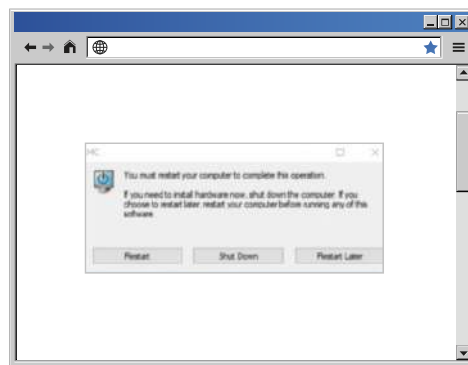
5.4 Click on “Next”



5.5 Click on “Next”



5.6 Click on “Restart”



6 • The Program set-up is finished

7 • Go to “Inicio”, “Todas la aplicaciones” and in file



8 • Open



CONNECT THE INTERFACE CABLE TO THE J4C ELECTRIC ACTUATOR

KIT INTERFACE J4C



1 · Use the INTERFACE cable inside the KIT box.



2 · Before connecting it to a J4C actuator, remove the cover of the actuator and connect one of the Interface cable sides as per our (image 1). Then connect the other cable side to a USB connector on the PC (image 2).



Image 1



Image 2



INTERFACE PROGRAM - HOW IT WORKS?

INTERFACE PROGRAM FOR J4 Y J4C SERIES ACTUATORS ONLY.

1 · Open the program  see the following screen



Two RED buttons appear on the screen.

Button 1 shows the USB Interface connector is not connected to the PC. It will change into GREEN color when it is connected.

Button 2 shows that the other side of the INTERFACE cable should be connected as per (image 1) as explained before. Connect it and apply voltage to the actuator, following the connection diagram label on the cover of the actuator. Button 2 should change into GREEN color.

To select the language, click on (CHANGE LANGUAGE), chose the language and click on CONTINUE.

If you click on **PARAMETERS**, the following screen will open, showing the actuator parameters, loaded during the mass production process.

Short explanation of each parameter:

Model: A 5 to 6-digit code. The last 3 digit show us the actuator model.

PCB Version: Is the software version of the PCB CONTROL part.

The rest of the parameter values, belong to a specific actuator model, in order to obtain the best working features of each one.

In case we should change any of the parameters, in order to be able to work in a different way, a new file would be sent to you. It should be copied on the PC, following the steps:

Press **SELEC CONFIG** - select the file on the screen.

Click on **PROGRAM**, the actuator would work with a new configuration.

To go back to the home menu, click on **MAIN MENU**.





If we click on **COUNTERS**, the following screen will open, showing all counters. To see values, click on **READ**.

Short explanation of each **COUNTER**:

Version: Software version of the PCB CONTROL part.

Options: Parameter for internal use only.

Operations: Number of times the cam steps on the OPEN or CLOSE micro switch.

Limitations: Number of times the limiter function has been activated, due to a higher torque than the allowed.

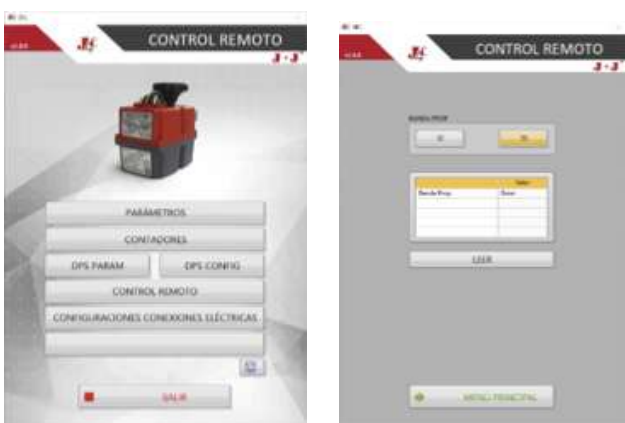
End Order: Parameter for internal use only.

Time Error: Number of times the motor has been stopped, as the TIEMPO DE MANIOBRA parameter value has been overpassed, but the actuator has not reached either the OPEN or CLOSE position yet. It usually happens when the declutching lever is in MAN position. (The user wants to move the actuator manually)

Power On: Number of times the actuator remains without Power Supply.

BSR: Number of times the actuator has been activated by using the BSR system, due to a Power Supply failure. This counter won't work if the BSR system has not been installed on the actuator before.

To go back to the MENU, click on **MAIN MENU**.



This configuration is possible only if our Positioner (DPS) has already been installed in the actuator.

Click on **DPS PARAM**, the following screen will open and allow you to set up the **Banda Prop** parameter.

The **Banda Prop** parameter should be **32** in all our standard models.

Only in case of a S20 or B20 model with a 5 Sec./90° working time, the **Banda Prop** value should change into **55**. Otherwise, the positioner (DPS) could not work in a proper way.

Click on **READ**, to see the recorded value.

Select **32** or **55** and record the selected value.

To go back to the HOME MENU, click on **MAIN MENU**.





This configuration is possible only if our Positioner (DPS) has already been installed in the actuator.

Click on **DPS**, if the following screen appears, please place the DIPs on the DPS PCB, following the screen instructions.



Click on **MAIN MENU**.

If we click on **DPS**, all the Positioner (DPS) possible configuration options will be shown on the following screen:



Short explanation of the different configurations:

Version: Is the software version of the **DPS** PCB.

Select different options when in OPERATION MODE:

INPUT/OUTPUT: The actuator with DPS will be positioned by using an external mA or V signal. Automatically the DPS will generate an output signal showing the actuator position.

ONLY OUTPUT: The actuator with DPS will work exactly the same as an ON-OFF one. The only difference is that the DPS generates an output mA or V signal, showing the actuator position.

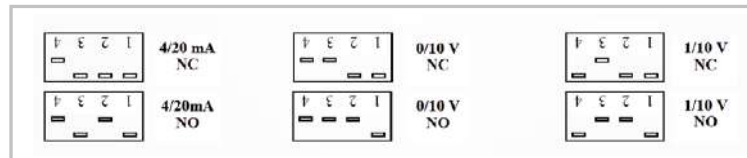
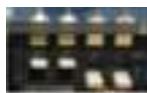
STOP WITHOUT INSTRUMENTATION: The actuator is working the same way as when using the **INPUT/OUTPUT** option, but in case of a mA or V signal failure, the actuator would stop, remaining in the same position as it was, prior to the signal failure. This configuration is only available when the actuator works with a 4/20mA, 1/10V, 4/12mA and 12/20mA signal.

Select configurations when in IN SELECTION:

Input Signal: Chose the type of requested signal. Both output and input signal will be the same. If you want to work with different signals, please ask the manufacturer.

NO / NC: In case of an input signal failure, the actuator will go to the preferential position: **NO** = Normally Open, **NC** = Normally Close.

We recommend that both the **input signal** and **NO/NC** set up, is made by placing the DIPs as follows:



RESET: Click on **RESET** to fix the prior changes, after select any of the **INPUT SELECT** configurations.

SELF ADJUST: If click on **SELF ADJUST** the actuator will make a complete movement, and register Open and Close positions.

Click on **READ** to know the DPS configuration (a table will show the DPS parameters).

To go back to the home menu, click on **MAIN MENU**.




REMOTE CONTROL options:

In case of an **ON-OFF** or a **DPS Output only actuator**, Click on **ABRIR**, **CERRAR** and **PARAR options** to activate it. Only in case of having a 3-position actuator, the screen will show an additional option **PUNTO MEDIO**, which stops the actuator at an intermediate position.

Click on **ACTUAL STATUS**, the screen will show the actuator status (green light).

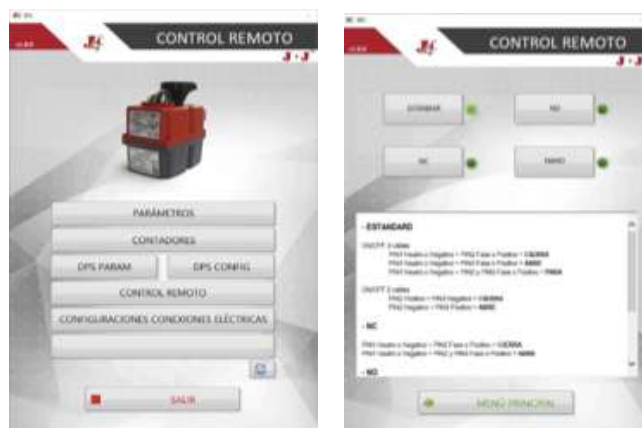
Click on **MENÚ PRINCIPAL** to go back to the home menu.

Click on **POWER SUPPLY CONFIGURATIONS**, the screen will show electrical wiring/connection options:

Select the wiring connection system you wish to work with. Click on **STANDARD**, **NO**, **NC** or **NANO**.

See the detail of each connection system below.

To go back to the home menu, click on **MAIN MENÚ**.



To finish, click on **EXIT**.



BLUETOOTH & WIFI

communication BLUETOOTH

We have introduced the BLUETOOTH communication system in our actuators, in order to communicate with our actuators, from any **IOS or 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, we could be informed about errors or incidences, etc.

The communication between our devices is protected by a password.

Via BLUETOOTH we could identify and communicate with up to 50 devices within a max distance of 20m.



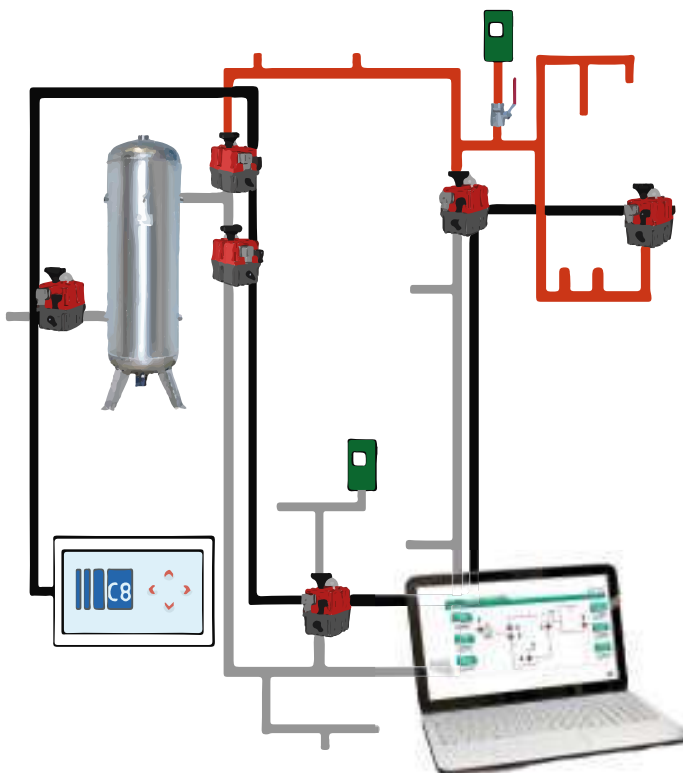


MODBUS system

- Plug and play.
- Each device could be operated manually.
- Could be seen from the control panel, tablet, mobile, PC, either inside or outside of the plant.
- Fast and flexible, starting by 3 actuators up to 32
- Up to 1.200m distance range.
- Locally connect the device and communicate with a data cable.
- Could name the devices, make a plant synoptic, send alarm mails.

Wireless system

- Plug and play.
- Each device could be operated manually.
- Could be seen from the control panel, tablet, mobile, PC, either inside or outside of the plant.
- Fast and flexible, starting by 3 actuators up to 32.
- From 50m up to 1.600m distance range without repeaters.
- Each device is emitting and receiving at the same time, creating a communication mesh, which enables the device to avoid walls or interferences.
- Under 802.15.4 protocol.
- Up to 12 bands of communication, wich allow a change of band is case of saturation.



06 CERTIFICATIONS

- IP 67
- Reach Certificate of Compliance
- Rohs Certificate of Compliance
- CE Certificates
- ISO 9001:2015



J.J. BCN INTERNACIONAL, S.A.
Poligono Industrial Sud
C/De l'Orfeo Català, 7
E – 08440 Cardedeu (Barcelona)
0034938713304
0034938713272



Degrees of protection provided by enclosures (IP CODE)

IEC 60529:1989+AMD1:1999+AMD2:2013 CSV Consolidated version

For our electric actuators of the J4C series.

Type ranges: S20, S35, S55, S85, S140 and S300 – B20, B35, B55, B140 and B300.

In versions: standard, DPS, BSR, DPS + BSR, Pot.

J.J. BCN INTERNACIONAL S.A., as a manufacturer declares herewith, that the above-mentioned part-turn actuators meet the degrees of protection provided by enclosures (IP CODE): UNE 20324:1993 + 1M: 2000 + ERR: 2004 (EN 60529:1991 + ERR: 1993 + A1:2000).

The following harmonized standards have been applied:

UNE-EN 60529:2018

The manufacturer commits to submitting the documents to the competent national authority, via electronic transmission upon request.

The part turn actuators further comply with the requirements of the following directives and the respective approximation of national laws, as well as the respective harmonized standards as listed below:

(1) Degrees of protection provided by enclosures (IP CODE)

UNE-EN 60529:2018

IEC 60529:1989+AMD1:1999+AMD2:2013 CSV Consolidated version

IP 67

Cardedeu 2018-10-01

J. Chaves
Technical Manager

Esta declaración no supone ningún tipo de garantía. Se deben observar las instrucciones de seguridad de la documentación del producto suministrada. Esta declaración pierde su validez si en los equipos se realizan cambios no acordados con el fabricante.

JJ. BCN INTERNACIONAL, S.A.
Poligono Industrial Sud
C/.De l'Orfeo Català, 7
E – 08440 Cardedeu (Barcelona)
0034938713304



Original Declaration of Incorporation of Partly Completed Machinery (EC Directive 2006/42/EC)
and EC Declaration of Conformity in compliance with the Directives on EMC and Low Voltage

For electric actuators of the series **J4C** type ranges:
S20, S35, S55, S85, S140, S300, B20, B35, B55, B85, B140 & B300

In versions: Standard, DPS, BSR, DPS + BSR, Poti

JJ. BCN INTERNACIONAL S.A. as manufacturer declares herewith, that the above-mentioned part-turn actuator meet the following basic requirements of the EC Machinery Directive 2006/42/EU: Annex I. articles

1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.6, 1.3.1, 1.3.7, 1.5.1, 1.6.3, 1.7.1, 1.7.3, 1.7.4

The following harmonised standards within the meaning of the Machinery Directive have been applied:
EN 12100:2012 ISO 5211:2017
EN 60204 - 1:2006

With regard to the partly completed machinery, the manufacturer commits to submitting the documents to the competent national authority via electronic transmission upon request. The relevant technical documentation pertaining to the machinery described in Annex VII, part B has been prepared.

J+J part turn actuators are designed to be installed on industrial valves. J+J part turn actuators must not be put into service until the final machinery into which they are to be incorporated has been declared in conformity with the provisions of the EC Directive 2006/42/EC.

As partly completed machinery, the part turn actuators further comply with the requirements of the following directives and the respective approximation of national laws as well as the respective harmonised standards as listed below:

- (1) Directive relating to Electromagnetic Compatibility (EMC) (2014/30/EU)
EN 61000-6-2: 2006 + E:2009
EN 61000-6-4: 2007 + E:/A1:2011
- (2) Low Voltage Directive (2014/35/EU)
EN 60204-1: 2007 + Corr:2010 Security
EN 50178: 1998

Year of affixing of the CE marking: 2008

Cardedeu 2018-10-01

J. Chaves
Technical Manager

This declaration does not contain any guarantees. The safety instructions in product documentation supplied with the devices must be observed. Non concerted of the devices voids this declaration.



February 2022.

REACH Certificate of Compliance

J.J. BCN INTERNACIONAL, S.A. is committed to manage the use of chemical substances in accordance with governmental regulations, industry standards, and customer-specific requirements in order to protect the environment.

We hereby certify that, no J.J. BCN INTERNACIONAL,S.A. products contain any of the Substances of Very High Concern (201 SVHC list released in June 2019) listed by the European Chemicals Agency (ECHA) under provisions of Regulation (EC) N° 1907/2006 of the European Parliament, in a proportion higher than 0.1% of product weight per article.

Even though J.J. BCN INTERNACIONAL,S.A. does not supply neither substances, nor preparation as they are concerned, but supplies finished product , is adhered to article 7.

Nevertheless, we understand our commitment with the protection of the environment and, due to this fact we have informed our suppliers about their responsibilities and have required their own REACH Certificates, when applicable.

Quality Dep.

J.J. BCN INTERNACIONAL,S.A.
Pol. Ind. Sud.
C/ de l'Orfeó Català, nº 7
08440 – CARDEDEU
BARCELONA
Tel. +34 938 713 304
Fax. +34 938 713 272

RoHS CERTIFICATE OF COMPLIANCE



The undersigned:

J.J. BCN INTERNACIONAL, S.A.
Orfeó Català, 7
08440 Cardedeu (Spain)

And on behalf:

Jorge Chaves Garcia
Technical Manager

DECLARES: Under its exclusive responsibility that:

The J4C ELECTRIC ACTUATORS series
Manufactured by: J.J. BCN INTERNACIONAL, S.A.
In: Spain
Model: S20, S35, S55, S85, S140, S300, B20, B35, B55, B85, B140 & B300
Options: DPS, BSR, DPS+BSR & POT

Accomplishes with the following requirements:

EC directive 2015/863/EU (the RoHS Directive):

The maximum concentration value of the restricted substances by weight is:

| | |
|--|-------------------|
| Lead (Pb) | < 0.1% |
| Mercury (Hg) | < 0.1% |
| Hexavalent Chromium (Cr VI) | < 0.1% |
| Polybrominated Biphenyls (PBB) | < 0.1% |
| Polybrominated Diphenyl Ethers (PBDE) | < 0.1% |
| Cadmium (Cd) | < 0.01% |
| Bis(2-Ethylhexyl) phthalate (DEHP) | < 0.1% |
| Benzyl butyl phthalate (BBP) | < 0.1% |
| Dibutyl phthalate (DBP) | < 0.1% |
| Diisobutyl phthalate (DIBP) | < 0.1% |

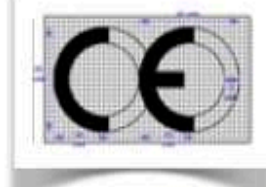


Cardedeu, September 2019

J.Chaves
Technical Manager

Laboratorio de Ensayos, mercado CE

Test Laboratory, CE mark



| | |
|------------------|-----|
| Marca: Brand: | J+J |
|------------------|-----|

| | |
|---------------------|------------------------|
| Modelos: Models: | J4C S20/S35/S55/S85 |
|---------------------|------------------------|

| | |
|------------------------------|-------------------|
| Descripción: Description: | Electric actuator |
|------------------------------|-------------------|

| | |
|----------------------------|--|
| Directivas: Directives: | 2014/35 /UE (LVD) Low Voltage Directive 2014/30/UE (E. M. C.) |
|----------------------------|--|

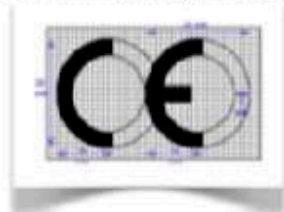
| | |
|---|--|
| Ensayos y medidas. Norma: Tests and measurements. Standard: | UNE-EN 60204-1:2007+Corr:2010 UNE-EN 61000-6-2:2006+E:2009 UNE-EN 61000-6-4:2007 +E:2008+A1:2011 |
|---|--|

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|--|-------------|
| Resultado en el informe de los ensayos Nº.: Show in summary in test report Nº.: | 2020-07-010 |
|--|-------------|

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|--------------------------|---|
| Verificado: Verified: | V |
|--------------------------|---|

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|--|------------|
| Fecha (DD-MM-AAAA): Date(DD-MM-YYYY): | 20-07-2020 |
|--|------------|

| | |
|--|---|
| Sello de la compañía y firma: Company seal and signature: F. J. García. Ing. T. Telecom. General manager. |  laboratorio de ensayos telpro CE www.elmercadoCE.com |
|--|---|


Laboratorio de Ensayos, marcado CE
Test Laboratory, CE mark


| | |
|--|---|
| Marca: Brand: | J+J |
| Modelo: Model: | J4 - J4C :: S140/300 |
| Descripción: Description: | Electric actuator |
| Directivas: Directives: | 2014/35 /UE (LVD) Low Voltage Directive 2014/30/UE (E. M. C.) |
| Ensayos y medidas. Norma: Tests and measurements. Standard: | UNE-EN 60204-1 2007+Corr:2010 UNE-EN 61000-6-2:2006+E:2009 UNE-EN 61000-6-4:2007 +E:2006+/A1 :2011 |

| | |
|--|--------------------|
| Resultado en el informe de los ensayos N°: Show in summary in test report N° : | 2018-04-002 |
|--|--------------------|

| | |
|---------------------------------|----------|
| Verificado: Verified: | V |
|---------------------------------|----------|

| | |
|--|-------------------|
| Fecha (DD-MM-AAAA): Date(DD-MM-YYYY) | 04-04-2018 |
|--|-------------------|

| | |
|---|---|
| Sello de la compañía y firma: Company seal and signature: |  |
| F. J. García, Ing. T. Telecom: General manager. |  |



ISO 9001 REGISTERED

This document certifies that the quality management systems of:

J.J. BCN INTERNACIONAL, S.A.

C/ De l'Orfeo Català, 7 (P.I. Sud) – 08440, CARDEDEU (Barcelona)

have been assessed and approved by QMS Spain to the following Quality management systems, standards and guidelines:

ISO 9001:2015

The approved quality management systems apply to the following:

MANUFACTURING, MARKETING AND TECHNICAL ASSISTANCE OF VALVE ACTUATORS

Original Approval: 03/09/2001

Current Certificate: 28/09/2021

Certificate Expiry: 06/09/2024

Certificate Number: 14127433



This certificate remains valid while the holder maintains their management System in accordance with the published standard.

To check the validity and status of this certificate please send an email to

calidad@qms-spain.com

This certificate is the property of QMS Spain and must be returned in the event of cancellation.

On behalf of QMS Spain

07 GUARANTEE

J+J actuators are warranted against defects of workmanship or assembly as follows:

J4C S/B Series: up to 60.000 working cycles or 3 years from their shipment date.

Working conditions of a 75% of duty. Max number of 50 limiter function activations, within 3 years of the warranty period.

OUR WARRANTY INCLUDES SOLELY AND EXCLUSIVELY THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS IN OUR WORKSHOP OR IN THE PLACEMENT OF THE INSTALLATION, AND DOES NOT COVER INDEMNIFICATIONS OR OTHER EXPENSES.

The warranty will be void if the device has been open, if the defects are the result of the misuse or if our products have been handled, repaired or modified outside our workshop or have been installed with materials or by methods not in accordance with our STANDARDS.

The party alleging the existence of a defect of workmanship shall accredit the suitable use of the product and, if appropriate the correct installation of the same.

The expenses of the return and reshipment of the defective materials will be for the account of the buyer.



08 CONTACT

J.J. BCN INTERNACIONAL, SA



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Barcelona (Spain)



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info@jjbcn.com



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CHRYSSAFIDIS