TECNOFLUID

REGULACIÓN Y TECNOLOGÍA PARA FLUIDOS

J4C HANDBOOK



J+J

J.J. BCN INTERNACIONAL S.A.

Handbook (EN) 2402V4

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01 INTRODUCTION

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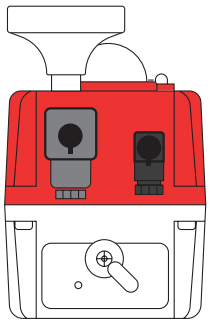
AUTOMATE YOUR VALVES WITH JJ PRODUCTS

A new feature of this range is a motor with Brushless technology, which is more efficient and therefore longer-lasting. It is marketed in the format J4C S for the multi-voltage range spanning from 24-240 VDC / VAC and in format J4C B for 12 VDC / VAC. It also includes the possibility of incorporating all the options, such as our DPS (Digital Positioner System) and BSR (Battery System Return) kits, which have been designed for this series.

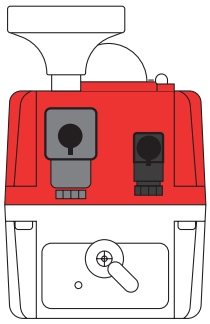


BASIC CHOICE

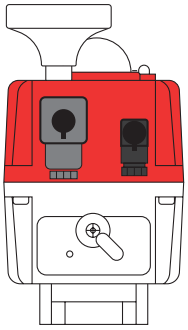
- IP67
- All voltage
- Brushless motor
- Position indicator
- Manual Override
- Visual control operation
- Automatic temperature
- Electronic torque operation
- VFC auxiliary micro switches
- 75% Duty rating



J4C 20



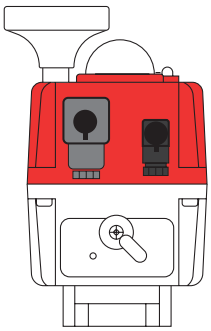
J4C 35



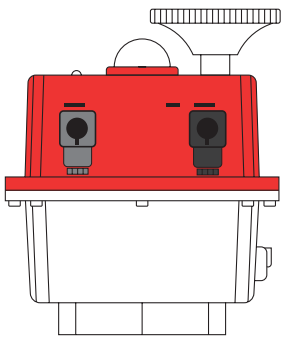
J4C 55

SIZES

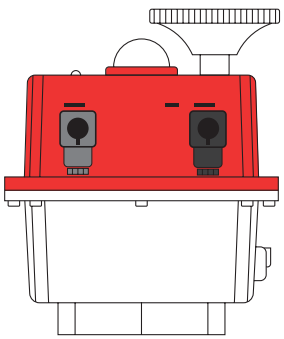
Operating torque / **20 Nm to 300 Nm**



J4C 85



J4C 140



J4C 300

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OPTIONS



DPS KIT

Digital Positioner System

Digital positioner for our J4C models. Instrumentation signal 4-20 mA, 0-20 mA, 0-10 V or 1-10 V.
This DPS digital positioner is suitable for S and B models.



BSR KIT

Battery System Returns

BSR system for our J4C models. It is an emergency fail safe kit system by battery wich is common to S and B models. The BSR system for our models 140 Nm and 300 Nm it is the same but with a bigger capacity battery.



INTERFACE KIT

Interface System

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

BLUETOOTH

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

MODBUS

Modbus System

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

Option assembled in Factory

Option Self-Assembling

KIT CONCEPT

The installation of the kit could be done at the factory or, if you prefer, do it by yourself. You could find the Instruction Manual in our web site.

With this kit we make it easier for customers who have a Basic actuator to convert it into a more complete actuator.

Our distributors could have lower stock and quicker service.

LOWER STOCK

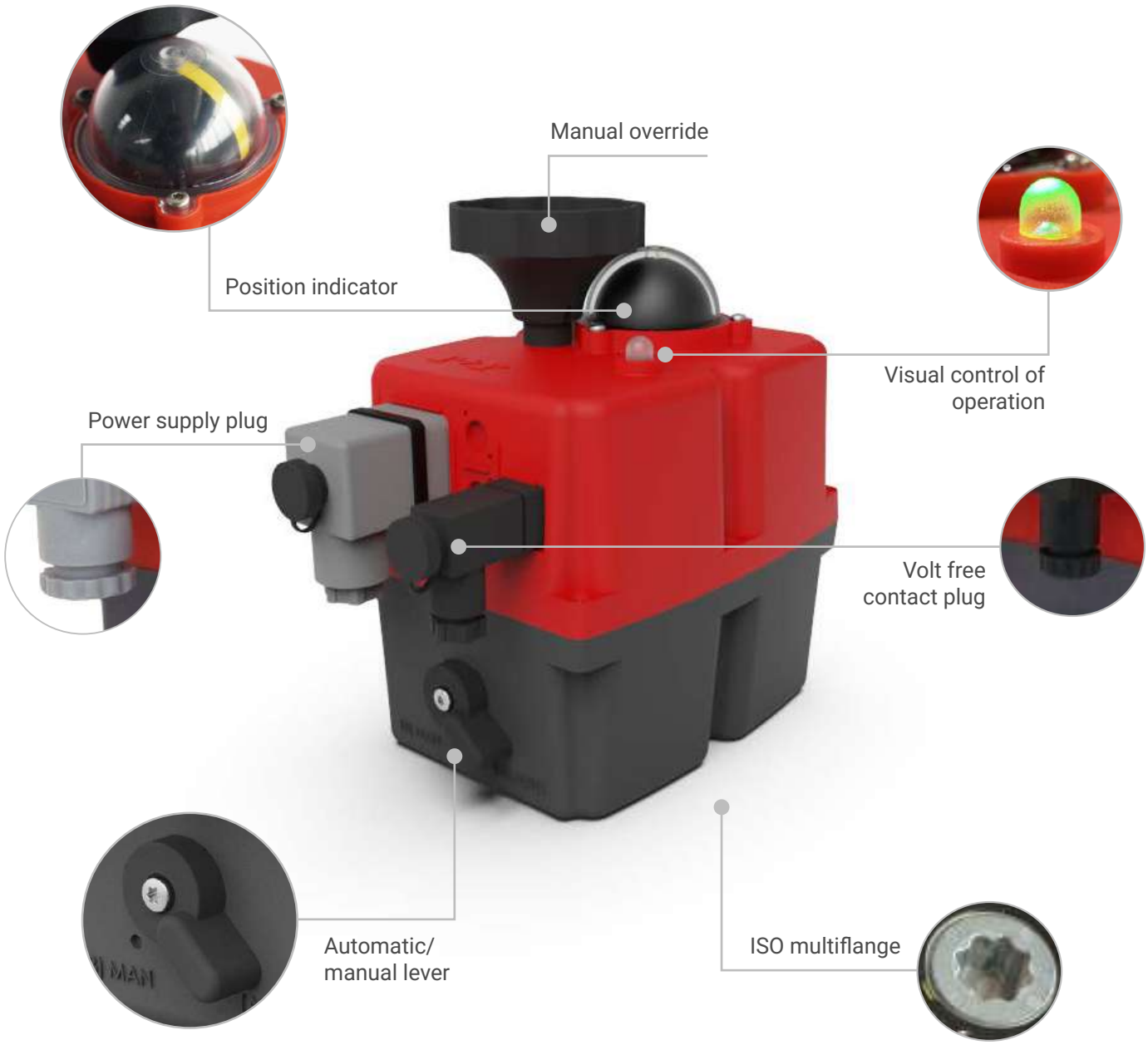
FAST SERVICE

02 ACTUATOR PART LIST

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ACTUATOR PART LIST

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



ACTUATOR PART LIST

MODELS: S140, S300, B140, B300



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03 J4C SERIES DETAILS

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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 50/60Hz-0/+5%
All our actuators model B20 to B300 are ready to work at 12 VDC/VAC ONLY, 50/60Hz-0/+5%

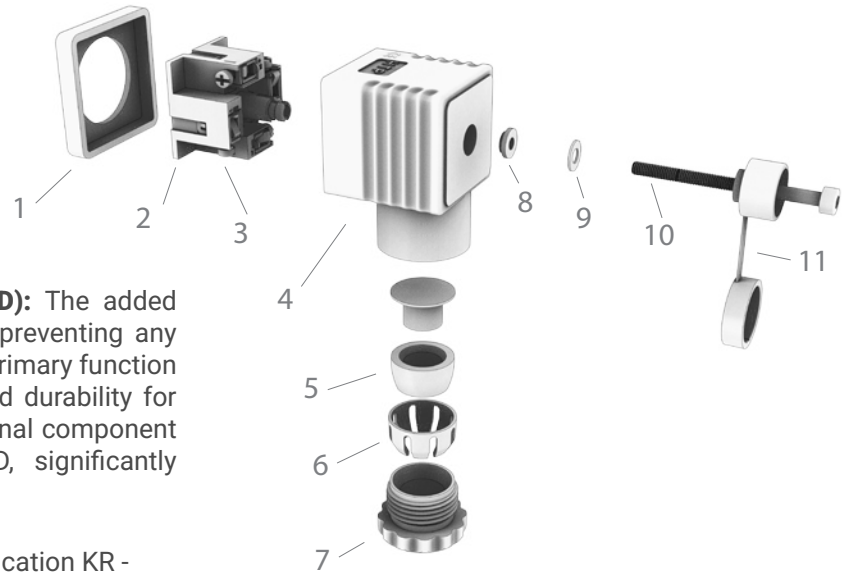
ELECTRICAL CONNECTORS

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.

Connector	Small Black		Big Grey or Black	
	EN175301-803 Form CI		EN175301-803 Form A	
Model	min. Ø	max. Ø	min. Ø	max. Ø
J4C 20 to 300	5 mm	6 mm	8 mm	10,5 mm

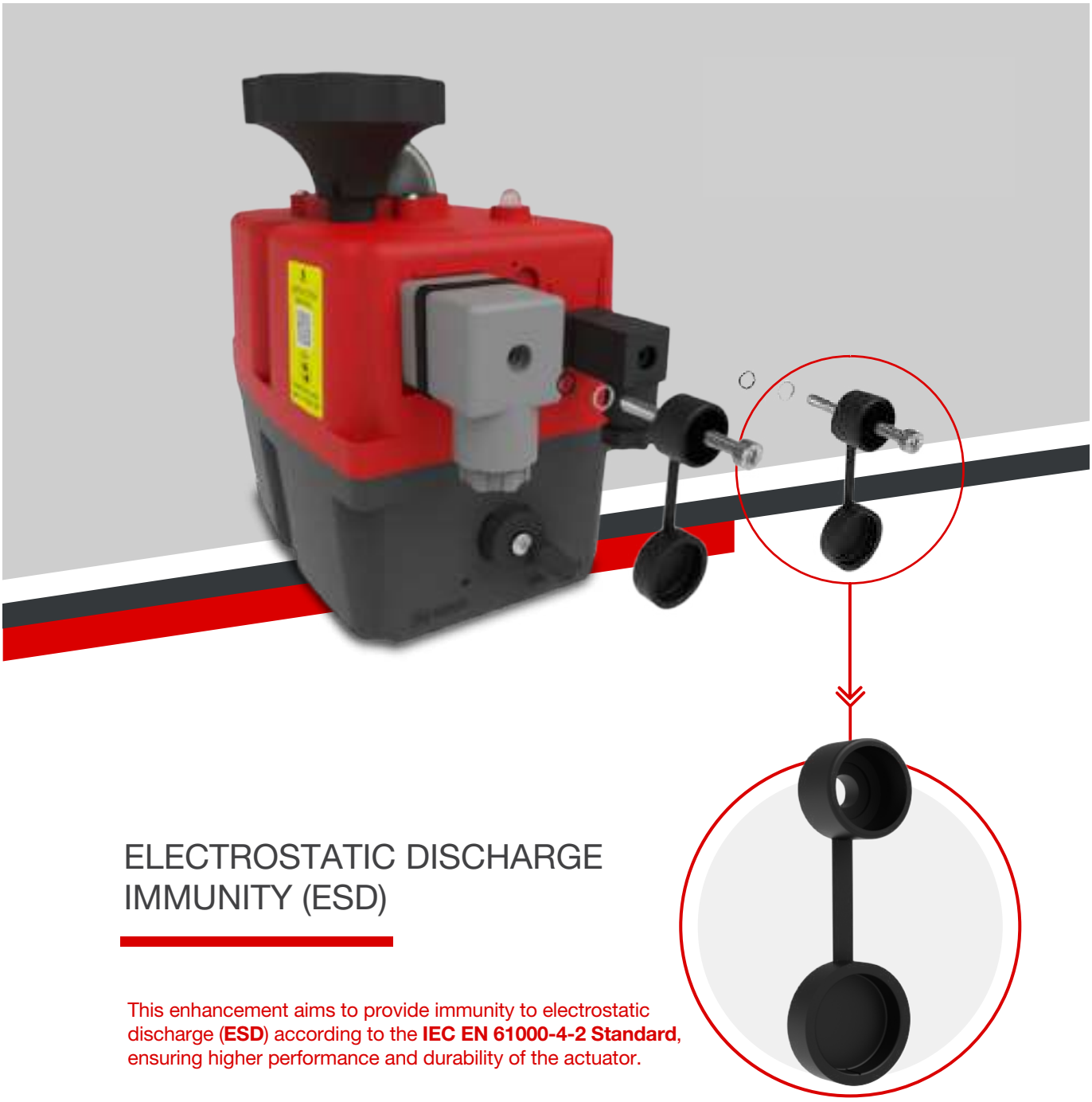
Warning: Ensure that the square rubber seal is in place when fixing each DIN plug to the actuator, also when installing the cable be sure that sealing 5 and 9 are well installed. Failure to do so could allow water ingress and damage caused by this installation error will invalidate any warranty. The DIN plugs are fixed to their respective bases on the actuator housing with a screw. Do not over tight the screw (10) when assembling (Max. 0.5Nm)

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



ELECTROSTATIC DISCHARGE IMMUNITY (ESD): The added ESD cap (11) serves as component aimed at preventing any adverse effects of electrostatic discharges. Its primary function is to ensure optimal performance and extended durability for the actuator. Acting as a safeguard, this additional component strengthens the actuator's immunity to ESD, significantly enhancing its overall lifespan.

The improvement allowed us to obtain the certification KR - Korean Register.



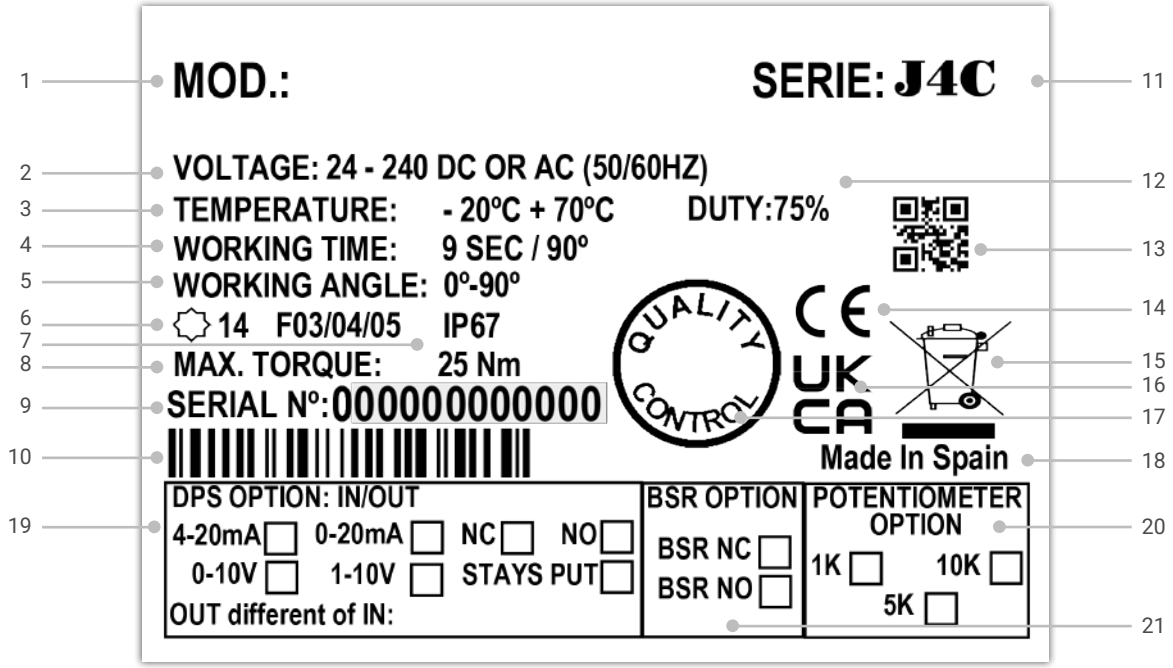
ELECTROSTATIC DISCHARGE IMMUNITY (ESD)

This enhancement aims to provide immunity to electrostatic discharge (**ESD**) according to the **IEC EN 61000-4-2 Standard**, ensuring higher performance and durability of the actuator.

- Once the electrical connections have been completed, make sure that the plug completely covers the screws to guarantee **ESD** protection.
- This plug is in addition to the connector design, and can be fitted to any previously manufactured actuator.
- The improvement allowed us to obtain the certification KR – Korean Register.

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ID ACTUATOR LABEL



1. Actuator Model.
2. Voltage to be connected.
3. Actuator ready to bear between -20ºC / +70ºC.
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 = 10 sec. Time between maneuvers = 3.3 sec.
13. QR code for manufacturing.
14. Actuator with 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. POTENTIOMETER options.
21. BSR options.

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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** =

STANDARD



Fig. 6 0 = CLOSE



Fig. 6 90 = OPEN

OPTIONAL



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



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

* Position indicators with these 4 inserts are not standard. You can order them, then they come with 2x yellow and 2x black insert (for "T" you need another yellow indicator)

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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:

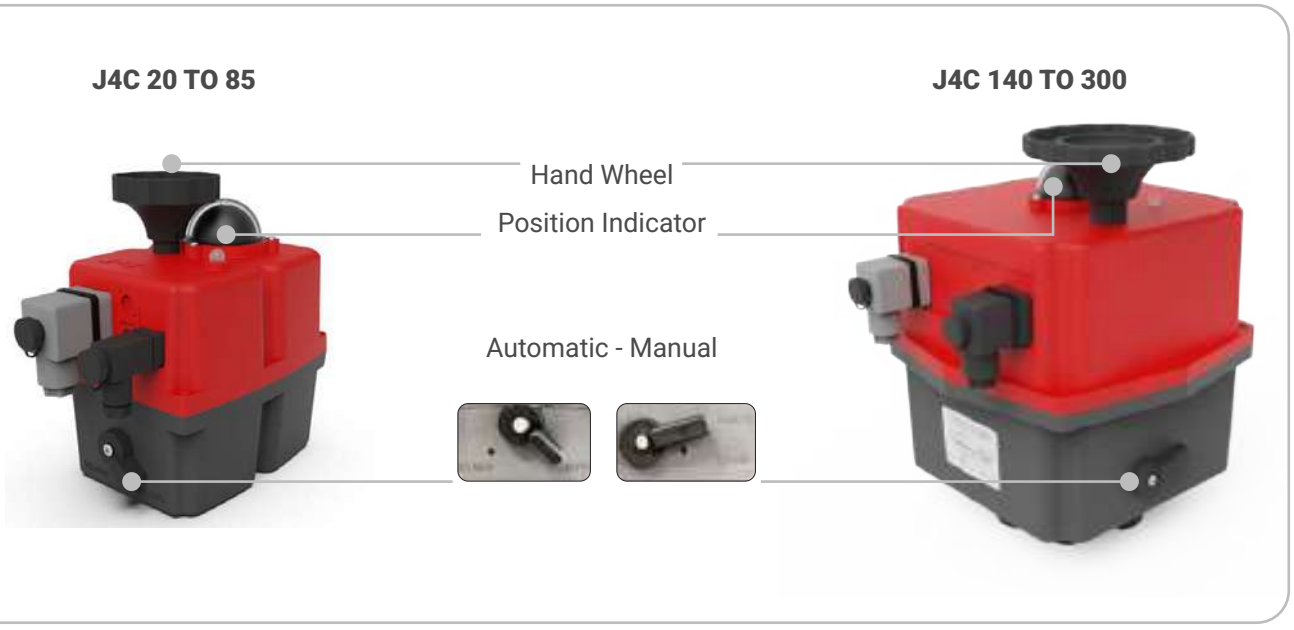
The hand wheel, of models 20,35,55, and 85 rotates automatically, it is very important not to block it, otherwise the actuator could suffer unrepairable damages.



Fig. 7 **J4C 20 TO 85**



Fig. 7 **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-active 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.

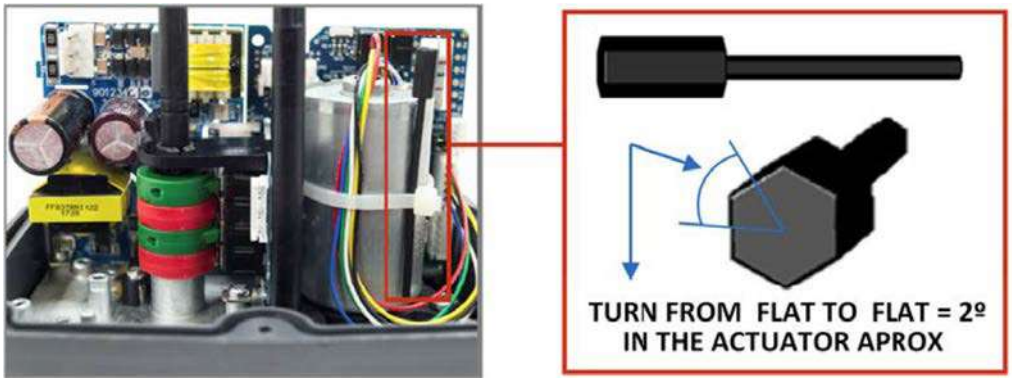
ADJUSTMENT OF THE CAMS

Warning! Risk of electric shock inside the actuator. Authorized personnel only.

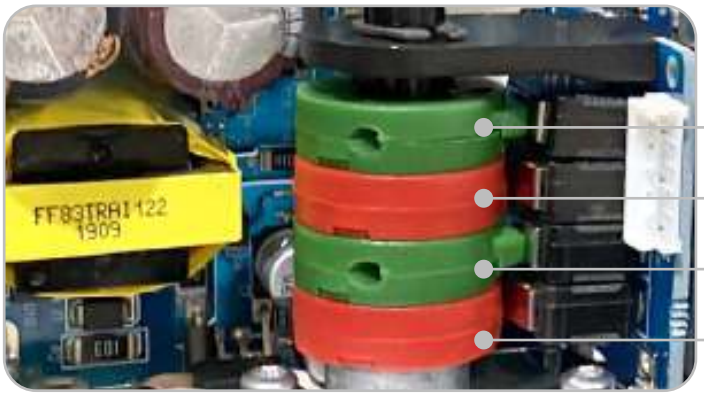
Under normal conditions, the actuator may only be operated with the closed cover. If work is performed on the actuator with the removed cover, the supply and control voltage must first be disconnected. Adjustments, which need to be done in the energized state, should be carried out with special insulated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

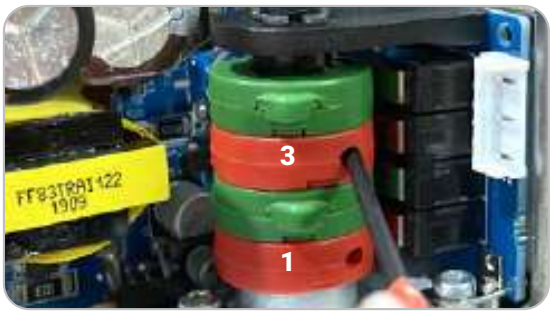
One special plastic wrench (is supplied together with the actuator). The wrench is tied together with the motor by using one plastic clamp.

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

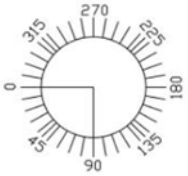


Cams 2 and 4

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 and 4) 3° (+/-1°) 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 and 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 and 3

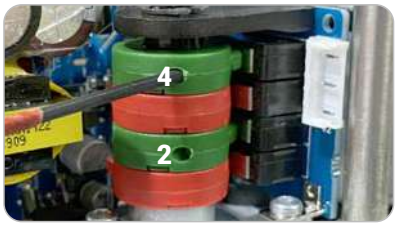


3) **To adjust the open position to more than 90°.**

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 and 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 and 4

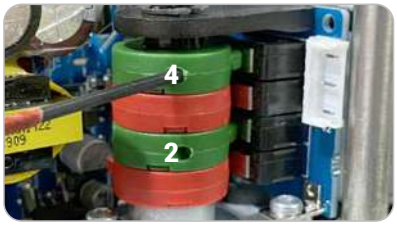


TABLE OF CONSUMPTIONS - ON-OFF ACTUATOR

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

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

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

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TABLE OF CONSUMPTIONS - ON-OFF ACTUATOR

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

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

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

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TABLE OF CONSUMPTIONS - DPS ACTUATOR

J4C 20 consumption		Unload		Max. Operational Torque 20 Nm		Max. Torque Break 25 Nm	
Volatge	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		Unload		Max. Operational Torque 35 Nm		Max. Torque Break 38 Nm	
Volatge	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		Unload		Max. Operational Torque 55 Nm		Max. Torque Break 60 Nm	
Volatge	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

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TABLE OF CONSUMPTIONS - DPS ACTUATOR

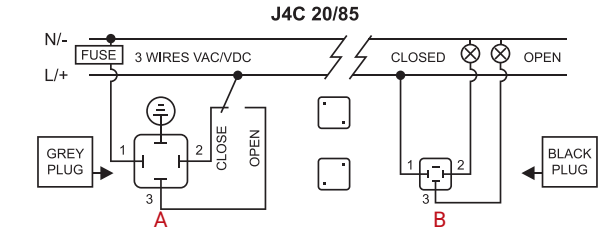
J4C 85 consumption		Unload		Max. Operational Torque 85 Nm		Max. Torque Break 85 Nm	
Volatge	Model	DPS		DPS		DPS	
		A	W	A	W	A	W
12 VDC	B85	0,69	8,33	2,36	28,36	2,55	30,64
24 VDC	S85	0,40	9,68	1,21	29,03	1,37	32,79
48 VDC	S85	0,19	9,14	0,54	25,80	0,59	28,49
110 VDC	S85	0,06	6,16	0,16	17,25	0,18	19,71
12 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

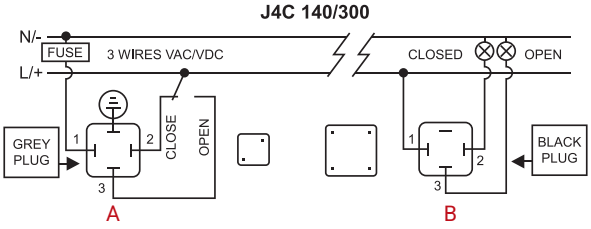
J4C 140 consumption		Unload		Max. Operational Torque 140 Nm		Max. Torque Break 170 Nm	
Volatge	Model	DPS		DPS		DPS	
		A	W	A	W	A	W
12 VDC	B140	2,16	25,94	5,30	63,57	6,04	72,44
24 VDC	S140	0,74	17,74	2,41	57,79	2,83	68,01
48 VDC	S140	0,34	16,13	0,99	47,31	1,23	59,14
110 VDC	S140	0,11	12,32	0,31	34,50	0,44	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		Unload		Max. Operational Torque 300 Nm		Max. Torque Break 350 Nm	
Volatge	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	116,10
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

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EXTERNAL CONNECTING DIAGRAM (STANDARD)

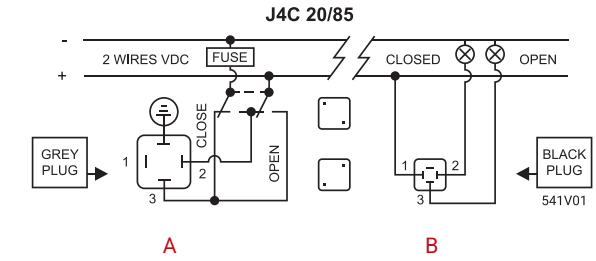


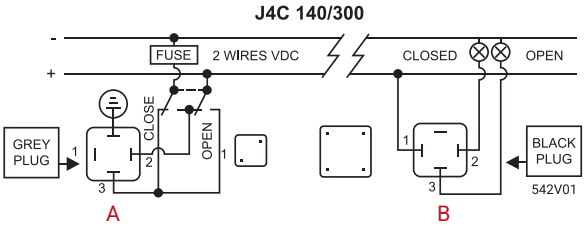


ON - OFF VAC

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

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



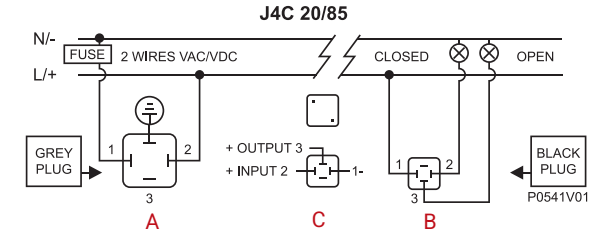


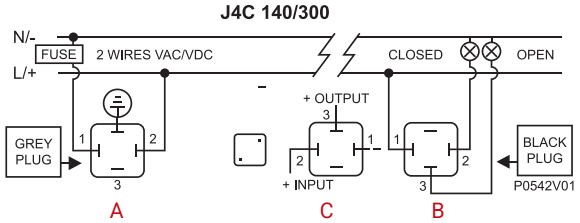
ON - OFF VDC

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

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

STANDARD POSITIONER EXTERNAL CONNECTING DIAGRAM





POSITIONER VAC VDC

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

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

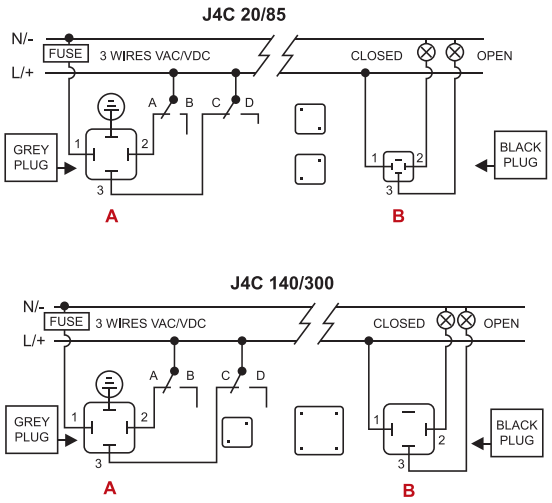
C = Input/output signal (Black plug)
Negative PIN 1 + positive PIN 2 = Input signal.
Negative PIN 1 + positive PIN 3 = Output signal.

C= Instrumentation signal **MAX 10V**

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

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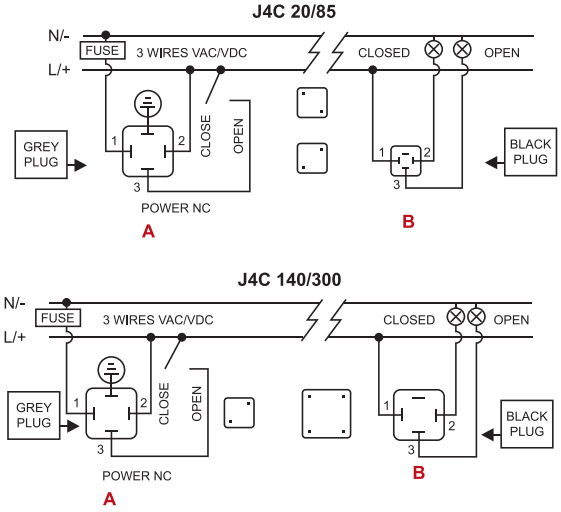
EXTERNAL CONNECTING DIAGRAM (OPTIONAL)



STANDARD MODE · 3 WIRES ON - OFF

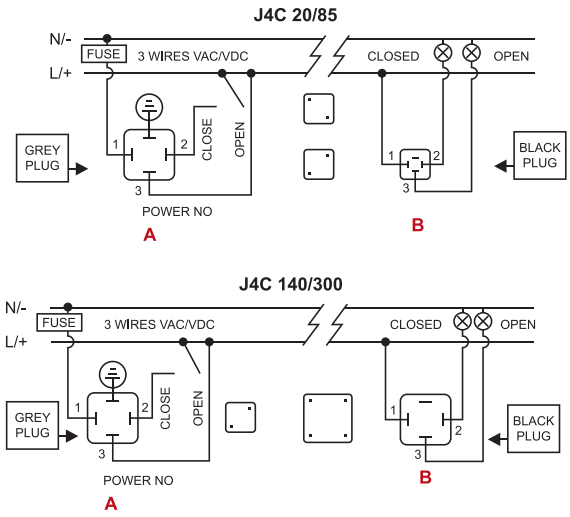
A = Power supply plug
A: VAC 3 WIRES (Grey plug)
PIN 1 = Neutral + PIN 2 = Phase = Close
PIN 1 = Neutral + PIN 3 = Phase = Open
PIN 1 = Neutral + PIN 2+3 = Phase = Stop
Earth/ground connection - Flat PIN ⏚
A: VDC 3 WIRES (Grey plug)
PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close
PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open
PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Stop
Earth/ground connection - Flat PIN ⏚
B = Volt free contact plug (Black plug)
Common PIN 1 / PIN 2 = Close confirmation of position.
Common PIN 1 / PIN 3 = Open confirmation of position.

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

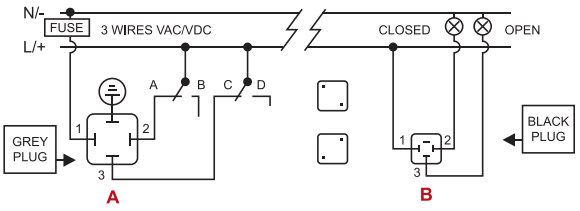
A = Power supply plug
A: VAC 3 WIRES (Grey plug)
PIN 1 = Neutral + PIN 2 = Phase = Close
PIN 1 = Neutral + PIN 2+3 = Phase = Open
Earth/ground connection - Flat PIN ⏚
A: VDC 3 WIRES (Grey plug)
PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close
PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Open
Earth/ground connection - Flat PIN ⏚
B = Volt free contact plug (Black plug)
Common PIN 1 / PIN 2 = Close confirmation of position.
Common PIN 1 / PIN 3 = Open confirmation of position.



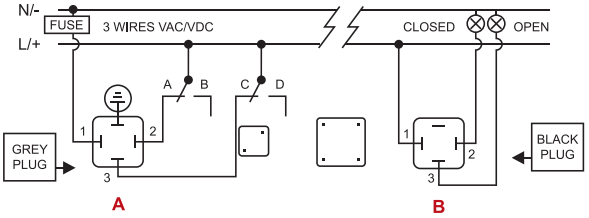
3 MODE ON - OFF

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
Earth/ground connection - Flat PIN ⏚
A: VDC 3 WIRES (Grey plug)
PIN 1 = (-) Negative + PIN 2+3 = (+) Positive = Close
PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open
Earth/ground connection - Flat PIN ⏚
B = Volt free contact plug (Black plug)
Common PIN 1 / PIN 2 = Close confirmation of position.
Common PIN 1 / PIN 3 = Open confirmation of position.

J4C 20/85



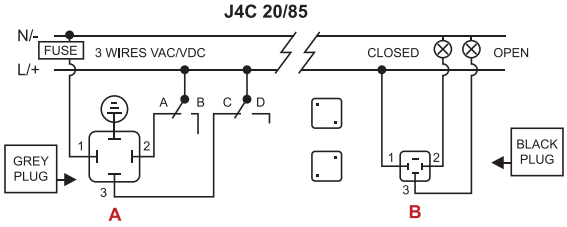
J4C 140/300



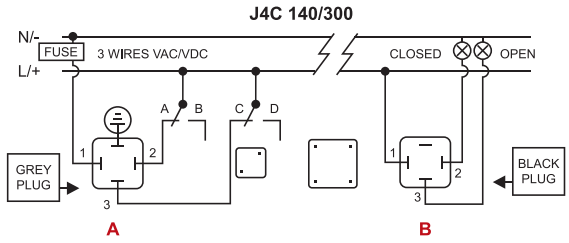
4 MODE ON - OFF

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
Earth/ground connection - Flat PIN ⏚
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
Earth/ground connection - Flat PIN ⏚
B = Volt free contact plug (Black plug)
Common PIN 1 / PIN 2 = Close confirmation of position.
Common PIN 1 / PIN 3 = Open confirmation of position.

J4C 20/85



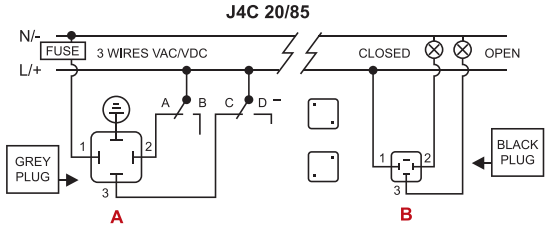
J4C 140/300



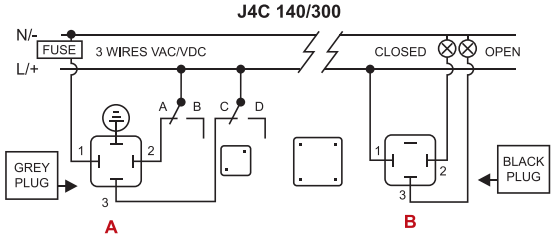
6 MODE ON - OFF

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
Earth/ground connection - Flat PIN ⏚
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
Earth/ground connection - Flat PIN ⏚
B = Volt free contact plug (Black plug)
Common PIN 1 / PIN 2 = Close confirmation of position.
Common PIN 1 / PIN 3 = Open confirmation of position.

J4C 20/85



J4C 140/300



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
Earth/ground connection - Flat PIN ⏚
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
Earth/ground connection - Flat PIN ⏚
B = Volt free contact plug (Black plug)
Common PIN 1 / PIN 2 = Close confirmation of position.
Common PIN 1 / PIN 3 = Open confirmation of position.

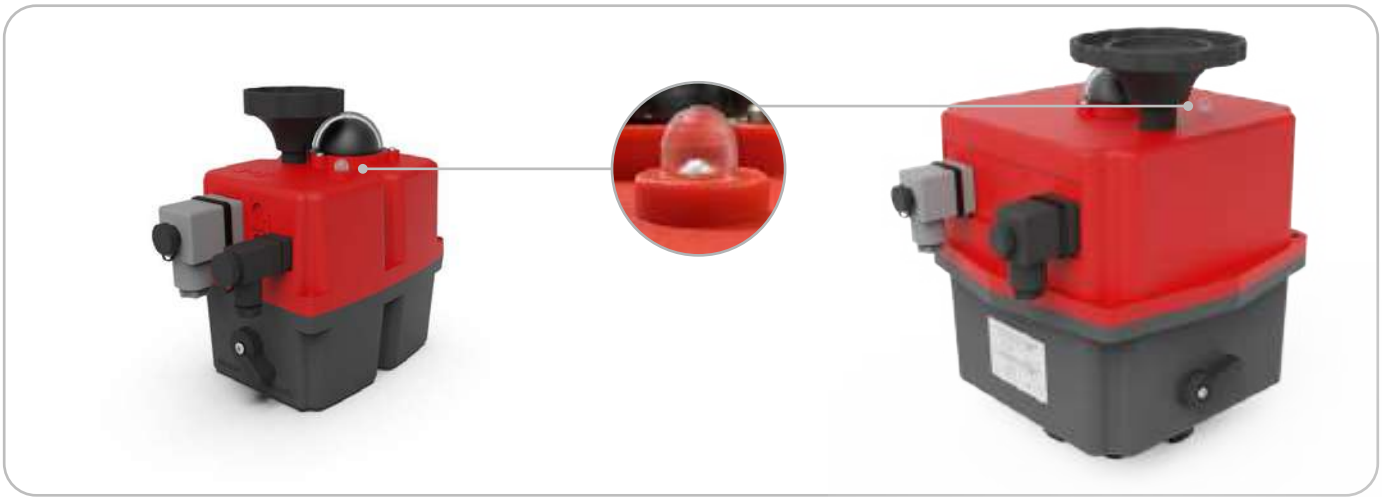
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ACTUATOR OPERATIONAL STATUS

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.

→ Index

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 supply	
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. Need a re-set.	
Actuator in MANUAL mode (Exceeded time).	
No Instrum. Signal pick-up. 4-20mA and 1-10V only.	

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04 DATASHEET

→ Index

J4C 20 - GENERAL CHARACTERISTICS



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

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

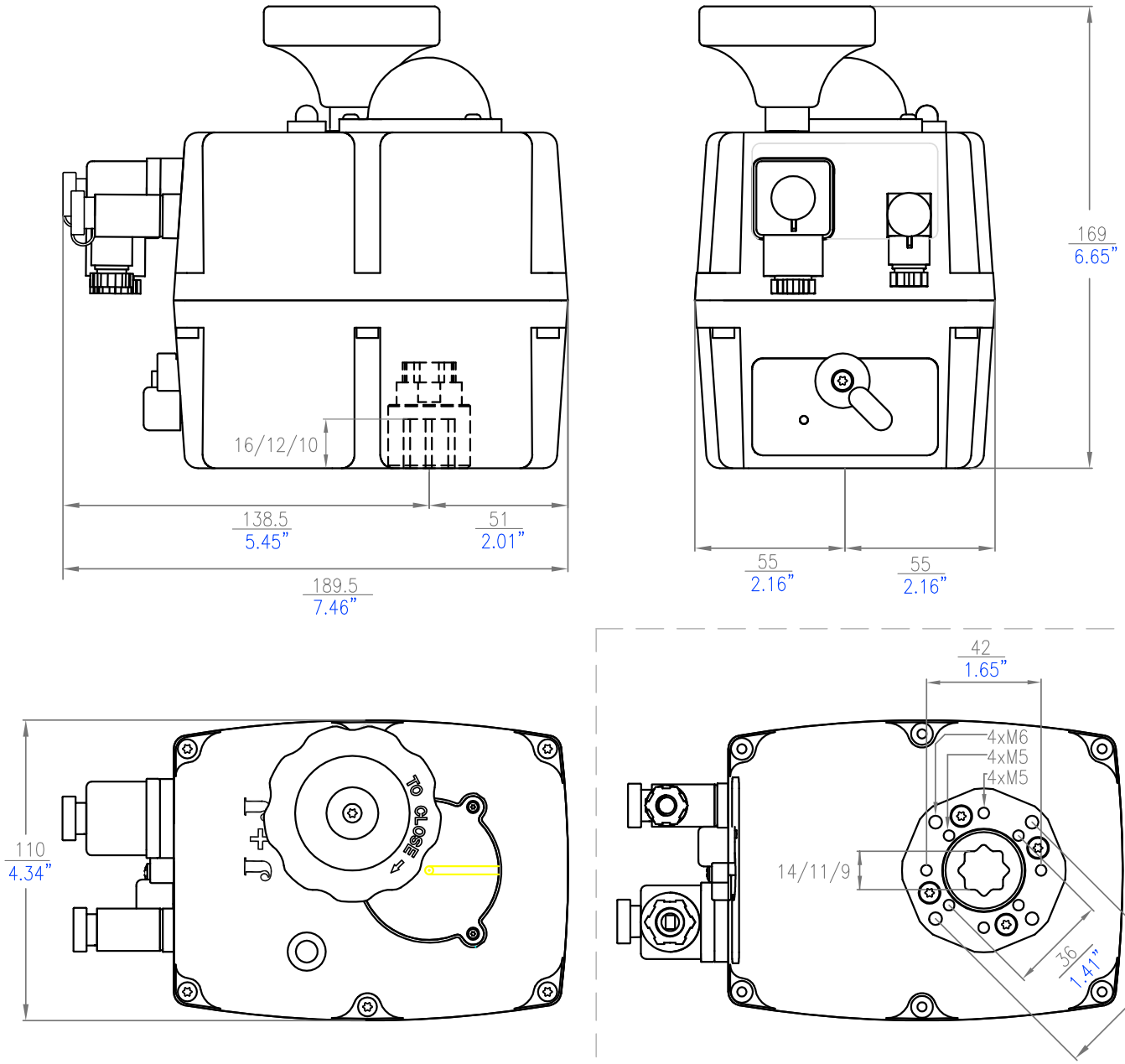
Voltage VDC/VAC 50/60Hz-0/+5%	
S20	24-240 VDC/VAC
B20	12 VDC/VAC ONLY

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

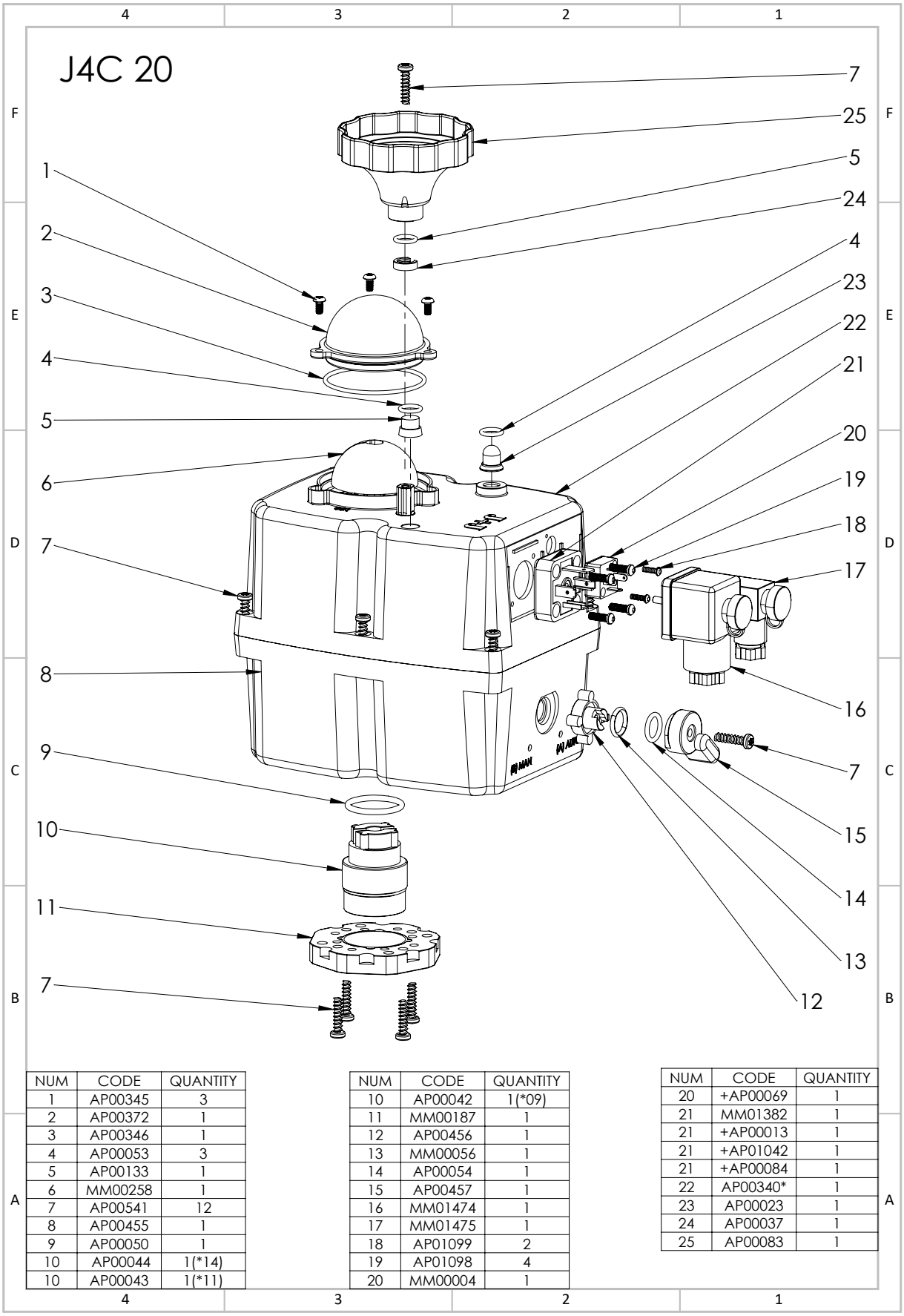
Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Zamak and Zinc plated	Zamak and TEFLON coated
Main external shaft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

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

J4C 20 SIZES


16/12/10
138.5
5.45”
51
2.01”
189.5
7.46”
169
6.65”
55
2.16”
55
2.16”
110
4.34”
TO CLOSE
42
1.65”
4xM6
4xM5
4xM5
14/11/9
36
1.41”
50
1.96”

EXPLODED VIEW

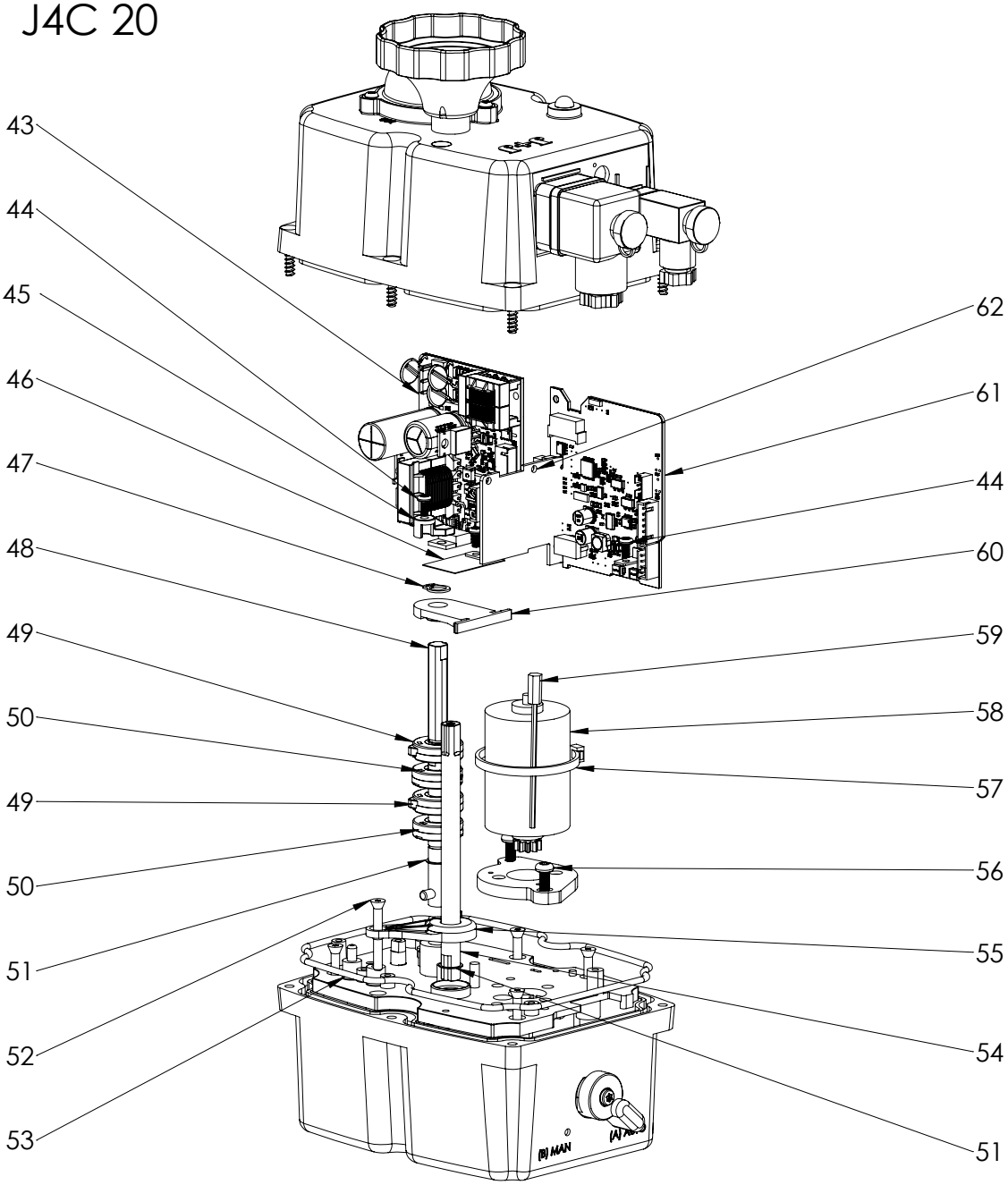


NUM	CODE	QUANTITY
1	AP00345	3
2	AP00372	1
3	AP00346	1
4	AP00053	3
5	AP00133	1
6	MM00258	1
7	AP00541	12
8	AP00455	1
9	AP00050	1
10	AP00044	1(*14)
10	AP00043	1(*11)

NUM	CODE	QUANTITY
10	AP00042	1(*09)
11	MM00187	1
12	AP00456	1
13	MM00056	1
14	AP00054	1
15	AP00457	1
16	MM01474	1
17	MM01475	1
18	AP01099	2
19	AP01098	4
20	MM00004	1

NUM	CODE	QUANTITY
20	+AP00069	1
21	MM01382	1
21	+AP00013	1
21	+AP01042	1
21	+AP00084	1
22	AP00340*	1
23	AP00023	1
24	AP00037	1
25	AP00083	1

EXPLODED VIEW

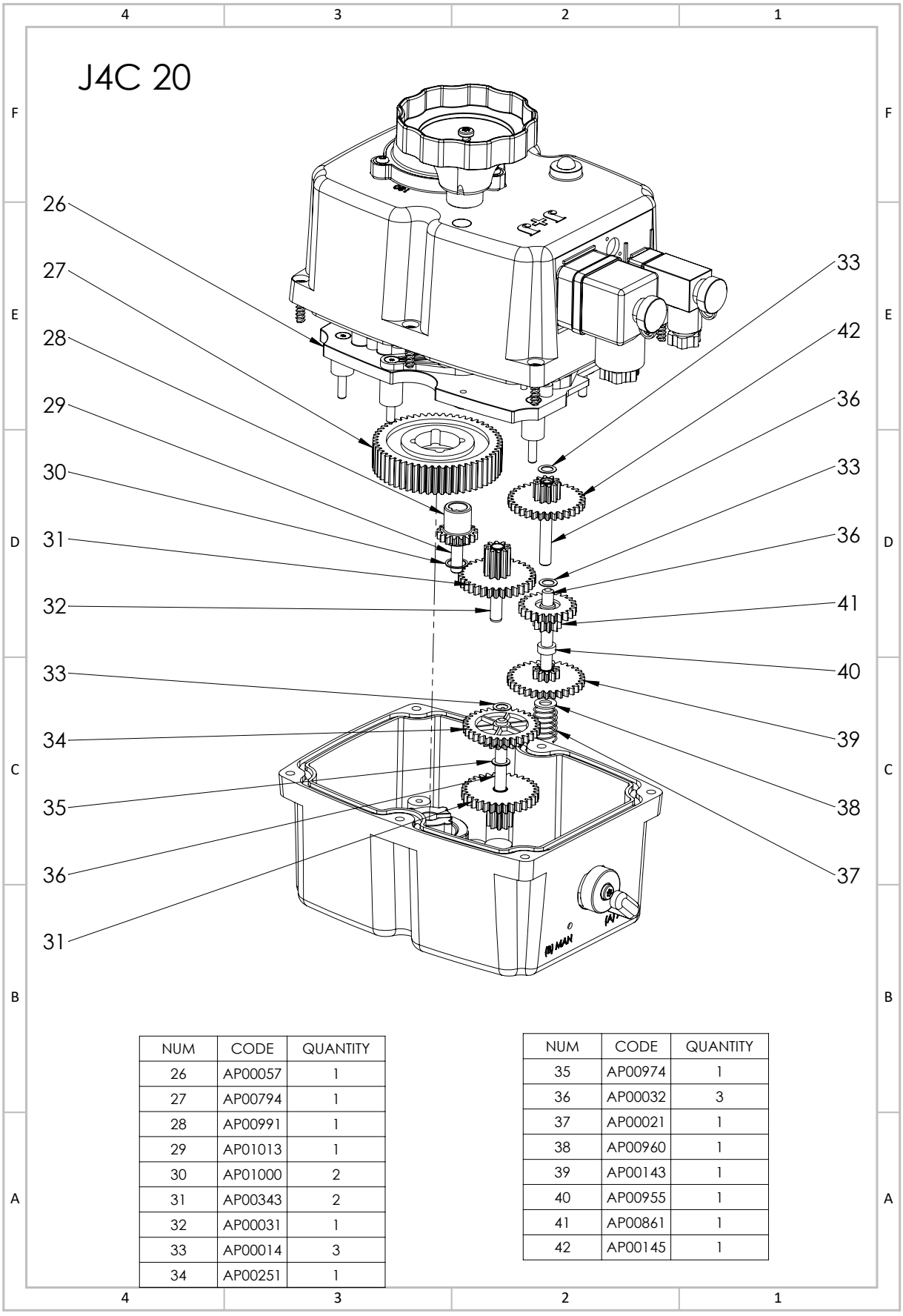


NUM	CODE	QUANTITY
43	AP00533	1 (S TYPE)
43	AP01059	1 (B TYPE)
44	AP00080	4
45	AP01047	1
46	AP01045	1
47	AP00159	1
48	AP00376	1
49	MM01211	2

NUM	CODE	QUANTITY
50	MM01210	2
51	AP01000	2
52	AP00070	6
53	AP00048	1
54	AP01015	1
55	AP01017	1
56	AP00911	2
57	AP00879	1

NUM	CODE	QUANTITY
58	AP01056	1
59	AP00926	1
60	AP00161	1
61	AP01066	1
62	MM01324	1

EXPLODED VIEW



NUM	CODE	QUANTITY
26	AP00057	1
27	AP00794	1
28	AP00991	1
29	AP01013	1
30	AP01000	2
31	AP00343	2
32	AP00031	1
33	AP00014	3
34	AP00251	1

NUM	CODE	QUANTITY
35	AP00974	1
36	AP00032	3
37	AP00021	1
38	AP00960	1
39	AP00143	1
40	AP00955	1
41	AP00861	1
42	AP00145	1

J4C 35 - GENERAL CHARACTERISTICS



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

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

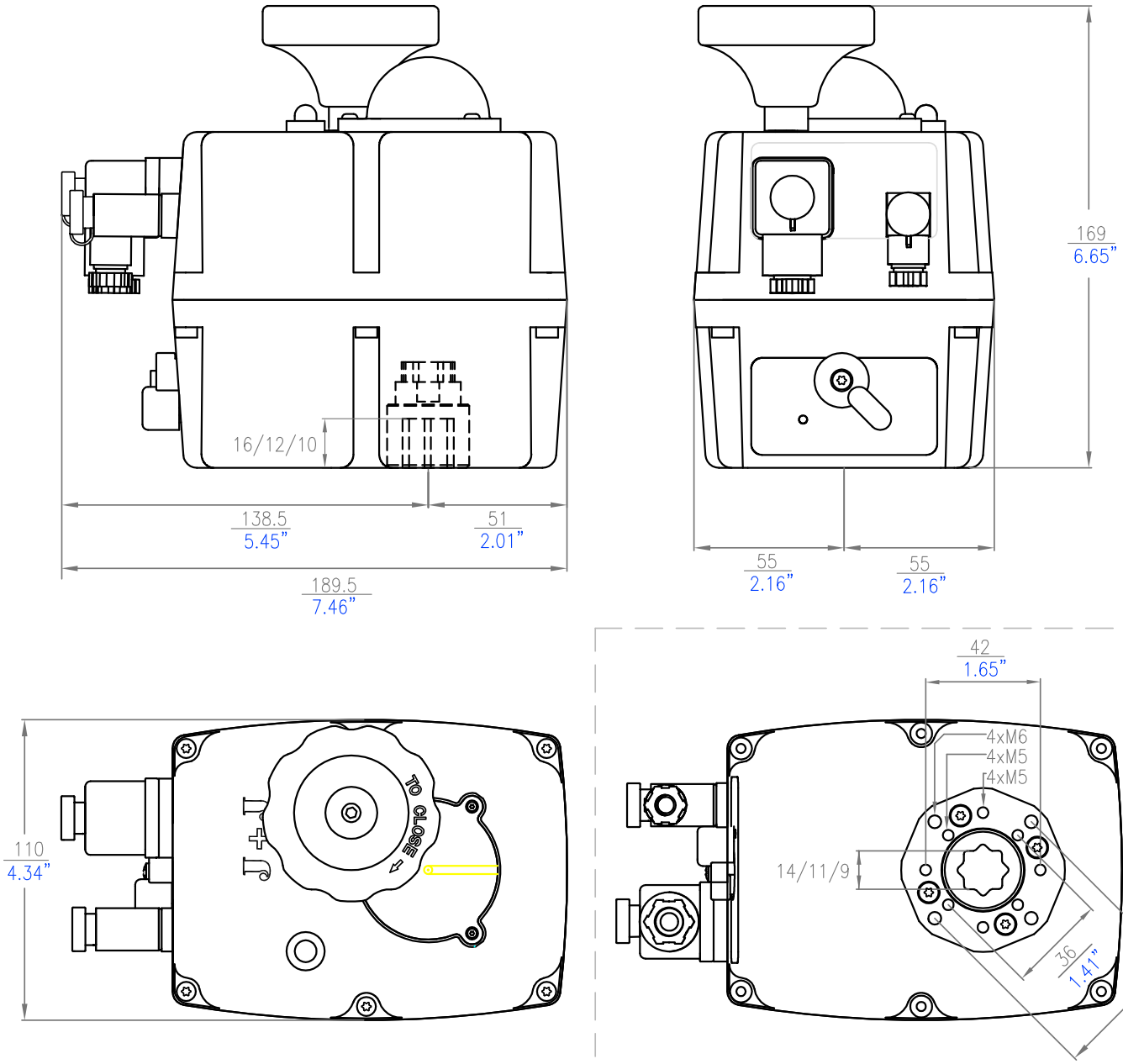
Voltage VDC/VAC 50/60Hz-0/+5%	
S35	24-240 VDC/VAC
B35	12 VDC/VAC ONLY

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

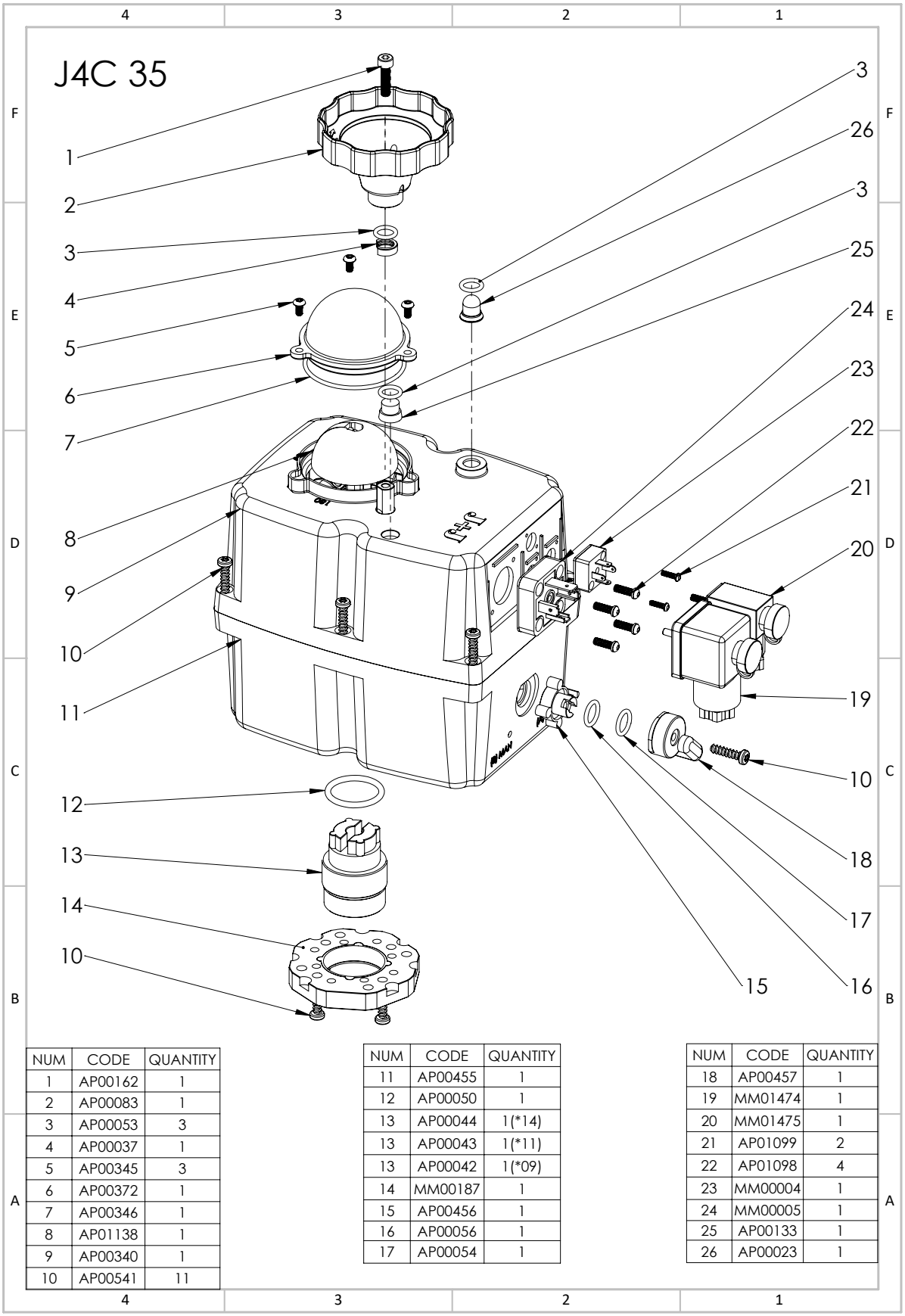
Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Zamak and Zinc plated	Zamak and TEFLON coated
Main external shaft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

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

J4C 35 SIZES


16/12/10
138.5
5.45”
51
2.01”
189.5
7.46”
169
6.65”
55
2.16”
55
2.16”
110
4.34”
TO CLOSE
42
1.65”
4xM6
4xM5
4xM5
14/11/9
36
1.41”
50
1.96”

EXPLODED VIEW

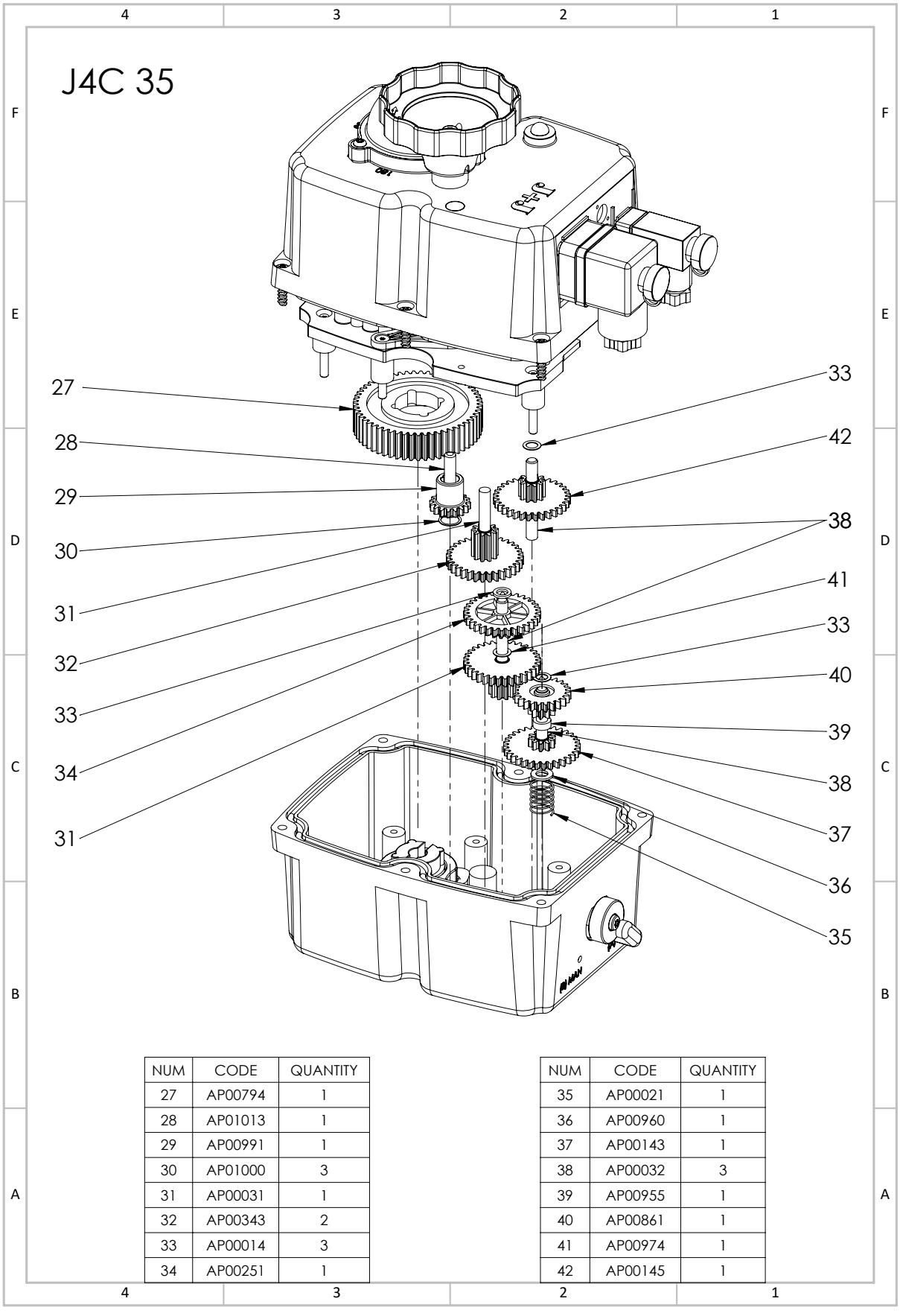


NUM	CODE	QUANTITY
1	AP00162	1
2	AP00083	1
3	AP00053	3
4	AP00037	1
5	AP00345	3
6	AP00372	1
7	AP00346	1
8	AP01138	1
9	AP00340	1
10	AP00541	11

NUM	CODE	QUANTITY
11	AP00455	1
12	AP00050	1
13	AP00044	1(*14)
13	AP00043	1(*11)
13	AP00042	1(*09)
14	MM00187	1
15	AP00456	1
16	AP00056	1
17	AP00054	1

NUM	CODE	QUANTITY
18	AP00457	1
19	MM01474	1
20	MM01475	1
21	AP01099	2
22	AP01098	4
23	MM00004	1
24	MM00005	1
25	AP00133	1
26	AP00023	1

EXPLODED VIEW

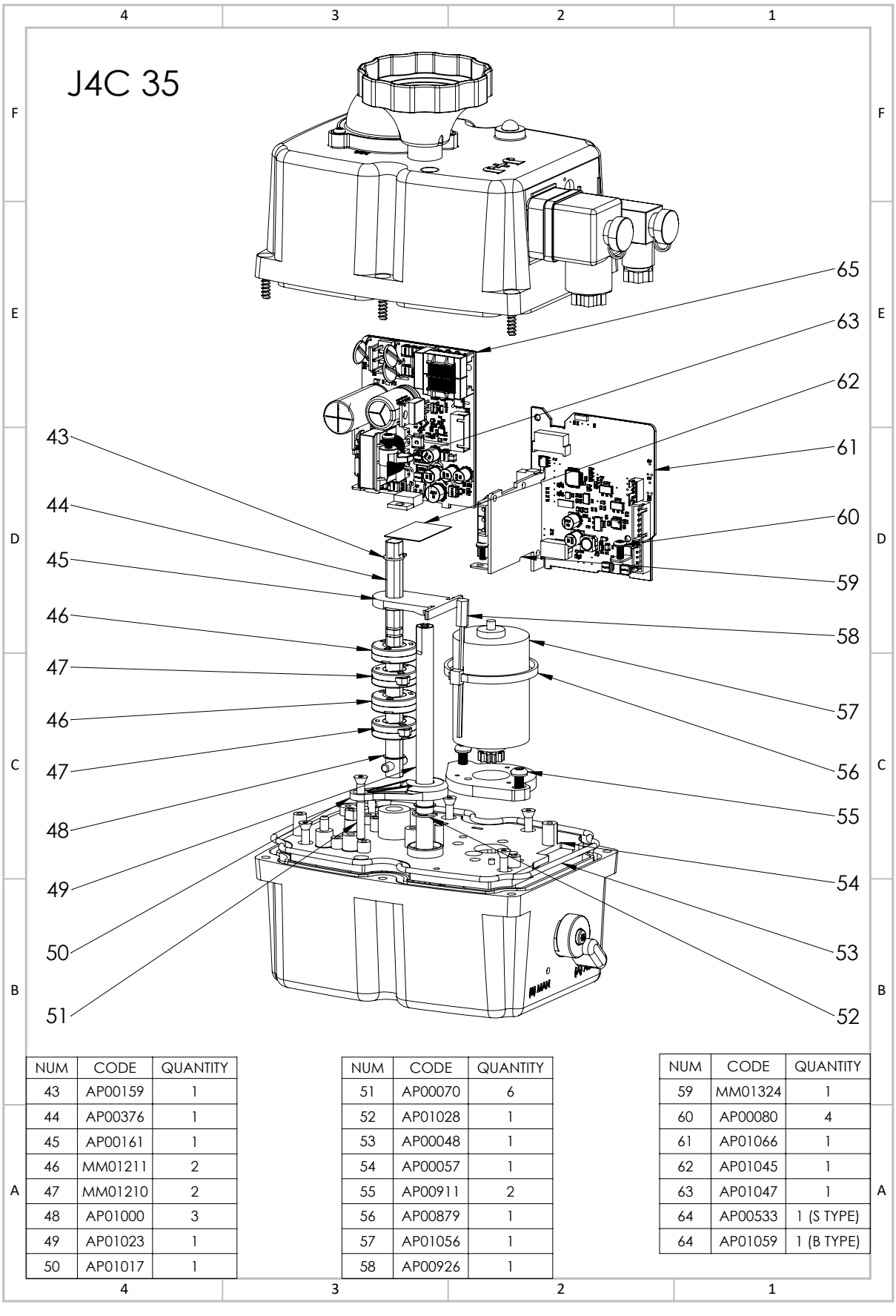


NUM	CODE	QUANTITY
27	AP00794	1
28	AP01013	1
29	AP00991	1
30	AP01000	3
31	AP00031	1
32	AP00343	2
33	AP00014	3
34	AP00251	1

NUM	CODE	QUANTITY
35	AP00021	1
36	AP00960	1
37	AP00143	1
38	AP00032	3
39	AP00955	1
40	AP00861	1
41	AP00974	1
42	AP00145	1

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EXPLODED VIEW



NUM	CODE	QUANTITY
43	AP00159	1
44	AP00376	1
45	AP00161	1
46	MM01211	2
47	MM01210	2
48	AP01000	3
49	AP01023	1
50	AP01017	1

NUM	CODE	QUANTITY
51	AP00070	6
52	AP01028	1
53	AP00048	1
54	AP00057	1
55	AP00911	2
56	AP00879	1
57	AP01056	1
58	AP00926	1

NUM	CODE	QUANTITY
59	MM01324	1
60	AP00080	4
61	AP01066	1
62	AP01045	1
63	AP01047	1
64	AP00533	1 (S TYPE)
64	AP01059	1 (B TYPE)

J4C 55 - GENERAL CHARACTERISTICS



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

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

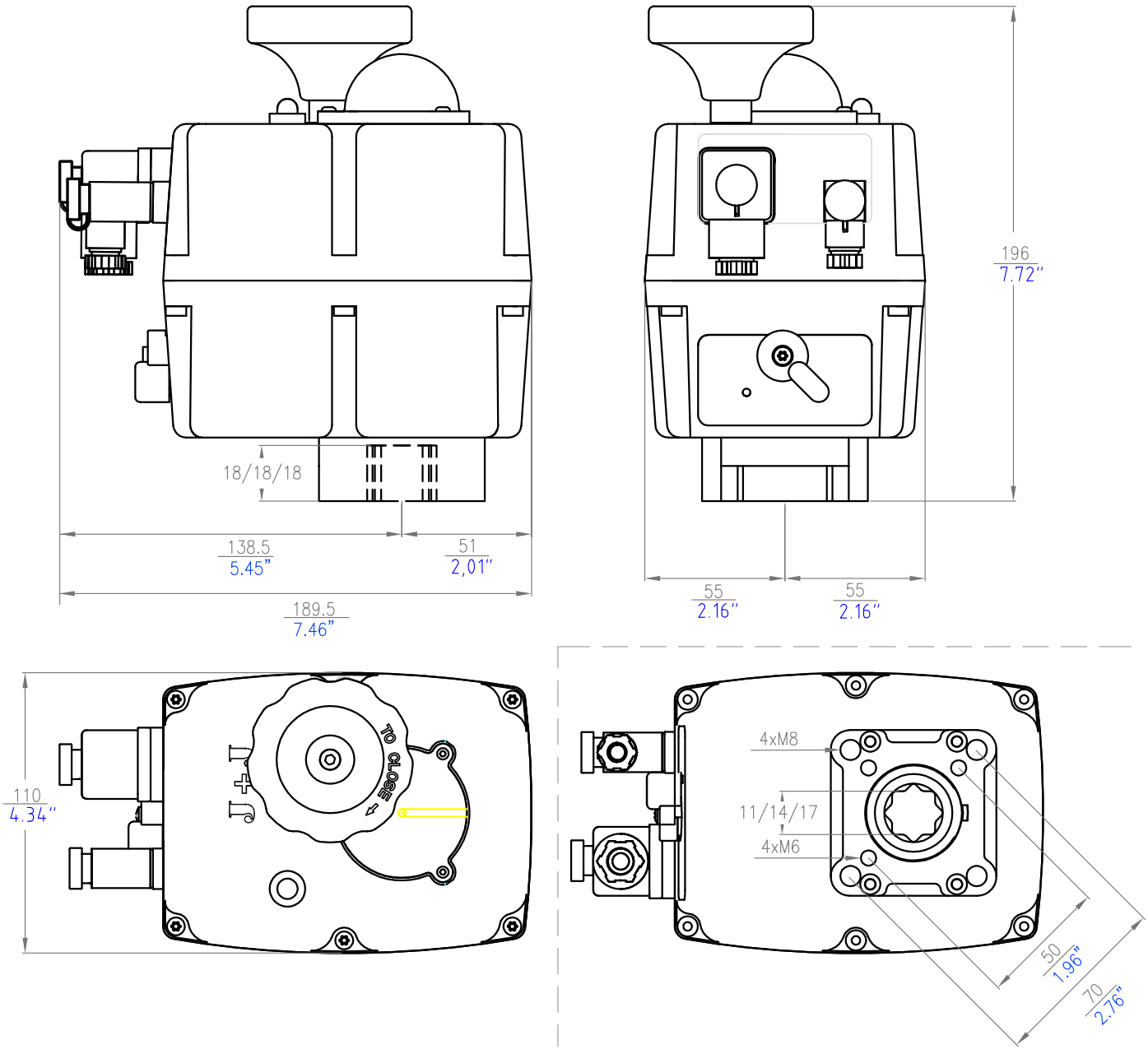
Voltage VDC/VAC 50/60Hz-0/+5%	
S55	24-240 VDC/VAC
B55	12 VDC/VAC ONLY

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

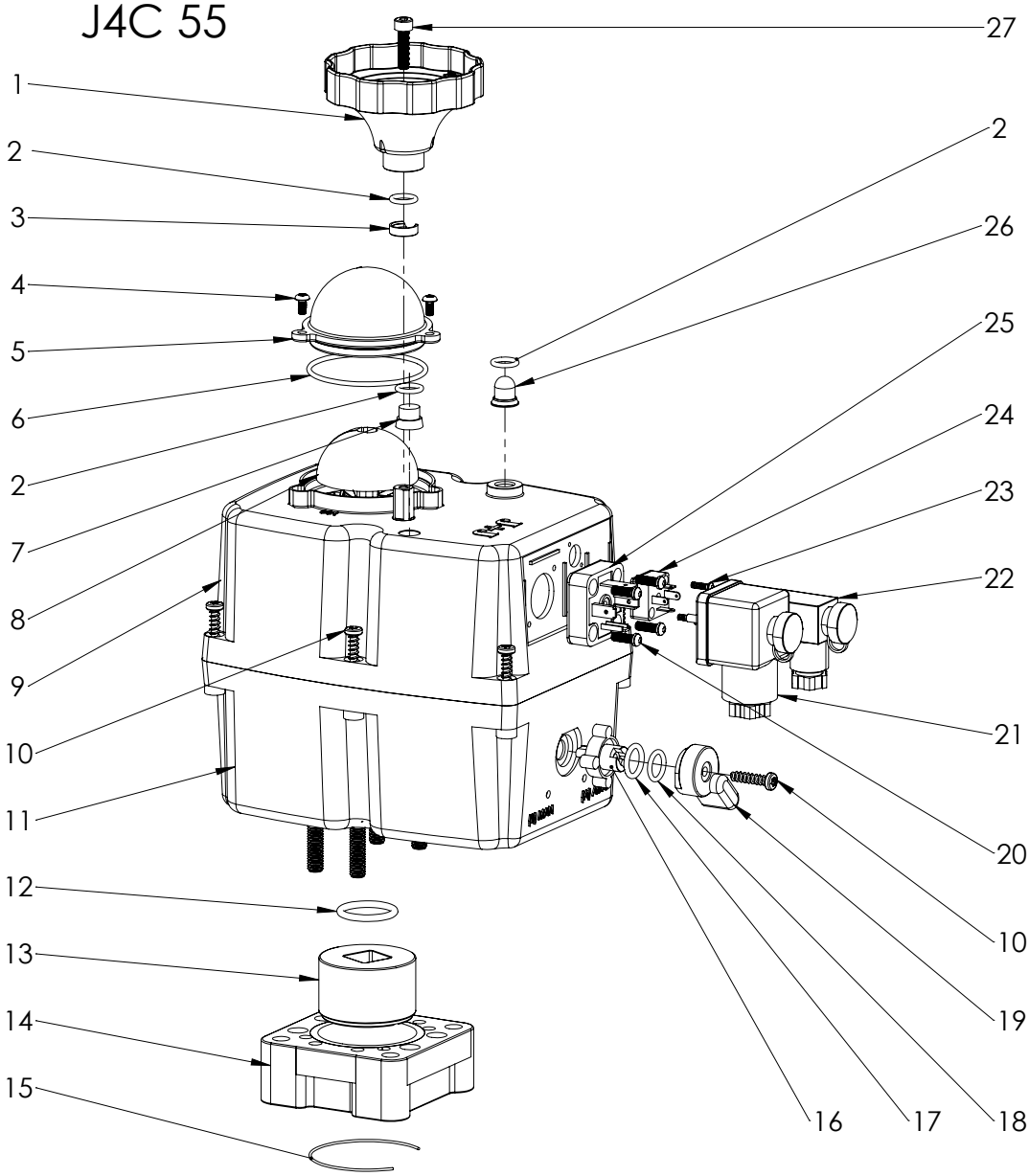
Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Aluminum and Cataphoresis	Aluminum and TEFLON coated
Main external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

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

J4C 55 SIZES


18/18/18
138.5
5.45"
51
2,01"
189.5
7.46"
196
7.72"
55
2.16"
55
2.16"
110
4.34"
TO CLOSE
4xM8
11/14/17
4xM6
50
1.96"
70
2.76"

EXPLODED VIEW

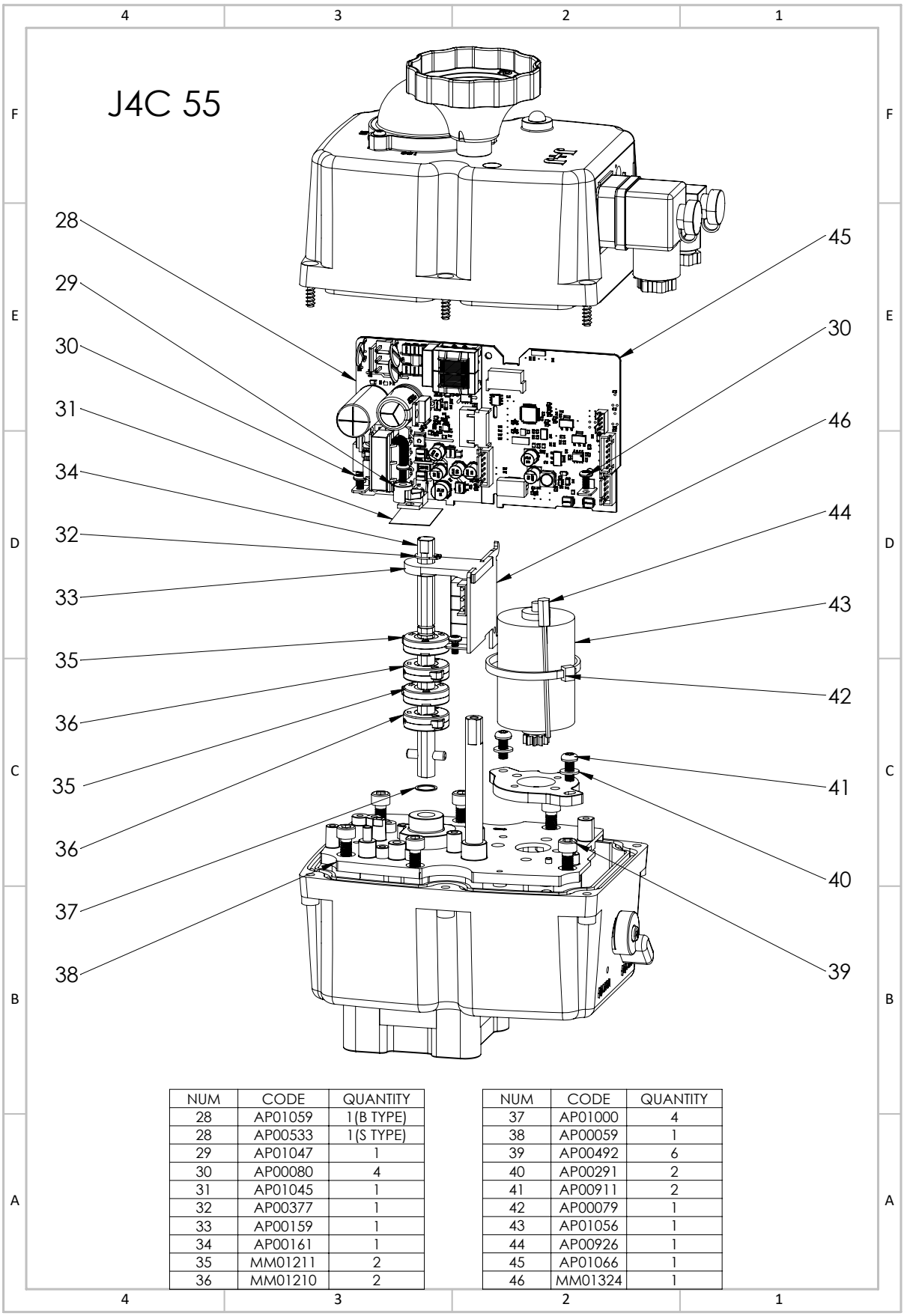


NUM	CODE	QUANTITY
1	AP00083	1
2	AP00053	3
3	AP00037	1
4	AP00345	3
5	AP00372	1
6	AP00346	1
7	AP00133	1
8	MM00258	1
9	AP00340*	1
10	AP00541	7
11	AP00036	1

NUM	CODE	QUANTITY
12	AP00049	1
13	AP00046	1 (*17)
13	AP00150	1 (*11)
13	AP00045	1 (*14)
14	MM00140	1
15	AP00016	1
16	AP00110	1
17	AP00056	1
18	AP00054	1
19	AP00457	1
20	AP01098	4

NUM	CODE	QUANTITY
21	MM01474	1
22	MM01475	1
23	AP01099	2
24	MM00004	1
24	+AP00069	1
25	MM01382	1
25	+AP00013	1
25	+AP01042	1
25	+AP00084	1
26	AP00023	1
27	AP00162	1

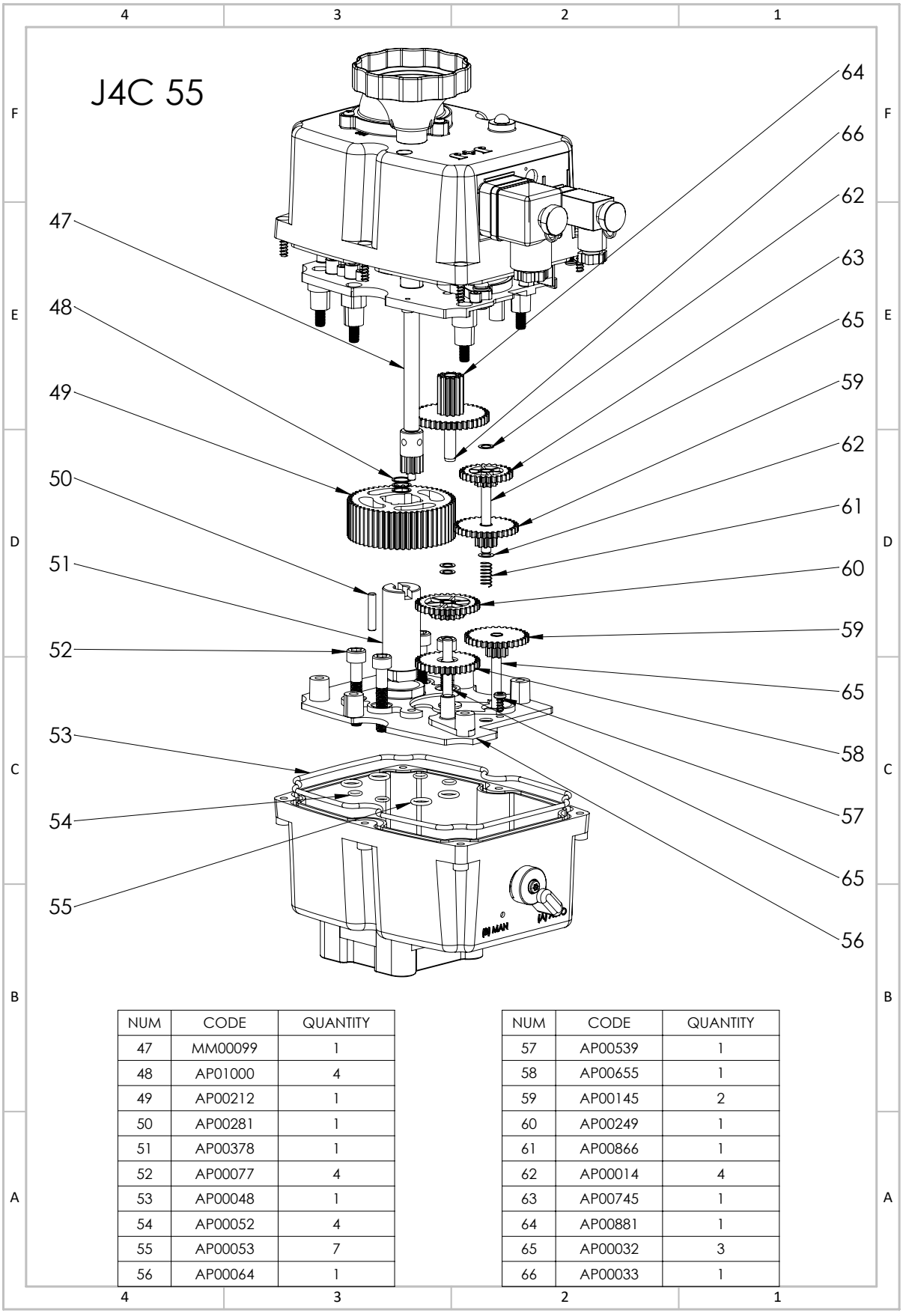
EXPLODED VIEW



NUM	CODE	QUANTITY
28	AP01059	1(B TYPE)
28	AP00533	1(S TYPE)
29	AP01047	1
30	AP00080	4
31	AP01045	1
32	AP00377	1
33	AP00159	1
34	AP00161	1
35	MM01211	2
36	MM01210	2

NUM	CODE	QUANTITY
37	AP01000	4
38	AP00059	1
39	AP00492	6
40	AP00291	2
41	AP00911	2
42	AP00079	1
43	AP01056	1
44	AP00926	1
45	AP01066	1
46	MM01324	1

EXPLODED VIEW



NUM	CODE	QUANTITY
47	MM00099	1
48	AP01000	4
49	AP00212	1
50	AP00281	1
51	AP00378	1
52	AP00077	4
53	AP00048	1
54	AP00052	4
55	AP00053	7
56	AP00064	1

NUM	CODE	QUANTITY
57	AP00539	1
58	AP00655	1
59	AP00145	2
60	AP00249	1
61	AP00866	1
62	AP00014	4
63	AP00745	1
64	AP00881	1
65	AP00032	3
66	AP00033	1

J4C 85 - GENERAL CHARACTERISTICS



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

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

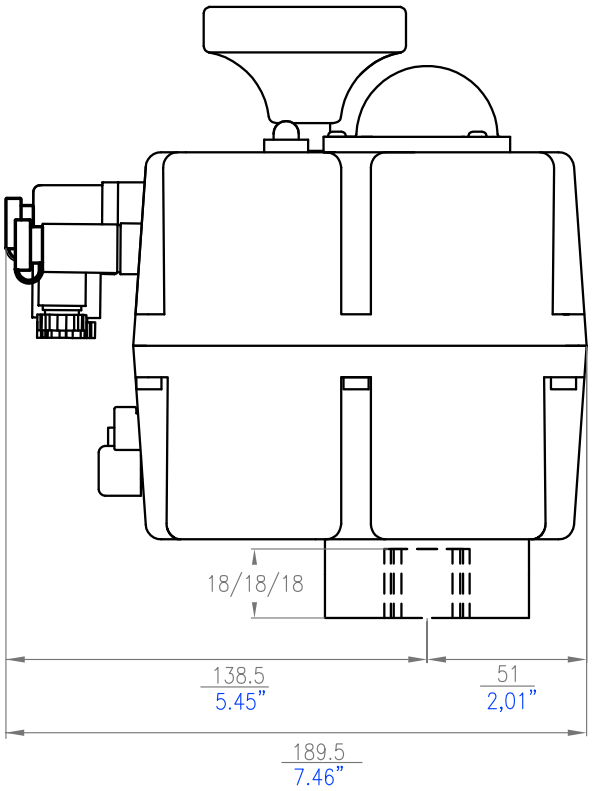
Voltage VDC/VAC 50/60Hz-0/+5%	
S85	24-240 VDC/VAC
B85	12 VDC/VAC ONLY

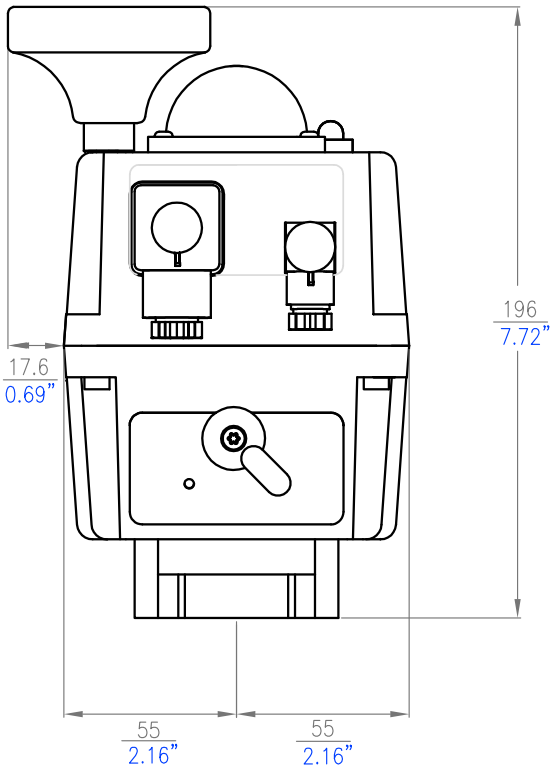
Options	
J4C 20/85 DPS KIT digital positioner	4-20mA, 0-20mA, 0-10V or 1-10V
J4C 20/85 BSR KIT emergency fail safe kit system by battery	NC - NO
Potentiometer	1K, 5K or 10K
3 position actuator	0º-45º-90º or 0º-90º-180º

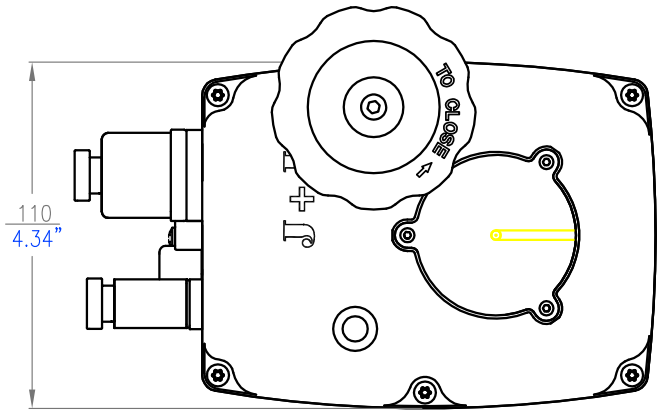
Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Aluminum and Cataphoresis	Aluminum and TEFLON coated
Main external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

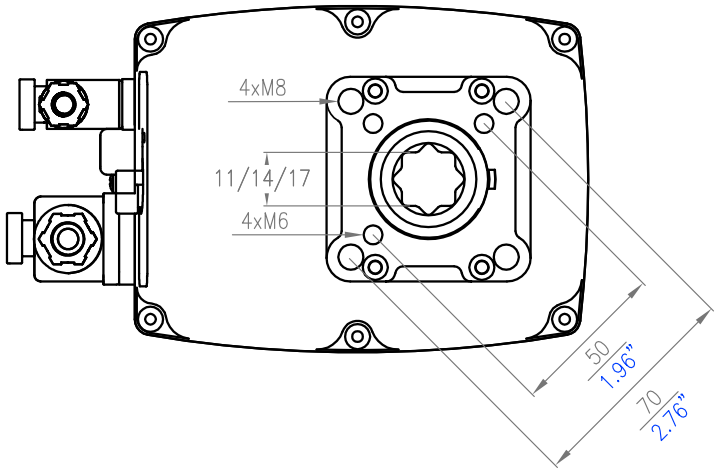
Note: Technical data are the same despite the different casings.

J4C 85 SIZES

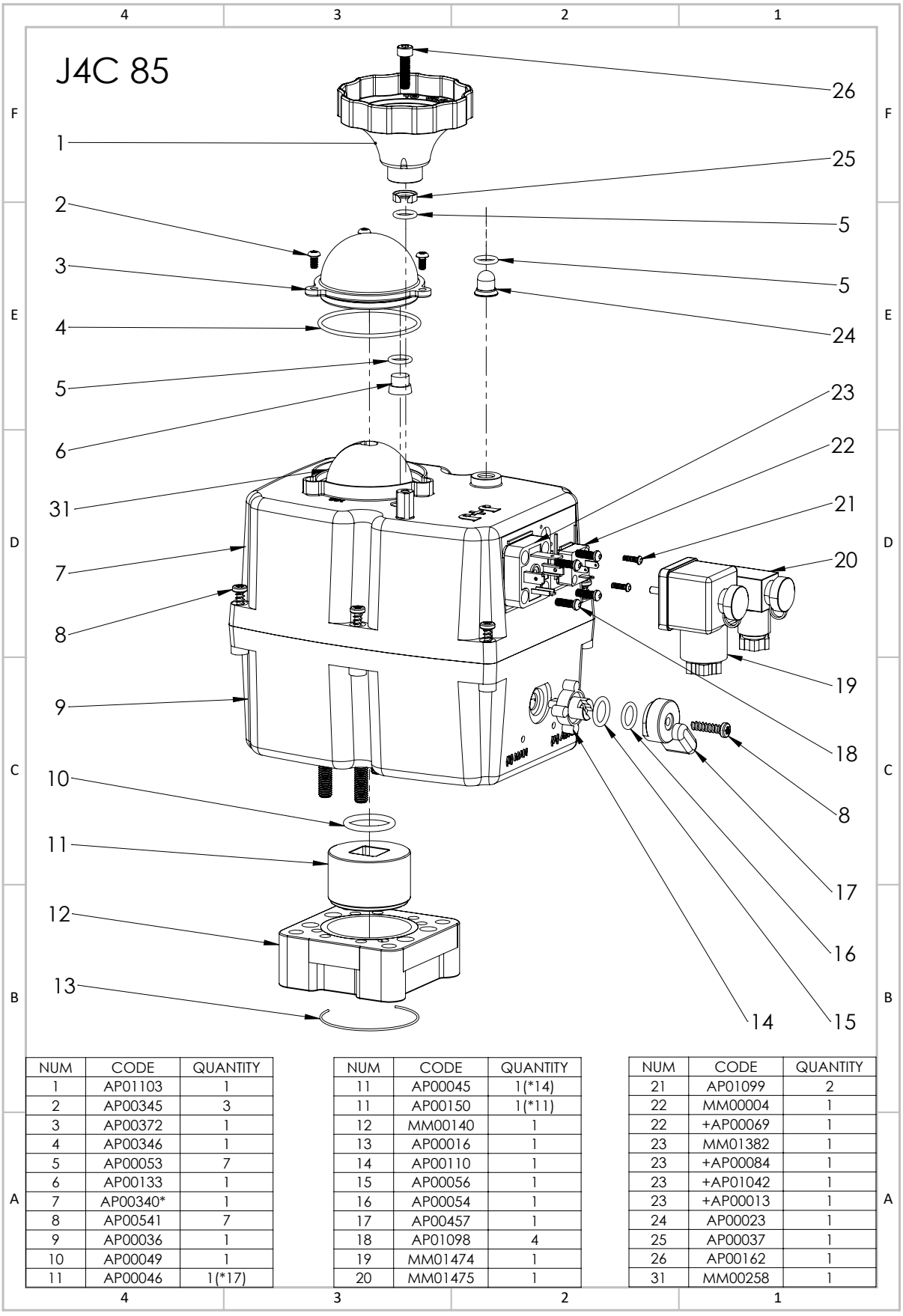

18/18/18
138.5
5.45”
51
2,01”
189.5
7.46”


17.6
0.69”
196
7.72”
55
2.16”
55
2.16”


TO CLOSE
110
4.34”


4xM8
11/14/17
4xM6
50
1.96”
70
2.76”

EXPLODED VIEW

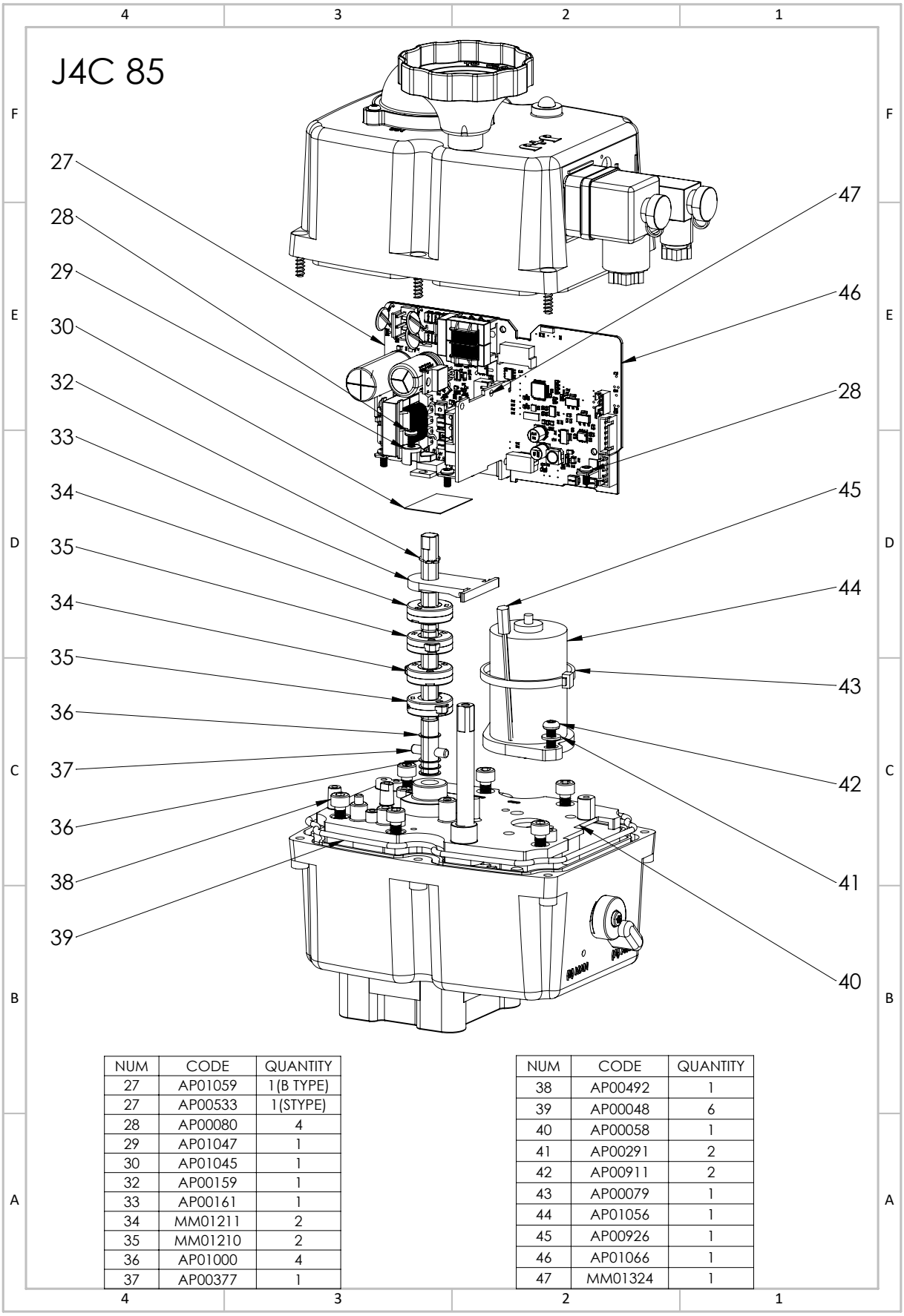


NUM	CODE	QUANTITY
1	AP01103	1
2	AP00345	3
3	AP00372	1
4	AP00346	1
5	AP00053	7
6	AP00133	1
7	AP00340*	1
8	AP00541	7
9	AP00036	1
10	AP00049	1
11	AP00046	1(*17)

NUM	CODE	QUANTITY
11	AP00045	1(*14)
11	AP00150	1(*11)
12	MM00140	1
13	AP00016	1
14	AP00110	1
15	AP00056	1
16	AP00054	1
17	AP00457	1
18	AP01098	4
19	MM01474	1
20	MM01475	1

NUM	CODE	QUANTITY
21	AP01099	2
22	MM00004	1
22	+AP00069	1
23	MM01382	1
23	+AP00084	1
23	+AP01042	1
23	+AP00013	1
24	AP00023	1
25	AP00037	1
26	AP00162	1
31	MM00258	1

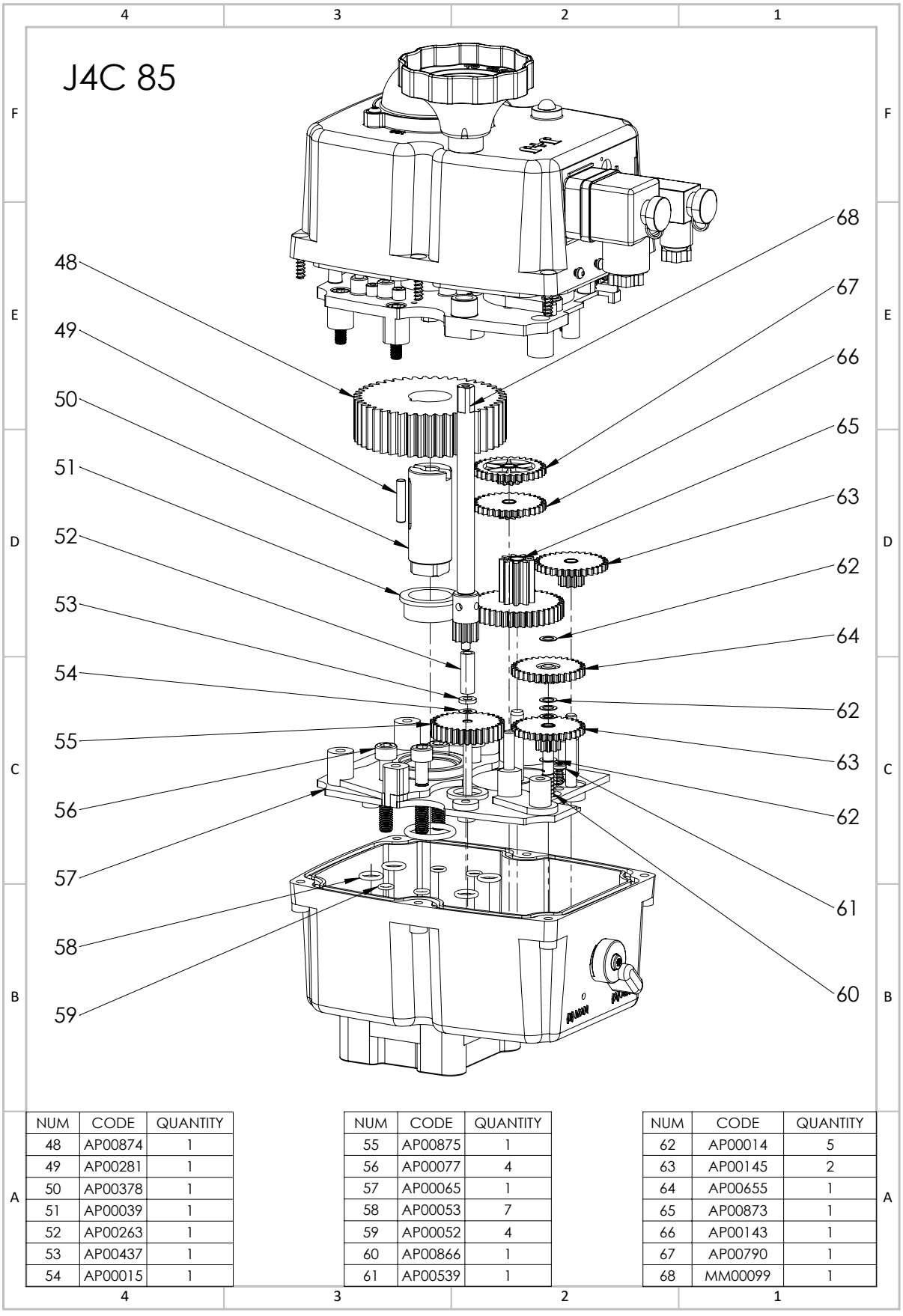
EXPLODED VIEW



NUM	CODE	QUANTITY
27	AP01059	1 (B TYPE)
27	AP00533	1 (STYPE)
28	AP00080	4
29	AP01047	1
30	AP01045	1
32	AP00159	1
33	AP00161	1
34	MM01211	2
35	MM01210	2
36	AP01000	4
37	AP00377	1

NUM	CODE	QUANTITY
38	AP00492	1
39	AP00048	6
40	AP00058	1
41	AP00291	2
42	AP00911	2
43	AP00079	1
44	AP01056	1
45	AP00926	1
46	AP01066	1
47	MM01324	1

EXPLODED VIEW



NUM	CODE	QUANTITY
48	AP00874	1
49	AP00281	1
50	AP00378	1
51	AP00039	1
52	AP00263	1
53	AP00437	1
54	AP00015	1

NUM	CODE	QUANTITY
55	AP00875	1
56	AP00077	4
57	AP00065	1
58	AP00053	7
59	AP00052	4
60	AP00866	1
61	AP00539	1

NUM	CODE	QUANTITY
62	AP00014	5
63	AP00145	2
64	AP00655	1
65	AP00873	1
66	AP00143	1
67	AP00790	1
68	MM00099	1

J4C 140 - GENERAL CHARACTERISTICS



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

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

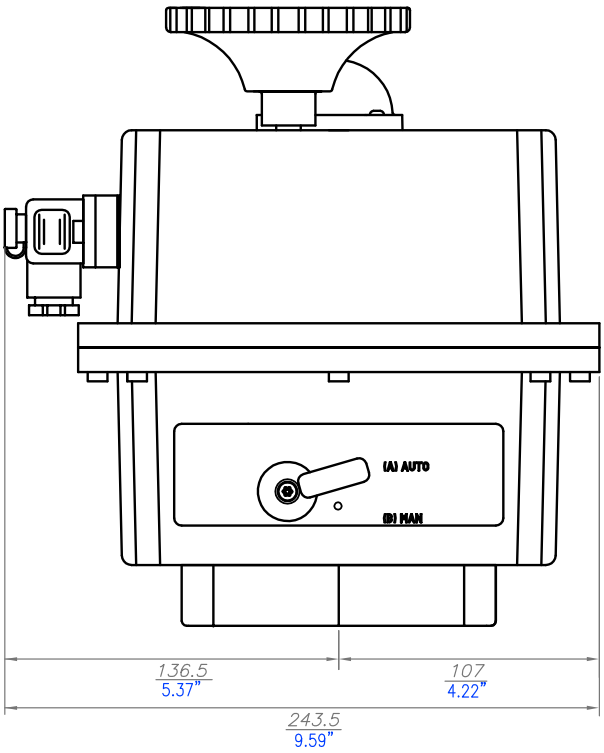
Voltage VDC/VAC 50/60Hz-0/+5%	
S140	24-240 VDC/VAC
B140	12 VDC/VAC ONLY

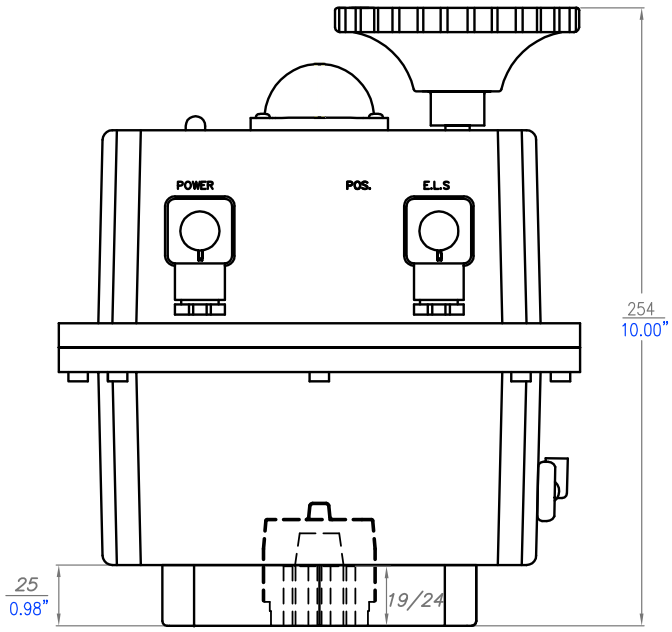
Options	
J4C 140/300 DPS KIT digital positioner	4-20mA, 0-20mA, 0-10V or 1-10V
J4C 140/300 BSR KIT emergency fail safe kit system by battery	NC - NO
Potentiometer	1K, 5K or 10K
3 position actuator	0º-45º-90º or 0º-90º-180º

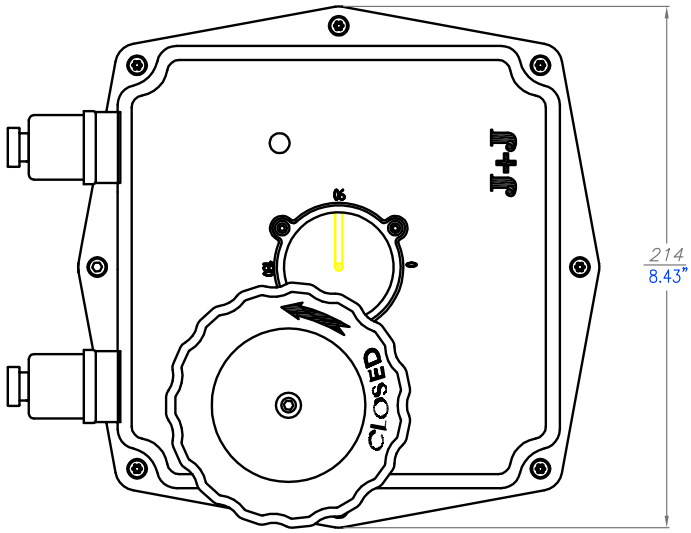
Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Aluminum and Cataphoresis	Aluminum and TEFLON coated
Main external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

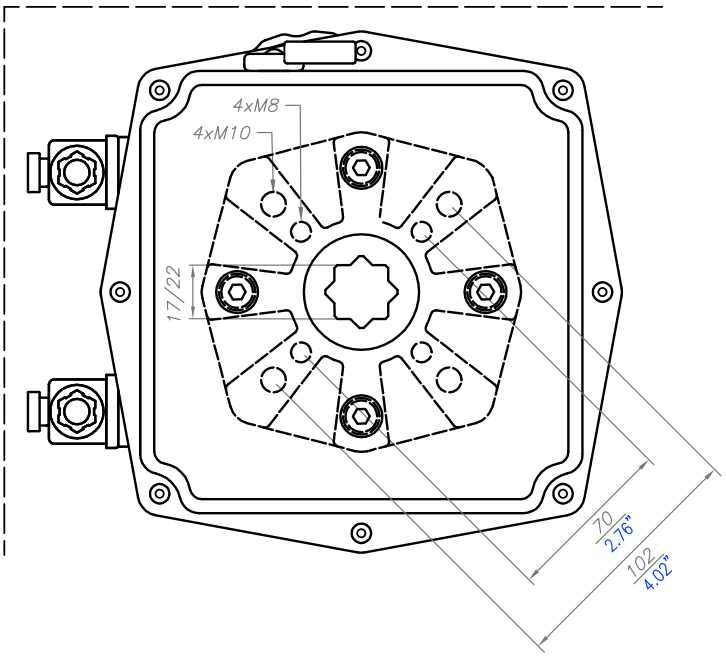
Note: Technical data are the same despite the different casings.

J4C 140 SIZES

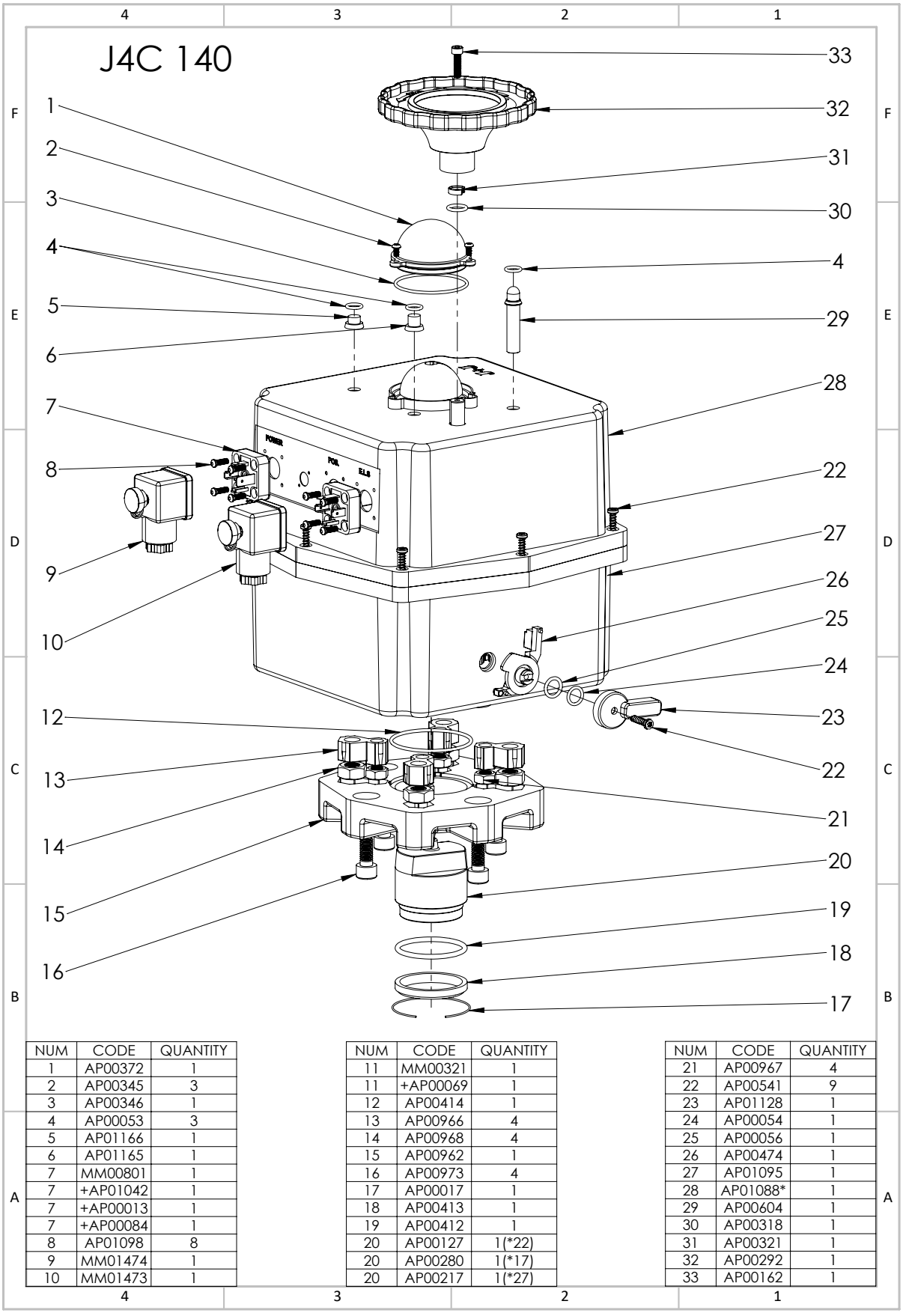








EXPLODED VIEW

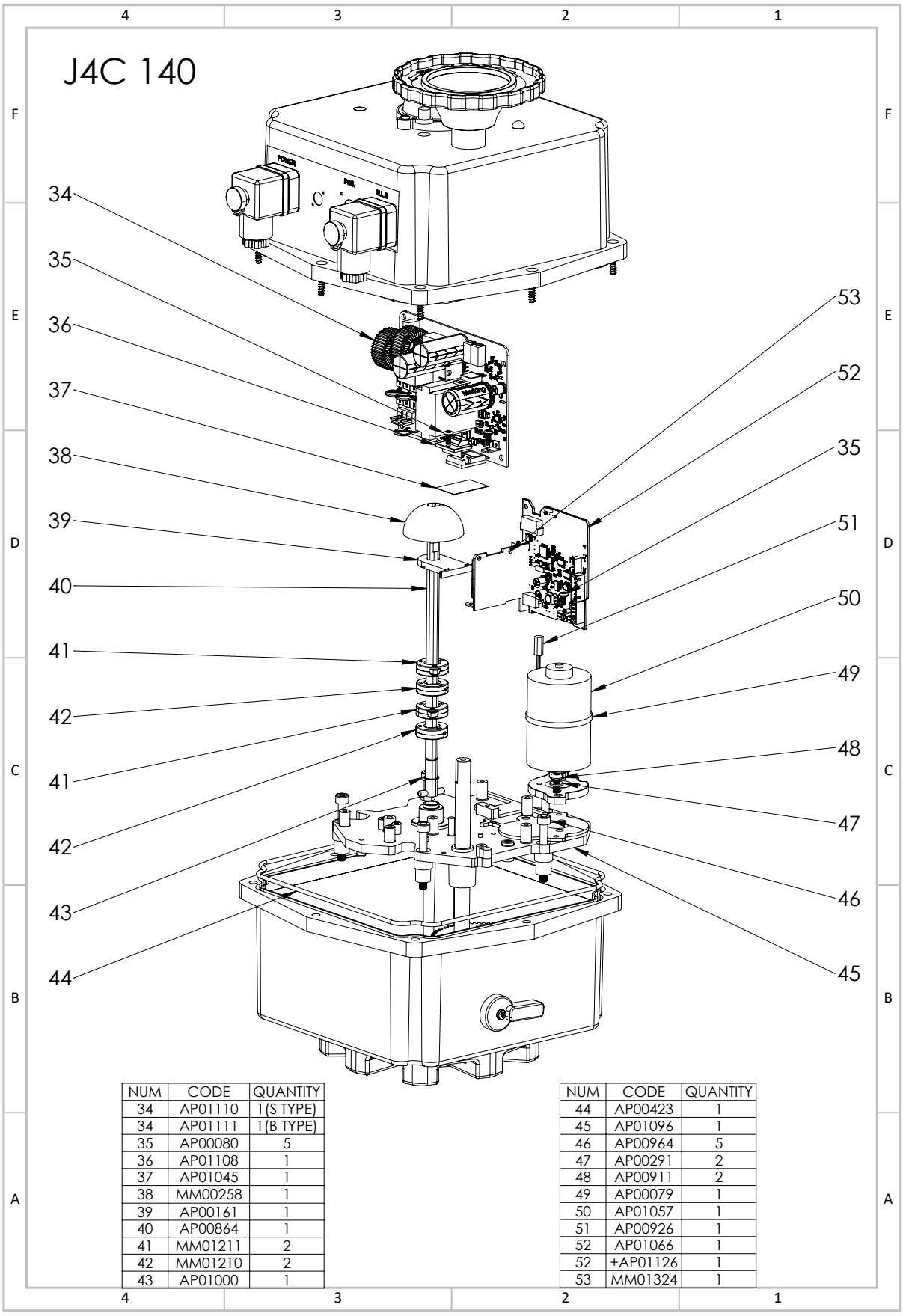


NUM	CODE	QUANTITY
1	AP00372	1
2	AP00345	3
3	AP00346	1
4	AP00053	3
5	AP01166	1
6	AP01165	1
7	MM00801	1
7	+AP01042	1
7	+AP00013	1
7	+AP00084	1
8	AP01098	8
9	MM01474	1
10	MM01473	1

NUM	CODE	QUANTITY
11	MM00321	1
11	+AP00069	1
12	AP00414	1
13	AP00966	4
14	AP00968	4
15	AP00962	1
16	AP00973	4
17	AP00017	1
18	AP00413	1
19	AP00412	1
20	AP00127	1(*22)
20	AP00280	1(*17)
20	AP00217	1(*27)

NUM	CODE	QUANTITY
21	AP00967	4
22	AP00541	9
23	AP01128	1
24	AP00054	1
25	AP00056	1
26	AP00474	1
27	AP01095	1
28	AP01088*	1
29	AP00604	1
30	AP00318	1
31	AP00321	1
32	AP00292	1
33	AP00162	1

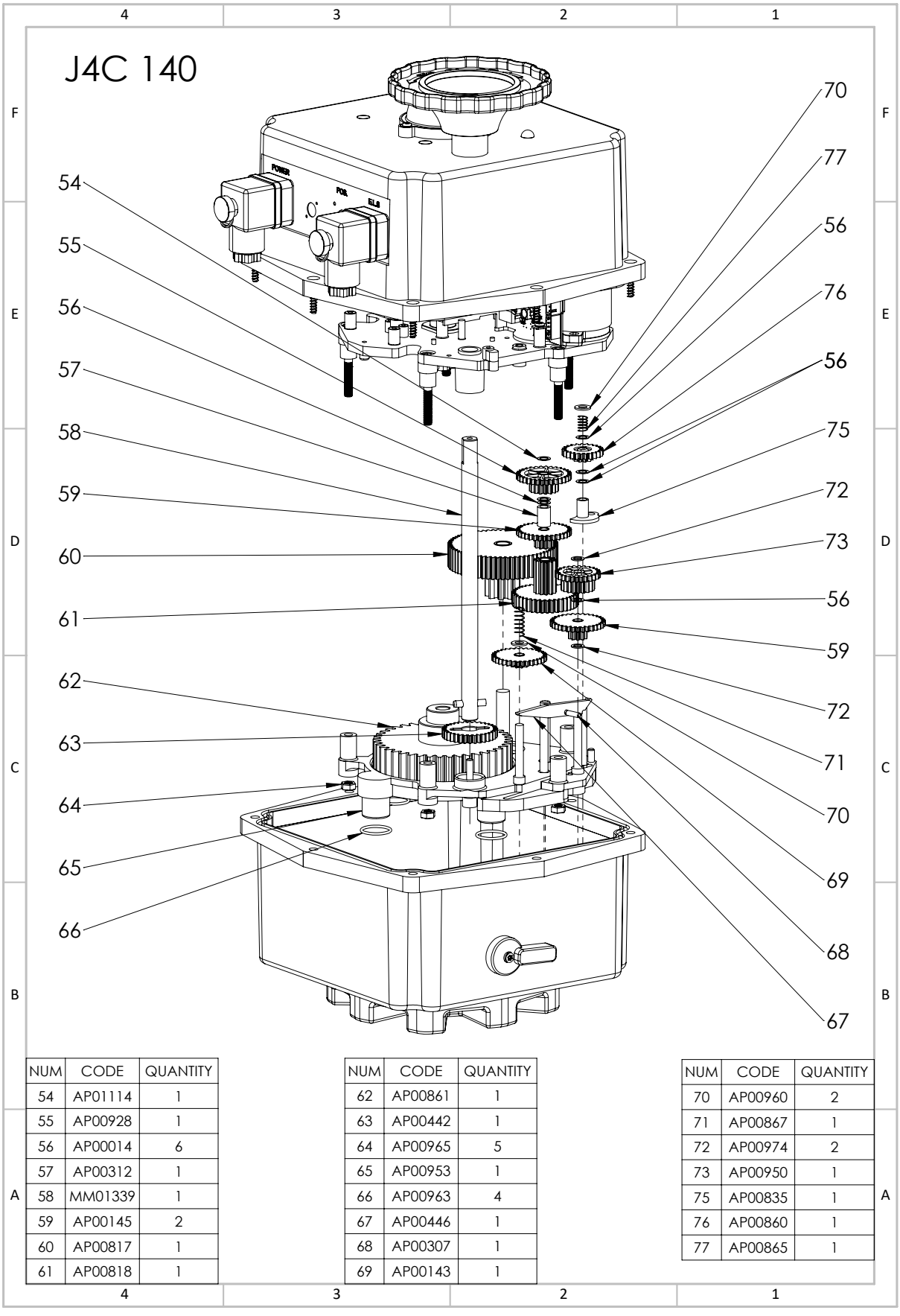
EXPLODED VIEW



NUM	CODE	QUANTITY
34	AP01110	1(S TYPE)
34	AP01111	1(B TYPE)
35	AP00080	5
36	AP01108	1
37	AP01045	1
38	MM00258	1
39	AP00161	1
40	AP00864	1
41	MM01211	2
42	MM01210	2
43	AP01000	1

NUM	CODE	QUANTITY
44	AP00423	1
45	AP01096	1
46	AP00964	5
47	AP00291	2
48	AP00911	2
49	AP00079	1
50	AP01057	1
51	AP00926	1
52	AP01066	1
52	+AP01126	1
53	MM01324	1

EXPLODED VIEW



NUM	CODE	QUANTITY
54	AP01114	1
55	AP00928	1
56	AP00014	6
57	AP00312	1
58	MM01339	1
59	AP00145	2
60	AP00817	1
61	AP00818	1

NUM	CODE	QUANTITY
62	AP00861	1
63	AP00442	1
64	AP00965	5
65	AP00953	1
66	AP00963	4
67	AP00446	1
68	AP00307	1
69	AP00143	1

NUM	CODE	QUANTITY
70	AP00960	2
71	AP00867	1
72	AP00974	2
73	AP00950	1
75	AP00835	1
76	AP00860	1
77	AP00865	1

→ Index

J4C 300 - GENERAL CHARACTERISTICS



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

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

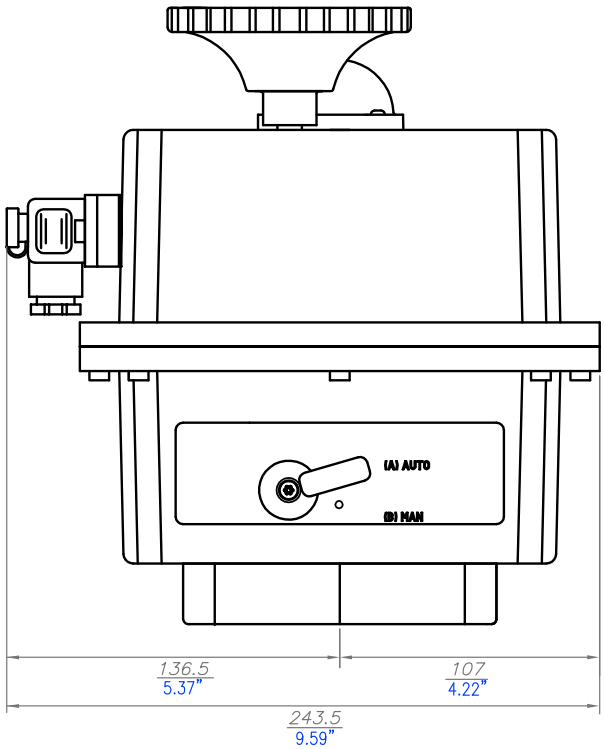
Voltage VDC/VAC 50/60Hz-0/+5%	
S300	24-240 VDC/VAC
B300	12 VDC/VAC ONLY

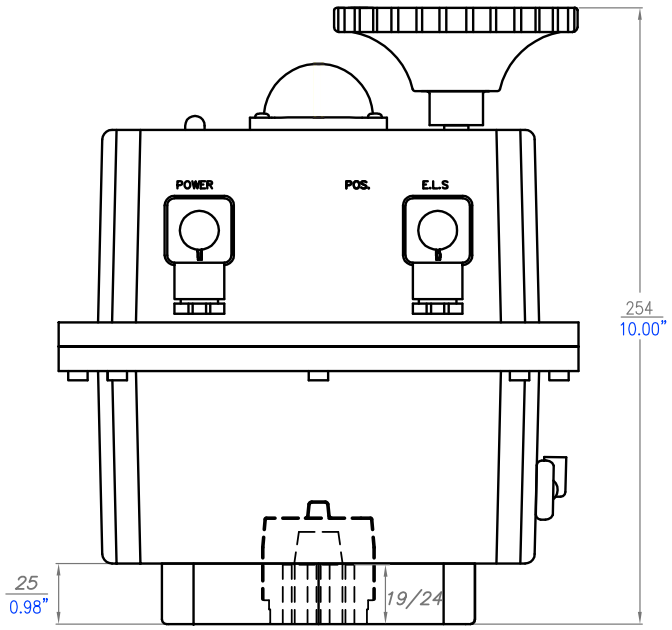
Options	
J4C140/300 DPS KIT digital positioner	4-20mA, 0-20mA, 0-10V or 1-10V
J4C 140/300 KIT BSR emergency fail safe kit system by battery	NC - NO
Potentiometer	1K, 5K or 10K
3 position actuator	0º-45º-90º or 0º-90º-180º

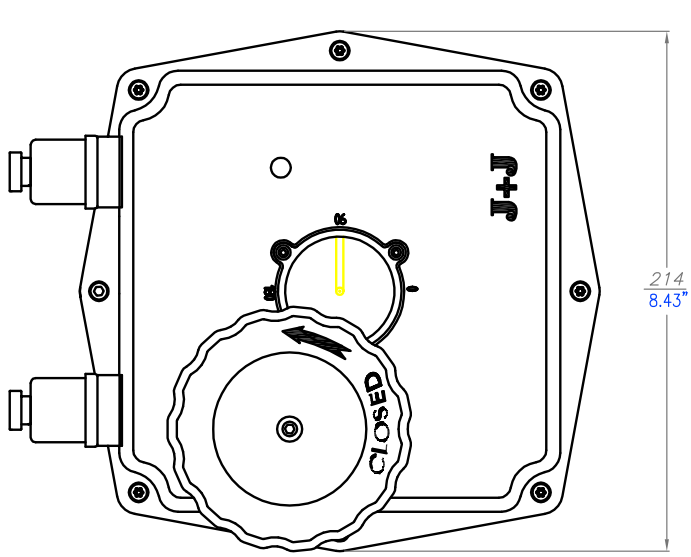
Materials	Standard	Optional
Body	Anticorrosive Polyamide, Grey colour	Polypropilene V0, Black colour
Cover	Anticorrosive Polyamide, Red colour	Polypropilene V0, Natural colour
Output drive	Zamak, Zinc plated	Zamak, TEFLON coated
Flange	Aluminum and Cataphoresis	Aluminum and TEFLON coated
Main external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

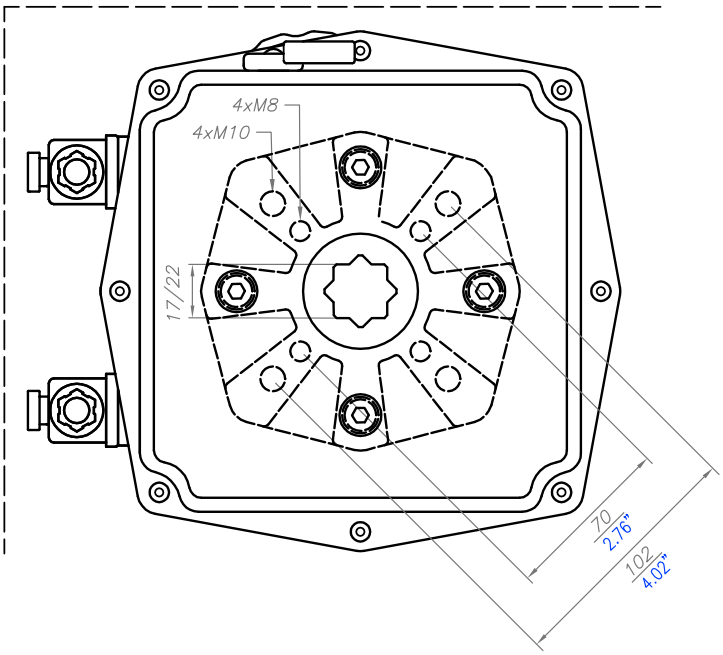
Note: Technical data are the same despite the different casings.

J4C 300 SIZES

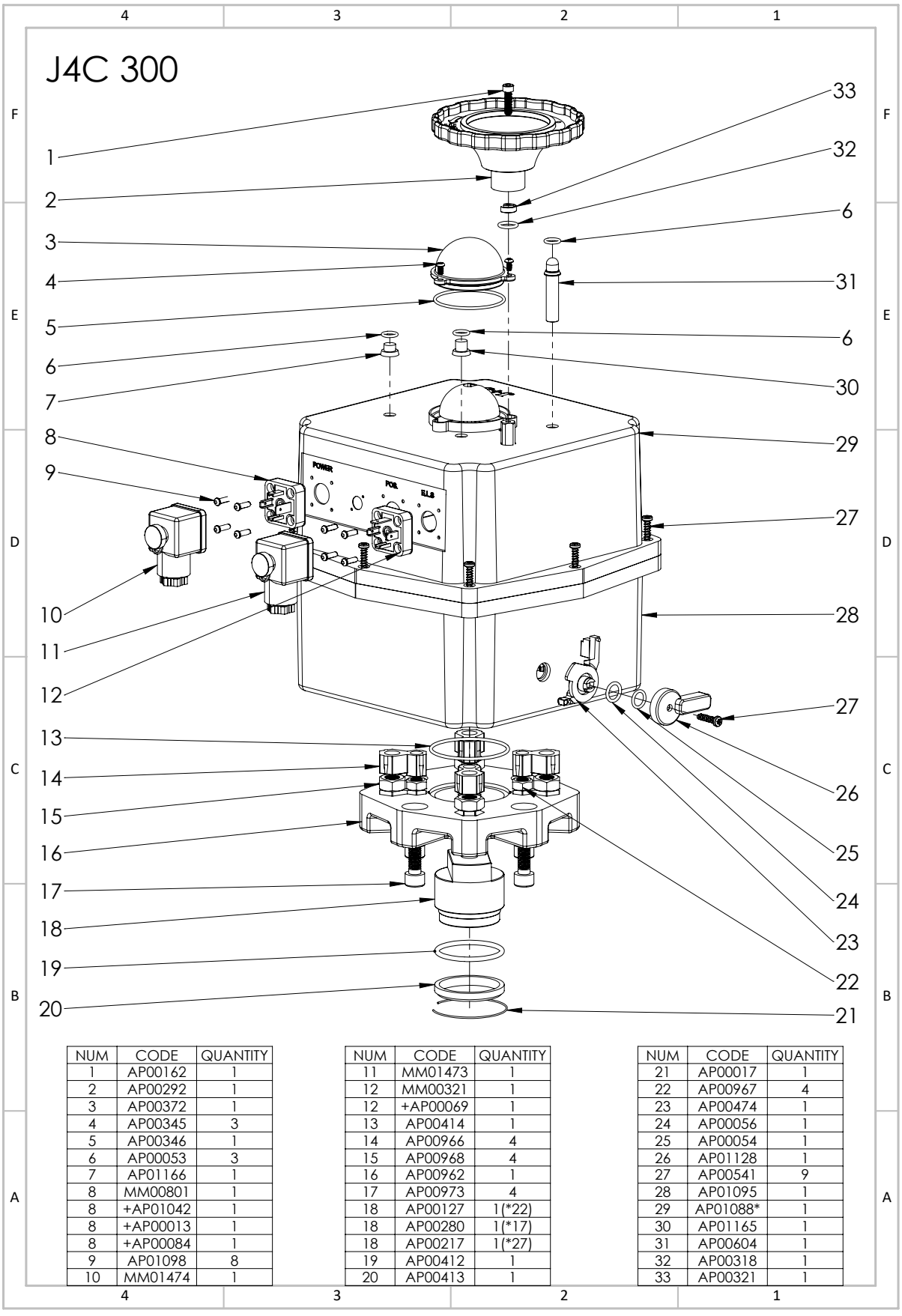








EXPLODED VIEW



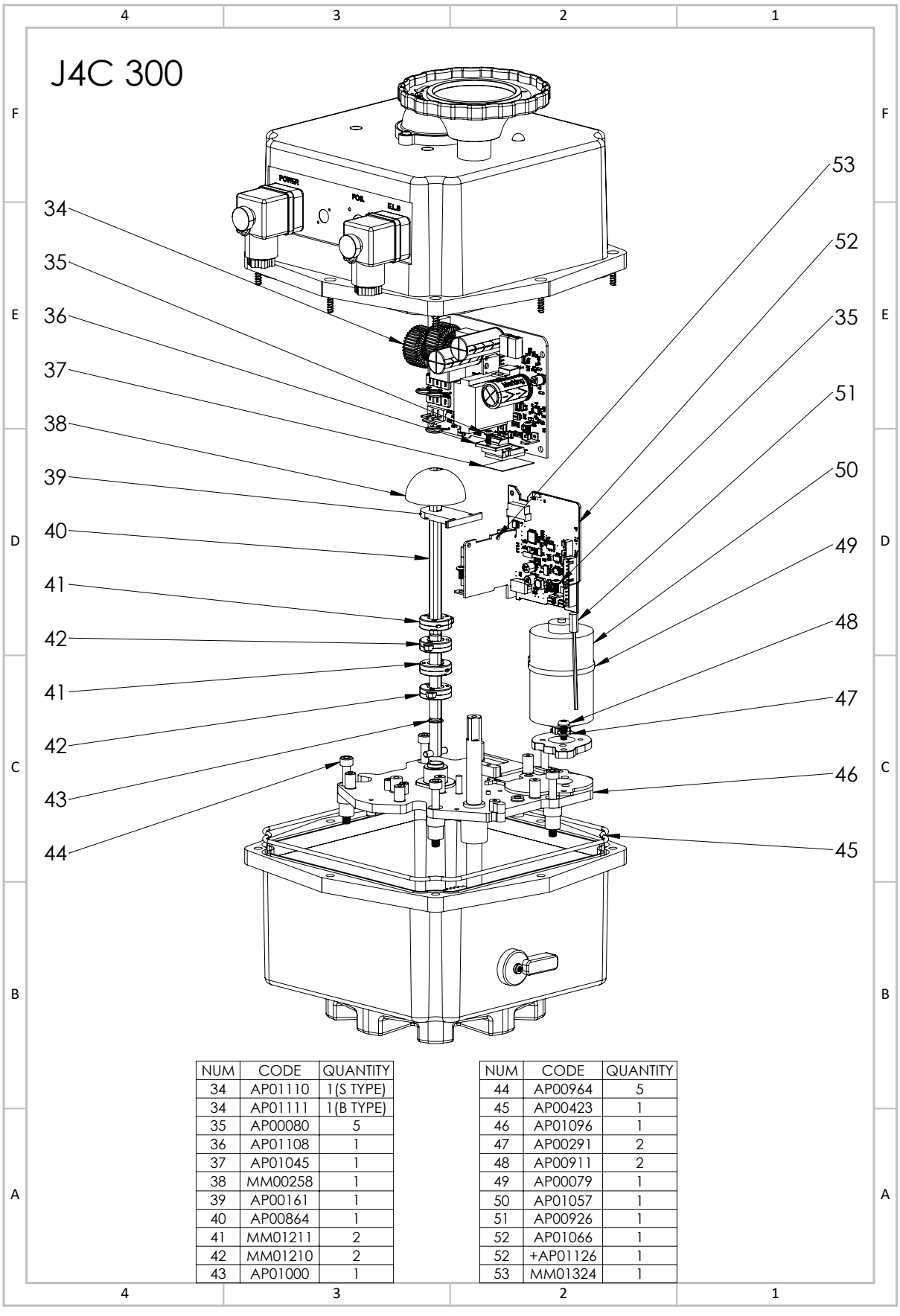
NUM	CODE	QUANTITY
1	AP00162	1
2	AP00292	1
3	AP00372	1
4	AP00345	3
5	AP00346	1
6	AP00053	3
7	AP01166	1
8	MM00801	1
8	+AP01042	1
8	+AP00013	1
8	+AP00084	1
9	AP01098	8
10	MM01474	1

NUM	CODE	QUANTITY
11	MM01473	1
12	MM00321	1
12	+AP00069	1
13	AP00414	1
14	AP00966	4
15	AP00968	4
16	AP00962	1
17	AP00973	4
18	AP00127	1(*22)
18	AP00280	1(*17)
18	AP00217	1(*27)
19	AP00412	1
20	AP00413	1

NUM	CODE	QUANTITY
21	AP00017	1
22	AP00967	4
23	AP00474	1
24	AP00056	1
25	AP00054	1
26	AP01128	1
27	AP00541	9
28	AP01095	1
29	AP01088*	1
30	AP01165	1
31	AP00604	1
32	AP00318	1
33	AP00321	1

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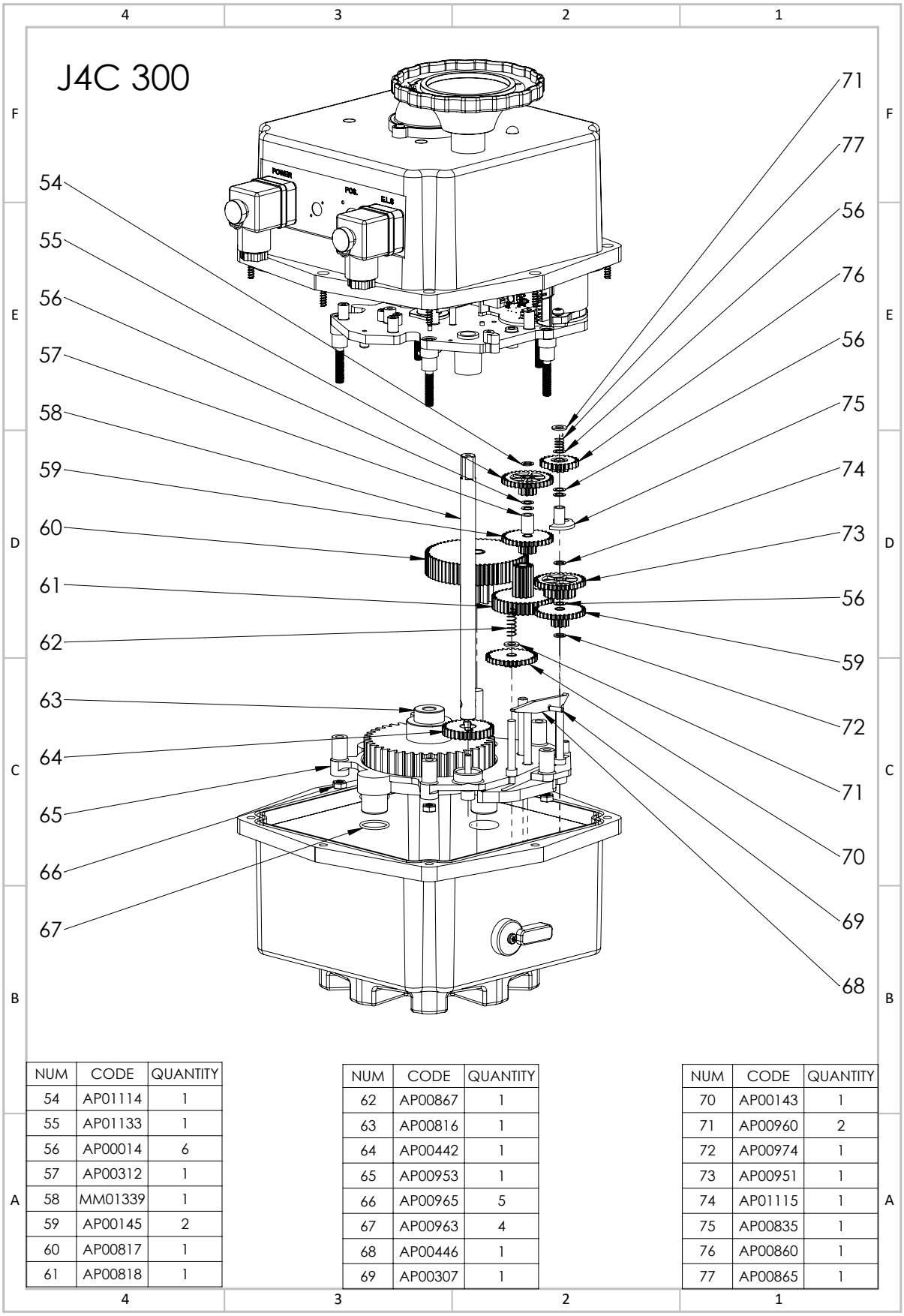
EXPLODED VIEW



NUM	CODE	QUANTITY
34	AP01110	1(S TYPE)
34	AP01111	1(B TYPE)
35	AP00080	5
36	AP01108	1
37	AP01045	1
38	MM00258	1
39	AP00161	1
40	AP00864	1
41	MM01211	2
42	MM01210	2
43	AP01000	1

NUM	CODE	QUANTITY
44	AP00964	5
45	AP00423	1
46	AP01096	1
47	AP00291	2
48	AP00911	2
49	AP00079	1
50	AP01057	1
51	AP00926	1
52	AP01066	1
52	+AP01126	1
53	MM01324	1

EXPLODED VIEW



NUM	CODE	QUANTITY
54	AP01114	1
55	AP01133	1
56	AP00014	6
57	AP00312	1
58	MM01339	1
59	AP00145	2
60	AP00817	1
61	AP00818	1

NUM	CODE	QUANTITY
62	AP00867	1
63	AP00816	1
64	AP00442	1
65	AP00953	1
66	AP00965	5
67	AP00963	4
68	AP00446	1
69	AP00307	1

NUM	CODE	QUANTITY
70	AP00143	1
71	AP00960	2
72	AP00974	1
73	AP00951	1
74	AP01115	1
75	AP00835	1
76	AP00860	1
77	AP00865	1

05 OPTIONS

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DPS J4C 20/85

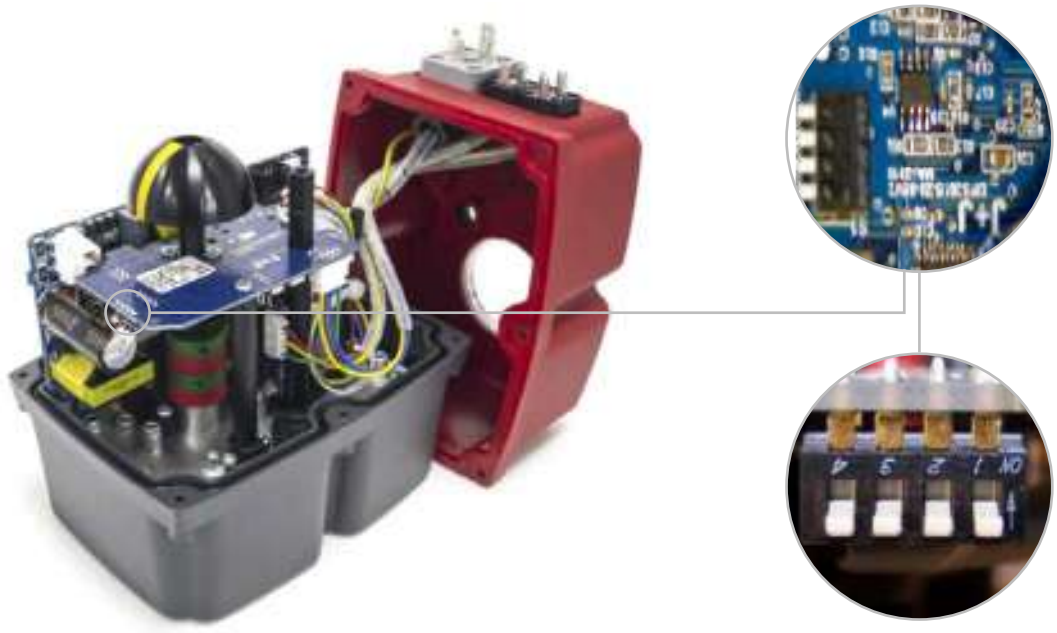


SPECIFICATIONS

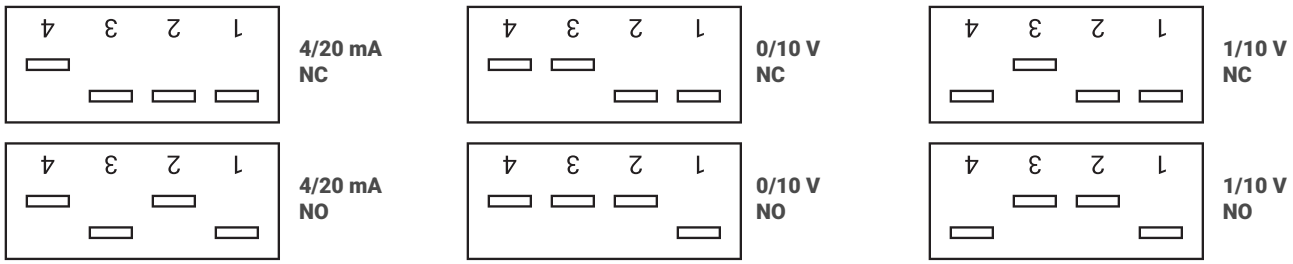
MODEL	S20-B20	S35-B35	S55-B55	S85-B85
Accuracy	3% F.S.			
Linearity	2 % F.S.			
Hysteresis	3 % F.S.			
Steps at 4/20mA	Min. 150 steps 90º			
Steps at 0/10V	Min. 98 steps 90º			
Steps at 0/20mA	Min. 150 steps 90º			
Steps at 1/10V	Min. 87 steps 90º			
4/20mA or 0/20mA Input signal impedance	100 Ohm			
0/10V or 1/10V Input signal impedance	25 KOhm			
Class	B+C to E DIN EN 15714 Inching + Modulation			
Weight	1,84 Kg	1,88 Kg	2,39 Kg	2,91 Kg

F.S. Full scale

DPS J4C 20/85



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

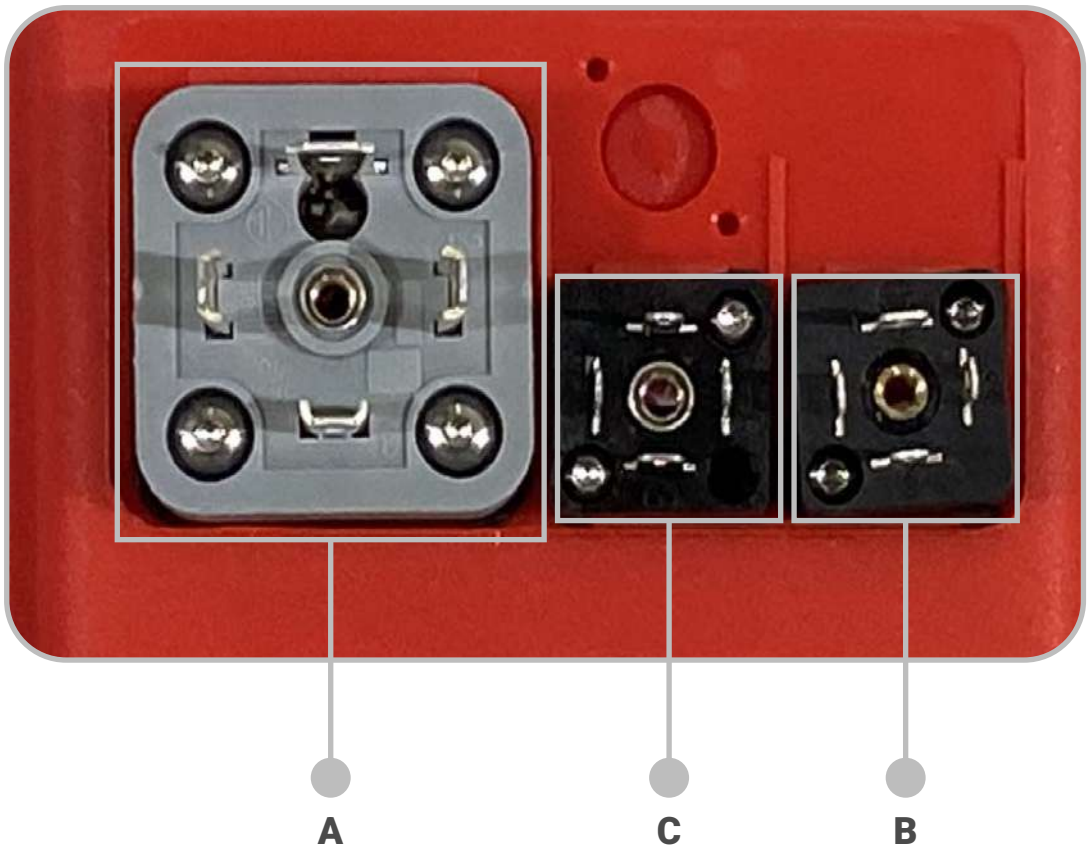


Configurations set up by using DIPs, should have the same Input and Output Signal.
I.e.: If Set up Input signal 4/20mA-Output signal 4/20 mA.
Other possibilities are available to work with, but they should be configurated from the manufacturer.

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	4/20 mA, 0/10 V, 0/20 mA, 1/10 V
MOTOR STOP, WITHOUT INSTRUMENTATION	4/20 mA, 1/10 V

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

DPS EXTERNAL SELF-ADJUSTMENT



A- Power supply plug.

B- Confirmation plug. Volt free contact.

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

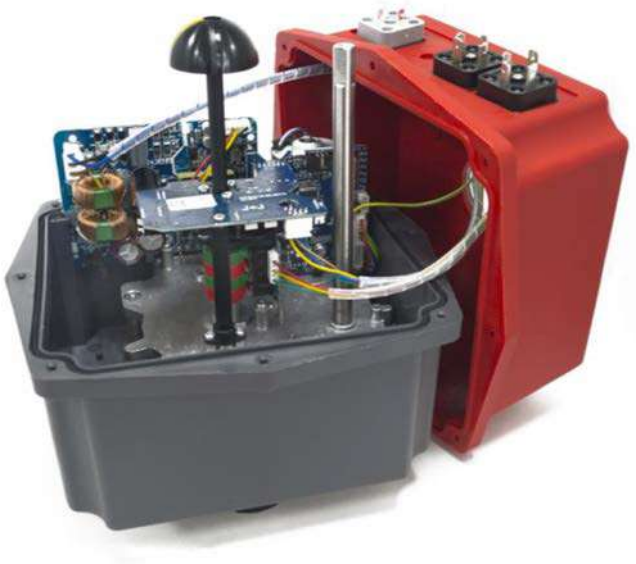
1-C plug - connect a cable between PIN 1 (on the left side) and PIN Earth (on the bottom) ⏚
2-A plug - connect:
VAC: PIN1 (neutral) and PIN2 (phase).
VDC: PIN1 (negative) and PIN2 (positive).

> ⚠ 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

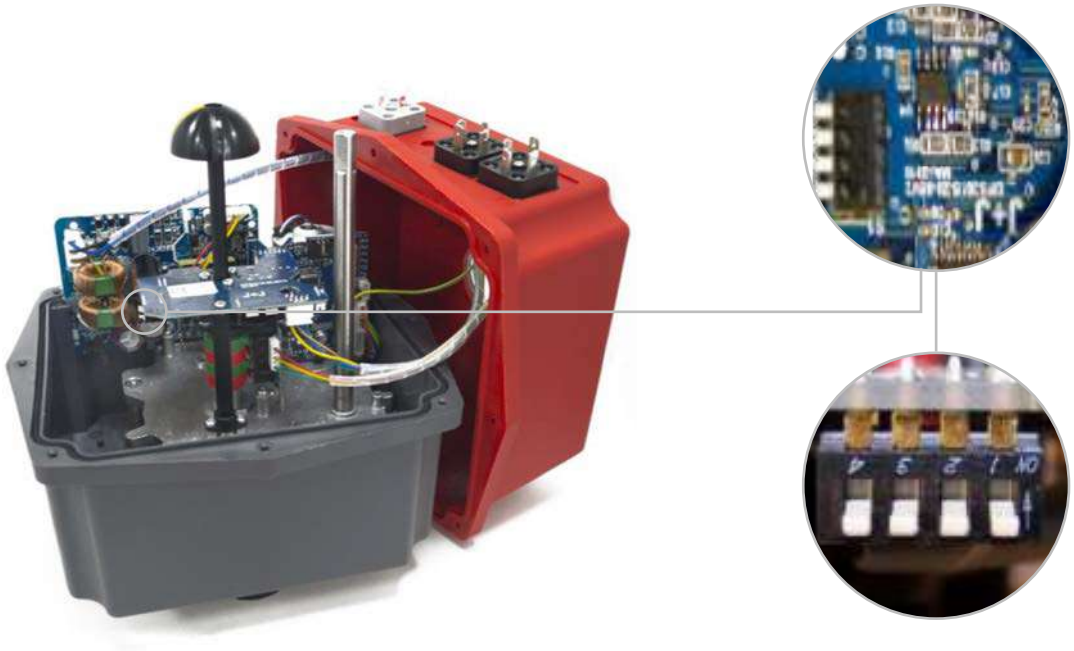


SPECIFICATIONS

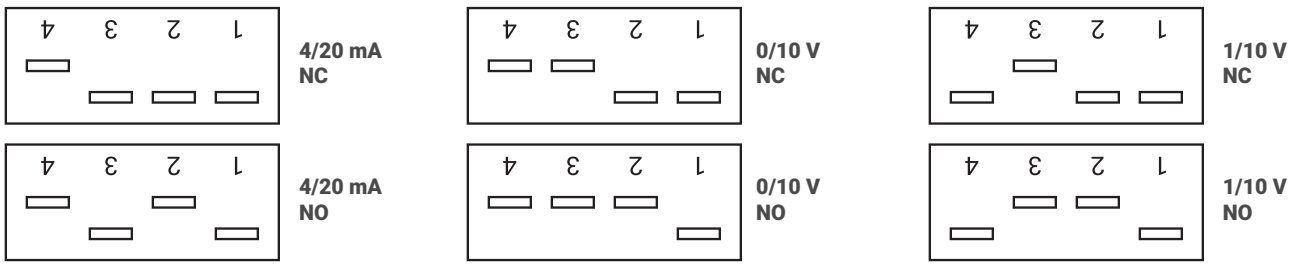
MODEL	S140-B140	S300-B300
Accuracy	3% F.S.	
Linearity	2 % F.S.	
Hysteresis	3 % F.S.	
Steps at 4/20mA	Min. 150 steps 90º	
Steps at 0/10V	Min. 98 steps 90º	
Steps at 0/20mA	Min. 150 steps 90º	
Steps at 1/10V	Min. 87 steps 90º	
4/20mA or 0/20mA Input signal impedance	100 Ohm	
0/10V or 1/10V Input signal impedance	25 KOhm	
Class	B+C to E DIN EN 15714 Inching + Modulation	
Weight	4,79 Kg	

F.S. Full scale

DPS J4C 140/300



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

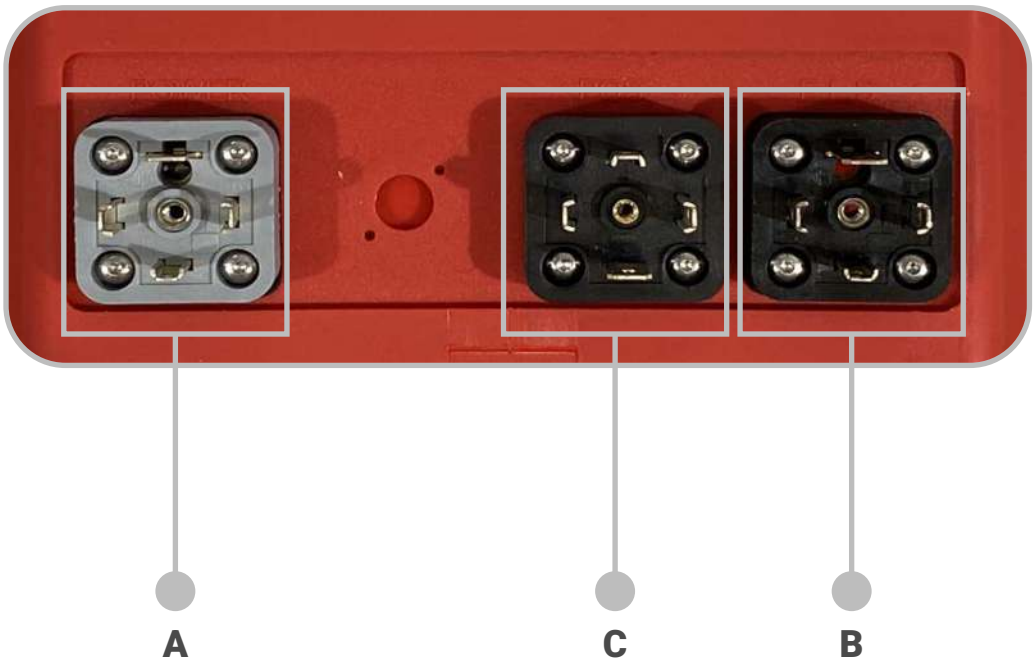


Configurations set up by using DIPs, should have the same Input and Output Signal.
I.e.: If Set up Input signal 4/20mA-Output signal 4/20 mA.
Other possibilities are available to work with, but they should be configurated from the manufacturer.

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	4/20 mA, 0/10 V, 0/20 mA, 1/10 V
MOTOR STOP, WITHOUT INSTRUMENTATION	4/20 mA, 1/10 V

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

DPS EXTERNAL SELF-ADJUSTMENT



A- Power supply plug.

B- Confirmation plug. Volt free contact.

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

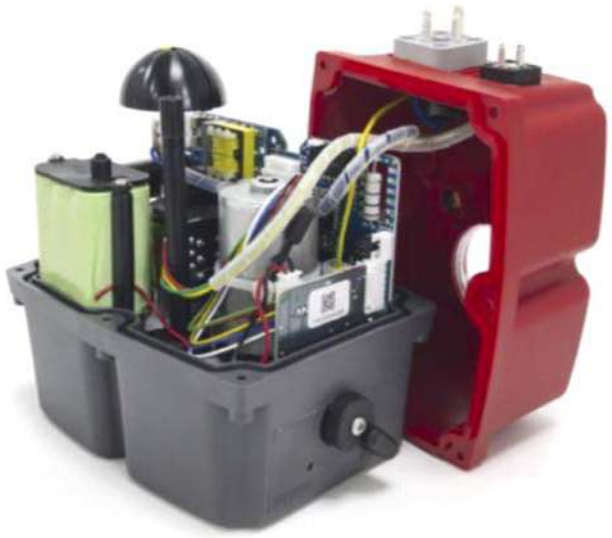
1-C plug - connect a cable between PIN 1 (on the left side) and PIN Earth (on the bottom).
2-A plug - connect:
VAC: PIN1 (neutral) and PIN2 (phase).
VDC: PIN1 (negative) and PIN2 (positive).

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 (4/20 mA, 0/10 V, 0/20 mA o 1/10 V) signal to the **C** plug

BSR J4C 20/85



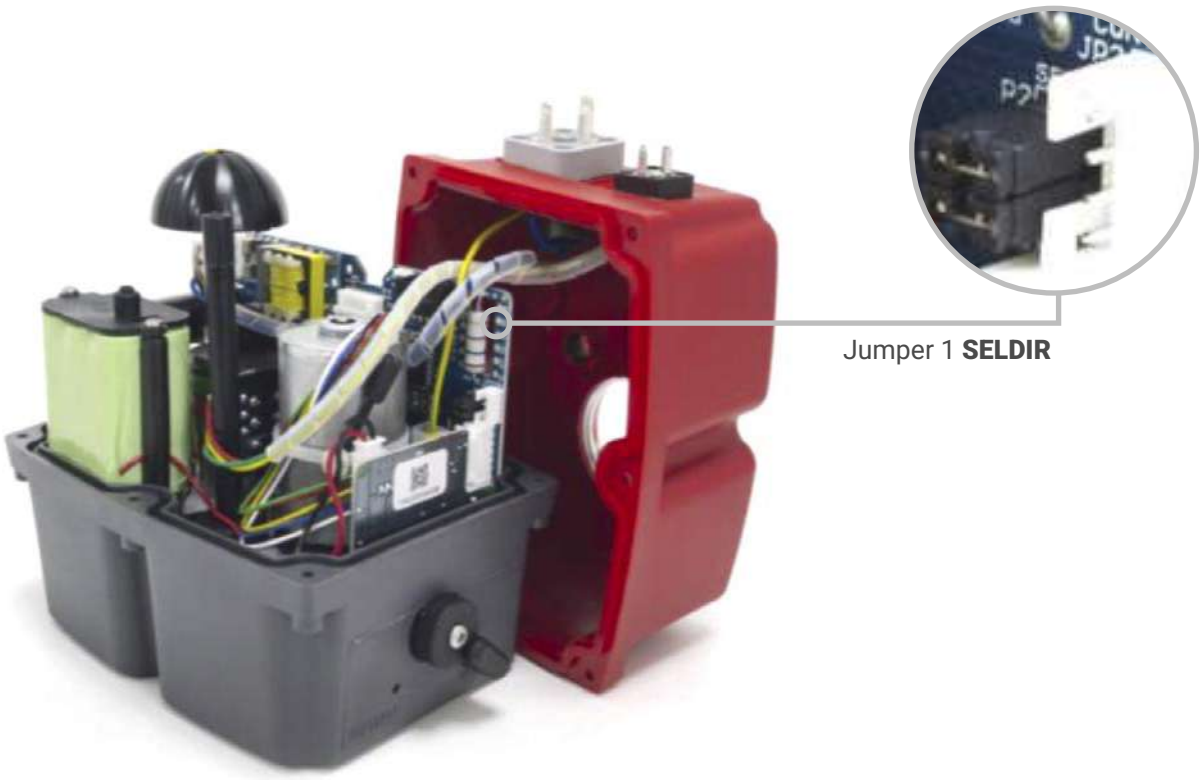
SPECIFICATIONS

ACTUATOR MODEL	S20-B20	S35-B35	S55-B55	S85-B85
No Working operation without recharge, with 100% battery charge	min. 5 operations, works 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			
Nominal capacity +/- 5%	2200 mAh			
NO or NC Features (*)	Jumper			
Current/one working operation with battery	10,1 mA	14 mA	31,6 mA	38,6 mA
Battery charge	40 mA			
Weight	1,99 Kg	2,03 Kg	2,50 Kg	3,02 Kg

* Our actuators are not designed to operate in single-acting mode. The BSR (Battery System Returns) is provided exclusively as an emergency system in case of power loss. It is recommended to always keep them connected to the main electrical grid for reliable performance

→ Index

Configurations		
Preferred position in case of power cut	NC (Normally close)	NO (Normally open)
	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.**



BSR J4C 140/300



SPECIFICATIONS

ACTUATOR MODEL	S140-B140	S300-B300
No Working operation without recharge, with 100% battery charge	min. 4 operations, works until battery discharged *	
Recharge time / working operation	30 min	50 min
Battery consumption / working operation	23 W	
Full charge time 100%	54 h	
Nominal capacity +/- 5%	4400 mAh	
NO or NC Features (*)	Jumper	
Current/one working operation with battery	15,1 mA	25,7 mA
Battery charge	40 mA	
Weight	5,08 Kg	

* Our actuators are not designed to operate in single-acting mode. The BSR (Battery System Returns) is provided exclusively as an emergency system in case of power loss. It is recommended to always keep them connected to the main electrical grid for reliable performance

Configurations		
Preferred position in case of power cut	NC (Normally close)	NO (Normally open)

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.**



BLUETOOTH & WIFI

COMMUNICATION BLUETOOTH

We have introduced the BLUETOOTH communication system in our actuators, in order to communicate with our actuators, from any ANDROID devices.

This system appears in our catalogue as a factory option.

From our mobile phone or tablet we could order our actuator to open/close or stop, we could be informed about errors or incidences, etc.

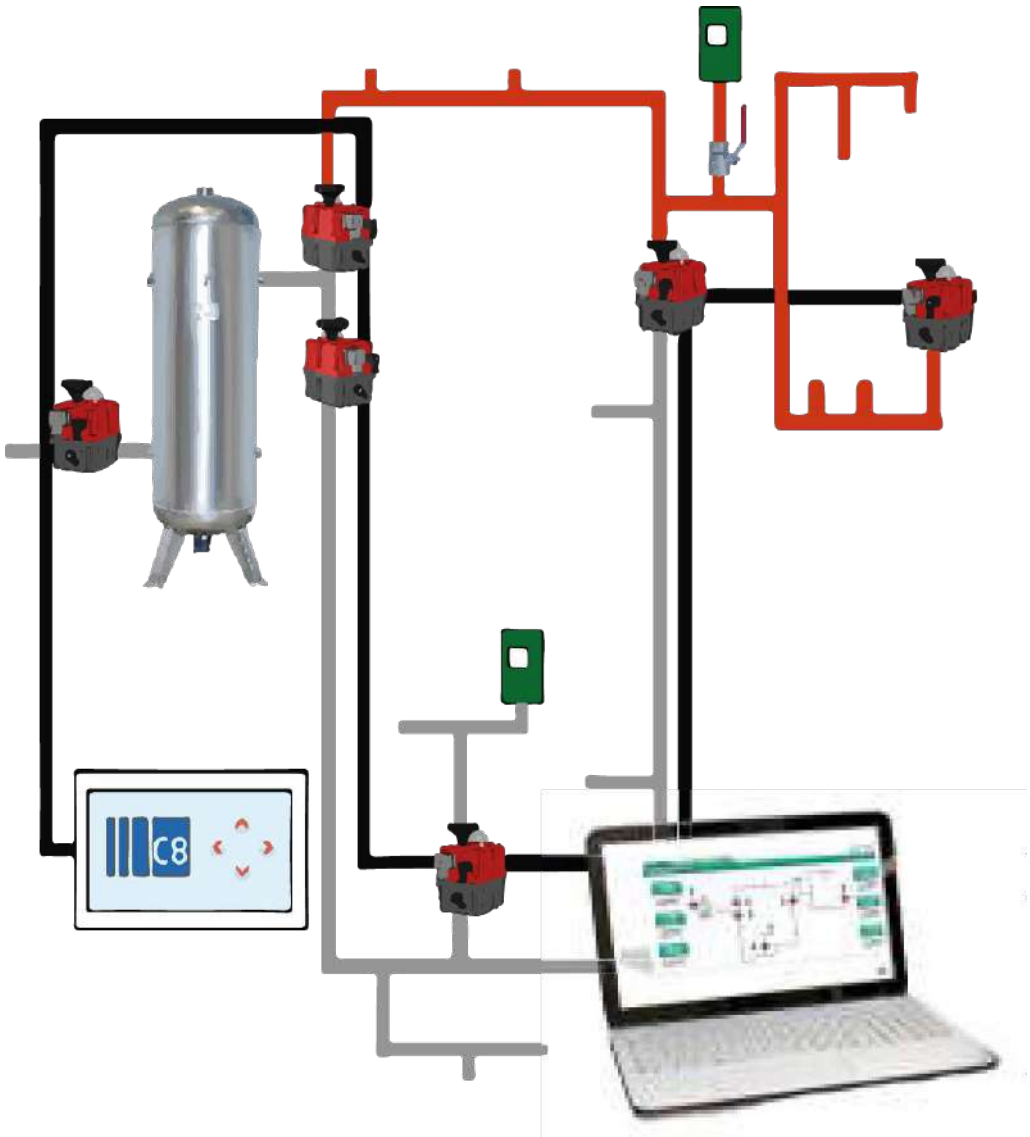
The communication between our devices is protected by a password.

Via BLUETOOTH we could identify and communicate 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 254.
- 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.



06 KITS

→ Index

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.			
Linearity	2 % F.S.			
Hysteresis	3 % F.S.			
Steps at 4/20mA	Min. 150 steps 90º			
Steps at 0/10V	Min. 98 steps 90º			
Steps at 0/20mA	Min. 150 steps 90º			
Steps at 1/10V	Min. 87 steps 90º			
4/20mA or 0/20mA Input signal impedance	100 Ohm			
0/10V or 1/10V Input signal impedance	25 KOhm			
Class	B+C to E DIN EN 15714 Inching + Modulation			
Weight	0,58 Kg			

F.S. Full scale

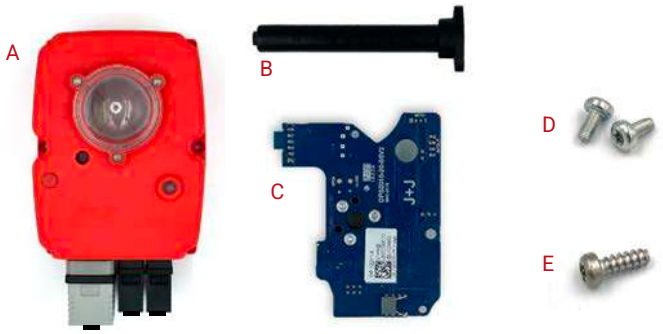
ASSEMBLY INSTRUCTIONS - DPS KIT 20/85

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:

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



* 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:

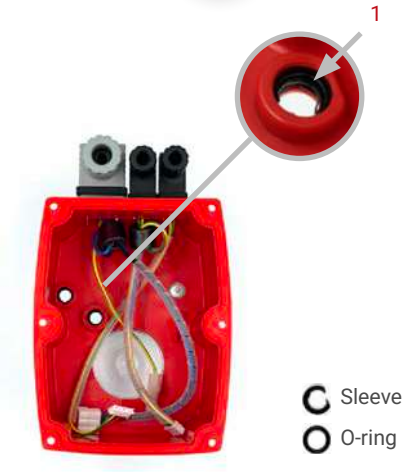
The cover of the kit is for a J4C 20, 35 and 55 models. In case you want to mount a kit on a J4C 85, follow the instructions:

1



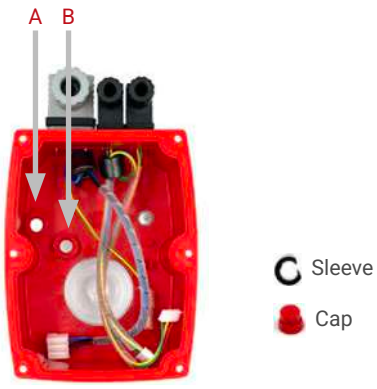
Remove the cap and leave the o-ring inside the hole.

2



Remove the sleeve **1** and leave the o-ring inside.

3



Introduce the sleeve in hole A and press it until is fully inside **(Fig.A).**



Introduce the cap in hole B and press it until it is fully inside **(Fig.B)**

KIT DPS 20/85 ASSEMBLY INSTRUCTIONS — **PAGE 1/3**

1



Remove the screw, which is fixing the hand wheel.

2



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

3



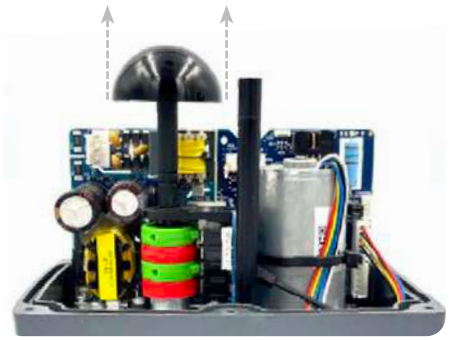
Carefully lift the cover.

4



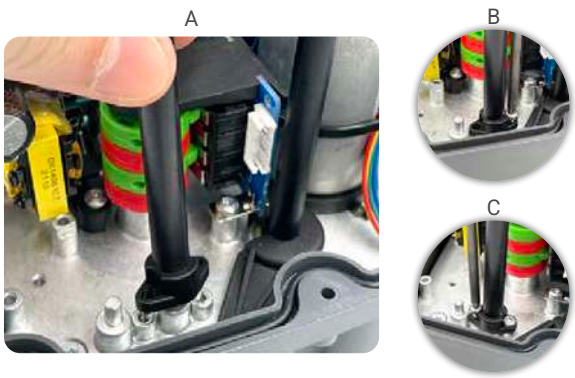
Remove the cables (from the cover) connected to the actuator PCB (Fig. A, B and C).

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).

→ Index

KIT DPS 20/85 ASSEMBLY INSTRUCTIONS — **PAGE 2/3**

7



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

8



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

9



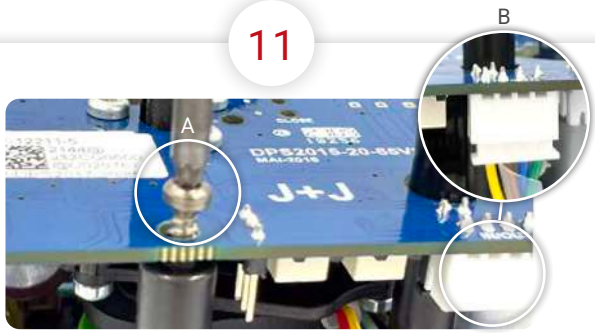
Mount the DPS positioner PCB (Element C), matching the cleft of the shaft with the key inside the DPS gear.

10



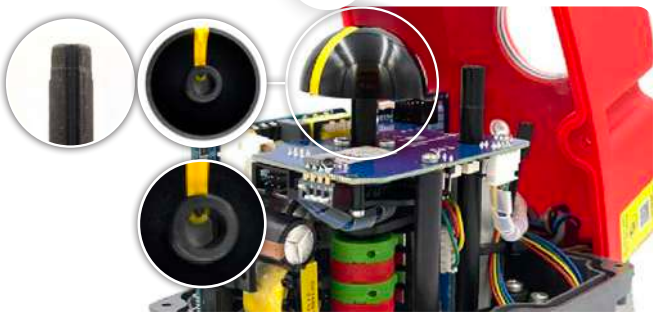
Press the DPS positioner PCB (Element C) along the shaft until the PCB connector (JP3) is plugged in the actuator PCB connector (JP2).

11



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).

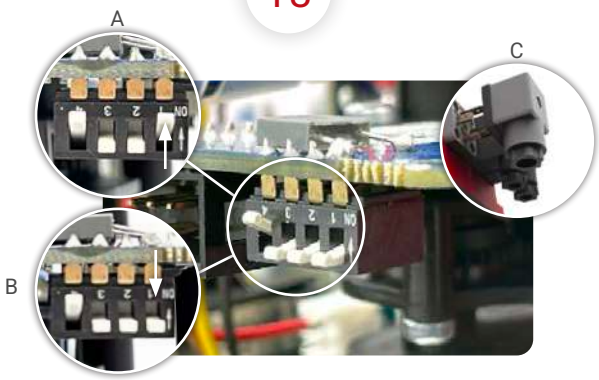
12



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

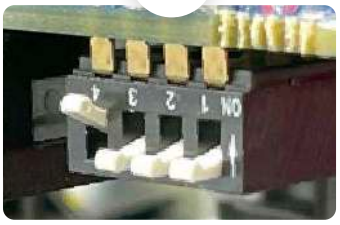
KIT DPS 20/85 ASSEMBLY INSTRUCTIONS — **PAGE 3/3**

13

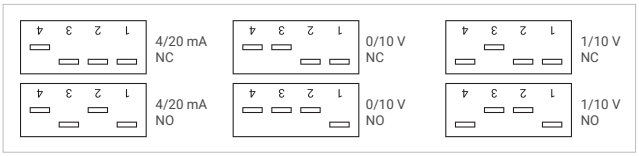


In order to set the actuator up, use the DIPs shown in the picture. Put DIP 1 in ON position (Fig. A), connect the grey connector to the power supply (Fig. C). Put DIP 1 back to the prior position (Fig. B). Wait until the actuator make a complete maneuver.

14



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



15



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

16



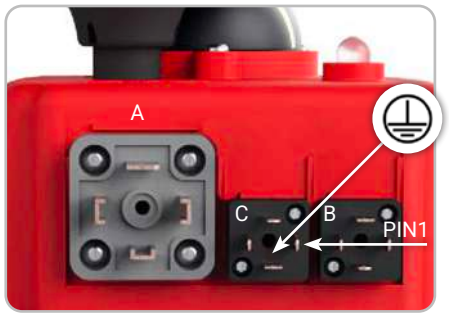
Fix the cover to the body by using the 6 screws.

17



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

18



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.

- C plug - Connect a cable between PIN 1 and PIN Earth.
- A plug - Connect it to the power supply.
- C plug, disconnect the cable between PIN 1 and PIN Earth.

The actuator will make a complete maneuver.

Connect C connector to the actuator. The actuator is ready to work.



If the WEEE (Waste Electrical and Electronic Equipment) contains batteries, they must be removed and deposited separately for proper management before being deposited at the collection facilities. Batteries may contain hazardous substances that can harm the environment and human health if mishandled or disposed of improperly. Therefore, it is important to deposit them in specific containers for recycling and proper treatment. In some countries, there are selective collection programs for used batteries in supermarkets, electronic stores, or other establishments.

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.	
Linearity	2 % F.S.	
Hysteresis	3 % F.S.	
Steps at 4/20mA	Min. 150 steps 90°	
Steps at 0/10V	Min. 98 steps 90°	
Steps at 0/20mA	Min. 150 steps 90°	
Steps at 1/10V	Min. 87 steps 90°	
4/20mA or 0/20mA Input signal impedance	100 Ohm	
0/10V or 1/10V Input signal impedance	25 KOhm	
Class	B+C to E DIN EN 15714 Inching + Modulation	
Weight	0,96 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

A



B



C



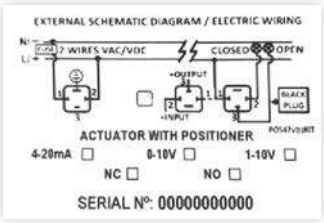
D



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.

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

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:

→ Index

KIT DPS 140/300 ASSEMBLY INSTRUCTIONS — **PAGE 1/3**

1



Remove the screw, which is fixing the hand wheel.

2



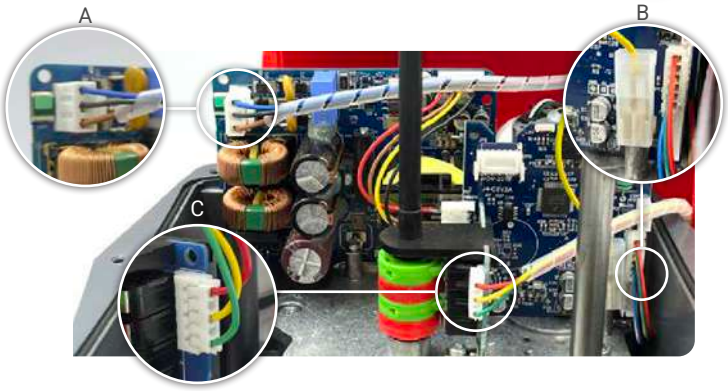
Remove the 8 screws, which are fixing the body to the cover of the actuator.

3



Carefully lift the cover.

4



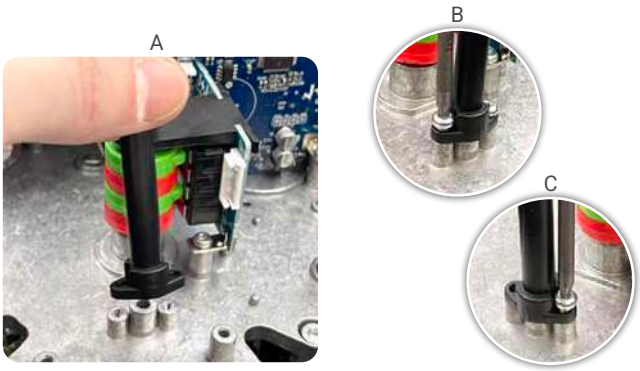
Remove the cables (from the cover) connected to the actuator PCB (Fig. A, B and C).

5



Carefully remove the position indicator.

6

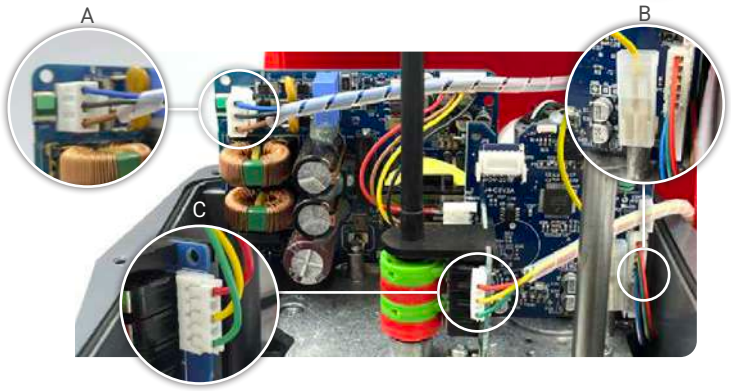


Fix the plastic column (Element B) on the base plate, by using 2 sheet metal fixing screws (Element D) (Fig. A,B and C).

→ Index

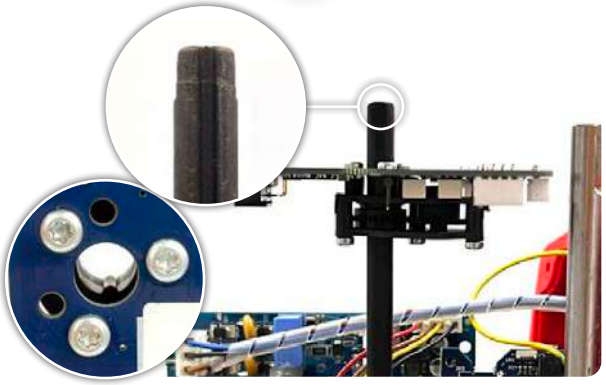
KIT DPS 140/300 ASSEMBLY INSTRUCTIONS — **PAGE 2/3**

7



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

8



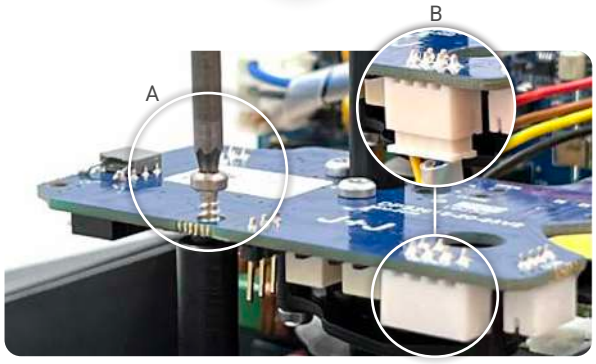
Mount the DPS positioner PCB (Element C), matching the cleft of the shaft with the key inside the DPS gear.

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).

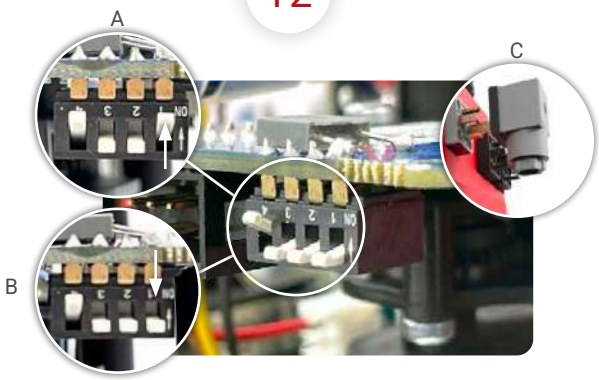
11



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

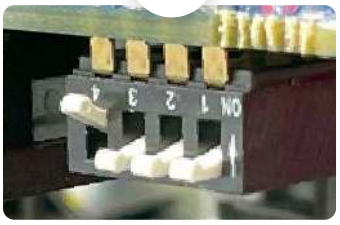
KIT DPS 140/300 ASSEMBLY INSTRUCTIONS — **PAGE 3/3**

12

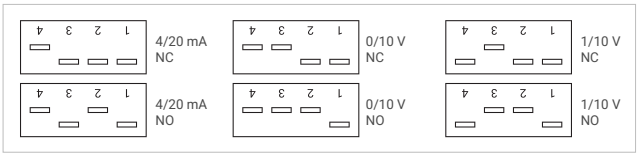


In order to set the actuator up, use the DIPs shown in the picture. Put DIP 1 in ON position (Fig. A), connect the grey connector to the power supply (Fig. C). Put DIP 1 back to the prior position (Fig. B). Wait until the actuator make a complete maneuver.

13



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



14



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

15



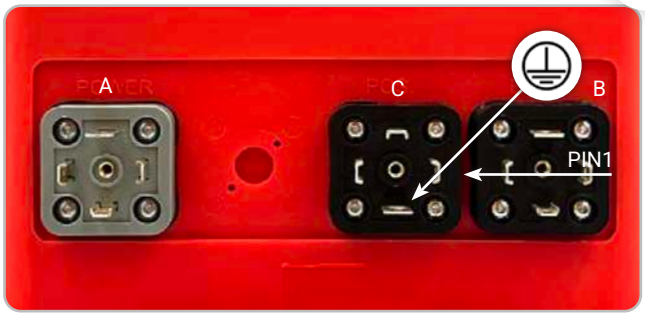
Fix the cover to the body by using the 8 screws.

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.

- C plug - Connect a cable between PIN 1 and PIN Earth.
- A plug - Connect it to the power supply.
- C plug, disconnect the cable between PIN 1 and PIN Earth.

The actuator will make a complete maneuver.

Connect C connector to the actuator. The actuator is ready to work.



If the WEEE (Waste Electrical and Electronic Equipment) contains batteries, they must be removed and deposited separately for proper management before being deposited at the collection facilities. Batteries may contain hazardous substances that can harm the environment and human health if mishandled or disposed of improperly. Therefore, it is important to deposit them in specific containers for recycling and proper treatment. In some countries, there are selective collection programs for used batteries in supermarkets, electronic stores, or other establishments.

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

SPECIFICATIONS

ACTUATOR MODEL	S20-B20	S35-B35	S55-B55	S85-B85
No Working operation without recharge, with 100% battery charge	min. 5 operations, works 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			
Nominal capacity +/- 5%	2200 mAh			
NO or NC Features (*)	Jumper			
Current/one working operation with battery	10,1 mA	14 mA	31,6 mA	38,6 mA
Battery charge	40 mA			
Weight	0,31 Kg			

* Our actuators are not designed to operate in single-acting mode. The BSR (Battery System Returns) is provided exclusively as an emergency system in case of power loss. It is recommended to always keep them connected to the main electrical grid for reliable performance

→ Index

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.

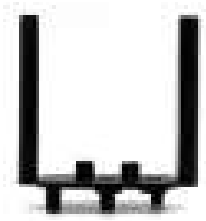
KIT COMPONENTS

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.

A



B



C



D



E



F



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

KIT BSR 20/85 ASSEMBLY INSTRUCTIONS — **PAGE 1/2**

1



Remove the screw, which is fixing the hand wheel.

2



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

3



Carefully lift the cover.

4



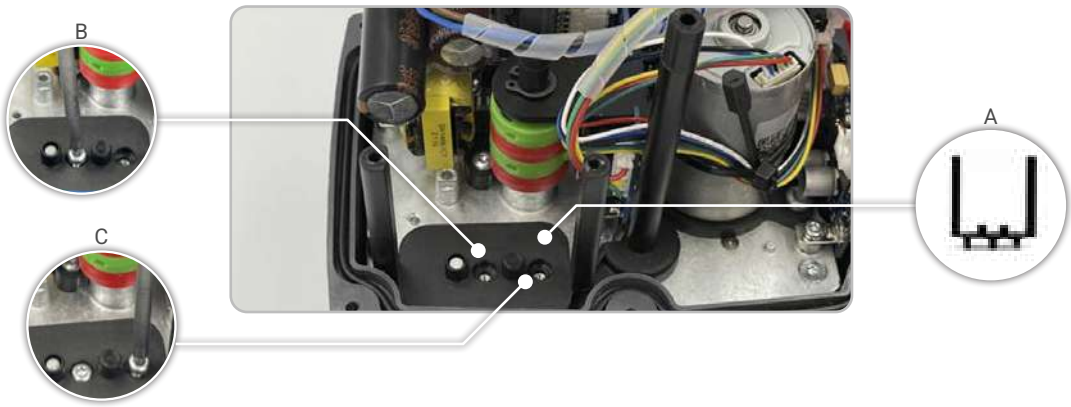
Take the BSR PCB (Element A) from the KIT and connect it to the actuator PCB, by using the connector shown in the picture.

5



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

6



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

→ Index

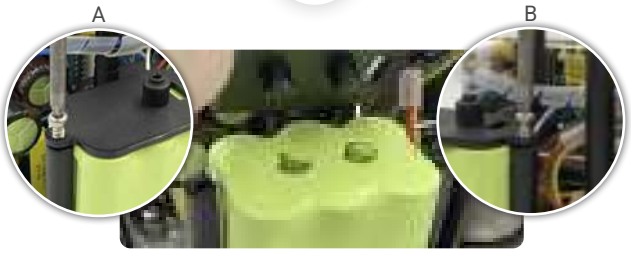
KIT BSR 20/85 ASSEMBLY INSTRUCTIONS — **PAGE 2/2**

7



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).

8



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).

9



SELDIR jumper

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

10



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

11



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

12



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

Num: RII-AEE: 8760

If the WEEE (Waste Electrical and Electronic Equipment) contains batteries, they must be removed and deposited separately for proper management before being deposited at the collection facilities. Batteries may contain hazardous substances that can harm the environment and human health if mishandled or disposed of improperly. Therefore, it is important to deposit them in specific containers for recycling and proper treatment. In some countries, there are selective collection programs for used batteries in supermarkets, electronic stores, or other establishments.

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

SPECIFICATIONS

ACTUATOR MODEL	S140-B140	S300-B300
No Working operation without recharge, with 100% battery charge	min. 4 operations, works until battery discharged *	
Recharge time / working operation	30 min	50 min
Battery consumption / working operation	23 W	
Full charge time 100%	54 h	
Nominal capacity +/- 5%	2200 mAh	
NO or NC Features (*)	Jumper	
Current/one working operation with battery	15,1 mA	25,7 mA
Battery charge	40 mA	
Weight	0,46 Kg	

* Our actuators are not designed to operate in single-acting mode. The BSR (Battery System Returns) is provided exclusively as an emergency system in case of power loss. It is recommended to always keep them connected to the main electrical grid for reliable performance

ASSEMBLY INSTRUCTIONS - BSR KIT 140/300

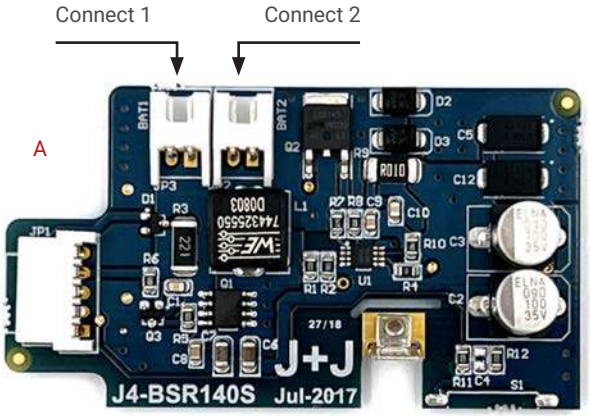
Very important!

Please, follow these instructions step by step.If the connector of the battery pack is pluged 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.

A



B



C1



Connect 1

C2



Connect 2

D



E



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

KIT BSR 140/300 ASSEMBLY INSTRUCTIONS — **PAGE 1/2**

1



Remove the screw, which is fixing the hand wheel.

2



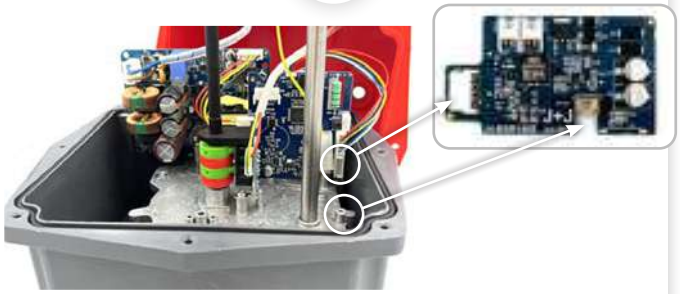
Remove the 8 screws, which are fixing the body to the cover of the actuator.

3



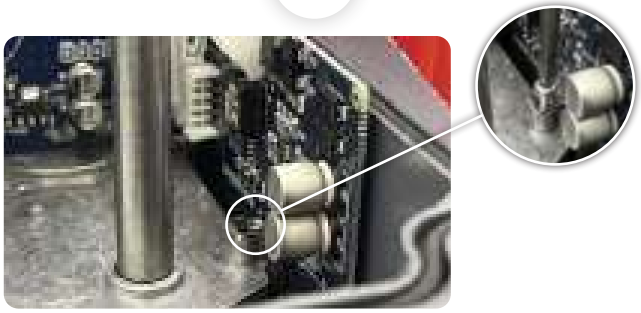
Carefully lift the cover.

4



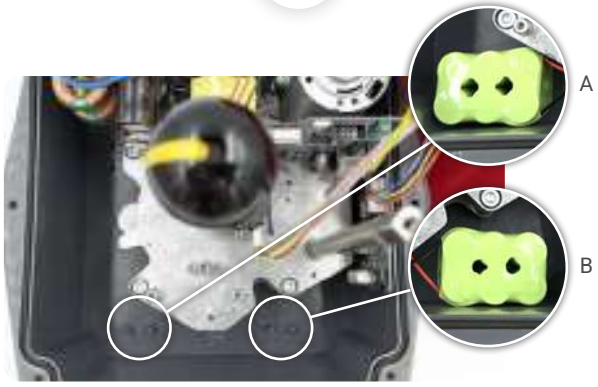
Take the BSR PCB (Element B) from the KIT and connect it to the actuator PCB, by using the connector shown in the picture.

5



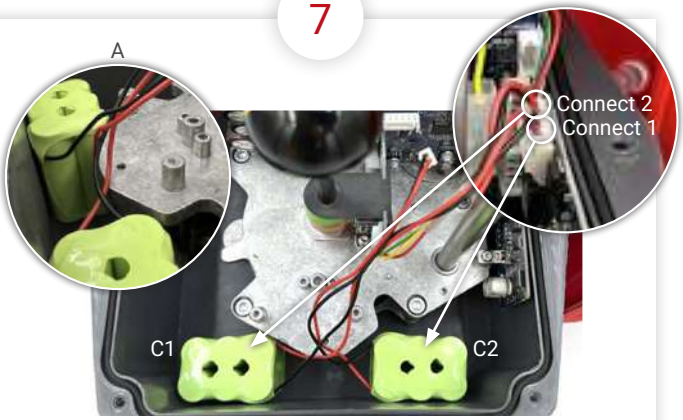
Fix it to the actuator metal plate, by using the Sheet metal fixing screw (Element D).

6



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

7



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.

→ Index

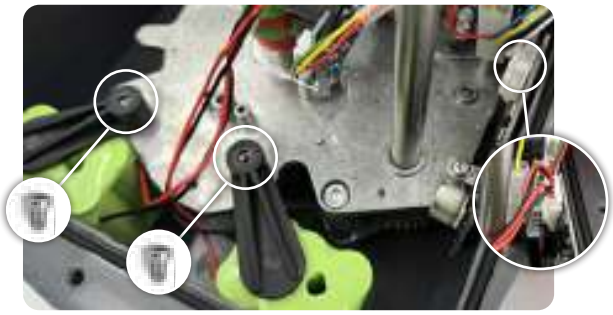
KIT BSR 140/300 ASSEMBLY INSTRUCTIONS — **PAGE 2/2**

8



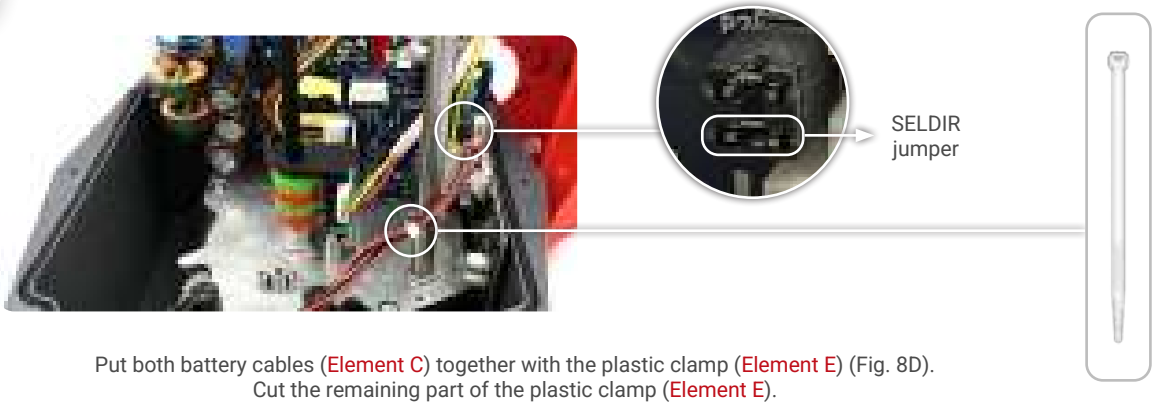
Place the 2 battery supports (Element B) as per picture (Fig. A & B).

9



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).

10



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).

11



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.

12



Fix the cover to the body by using the 8 screws.

13



Reassemble the hand wheel and fix it with the screw.

Num: RII-AEE 8760

If the WEEE (Waste Electrical and Electronic Equipment) contains batteries, they must be removed and deposited separately for proper management before being deposited at the collection facilities. Batteries may contain hazardous substances that can harm the environment and human health if mishandled or disposed of improperly. Therefore, it is important to deposit them in specific containers for recycling and proper treatment. In some countries, there are selective collection programs for used batteries in supermarkets, electronic stores, or other establishments.

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KIT INTERFACE



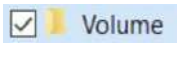
By using the INTERFACE KIT cable we stablish communication with the actuator, read parameters and change the set-up values.

INTERFACE PROGRAM FOR PC INSTALLATION

1

› Download the Interface program from:
https://www.dropbox.com/s/h1lw1e3t9x106y2/J4CM%2020230628_131_0.rar?dl=0

› Unzip and open it



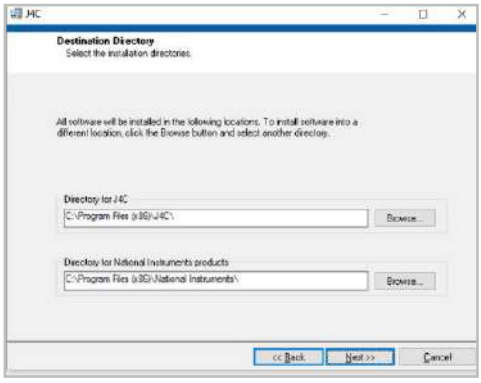
› Click on the file



› Run the program and log in

PROGRAM SET-UP

2



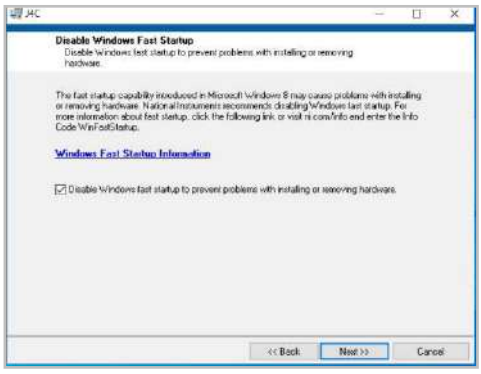
Click on “Next”

3



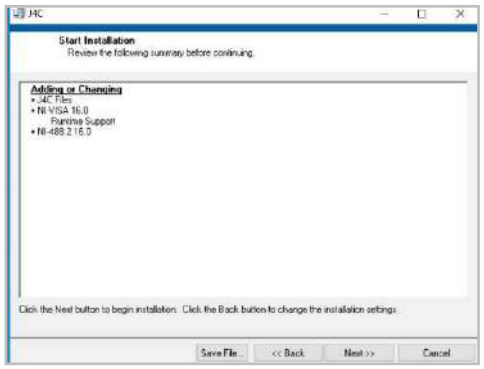
Click on “Next”

4



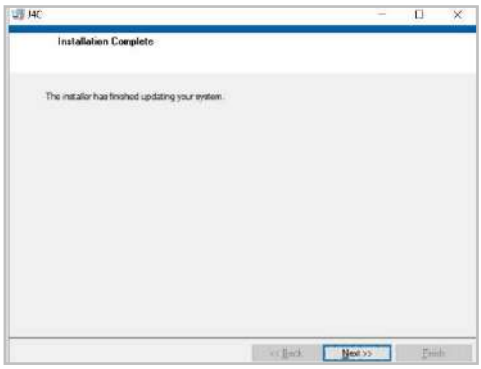
Click on “Next”

5



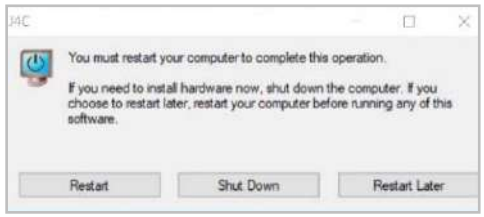
Click on “Next”

6



Click on “Next”

7



Click on “Restart”

8

› The Program set-up is finished



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



› Open

CONNECT THE INTERFACE CABLE TO THE J4C ELECTRIC ACTUATOR

1

J4C INTERFACE KIT









Use the INTERFACE cable inside the KIT box.

2

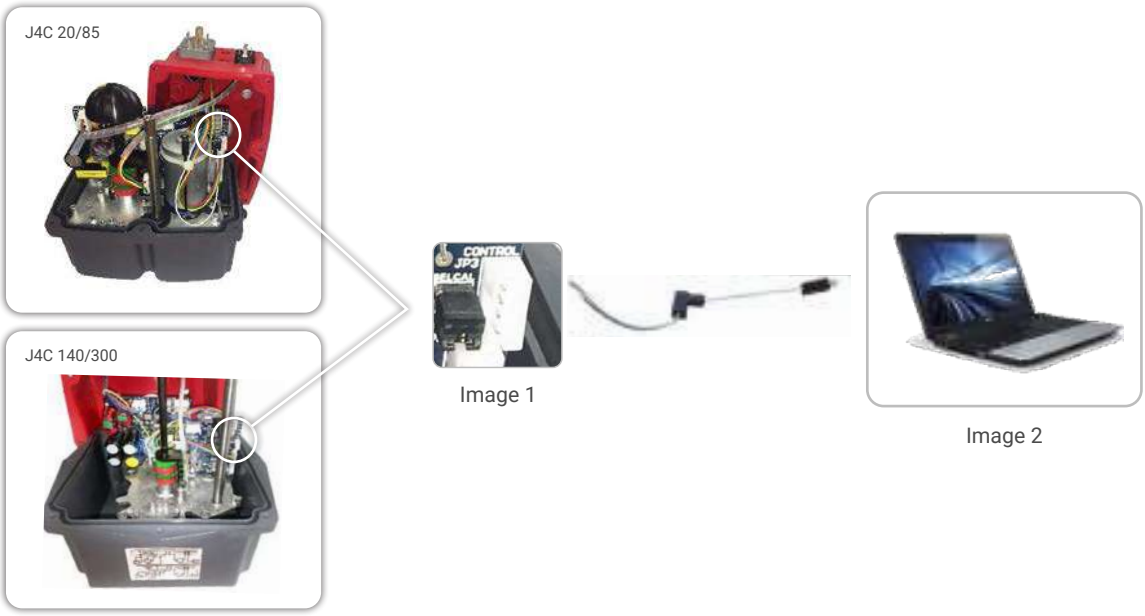


Image 1

Image 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).

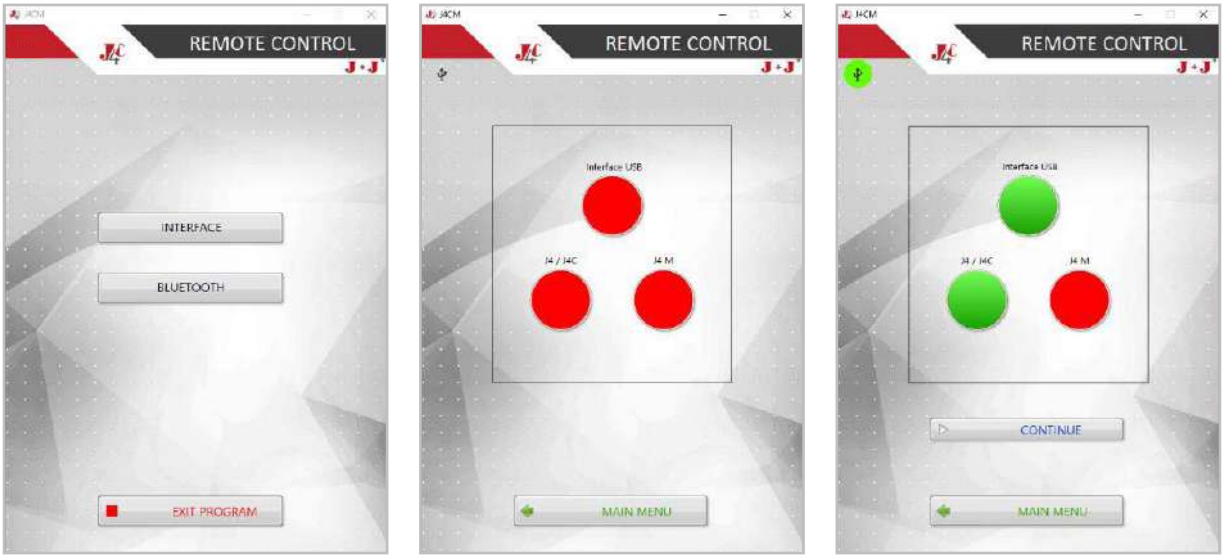
INTERFACE PROGRAM - HOW IT WORKS?

INTERFACE PROGRAM FOR J4 AND J4C SERIES ACTUATORS ONLY

› https://www.dropbox.com/s/h1lw1e3t9x106y2/J4CM%2020230628_131_0.rar?dl=0

1 Open the program see the following screen

2



Three RED indicators appear on the screen:

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

J4/J4C indicator 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. **J4/J4C indicator should change into GREEN color.**

J4M indicator will be always in RED color, as the actuator is from a J4/J4C series.

3





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**.

4



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 OPERATION TIME 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**.

5



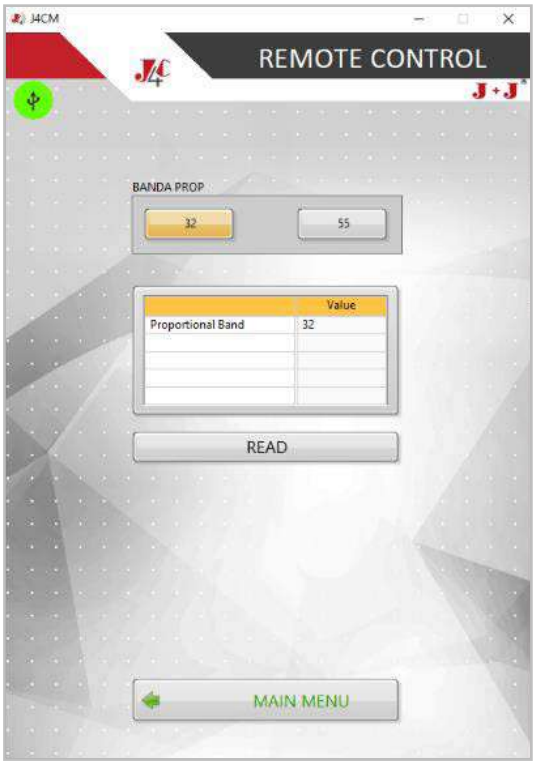


This configuration is possible only if our Battery Safe Return system (BSR) has already been installed in the actuator.

Click on BSR, the following screen will appear

6





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 **Prop Band** parameter. The Prop Band 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 **Prop Band** value should change into 55. Otherwise, the positioner (DPS) could not work in a proper way.

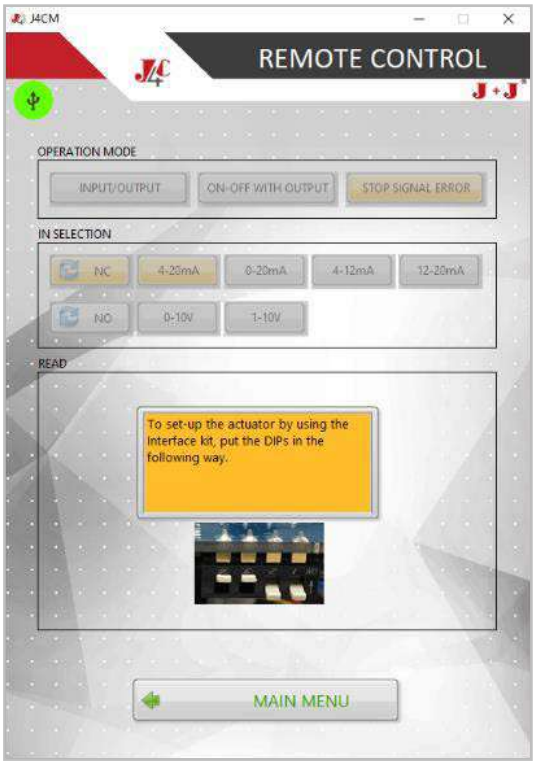
Click on **READ**, to see the recorded value.

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

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

7





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

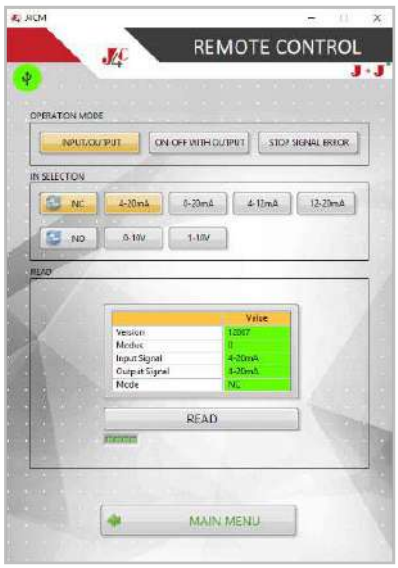
Click on DPS, if the following screen appears, please place the DIPs on the DPS PCB, following the screen instructions.



Click on **MAIN MENU**.

8

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:

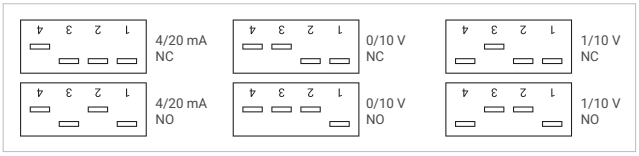
- **INPUT/OUTPUT**: The actuator with DPS will be positioned by using an external mA or V signal. Automatically the DPS will generate an output signal showing the actuator position.
- **ONLY OUTPUT**: The actuator with DPS will work exactly the same as an ON-OFF one. The only difference is that the DPS 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 of 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 4/20m, 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:



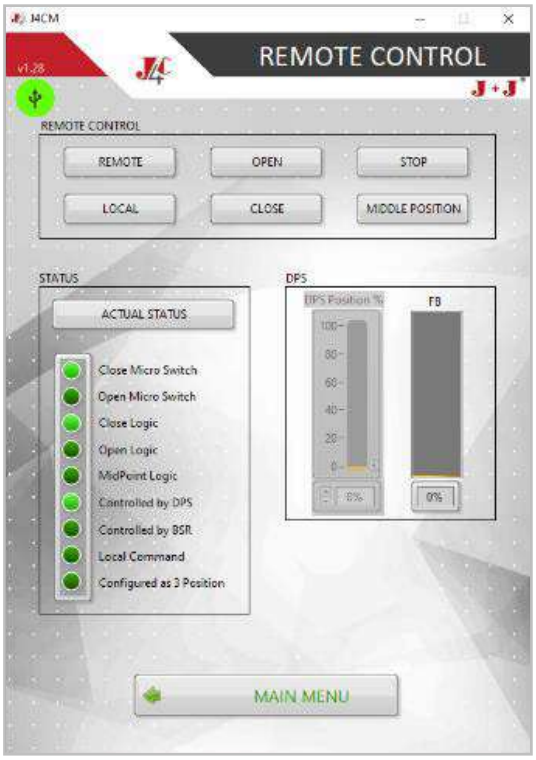


Click on **READ** to know the DPS configuration (a table will show the DPS parameters).

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

9





Click on **REMOTE CONTROL** indicator. The screen will show different **DPS options**.

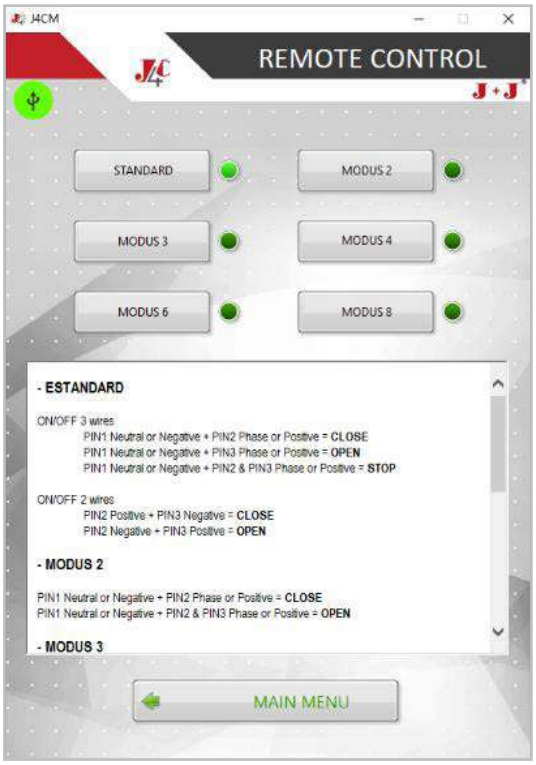
In case of an **ON-OFF** or a **DPS Output only actuator**, Click on **OPEN, CLOSE** and **STOP options** to activate it. Only in case of having a 3-position actuator, the screen will show an additional option **MIDDLE POSITION**, which stops the actuator at an intermediate position.

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

Click on **MAIN MENU** to go back to the home menu.

10





POWER SUPPLY CONFIGURATIONS indicator, the screen will show electrical wiring/connection options:

Select the wiring connection system you wish to work with. Click on **STANDARD, MODUS 2, MODUS 3, MODUS 4, MODUS 6 or MODUS 8**.

See the detail of each connection system below. To go back to the home menu, click on **MAIN MENU**.

To finish, click on **EXIT**.

07 CERTIFICATIONS

→ Index


Applus laboratories

FILE NUMBER 22/36403838

TEST REPORT

Degrees of Protection Provided by Enclosures (IP Code)

Petitioner's Reference: JJ BCN INTERNACIONAL, S.A.

Customer address: Carrer de l'Orfeó Català, 7 ES-08440 – CARDEDEU (BARCELONA)

Received material: ELECTRIC ACTUATOR

Brand: J+J Model: 20-35-2 6-10

Series: J4/J4C/J4M/J5/J5C/J5M Applus id.: 8950/3 & 8950/4

Result:

It has been tested and complies the standard applicable specifications.

Degree of protection (IP): IP67

See applied specifications on clause 1.3.

Applicable standards:

UNE-EN 60529:2018 + A1:2018 + A2:2018 + AC:2019-02 (EN 60529:1991 + A1:2000 + A2:2013 + AC:2019-02)

Date of issue: Bellaterra, August 24, 2022

Omar Velásquez Tito
Technical Manager
Electrical and Electronics

The results refer only and exclusively to the sample, product or material delivered for testing in "Received Material" section above. The equipment has been tested under conditions stipulated by standard(s) quoted in this document. This document will not be reproduced otherwise than in full.

This is the first page of the document, which consists of 11 pages of 2 annexes.

IP 67

Document link


J+J

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

CE

Declaration of Conformity EMC

Document link


J+J

Reach Certificate of Compliance

Document link


RoHS COMPLIANT

J+J

Rohs Certificate of Compliance

Document link


telproCE

Laboratorio de Ensayos, marcado CE

Test Laboratory, CE mark

CE

Marca: J+J

Modelo: Serie: J4C : J4M Modelos: 520/535/555/585/52/56/510

Descripción: Actuador eléctrico

Directivas: 2014/35 /EU (LVD) Low Voltage Directive Classl 2014/30/EU (E. M. C.) 2014/53/EU (RED)

Ensayos y medidas. Norma:

Resultado en el informe de los ensayos Nº: 2022-09-008

Verificado: V

Fecha (DD-MM-AAAA): 28-09-2022

Sello de la compañía y firma

laboratorio de ensayos telproCE www.almorcadoCE.com

CE Certificate J4C 20 to 85

Document link


telproCE

Laboratorio de Ensayos, marcado CE

Test Laboratory, CE mark

CE

Marca: J+J

Modelos: Serie: J4C : J4M 5140/5300/525/540

Descripción: Actuador eléctrico ACTUATOR 1: ON-OFF + DPS+BSR + BLUETOOTH

Directivas: 2014/35 /EU (LVD) Low Voltage Directive Classl 2014/30/EU (E. M. C.) 2014/53/EU (RED)

Ensayos y medidas. Norma:

Resultado en el informe de los ensayos Nº: 2023-05-011

Verificado: V

Fecha (DD-MM-AAAA): 17-05-2023

Sello de la compañía y firma

laboratorio de ensayos telproCE www.almorcadoCE.com

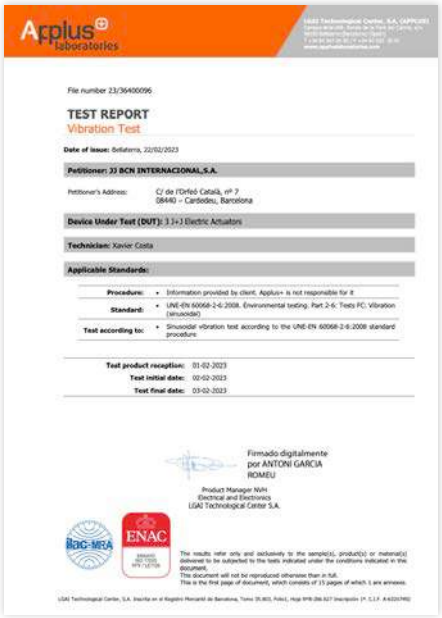
CE Certificate J4C 140 to 300

Document link



ISO 9001:2015

Document link



Vibration Test

Document link



UK CA

Document link



KOREAN REGISTER

Document link

08 GUARANTEE

→ Index

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.