J4C 20 ON – OFF INFORMATION



GENERAL CHARACTERISTICS
Housing: Anticorrosive polyamide (lid & body)
Main external shaft: Anticorrosive polyamide
External screws: stainless steel
Gears: Steel and polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide
Electric motor: 24VDC Brushless motor
Insulation: Class B
(IEC 60034) Service: S4

DATASHEET

Model	S20	B20
Voltage VDC/VAC 50/60Hz -0/+5%	24 a 240 (Patent Pending)	12 V **ONLY**
Operation time unload	9 Sec./90°	9 Sec./90°
Maximum torque break	25 Nm / 221 lb/in	25 Nm / 221 lb/in
Maximum operational torque	20 Nm / 177 lb/in	20 Nm / 177 lb/in
Duty rating	75 %	75 %
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmations)	4 SPST NO micro (2 motor stop and 2 confirmations)
Automatic heater	3,5 W	3,5 W
Big Plug	EN175301-803 FORM A	EN175301-803 FORM A
Small Plug	DIN43650/C	DIN43650/C
Protection IEC 60529 rating	IP67	IP67
Temperature	-20°C +70°C / -4°F +158°F	-20°C +70°C / -4°F +158°F
Weight	1,8 Kg	1,8 Kg

VALVE CONNECTION

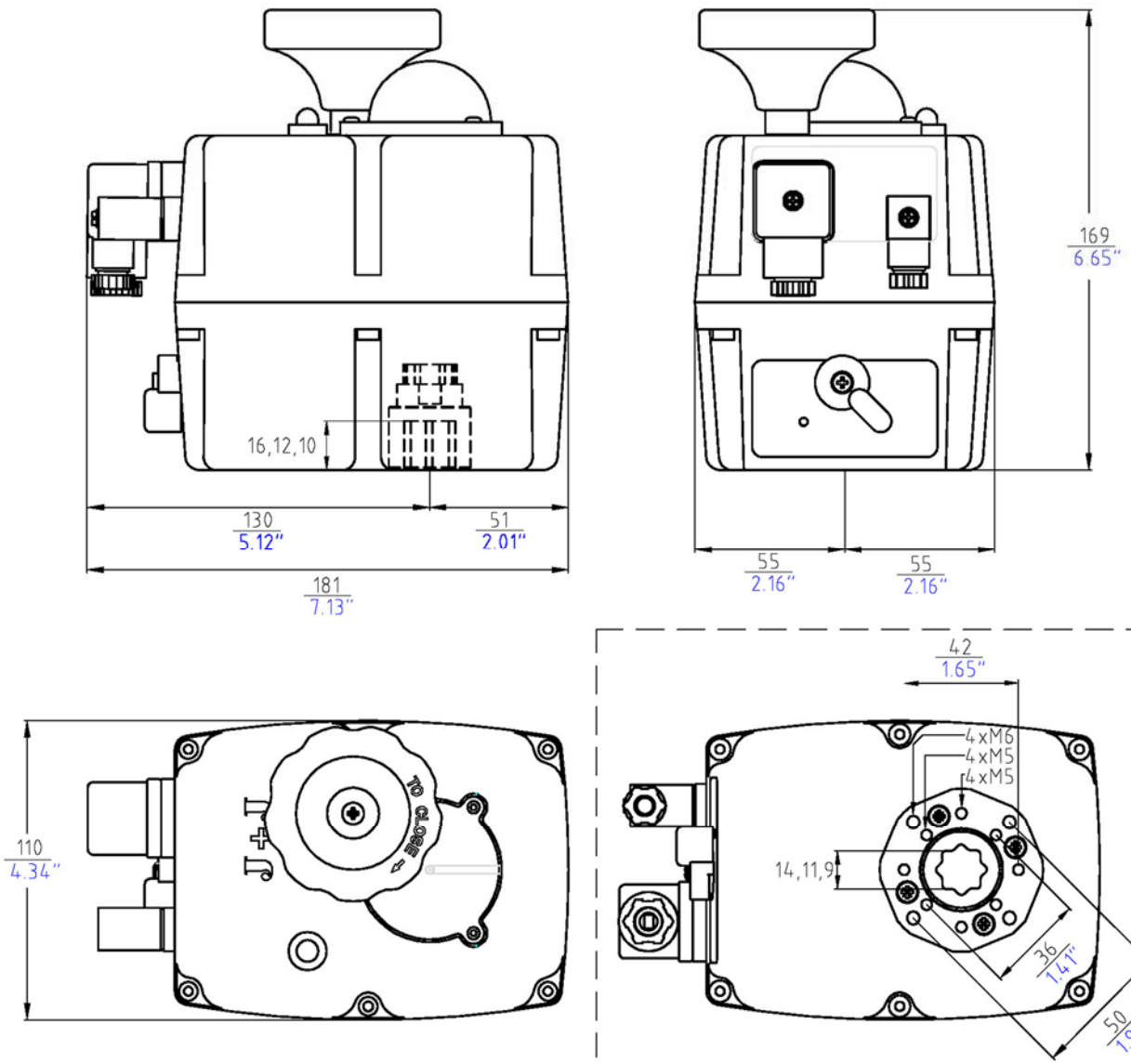
ISO 5211 Plate : F03/F04/F05
DIN 3337 Female output drive : *14 mm

Options:
DIN 3337 Female output drive: *9 or *11 mm
F05 to F07 Conversion Kit with *17mm output

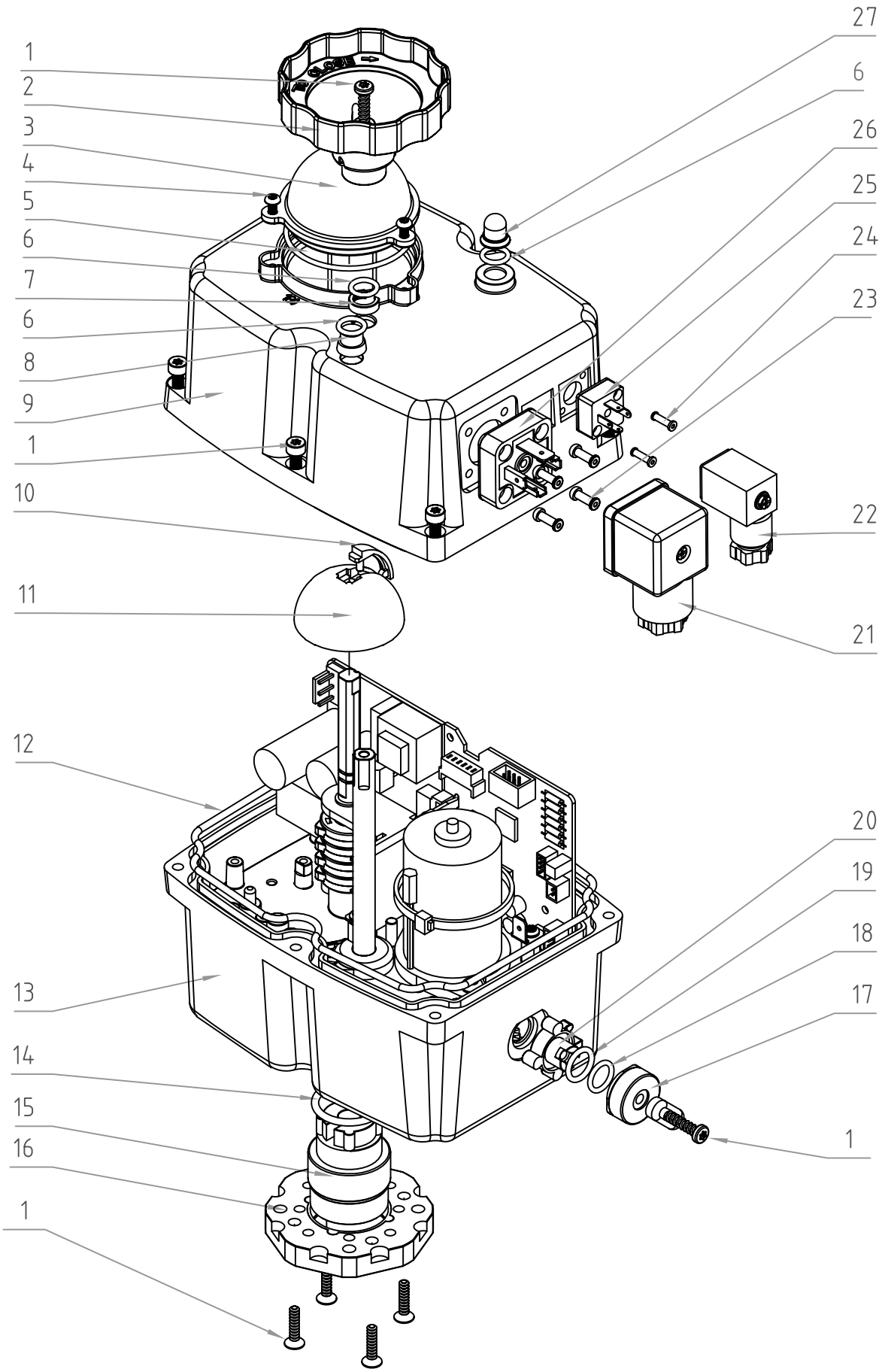
OPTIONS

-J4C 20/85 DPS digital positioner: 4-20mA, 0-20mA, 0-10V or 1-10V.
-J4C 20/85 BSR emergency fail safe kit system by battery

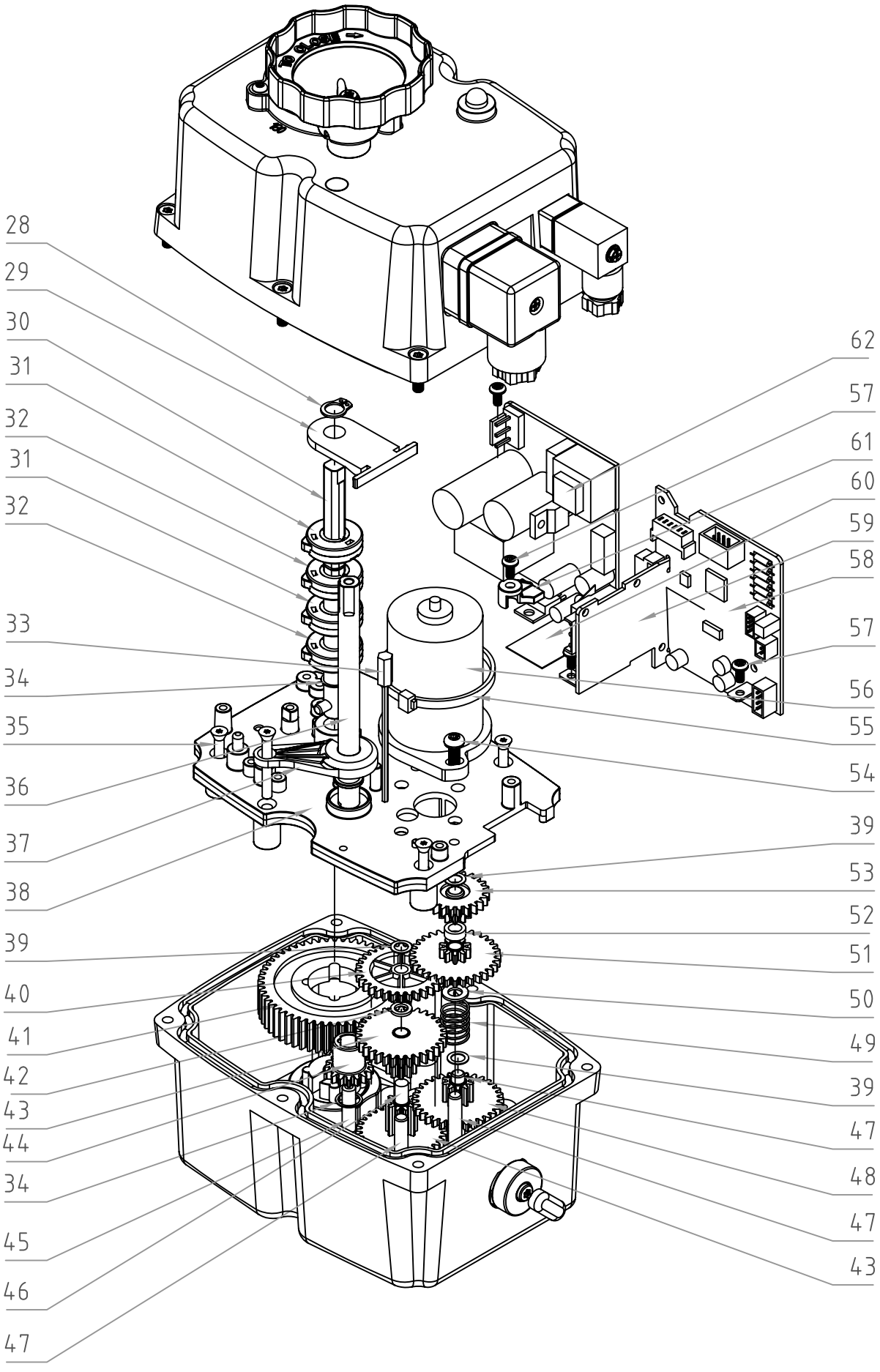
J4C 20 SIZES


16,12,10
130
5.12"
51
2.01"
181
7.13"
169
6.65"
55
2.16"
55
2.16"
110
4.34"
CLOSE
TO
42
1.65"
4 x M6
4 x M5
4 x M5
14,11,9
36
1.41"
50
1.96"

J4C 20


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J4C 20


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J4C 20

Number	Code	Units	
1	AP00541	12	
2	AP00083	1	
3	AP00372	1	
4	AP00345	3	
5	AP00346	1	
6	AP00053	3	
7	AP00037	1	
8	AP00133	1	
9	AP00340	1	
10	AP00374	1	
11	AP01138	1	
12	AP00048	1	
13	AP00455	1	
14	AP00050	1	
15	AP00044	1	**(*14)**
15	AP00043	1	**(*11)**
15	AP00042	1	**(*09)**
16	MM00187	1	
17	AP00457	1	
18	AP00054	1	
19	AP00056	1	
20	AP00456	1	
21	AP00067	1	
22	AP00068	1	
23	AP01098	4	
24	AP01099	2	
25	MM00004	1	
26	MM01382	1	
27	AP00023	1	
28	AP00159	1	
29	AP00161	1	
30	AP00376	1	
31	MM01211	2	
32	MM01210	2	
33	AP00926	1	
34	AP01000	2	
35	AP00070	6	
36	AP01015	1	
37	AP01017	1	
38	AP00057	1	

Number	Code	Units	
39	AP00014	3	
40	AP00251	1	
41	AP00794	1	
42	AP00974	1	
43	AP00343	2	
44	AP00991	1	
45	AP01013	1	
46	AP00031	1	
47	AP00032	3	
48	AP00145	1	
49	AP00021	1	
50	AP00960	1	
51	AP00143	1	
52	AP00955	1	
53	AP00861	1	
54	AP00911	2	
55	AP00079	1	
56	AP01056	1	
57	AP00080	4	
58	AP01066	1	
59	MM01324	1	
60	AP01045	1	
61	AP01047	1	
62	AP00533	1	**S** TYPE
62	AP01059	1	**B** TYPE



DPS

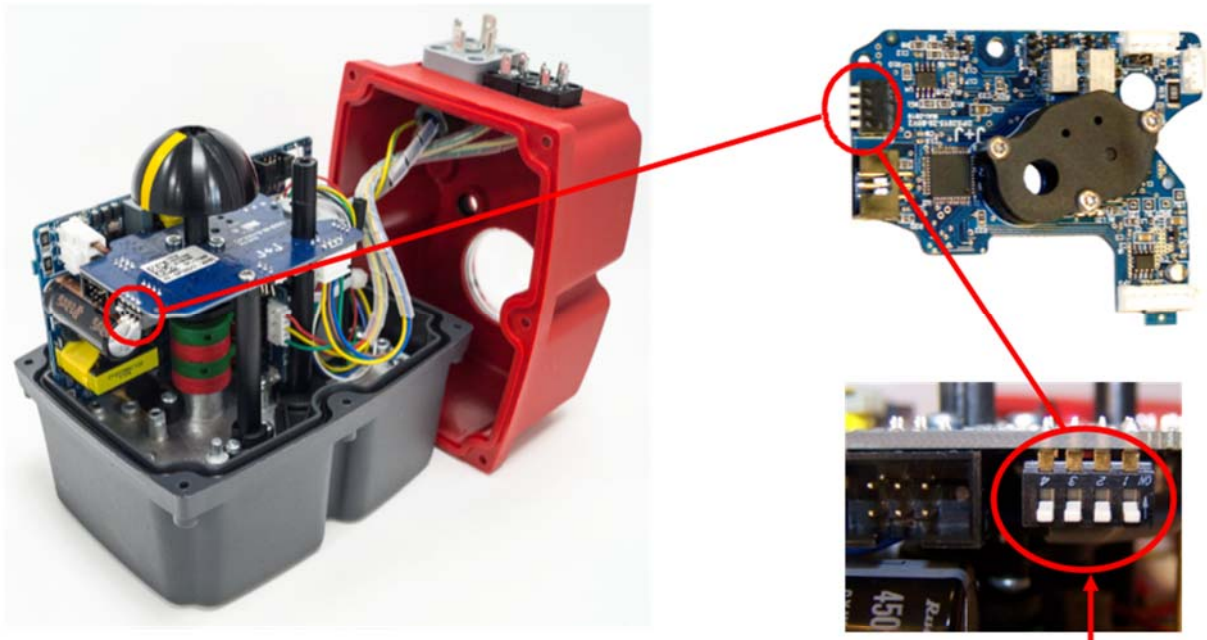
J4C 20/35/55/85 POSITIONER INFORMATION (DPS)



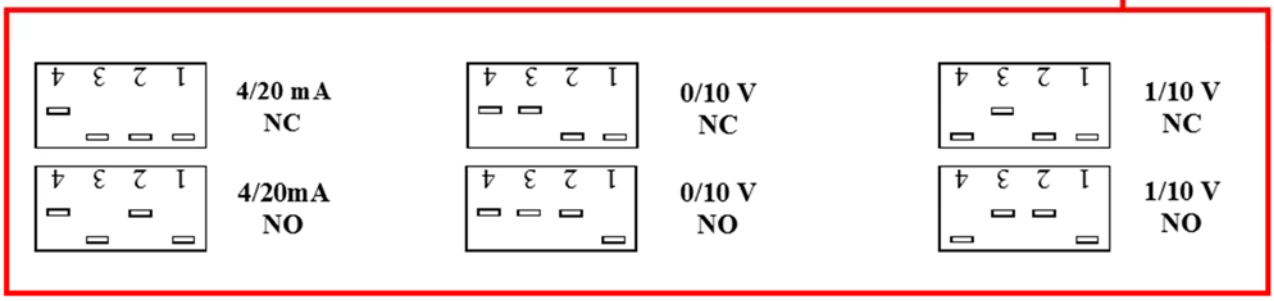
SPECIFICATIONS				
MODEL	**S20-B20**	**S35-B35**	**S55-B55**	**S85-B85**
Accuracy	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Linearity	2 % F.S.	2 % F.S.	2 % F.S.	2 % F.S.
Hysteresis	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Steps at 4/20mA	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°
Steps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

F.S. **F**ull **S**cale

J4C 20/35/55/85 POSITIONER CONFIGURATION (DPS)

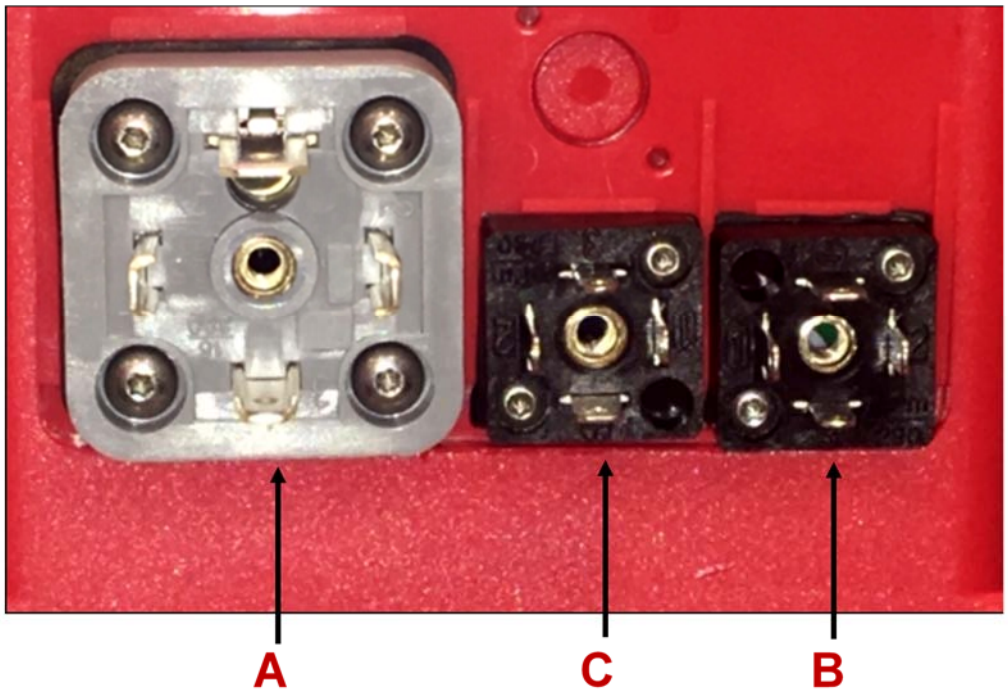


Use the configuration you need by moving the DIPs:
Different possibilities of configuration:



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

J4C 20/35/55/85 POSITIONER SELF-ADJUSTMENT (DPS)



A- Power supply plug.

B- Volt free contact plug.

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

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

2- **A** plug - connect:

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

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

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

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

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

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



BSR

J4C 20/35/55/85 BSR INFORMATION

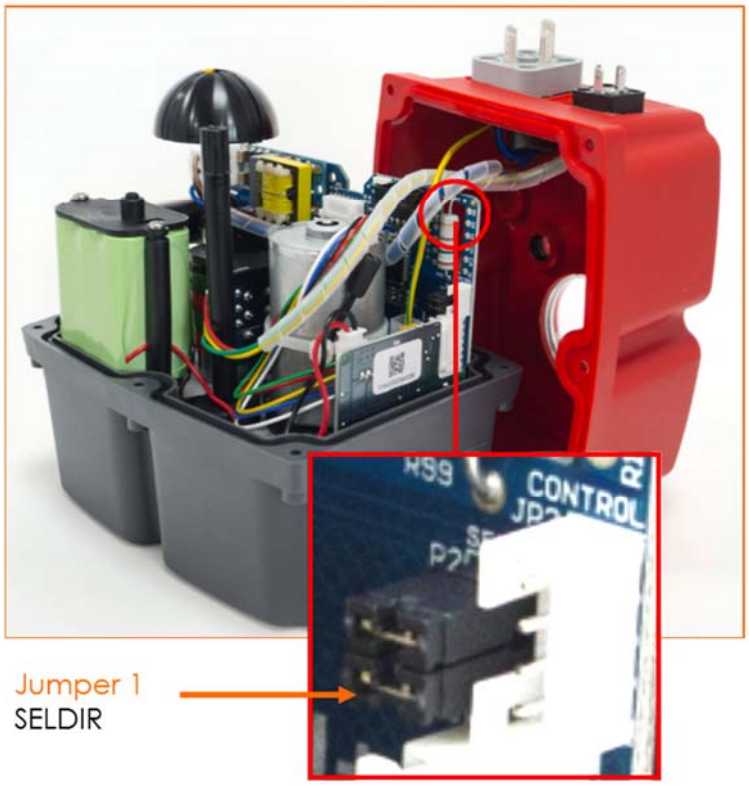


SPECIFICATIONS				
ACTUATOR MODEL	**S20-B20**	**S35-B35**	**S55-B55**	**S85-B85**
N° Working operation without recharge, with 100% battery charge	10	10	10	10
Recharge time/working operation	15 min	21 min	48 min	58 min
Battery consumption/working operation	2,2 W	3,0 W	6,8 W	8,3 W
Full charge time 100%	28 h	28 h	28 h	28 h
Nominal capacity +/- 5%	2200 mA	2200 mA	2200 mA	2200 mA
NO or NC Features (*)	Jumper	Jumper	Jumper	Jumper
Current/one working operation with battery	10,1 mA	14 mA	31,6 mA	38.6 mA
Battery charge	40 mA/h	40 mA/h	40 mA/h	40 mA/h

J4C 20/35/55/85 BSR CONFIGURATION

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

(*) NO or NC Set-Up



Jumper 1
SELDIR

NC Set-Up

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

NO Set-Up

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

DPS KIT 20/35/55/85



OUTSIDE BOX



INSIDE BOX

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.

SPECIFICATIONS				
MODEL	**S20-B20**	**S35-B35**	**S55-B55**	**S85-B85**
Accuracy	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Linearity	2 % F.S.	2 % F.S.	2 % F.S.	2 % F.S.
Hysteresis	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Steps at 4/20mA	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°
Steps at 0/10V	Min.98 steps 90°	Min.98 steps 90°	Min.98 steps 90°	Min.98 steps 90°
Steps at 0/20mA	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°
Steps at 1/10V	Min.87 steps 90°	Min.87 steps 90°	Min.87 steps 90°	Min.87 steps 90°
4/20mA or 0/20mA Input signal impedance	100 Ohm	100 Ohm	100 Ohm	100 Ohm
0/10V or 1/10V Input signal impedance	25 KOhm	25 KOhm	25 KOhm	25 KOhm
CLASS	B+C to E DIN EN 15714 Inching + Modulation			
WEIGHT	0,600 Kg	0,600 Kg	0,600 Kg	0,600 Kg

F.S. **F**ull **S**cale

J4C 55 ON – OFF INFORMATION



GENERAL CHARACTERISTICS
Housing: Anticorrosive polyamide (lid & body)
Main external shaft: stainless steel
External screws: stainless steel
Gears: Steel and polyamide
Visual position indicator: Polyamide
Dome: Polycarbonate
Adjustable internal cams: Polyamide
Electric motor: 24VDC Brushless motor
Insulation: Class B
(IEC 60034) Service: S4

DATASHEET

Model	S55	B55
Voltage VDC/VAC 50/60Hz -0/+5%	24 a 240 (Patent Pending)	12 V **ONLY**
Operation time unload	13 Sec./90°	13 Sec./90°
Maximum torque break	60 Nm / 530 lb/in	60 Nm / 530 lb/in
Maximum operational torque	55 Nm / 486 lb/in	55 Nm / 486 lb/in
Duty rating	75 %	75 %
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmations)	4 SPST NO micro (2 motor stop and 2 confirmations)
Automatic heater	3,5 W	3,5 W
Big Plug	EN175301-803 FORM A	EN175301-803 FORM A
Small Plug	DIN43650/C	DIN43650/C
Protection IEC 60529 rating	IP67	IP67
Temperature	-20°C +70°C / -4°F +158°F	-20°C +70°C / -4°F +158°F
Weight	2,4 Kg	2,4 Kg

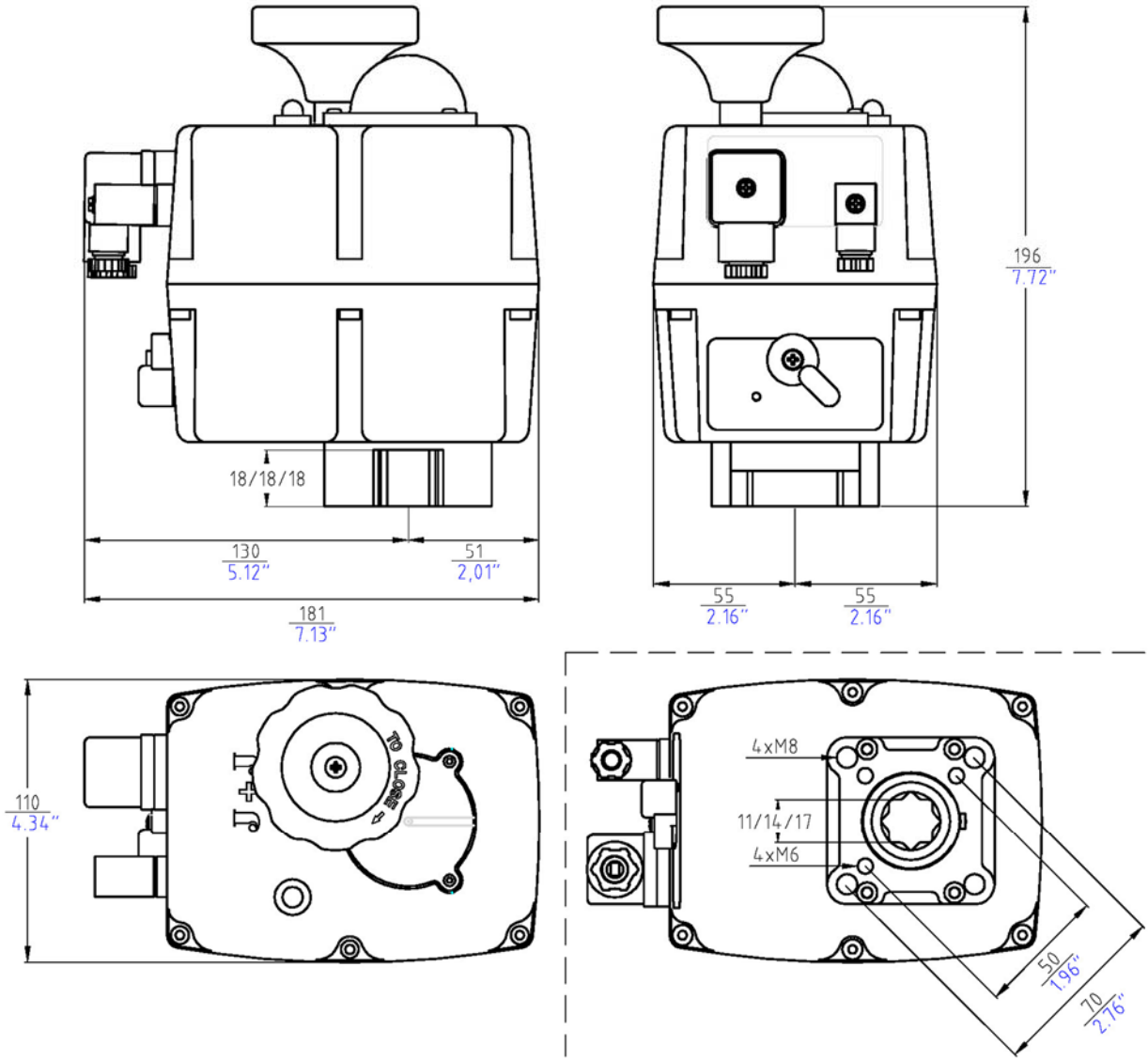
VALVE CONNECTION

ISO 5211 Plate : F05/F07
DIN 3337 Female output drive : *17 mm
Option:
DIN 3337 Female output drive: *11 or *14 mm

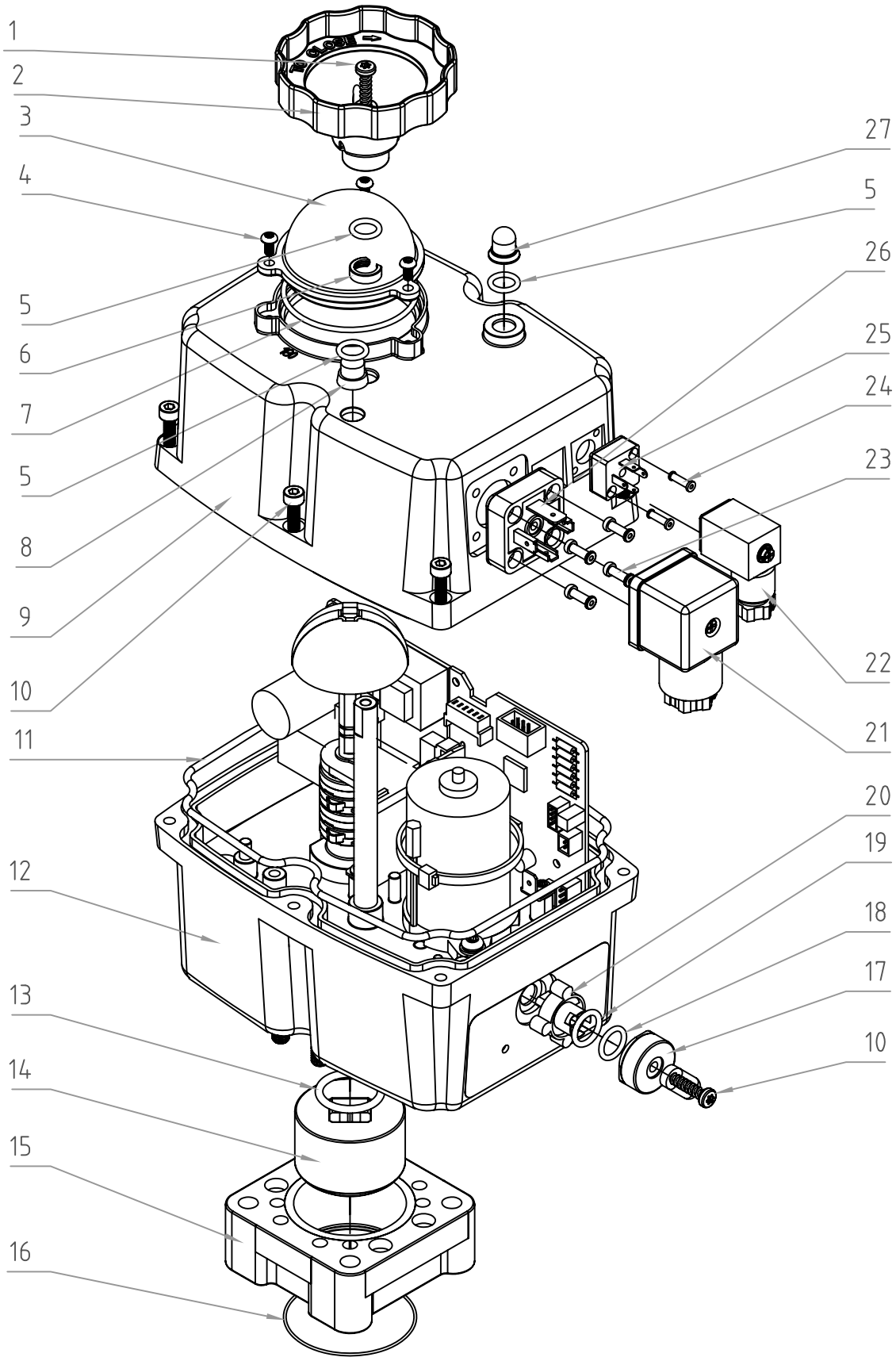
OPTIONS

-J4C 20/85 DPS digital positioner: 4-20mA, 0-20mA, 0-10V or 1-10V.
-J4C 20/85 BSR emergency fail safe kit system by battery
-Digital potentiometer: 1K, 5K or 10K.
-3 position actuator: 0°-45°-90° or 0°-90°-180°

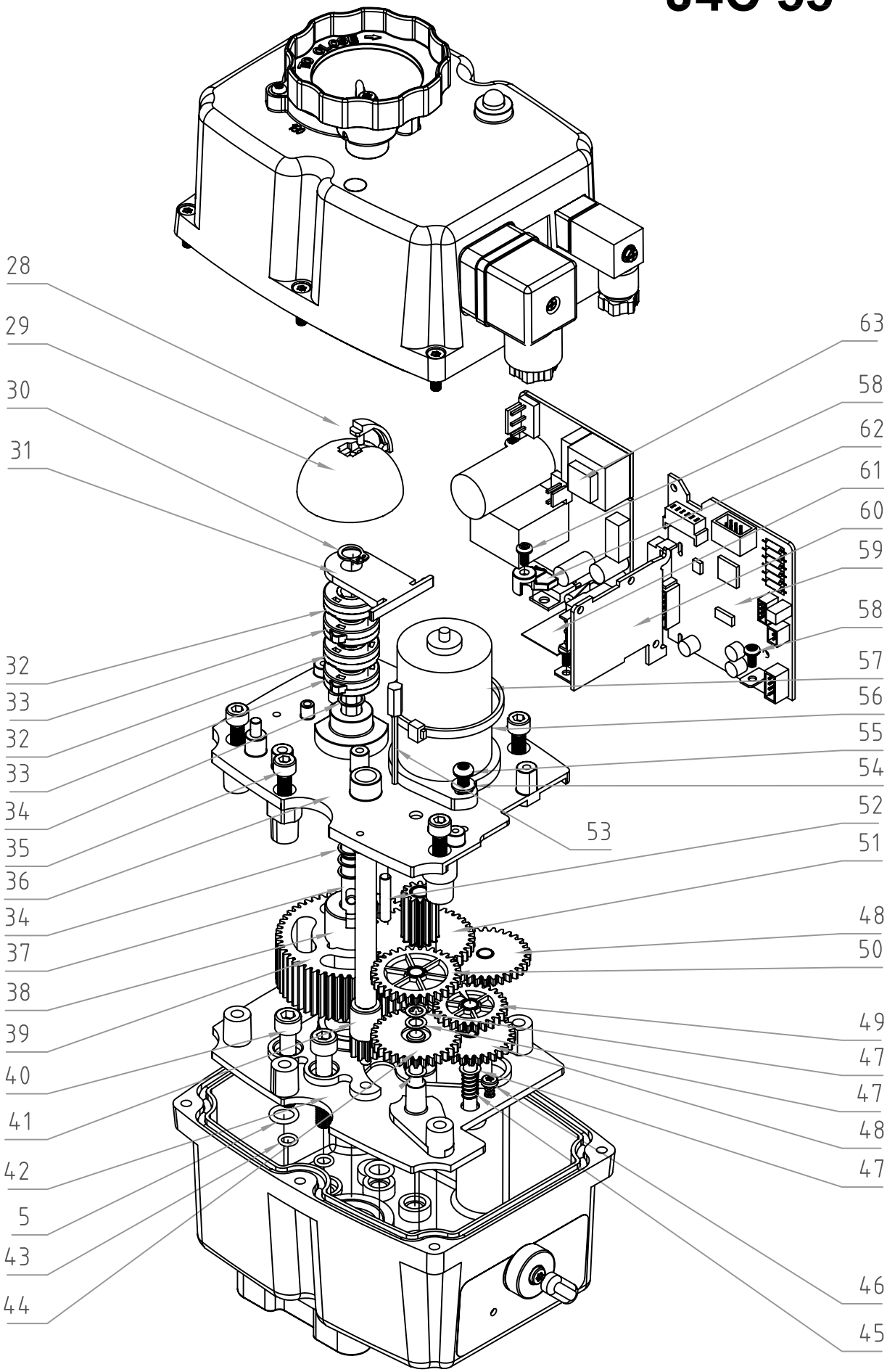
J4C 55 SIZES


18/18/18
130
5.12"
51
2,01"
181
7.13"
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"

J4C 55



J4C 55


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J4C 55

Number	Code	Units	
1	AP00162	1	
2	AP00083	1	
3	AP00372	1	
4	AP00345	3	
5	AP00053	7	
6	AP00037	1	
7	AP00346	1	
8	AP00133	1	
9	AP00340	1	
10	AP00541	7	
11	AP00048	1	
12	AP00036	1	
13	AP00049	1	
14	AP00046	1	**(*17)**
14	AP00045	1	**(*14)**
14	AP00150	1	**(*11)**
15	MM00140	1	
16	AP00016	1	
17	AP00457	1	
18	AP00054	1	
19	AP00056	1	
20	AP00110	1	
21	AP00067	1	
22	AP00068	1	
23	AP01098	4	
24	AP01099	2	
25	MM00004	1	
26	MM01382	1	
27	AP00023	1	
28	AP00374	1	
29	MM01138	1	
30	AP00159	1	
31	AP00161	1	
32	MM01211	2	
33	MM01210	2	
34	AP01000	4	
35	AP00492	6	
36	AP00059	1	
37	AP00377	1	
38	AP00378	1	

Number	Code	Units	
39	AP00212	1	
40	AP00077	4	
41	MM00099	1	
42	AP00064	1	
43	AP00052	4	
44	AP00655	1	
45	AP00866	1	
46	AP00539	1	
47	AP00014	4	
48	AP00145	2	
49	AP00745	1	
50	AP00249	1	
51	AP00881	1	
52	AP00281	1	
53	AP00926	1	
54	AP00291	2	
55	AP00911	2	
56	AP00079	1	
57	AP01056	1	
58	AP00080	4	
59	AP01066	1	
60	MM01324	1	
61	AP01045	1	
62	AP01047	1	
63	AP00533	1	**S** TYPE
63	AP01059	1	**B** TYPE



DPS

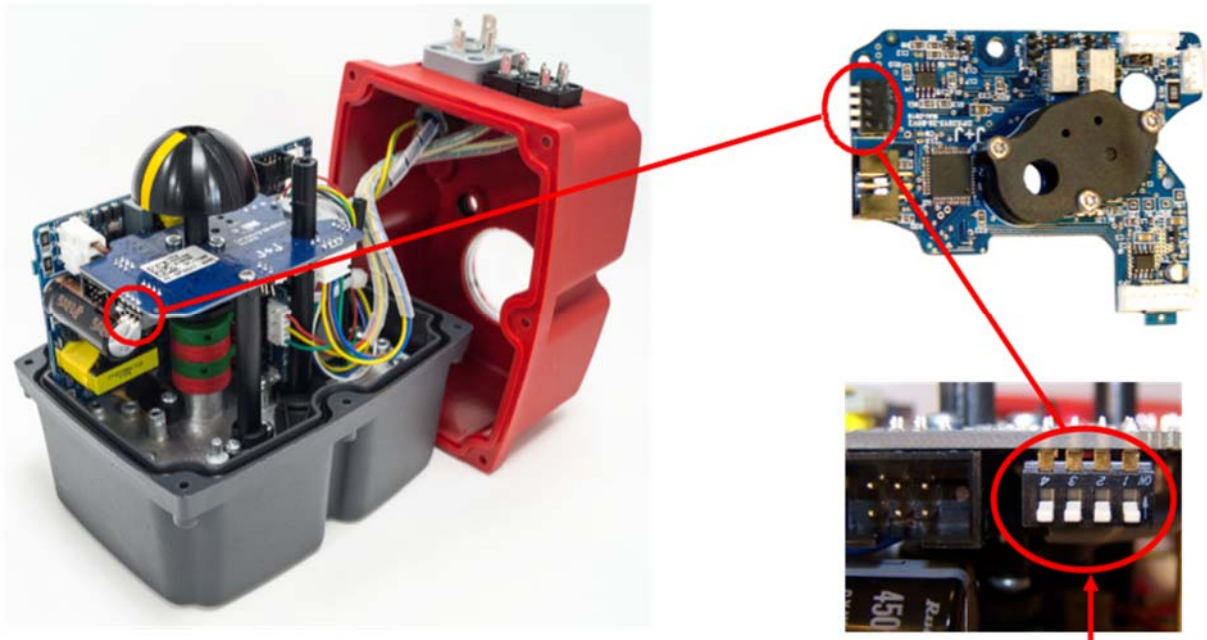
J4C 20/35/55/85 POSITIONER INFORMATION (DPS)



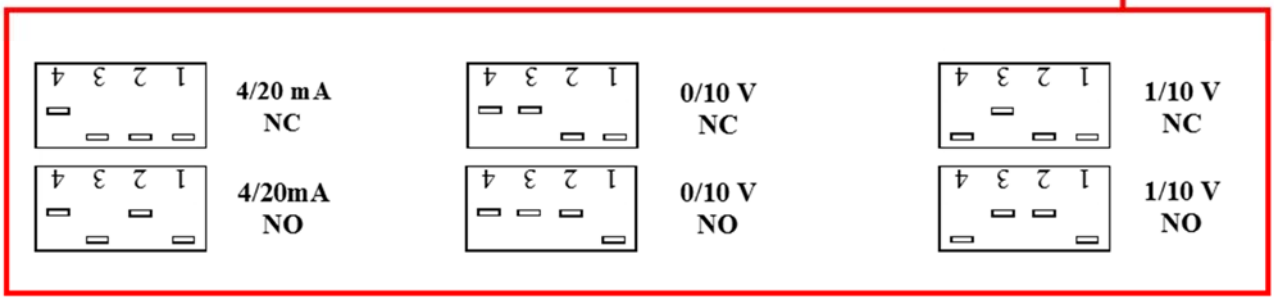
SPECIFICATIONS				
MODEL	**S20-B20**	**S35-B35**	**S55-B55**	**S85-B85**
Accuracy	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Linearity	2 % F.S.	2 % F.S.	2 % F.S.	2 % F.S.
Hysteresis	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Steps at 4/20mA	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°	Min.150 steps 90°
Steps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

F.S. **F**ull **S**cale

J4C 20/35/55/85 POSITIONER CONFIGURATION (DPS)

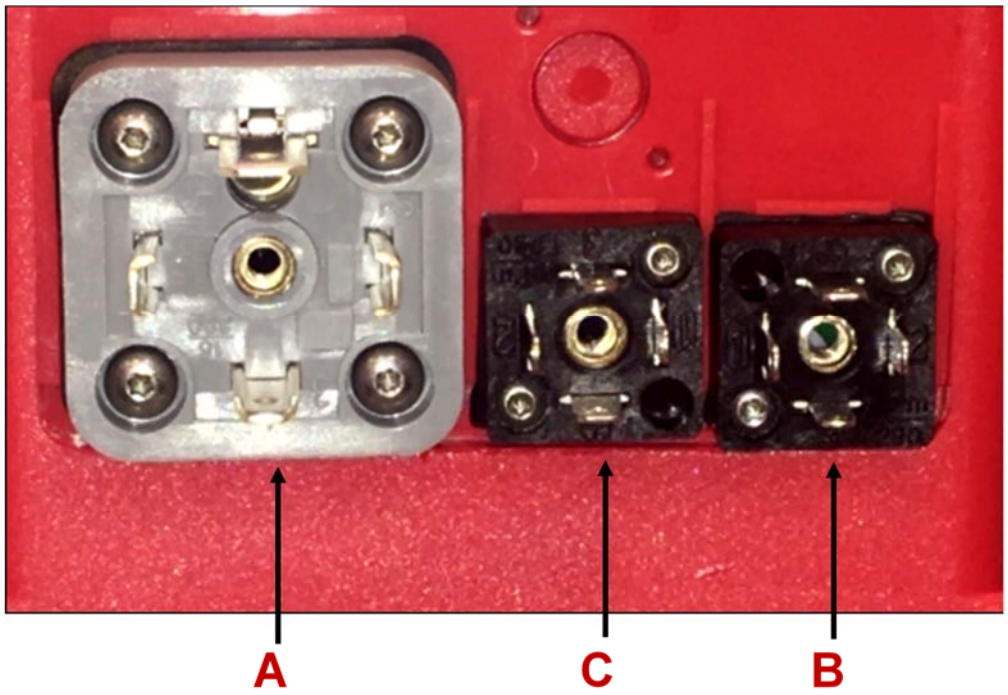


Use the configuration you need by moving the DIPs:
Different possibilities of configuration:



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

J4C 20/35/55/85 POSITIONER SELF-ADJUSTMENT (DPS)



A- Power supply plug.

B- Volt free contact plug.

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

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

2- **A** plug - connect:

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

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

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

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

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

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



BSR

J4C 20/35/55/85 BSR INFORMATION

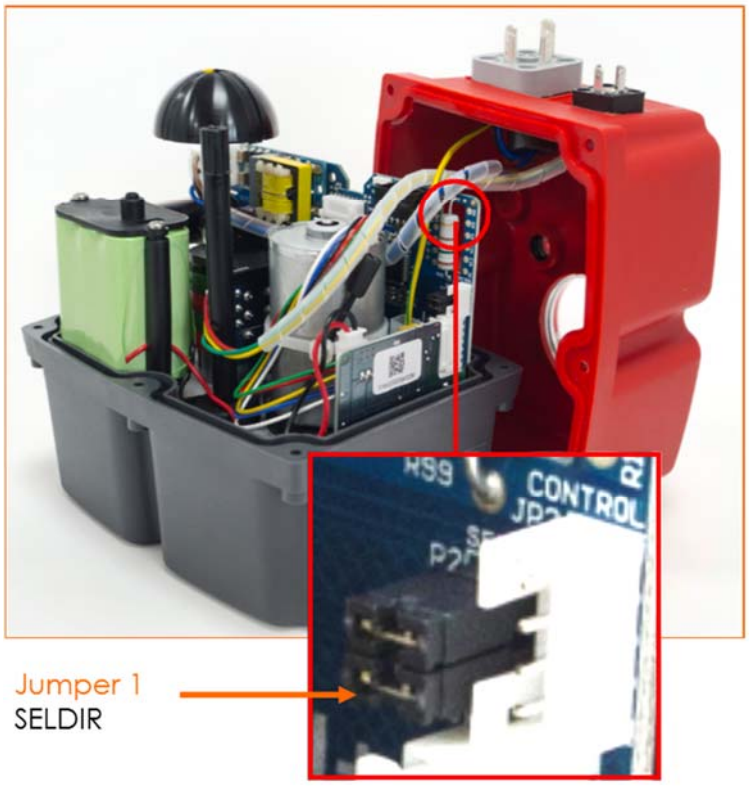


SPECIFICATIONS				
ACTUATOR MODEL	**S20-B20**	**S35-B35**	**S55-B55**	**S85-B85**
N° Working operation without recharge, with 100% battery charge	10	10	10	10
Recharge time/working operation	15 min	21 min	48 min	58 min
Battery consumption/working operation	2,2 W	3,0 W	6,8 W	8,3 W
Full charge time 100%	28 h	28 h	28 h	28 h
Nominal capacity +/- 5%	2200 mA	2200 mA	2200 mA	2200 mA
NO or NC Features (*)	Jumper	Jumper	Jumper	Jumper
Current/one working operation with battery	10,1 mA	14 mA	31,6 mA	38.6 mA
Battery charge	40 mA/h	40 mA/h	40 mA/h	40 mA/h

J4C 20/35/55/85 BSR CONFIGURATION

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

(*) NO or NC Set-Up



Jumper 1
SELDIR

NC Set-Up

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

NO Set-Up

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