

4400xxB



J+J® TECHNICAL DATA SHEET

electric actuators all voltages



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

ELECTRIC ACTUATOR

J3CS S20 & B20


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: Single phase 24VDC

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	10 Sec./90°	10 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

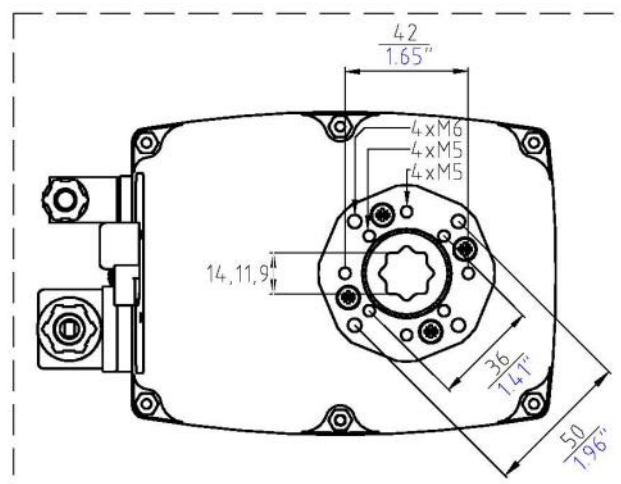
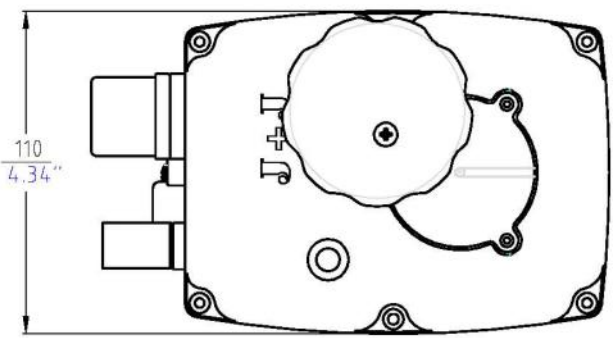
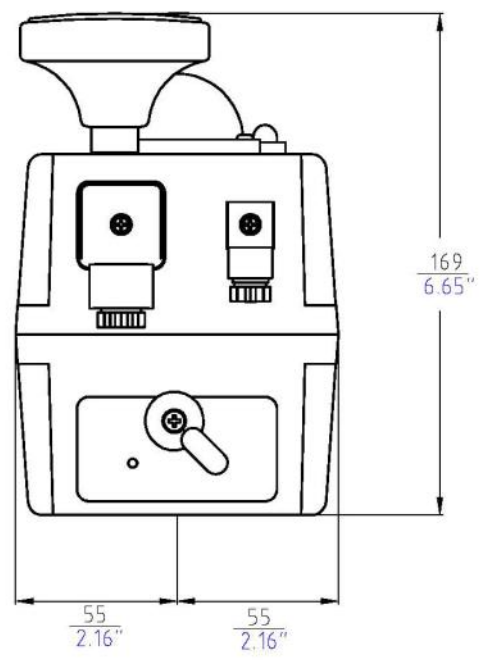
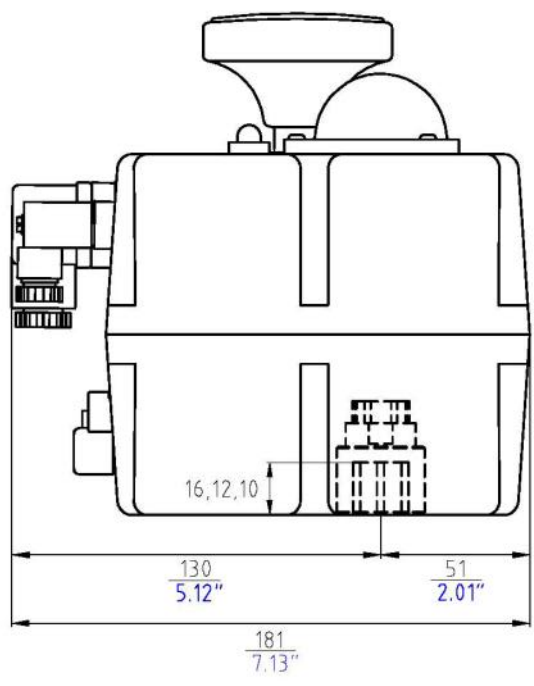
-J3CS 20/85 DPS 2017 digital positioner: 4-20mA, 0-20mA, 0-10V or 1-10V.

-J3CS 20/85 BSR 2017 emergency fail safe kit system by battery

-Digital potentiometer: 1K, 5K or 10K.

-3 position actuator: 0°-45°-90° or 0°-90°-180°

J3CS S20 & B20 SIZES



ELECTRIC ACTUATOR

J3CS S35 & B35


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: Single phase 24VDC

Insulation: Class B

(IEC 60034) Service: S4


DATASHEET

Model	S35	B35
Voltage VDC/VAC 50/60Hz -0/+5%	24 a 240 (Patent Pending)	12 V ONLY
Operation time unload	10 Sec./90°	10 Sec./90°
Maximum torque break	38 Nm / 359.3 lb/in	38 Nm / 359.3 lb/in
Maximum operational torque	35 Nm / 309 lb/in	35 Nm / 309 lb/in
Duty rating	75 %	75 %
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmation)	4 SPST NO micro (2 motor stop and 2 confirmation)
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	1,9 Kg	1,9 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

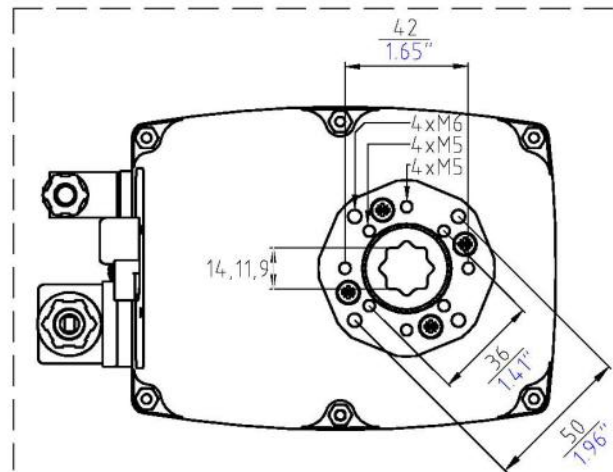
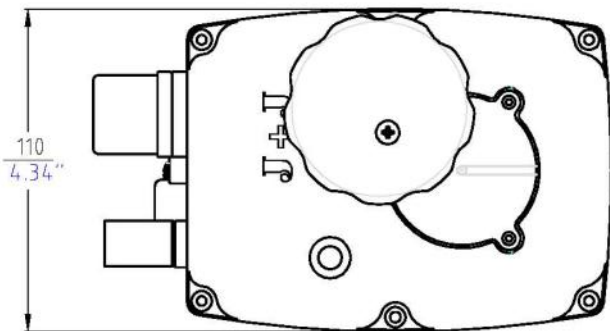
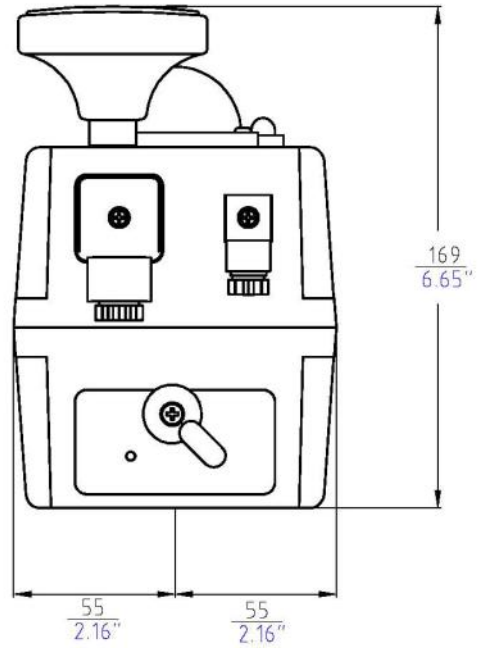
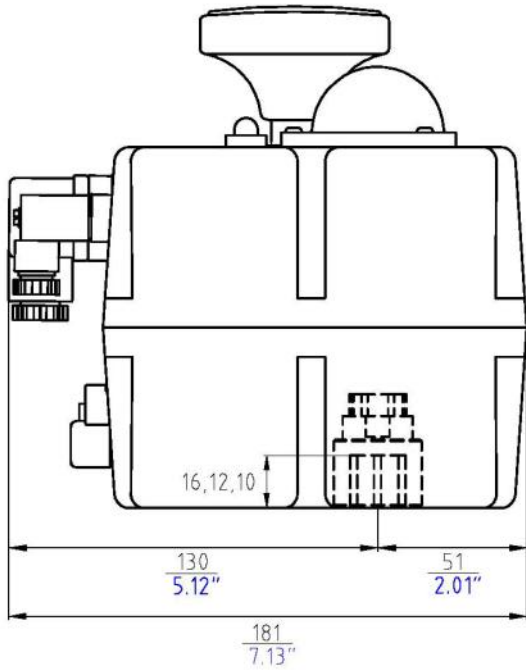
-J3CS 20/85 DPS 2017 digital positioner: 4-20mA, 0-20mA, 0-10V or 1-10V.

-J3CS 20/85 BSR 2017 emergency fail safe kit system by battery

-Digital potentiometer: 1K, 5K or 10K.

-3 position actuator: 0°-45°-90° or 0°-90°-180°

J3CS S35 & B35 SIZES



ELECTRIC ACTUATOR

J3CS S55 & B55


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: Single phase 24VDC

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	14 Sec./90°	14 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

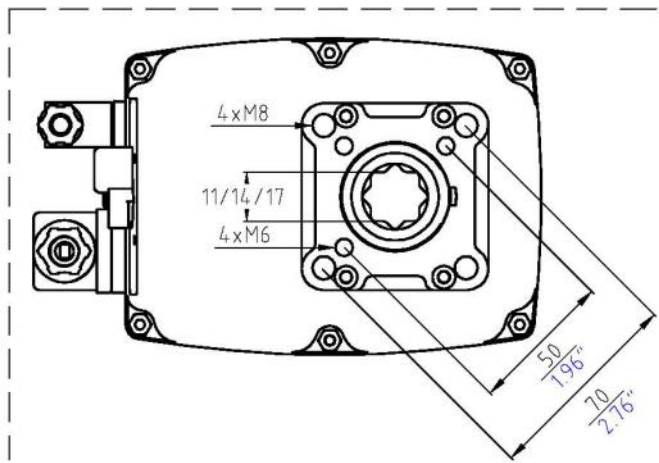
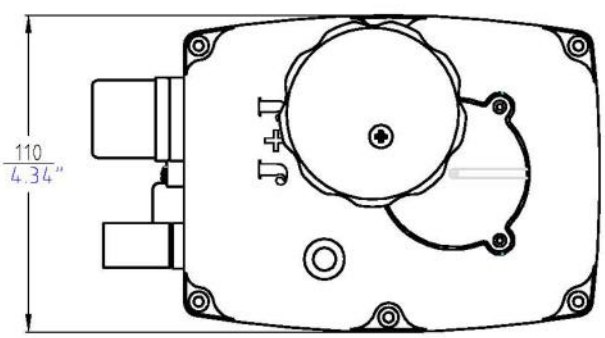
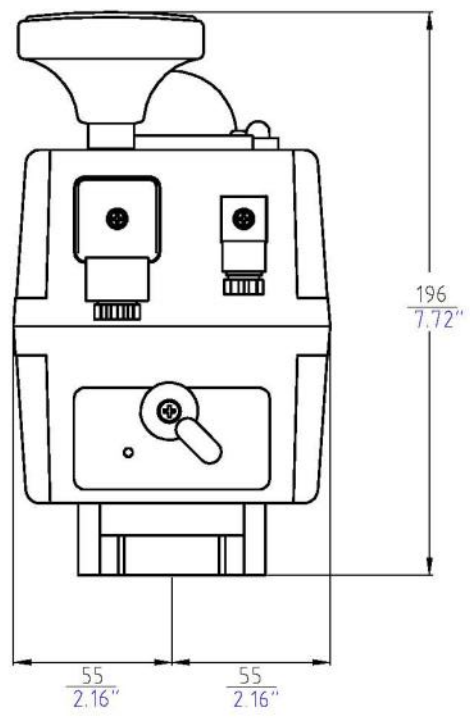
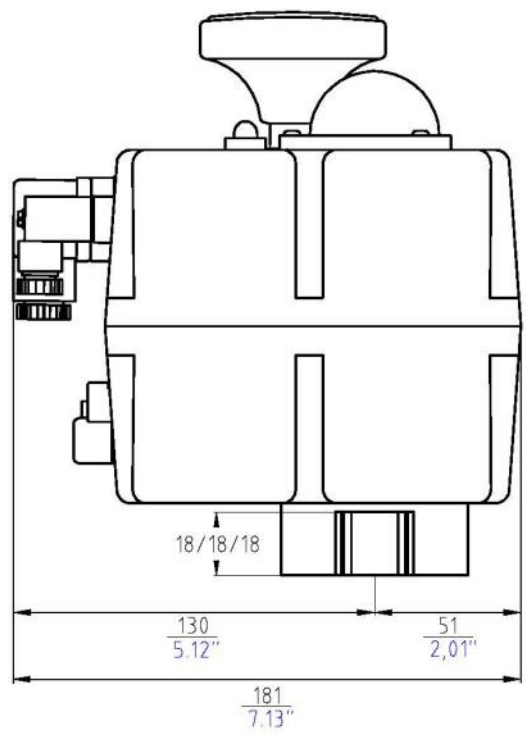
-J3CS 20/85 DPS 2017 digital positioner: 4-20mA, 0-20mA, 0-10V or 1-10V.

-J3CS 20/85 BSR 2017 emergency fail safe kit system by battery

-Digital potentiometer: 1K, 5K or 10K.

-3 position actuator: 0°-45°-90° or 0°-90°-180°

J3CS S55 & B55 SIZES



ELECTRIC ACTUATOR

J3CS S85 & B85


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: Single phase 24VDC

Insulation: Class B

(IEC 60034) Service: S4


DATASHEET

Model	S85	B85
Voltage VDC/VAC 50/60Hz -0/+5%	24 a 240 (Patent Pending)	12 V ONLY
Operation time unload	30 Sec./90°	30 Sec./90°
Maximum torque break	90 Nm / 796,3 lb/in	90 Nm / 796,3 lb/in
Maximum operational torque	85 Nm / 752 lb/in	85 Nm / 752 lb/in
Duty rating	75 %	75 %
Max. Working angle	0° to 270°	0° to 270°
Limit switch	4 SPST NO micro (2 motor stop and 2 confirmations)	4 SPST NO micro (2 motor stop and 2 confirmations)
Automatic heater	3,5 W	3,5 W
Big Plug	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	3 Kg	3 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

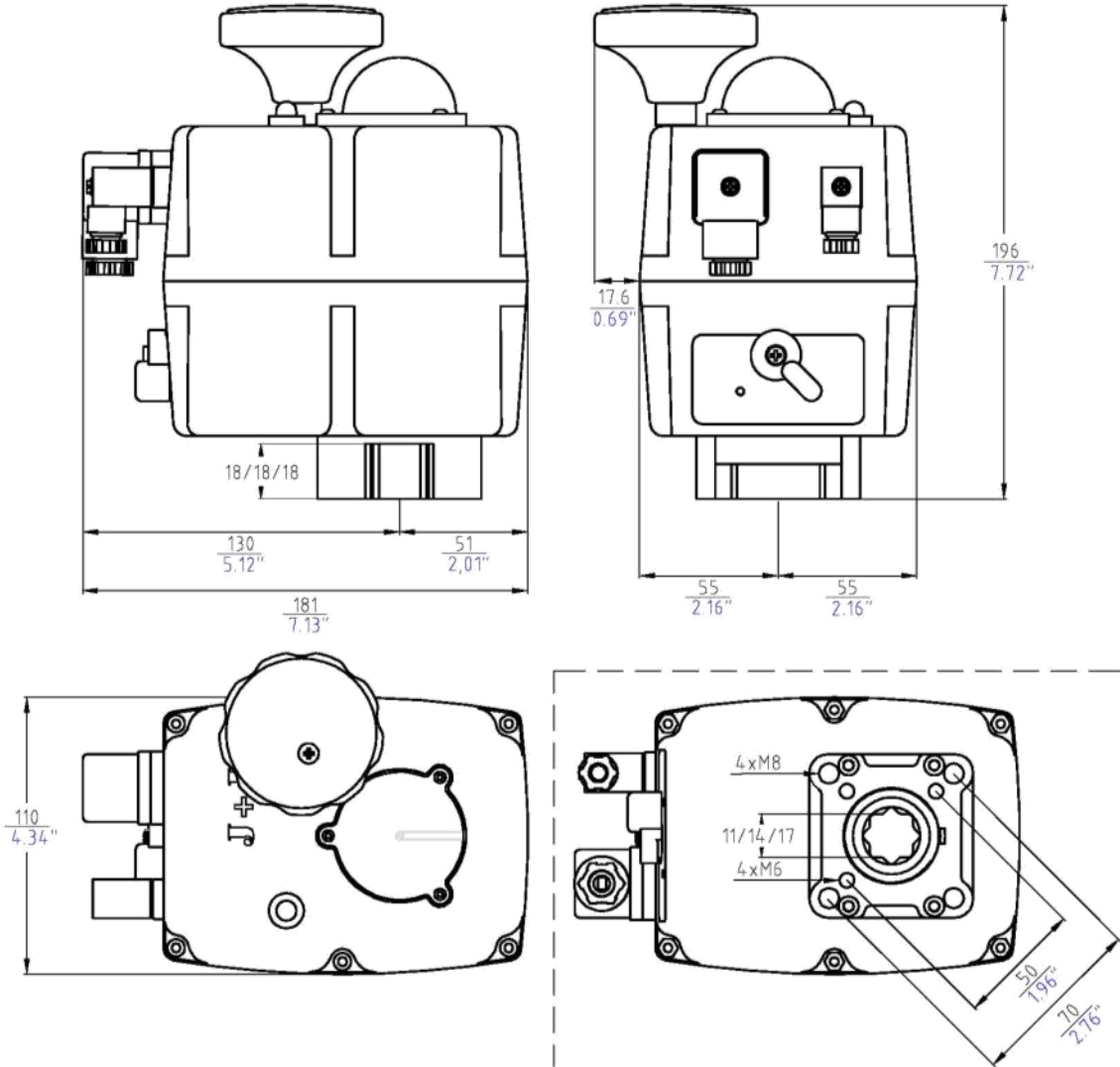
-J3CS 20/85 DPS 2017 digital positioner: 4-20mA, 0-20mA, 0-10V or 1-10V.

-J3CS 20/85 BSR 2017 emergency fail safe kit system by battery

-Digital potentiometer: 1K, 5K or 10K.

-3 position actuator: 0°-45°-90° or 0°-90°-180°

J3CS S85 & B85 SIZES

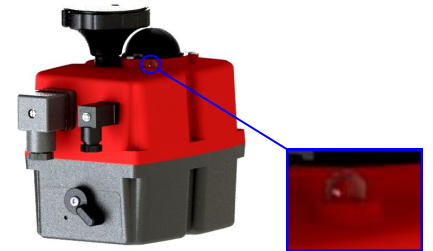


J3CS SERIES - MODEL S20, S35 , S55, S85, B20, B35, B55 & B85

“S” & “B” models - Novelties to be pointed out:

1-VISUAL CONTROL OF OPERATION:

Through the VISUAL CONTROL OF OPERATION one could see a different color LED light, fixed or blinking, from which, one could know what is the operation the actuator is making or which is the incidence the actuator is facing.

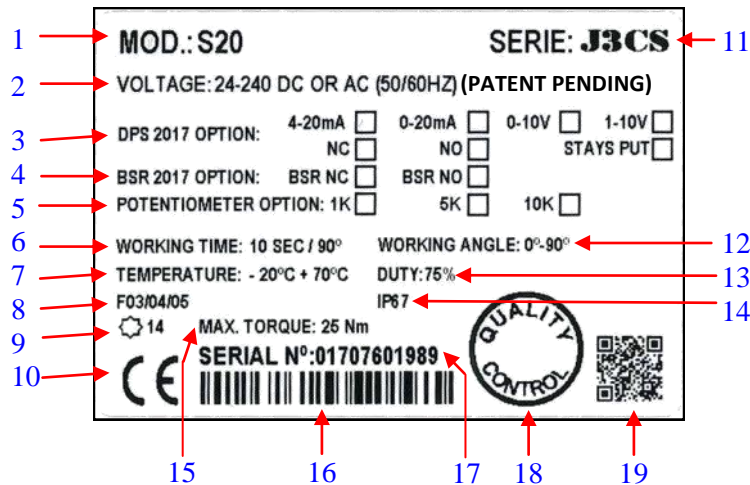


VISUAL CONTROL OF OPERATION

2- VOLTAGE TO BE CONNECTED

- All **S20 to S85** actuators have been set-up to work from **24-240 VDC/VAC (Patent pending)**.
- All **B20 to B85** actuators have been set-up to work at **12 VDC/VAC ONLY**.

3-ID ACTUATOR LABEL



- 1-Actuator Model.
- 2-Voltage to be connected.
- 3-DPS 2017 options.
- 4-BSR 2017 options.
- 5-POTENTIOMETER options.
- 6-Time the actuator needs to run to the indicated degrees.
- 7-Actuator ready to bear between -20°C y $+70^{\circ}\text{C}$.
- 8-Plate to fix the valve to the actuator, following ISO 5211.
- 9-Female output drive size, following DIN3337.
- 10-Actuator with the CE certificate.
- 11-Actuator Series.
- 12-Working angle.
- 13-Duty: 75%.
Example: S20 Model - Maneuver time = 10sec. Time between maneuvers = 3.3 sec.
- 14-Actuator with the IP67 protection.
- 15-Maximum torque break.
- 16-Bar code of the serial number.
- 17-Actuator serial number.
- 18-Quality Control Conformity .
- 19-QR code for manufacturing.

4-BSR 2017 J3CS 20/85 KIT

For actuator models S20 to S85 and B20 to B85, there is a new BSR 2017 KIT, which drives the actuator to the OPEN (BSR NO) or to the CLOSE position (BSR NC) in case of a power supply failure, by using an internal battery system. Always depending on the previous set-up configuration.

5-DPS 2017 J3CS 20/85 KIT

For actuator models S20 to S85 and B20 to B85, there is a new DPS 2017 KIT, which allow us to put the actuator in any position throughout its working angle, by using a 4-20mA or a 0-10V signal. In case one would like to use a 0-20mA or a 1-10V signal, ask the distributor.

TABLE OF CONSUMPTIONS

J3CS 20 Consumption		Unload		Max. Operational Torque 20Nm		Max. Torque Break 25Nm	
Voltage	Model	A	W	A	W	A	W
12 VDC	B20	0,75	9,06	1,80	21,60	1,95	23,36
24 VDC	S20	0,45	10,77	0,90	21,49	0,97	23,39
48 VDC	S20	0,21	9,93	0,42	20,38	0,46	22,07
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

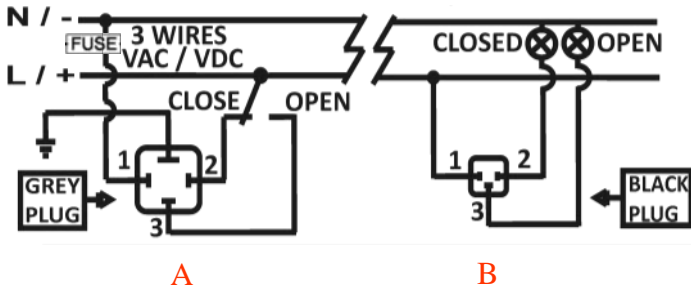
J3CS 35 Consumption		Unload		Max. Operational Torque 35Nm		Max. Torque Break 38Nm	
Voltage	Model	A	W	A	W	A	W
12 VDC	B20	0,75	9,06	2,38	28,62	2,62	31,50
24 VDC	S20	0,45	10,77	1,28	30,78	1,37	32,79
48 VDC	S20	0,21	9,93	0,56	26,72	0,59	28,20
12 VAC	B20	1,04	12,51	2,75	33,00	3,19	38,28
24 VAC	S20	0,59	14,20	1,58	37,80	1,67	40,13
48 VAC	S20	0,34	16,37	0,92	44,04	0,99	47,31
110 VAC	S20	0,14	15,73	0,36	39,45	0,38	41,87
240 VAC	S20	0,10	23,76	0,19	45,41	0,20	47,52

J3CS 55 Consumption		Unload		Max. Operational Torque 55Nm		Max. Torque Break 60Nm	
Voltage	Model	A	W	A	W	A	W
12 VDC	B20	0,70	8,45	3,04	36,43	3,42	41,05
24 VDC	S20	0,42	10,19	1,55	37,17	1,63	39,02
48 VDC	S20	0,20	9,72	0,61	29,25	0,67	32,31
12 VAC	B20	0,94	11,30	3,43	41,18	3,78	45,41
24 VAC	S20	0,58	13,89	1,87	44,88	1,98	47,52
48 VAC	S20	0,33	15,73	1,10	52,80	1,21	58,29
110 VAC	S20	0,14	15,73	0,40	43,80	0,43	46,95
240 VAC	S20	0,09	22,70	0,20	47,52	0,21	50,16

J3CS 85 Consumption		Unload		Max. Operational Torque -85Nm		Max. Torque Break -90Nm	
Voltage	Model	A	W	A	W	A	W
12 VDC	B20	0,62	7,42	2,11	25,34	2,28	27,32
24 VDC	S20	0,36	8,55	1,08	25,87	1,22	29,30
48 VDC	S20	0,17	8,24	0,48	22,92	0,53	25,56
12 VAC	B20	0,81	9,69	2,38	28,51	2,65	31,81
24 VAC	S20	0,50	11,88	1,36	32,74	1,50	36,01
48 VAC	S20	0,25	11,83	0,77	37,07	0,86	41,18
110 VAC	S20	0,12	12,83	0,31	33,64	0,33	36,54
240 VAC	S20	0,08	20,06	0,17	40,13	0,18	42,77

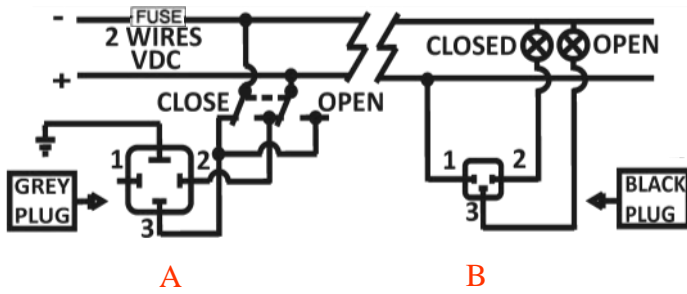
EXTERNAL CONNECTING DIAGRAM

3 WIRES ON - OFF



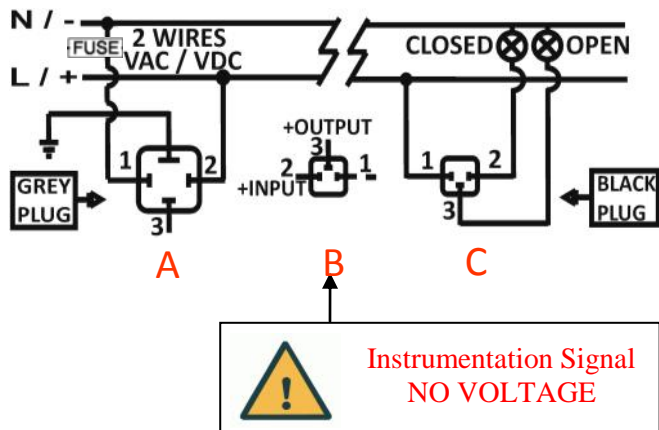
- A** = Power supply plug
- A:** VAC 3 WIRES (Grey plug)
 - PIN 1 = Neutral + PIN 2 = Phase = Close
 - PIN 1 = Neutral + PIN 3 = Phase = Open
- A:** VDC 3 WIRES (Grey plug)
 - PIN 1 = (-) Negative + PIN 2 = (+) Positive = Close
 - PIN 1 = (-) Negative + PIN 3 = (+) Positive = Open
- B** = Volt free contact, plug
 - PIN 1 / PIN 2 = Close
 - PIN 1 / PIN 3 = Open

2 WIRES ON - OFF



- A** = Power supply plug
- A:** VDC 2 WIRES (Grey plug)
 - PIN 2 = (+) Positive + PIN 3 = (-) Negative = Close
 - PIN 2 = (-) Negative + PIN 3 = (+) Positive = Open
- B** = Volt free contact plug
 - PIN 1 / PIN 2 = Close
 - PIN 1 / PIN 3 = Open

POSITIONER

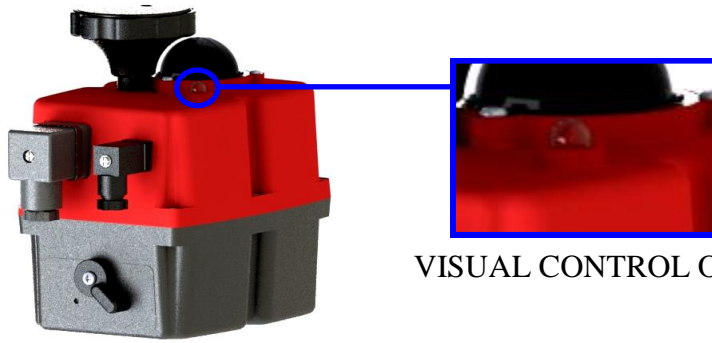


- A** = Power supply plug
- A:** VAC 2 WIRES (Grey plug)
 - PIN 1 = Neutral + PIN 2 = Phase = Power supply plug
- A:** VDC 2 WIRES (Grey plug)
 - PIN 1=(-) Negative + PIN 2=(+) Positive = Power supply plug
- B** = Instrumentation Signal
- B:** Input signal : 4/20mA or 0/10V
 - PIN 1 = (-) Negative + PIN 2 = (+) Positive = Input signal
 - PIN 1 = (-) Negative + PIN 3 = (+) Positive = Output signal
- C** = Volt free contact plug
 - PIN 1 / PIN 2 = Closed
 - PIN 1 / PIN 3 = Open

ACTUATOR OPERATIONAL STATUS

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

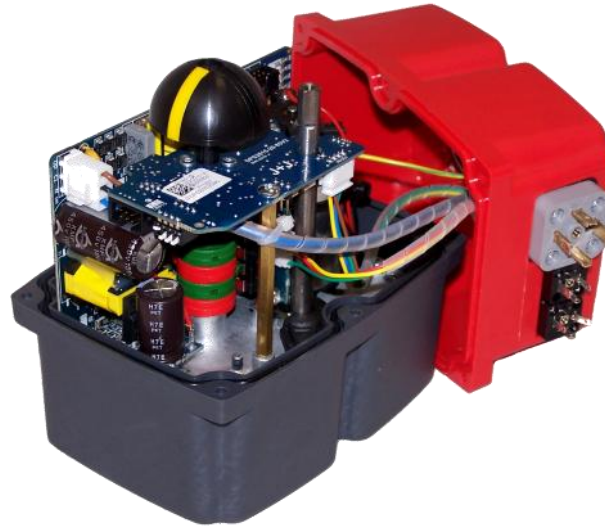
The LED Light provides visual communication between the actuator and the user.
The current operational status is shown by different LED colors.



VISUAL CONTROL OF OPERATION

ON-OFF ACTUATOR	ACTUATOR OPERATIONAL STATUS
Without power supply	Black
In open position	Green
In close position	Red
Opening	Yellow, Green
Closing	Yellow, Red
Torque limiter function on, moving from close to open	Green, Black
Torque limiter function on, moving from open to close	Red, Black
Actuator in MANUAL mode (Exceeded time)	Yellow, Black
The actuator has stopped (no close/no open position)	Magenta
In middle position	Yellow
ACTUATOR WITH BSR 2017	ACTUATOR OPERATIONAL STATUS
Without power supply	Black
In open position	Green
In close position	Red
Opening	Yellow, Green
Closing	Yellow, Red
Torque limiter function on, moving from close to open	Green, Black
Torque limiter function on, moving from open to close	Red, Black
Actuator in MANUAL mode (Exceeded time)	Yellow, Black
The actuator has stopped (no close/no open position)	Magenta
In middle position	Yellow
Actuator without power, working with the BSR NO system. Max.3 min., (led off)	Green, Black
Actuator without power, working with the BSR NC system. Max.3 min., (led off)	Red, Black
Battery protection. Danger, the battery needs recharging. BSR blocked	Yellow, Black

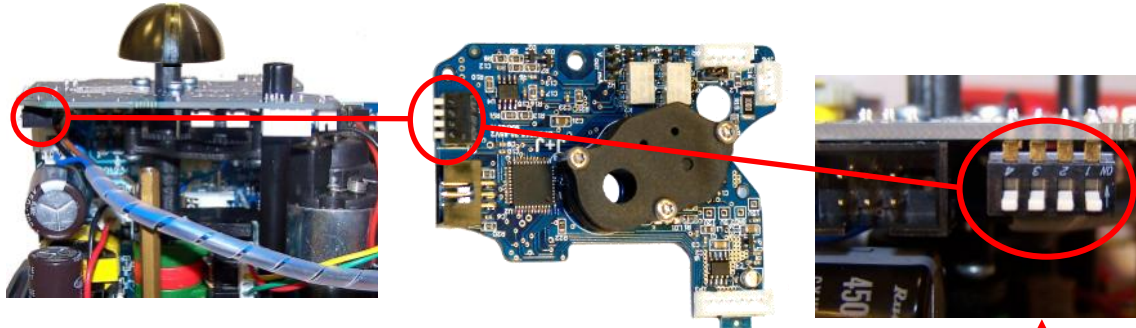
ACTUATOR WITH DPS 2017	ACTUATOR OPERATIONAL STATUS											
Without power supplied	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Motor stop	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Opening	Blue	Green	Green	Blue	Green	Green	Blue	Green	Green	Blue	Green	Green
Closing	Blue	Red	Red	Blue	Red	Red	Blue	Red	Red	Blue	Red	Red
Self adjusting configuration	Red	Red	Red	Blue	Green	Green	Blue	Red	Red	Blue	Green	Green
Torque limiter function on, moving from close to open	Green	Green	Green	Green	Black	Black	Black	Green	Green	Green	Green	Black
Torque limiter function on, moving from open to close	Red	Red	Red	Red	Black	Black	Black	Red	Red	Red	Red	Black
Instrum. Signal overpassed. Blocked actuator. Need a re-set.	Blue	Blue	Blue	Cyan	Black	Black	Black	Blue	Blue	Blue	Cyan	Black
Actuator in MANUAL mode (exceeded time)	Yellow	Yellow	Yellow	Yellow	Black	Black	Black	Yellow	Yellow	Yellow	Yellow	Black
No Instrum. Signal pick-up. 4-20mA and 1-10V only.	Blue	Blue	Blue	Blue	Black	Black	Black	Blue	Blue	Blue	Blue	Black

DPS 2017 **J3CS** 20/85

ESPECIFICACIONES / SPECIFICATIONS

MODELO / MODEL	S20-B20	S35-B35	S55-B55	S85-B85
Precisión Accuracy	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Linealidad Linearity	2 % F.S.	2 % F.S.	2 % F.S.	2 % F.S.
Histéresis Hysteresis	3 % F.S.	3 % F.S.	3 % F.S.	3 % F.S.
Impulsos a 4/20mA Steps at 4/20mA	Min.142 steps 90°	Min.142 steps 90°	Min.142 steps 90°	Min.142 steps 90°
Impulsos a 0/10V Steps at 0/10V	Min.88 steps 90°	Min.88 steps 90°	Min.88 steps 90°	Min.88 steps 90°
Impulsos a 0/20mA Steps at 0/20mA	Min.166 steps 90°	Min.166 steps 90°	Min.166 steps 90°	Min.166 steps 90°
Impulsos 1/10V Steps at 1/10V	Min.85 steps 90°	Min.85 steps 90°	Min.85 steps 90°	Min.85 steps 90°
Impedancia señal entrada 4/20mA o 0/20mA 4/20mA or 0/20mA Input signal impedance	100 Ohm	100 Ohm	100 Ohm	100 Ohm
Impedancia señal entrada 0/10V o 1/10V 0/10V or 1/10V Input signal impedance	25 KOhm	25 KOhm	25 KOhm	25 KOhm
CLASE / CLASS	B+C to E DIN EN 15714 Inching + Modulation			
PESO / WEIGHT	0,600 Kg	0,600 Kg	0,600 Kg	0,600 Kg

F.S. Se refiere a todo el rango de medición
F.S. **Full Scale**

DPS 2017 J3CS 20/85

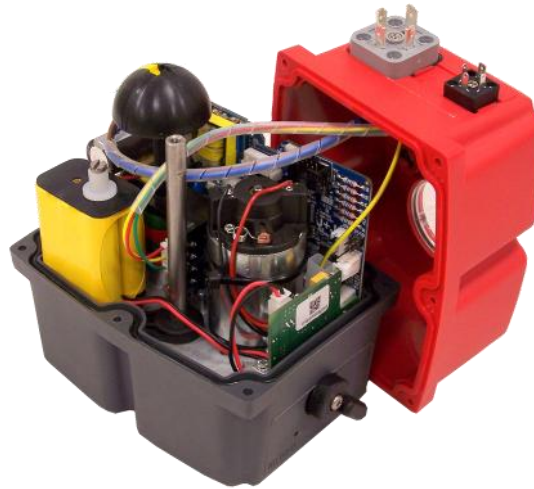


Aplicar la configuración necesaria para cada aplicación:
Posibles configuraciones:

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

	<p>4/20 mA NC</p>		<p>0/10 V NC</p>
	<p>4/20mA NO</p>		<p>0/10 V NO</p>
	<p>1/10 V NC</p>		<p>1/10 V NO</p>

OTRAS OPCIONES A CONFIGURAR EN FABRICA O CON INTERFACE J3CS OTHER OPTIONS TO BE SET-UP BY THE MANUFACTURER OR WITH A J3CS INTERFACE	
SOLO SALIDA / OUTPUT ONLY	4/20 mA, 0/10 V, 0/20 mA, 1/10 V
ENTRADA Y SALIDA / INPUT & OUTPUT	0/20 mA
PARO MOTOR, A FALTA DE INSTRUMENTACIÓN / MOTOR STOP, WITHOUT INSTRUMENTATION	4/20 mA, 0/10 V, 0/20 mA, 1/10 V

BSR 2017 **J3CS** 20/85

J3CS-20

J3CS-35

J3CS-55

J3CS-85
ESPECIFICACIONES / SPECIFICATIONS

MODELO ACTUADOR / ACTUATOR MODEL	S20-B20	S35-B35	S55-B55	S85-B85
Nº de Maniobras sin recargar, con batería 100% de carga Nº Working operation without recharge, with 100% battery charge	5	5	5	5
Tiempo de recarga/ maniobra. Recharge time/working operation	15 min	21 min	48 min	58 min
Consumo de batería/maniobra. Battery consumption/working operation	2,2 W	3,0 W	6,8 W	8,3 W
Tiempo de carga completa 100% Full charge time 100%	28 h	28 h	28 h	28 h
Capacidad nominal +/- 5% Nominal capacity +/- 5%	1000 mA	1000 mA	1000 mA	1000 mA
Configuración NA o NC (*) NO or NC Features (*)	Jumper	Jumper	Jumper	Jumper
Consumo/una maniobra con batería Current/one working operation with battery	10,1 mA	14 mA	31,6 mA	38.6 mA
Carga batería Battery charge	40 mA/h	40 mA/h	40 mA/h	40 mA/h
Peso Weight	0,27 Kg	0,27 Kg	0,27 Kg	0,27 Kg

CONFIGURACIONES / CONFIGURATIONS	A	B
POSICION PREFERENTE A FALLO DE CORRIENTE PREFERRED POSITION IN CASE OF POWER CUT	(NC) NORMALMENTE CERRADA (NC) NORMALLY CLOSE	(NO) NORMALMENTE ABIERTA (NO) NORMALLY OPEN

(*)

Configuración NA o NC / NO or NC Set-Up

**Jumper 1
SELDIR**
Configuración NC / NC Set-Up

NC - Si deseamos que el actuador, a fallo de corriente CIERRE, es necesario insertar el **jumper 1** en la posición SELDIR.

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.

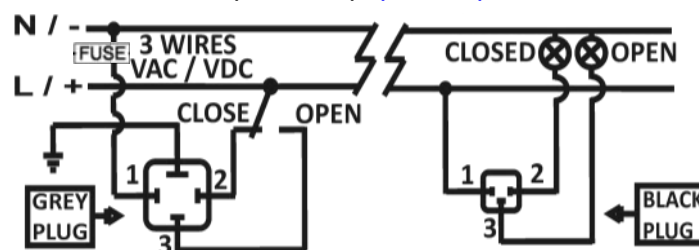
Configuración NA / NO Set-Up

NO - Si deseamos que el actuador, a fallo de corriente ABRA, comprobar que en la posición SELDIR, no tenga el **jumper 1** montado.

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.

OPCIONES CONEXIONES EXTERNAS / EXTERNAL ELECTRIC WIRING OPTIONS

(3 CABLES) / (3 WIRES)



(2 CABLES) / (2 WIRES)

