J3C

INFORMACIÓN TÉCNICA / *TECHNICAL DATA*

J+J®

J3CTV2 MARCH 2015

ΗΛΕΚΤΡΙΚΟΙ ΚΙΝΗΤΗΡΕΣ * 140/300 *

CARACTERÍSTICAS GENERALES

Cuerpo y Tapa: Poliamida Anticorrosiva
Ejes principales externos: Acero Inoxidable
Tornillería exterior: Acero Inoxidable
Engranajes: Acero y Poliamida
Cúpula: Policarbonato
Levas internas: Poliamida
Motor monofásico
Aislamiento B
Servicio: S4
Tiempo bajo tensión: 75%

TECHNICAL DATA

Enclosure: Anticorresive Polyamide
Main external shaft: Stainless Steel
Fastening: Stainless Steel
Gears: Steel and Polyamide
Dome: Polycarbonate
Internal cams: Polyamide
Electric motor: Single phase
Insulation: Class B
Service: S4
Duty range: 75%

MODELO *MODEL*	*J3C H140* *J3C H140*	*J3C L140* *J3C L140*	*J3C H300* *J3C H300*	*J3C L300* *J3C L300*
VOLTAJE (V) *VOLTAJE (V)*	*85-240 VDC/VAC 50/60Hz* *85-240 VDC/VAC 50/60Hz*	*24 VDC/VAC 50/60Hz* *24 VDC/VAC 50/60Hz*	*85-240 VDC/VAC 50/60Hz* *85-240 VDC/VAC 50/60Hz*	*24 VDC/VAC 50/60Hz* *24 VDC/VAC 50/60Hz*
TIEMPO MANIOBRA SIN CARGA + / - 10% *OPERATION TIME NO LOAD + / - 10%*	*34 SEG. / 90º* *34 SEC. / 90º*	*34 SEG. / 90º* *34 SEC. / 90º*	*58 SEG. / 90º* *58 SEC. / 90º*	*58 SEG. / 90º* *58 SEC. / 90º*
PAR MÁXIMO MANIOBRA (Nm-lb/in) *MAXIUM OPERATIONAL TORQUE (Nm-lb/in)*	*140 Nm* *1239 lb/in*	*140 Nm* *1239 lb/in*	*300 Nm* *2655 lb/in*	*300 Nm* *2655 lb/in*
PAR MÁXIMO ARRANQUE (Nm-lb/in) *MAXIUM TORQUE BREAK (Nm-lb/in)*	*170 Nm* *1504.5 lb/in*	*170 Nm* *1504.5 lb/in*	*350 Nm* *3097.5 lb/in*	*350 Nm* *3097.5 lb/in*
TIEMPO BAJO TENSIÓN (%) *DUTY RATING (%)*	*75 %* *75 %*	*75 %* *75 %*	*75 %* *75 %*	*75 %* *75 %*
PROTECCIÓN IEC 60529 *IP RATING IEC 60529*	*IP67* *IP67*	*IP67* *IP67*	*IP67* *IP67*	*IP67* *IP67*
ÁNGULO MANIOBRA (º) *WORKING ANGLE (º)*	*90º a 270º* *90º to 270º*	*90º a 270º* *90º to 270º*	*90º a 270º* *90º to 270º*	*90º a 270º* *90º to 270º*
TEMPERATURA ºC *TEMPERATURE ºF*	*-20º + 70º C* *-4º + 158º F*	*-20º + 70º C* *-4º + 158º F*	*-20º + 70º C* *-4º + 158º F*	*-20º + 70º C* *-4º + 158º F*
INTERRUPTOR FINAL CARRERA *LIMIT SWITCH*	4 SPDT micro *4 SPDT micro*	4 SPDT micro *4 SPDT micro*	4 SPDT micro *4 SPDT micro*	4 SPDT micro *4 SPDT micro*
RESISTENCIA CALEFACTORA (W) *HEATER (W)*	3.5 W *3.5 W*	3.5 W *3.5 W*	3.5 W *3.5 W*	3.5 W *3.5 W*
CONECTOR *PLUG*	*DIN 43650 ISO 4400 & C192*	*DIN 43650 ISO 4400 & C192*	*DIN 43650 ISO 4400 & C192*	*DIN 43650 ISO 4400 & C192*
PESO (Kg) *WEIGHT (Kg)*	*5.2 Kg* *5.2 Kg*	*5.2 Kg* *5.2 Kg*	*5.2 Kg* *5.2 Kg*	*5.2 Kg* *5.2 Kg*

MULTIBRIDA / MULTI FLANGE
Anclaje ISO 5211 F07/F10
Fastening ISO 5211 F07/F10
Opcional / Optional:
Anclaje ISO 5211 F12
Fastening ISO 5211 F12

SALIDA DIN3337 / OUTPUT DIN3337
*Doble cuadrado *22 mm Standard*
*Double square *22mm Standard*
OPCIONAL / OPTIONAL:
*Doble cuadrado *17 mm*
*Double square *17 mm*

OPCIONES / OPTIONS
Posicionador digital DPS2005: 4/20mA, 0/10V, 0/20mA ó 1/10V
DPS2005 digital positioner: 4/20mA, 0/10V, 0/20mA or 1/10V
BSR retorno por batería
BSR battery fails safe
Potenciómetro digital: 1K, 5K ó 10K
Digital potentiometer: 1K, 5K or 10K
3 Posiciones: 0º-45º-90º / 0º-90º-180º
3 Positions stops: 0º-45º-90º / 0º-90º-180º

KIT DPS2005 J3C 140/300 / J3C 140/300 DPS2005

KIT BSR J3C 140/300 / J3C 140/300 BSR KIT

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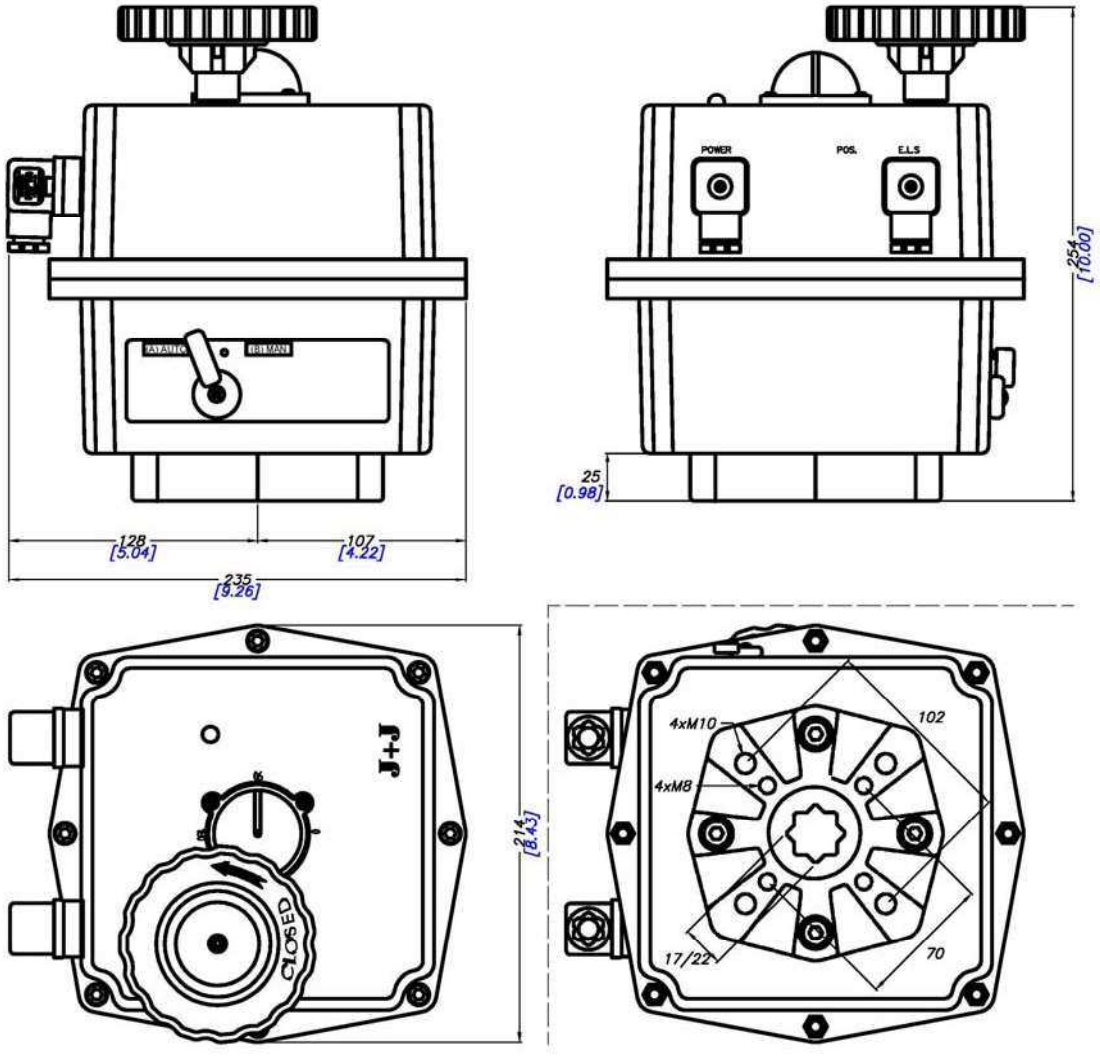
PRINCIPIO DE FUNCIONAMIENTO / HOW IT WORKS

DIMENSIONES GENERALES / GENERAL DIMENSIONS



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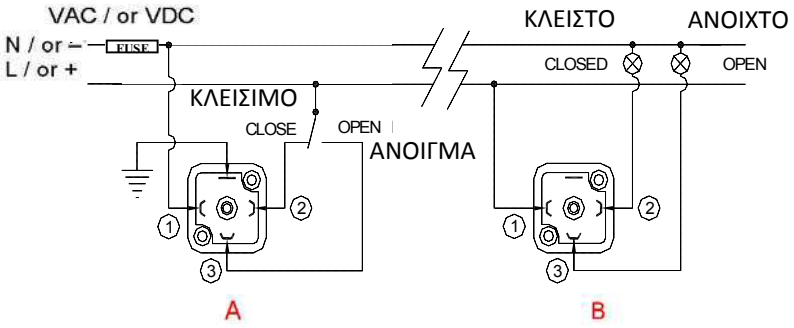
ESQUEMA CONEXIONES / SCHEMATIC DIAGRAM

ABRE - CIERRA o ABRE - CIERRA + BSR / ON - OFF or ON - OFF + BSR

Κινητήρας 2 θέσεων (ON/OFF)

Conexión VAC/VDC 3 hilos / 3 wires VDC conection



A = *Alimentación eléctrica / Power supply plug*

A: *VAC 3 CABLES (Conector gris) / VAC 3 WIRES (Grey plug)*

PIN 1 = Neutral + PIN 2 = Phase = Cierra / Close

PIN 1 = Neutral + PIN 3 = Phase = Abre / Open

A: *VDC 3 CABLES (Conector gris) / VDC 3 WIRES (Grey plug)*

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

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

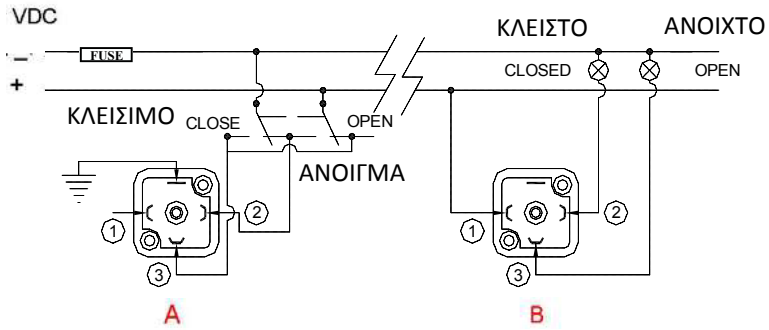
B = *Contactos auxiliares / Volt free contacts plug*

PIN 1 / PIN 2 = Cerrado / Closed

PIN 1 / PIN 3 = Abierto / Open

Conexión VDC 2 hilos / 2 wires VDC conection

ΣΥΝΕΧΟΥΣ ΡΕΥΜΑΤΟΣ -2 αγωγών



A = *Alimentación eléctrica / Power supply plug*

A: *VDC 2 CABLES (Conector gris) / VDC 2 WIRES (Grey plug)*

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

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

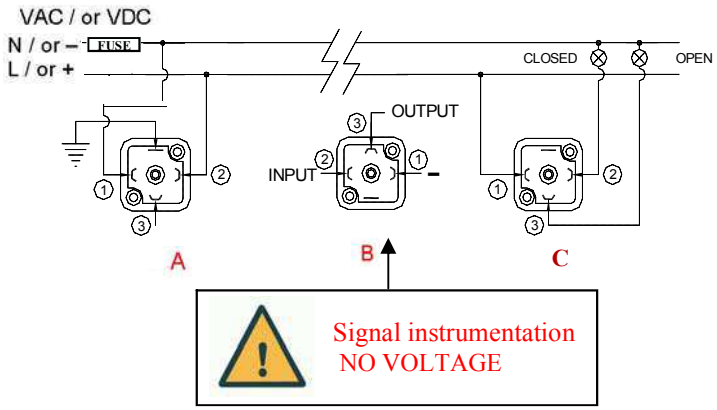
B = *Contactos auxiliares / Volt free contacts plug*

PIN 1 / PIN 2 = Cerrado / Closed

PIN 1 / PIN 3 = Abierto / Open

POSICIONADOR DPS 2005 / DPS 2005 POSITIONER

Αναλογικός ρυθμιστής



A = *Alimentación eléctrica / Power supply plug*

A: *VAC 2 CABLES (Conector gris) / VDC 2 WIRES (Grey plug)*

PIN 1 = Neutral + PIN 2 Phase = Alimentación / Power

A: *VDC 2 CABLES (Conector gris) / VDC 2 WIRES (Grey plug)*

PIN 1= (-)Negative+PIN 2(+)Positive=Alimentación / Power

B = *Señal de instrumentación / Signal instrumentation*

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

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

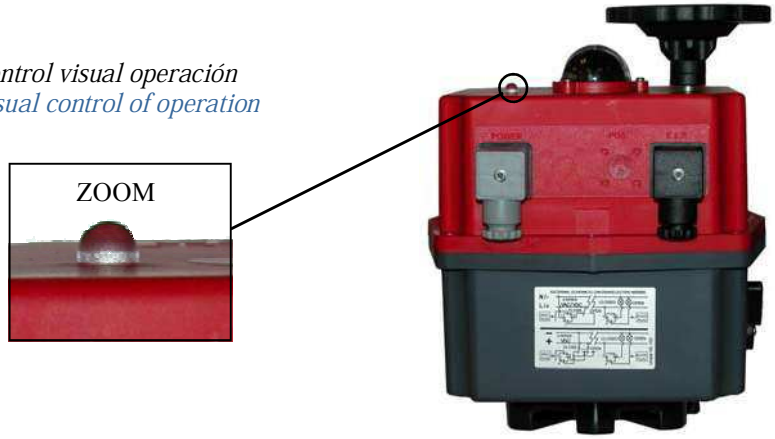
C = *Contactos auxiliares / Volt free contacts plug*

PIN 1 / PIN 2 = Cerrado / Closed

PIN 1 / PIN 3 = Abierto / Open

INDICADOR LUMINOSO / EXTERNAL LED LIGHT STATUS

control visual operación
visual control of operation



ESTATUS OPERACIONAL DEL ACTUADOR *ACTUATOR OPERATIONAL STATUS*	*CONFIGURACIÓN LED RGB* *RGB LED CONFIGURATION*
Actuador sin alimentación / *Actuator without power being supplied.*	*Led apagado.* *Led OFF.*
Actuador con alimentación / *Actuator with power being supplied.*	*Actuador abierto = Led verde* *Actuador cerrado = Led rojo* *Close actuador = Green led* *Open actuator = Red led*
Actuador, maniobra de … a …(led intermitente). *Actuator, moving from …to …(flashing led).*	*De abrir a cerrar = Rojo, naranja* *De cerrar a abrir = Verde, naranja* *From open to close = Red, orange* *From close to open = Green, orange*
Actuador limitando, maniobra de … a … (led intermitente) *Actuator w torque limiter function on, moving from … to … (flashing led)*	*De abrir a cerrar = Rojo, apagado* *De cerrar a abrir = Verde, apagado* *From open to close = Red, led off.* *From close to open = Green, led off.*
Desconexión del motor por tiempo. /	*Naranja, led apagado.*
Actuador sin alimentación. Funciona con el BSR max.de 3 minutos. *Actuator without power and working with the BSR system, max. 3 minutes.*	*BSR NC= Rojo, apagado* *BSR NO=Verde, apagado.* *BSR NC= Red, led off.* *BSR NO= Green, led off.*
Protección baterías. Peligro baterías con poca carga. BSR bloqueado / *Battery protection. Danger– Te battery needs recharging. BSR disabled.*	*Naranja, apagado.* *Orange, led off.*
Actuador con DPS2005.. / *Actuator with DPS2005.*	*Parado=Azul* *Abriendo=Azul, Verde.* *Cerrando= Azul, Rojo.* *Stopped=Blue.* *Opening= Blue, Green.* *Closing= Blue, Red.*

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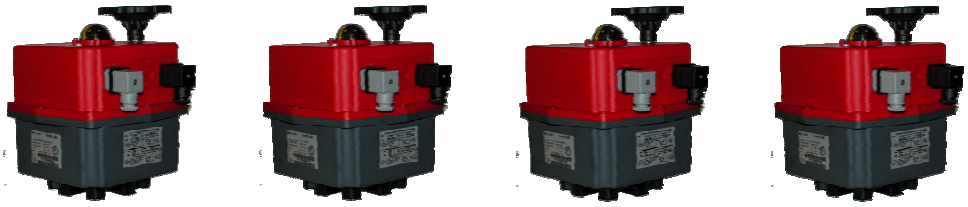
CONSUMOS / CURRENT



CURRENT (+/- 10%) CONSUMOS (+/- 10%)	VOLTAGE VOLTAJE	J3C H140 (A)	J3C H140 (W)	J3C L140 (A)	J3C L140 (W)	J3C H300 (A)	J3C H300 (W)	J3C L300 (A)	J3C L300 (W)
CURRENT (UNLOAD) CONSUMO SIN CARGA	220 VAC	0,24	53,0			0,24	52,0		
	110 VAC	0,33	36,4			0,32	34,8		
	110 VDC	0,17	18,3			0,17	18,5		
	24 VAC			1,41	33,9			1,36	32,6
	24 VDC			1,13	27,1			1,11	26,7
CURRENT AT MAXIMUM RUN TORQUE CONSUMO A PAR MAXIMO DE MANIOBRA	220 VAC	0,30	65,6			0,34	75,0		
	110 VAC	0,50	55,1			0,57	62,9		
	110 VDC	0,27	29,5			0,29	32,1		
	24 VAC			2,18	52,3			2,71	65,1
	24 VDC			1,78	42,8			2,09	50,2
CURRENT AT MAXIMUM BREAK TORQUE CONSUMO A PAR MAXIMO DE ARRANQUE	220 VAC	0,31	68,2			0,36	79,4		
	110 VAC	0,52	57,6			0,61	66,7		
	110 VDC	0,29	31,6			0,31	34,6		
	24 VAC			2,29	55,0			2,80	67,2
	24 VDC			1,89	45,5			2,28	54,6

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KIT DPS J3C 140/300

OUTSIDE BOX

INSIDE BOX

El **DPS 2005** es un accesorio para los actuadores eléctricos **J3C** que los convierte en posicionador de válvulas servo controlados.

El **DPS 2005** es un módulo que incorpora un microprocesador (CPU) el cual controla digitalmente la entrada y salida de señal analógica y compara ambas con la posición del actuador a fin de establecer una relación uniforme.
Las entradas analógicas son enviadas a la CPU donde son procesadas en continua comparación con la posición del actuador lo cual permite obtener un muy alto grado de sensibilidad y una muy alta repetitividad de posición (ver características).

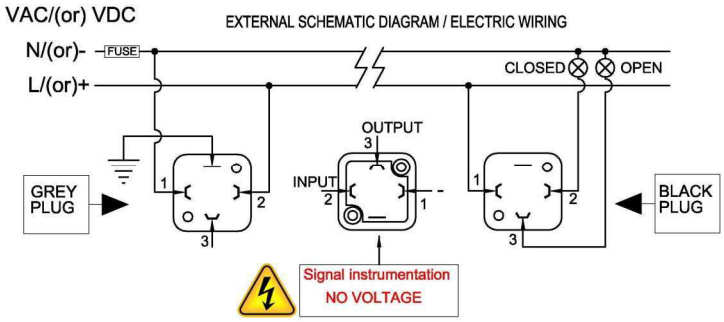
El posicionador **DPS 2005,** en comunicación con el sistema electrónico del actuador, provee un control integral del movimiento del actuador.

The **DPS 2005** is a device for the **J3C** electric actuator that turns the actuator into a servo controlled valve positioner .

The **DPS 2005** 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 2005** in communication with the electronic system of the actuator provides an integral management of the motion of the actuator.

CONEXIONES EXTERNAS / EXTERNAL ELECTRIC WIRING



CONFIGURACIONES CONFIGURATIONS	A	B	C	D
ENTRADA / INPUT	4/20 mA	0/10 V	20/4 mA	10/0 V
SALIDA / OUTPUT				

CONFIGURACIONES (A,B,C,D), CON KIT DPS 2005 ESTANDARD
(A,B,C,D) CONFIGURATIONS WITH STANDARD DPS 2005 KIT

Otras opciones: Other options:	E	F	G	H
ENTRADA / INPUT	0/20 mA	1/10 V	ON/OFF	ON/OFF
SALIDA / OUTPUT			4/20 mA	0/10 V

CONFIGURACIONES (E,F,G,H),CONSULTAR CON DISTRIBUIDOR
(E,F,G,H) CONFIGURATIONS CHECK WITH DEALER

KIT DPS PARA MONTAR EN: DPS KIT MOUNTABLE IN:		
MODELO / MODEL	J3C-140	J3C-300
VOLTAJE / VOLTAGE	H & L	H & L
PESO (Kg) / WEIGHT (Kg)	0,940	0,940

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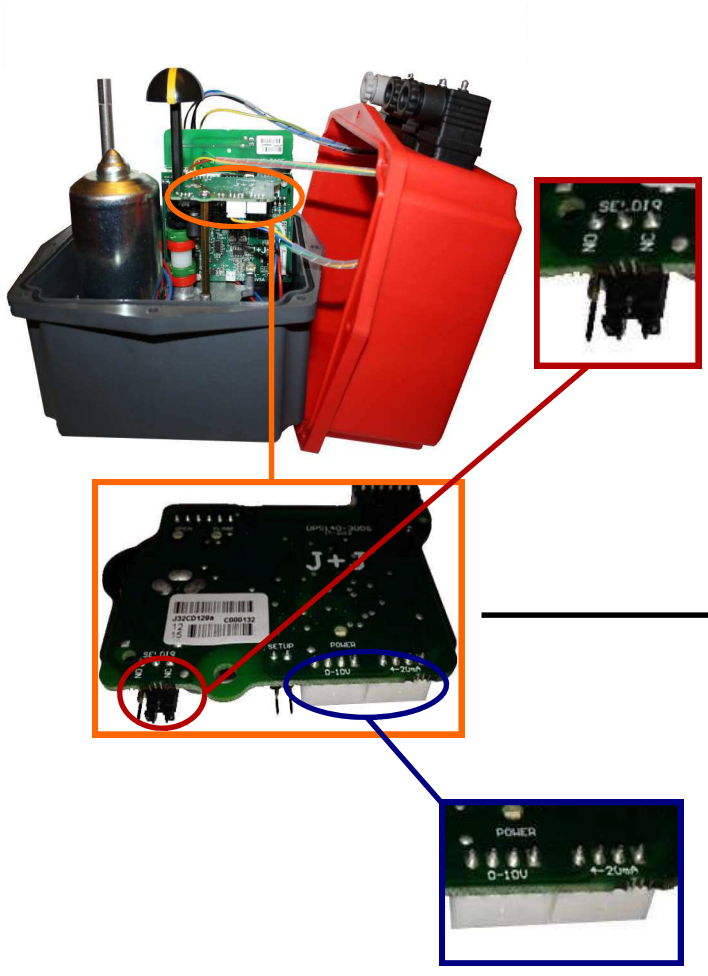
KIT DPS J3C 140/300

KIT DPS PARA MONTAR EN ACTUADOR:
DPS KIT MOUNTABLE IN:

MODELO / MODEL	J3CH140	J3CL140	J3CH300	J3CL300
Histéresis Hysteresis	3 %	3 %	3 %	3 %
Impulsos Steps	Min.70 steps 90º	Min.70 steps 90º	Min.70 steps 90º	Min.70 steps 90º
Impedancia señal entrada 4/20 mA 4/20 mAInput signal impedance	100 Ohm	100 Ohm	100 Ohm	100 Ohm
Impededancia señal entrada 0/10V 0/10 V input signal impedance	13 KOhm	13 KOhm	13 KOhm	13 KOhm

Configuración DPS2005 / DPS2005 Set-Up



Configuración DPS2005 NA
NO DPS2005 Set-Up

Si deseamos que el actuador, a fallo de señal de instrumentación abra, es necesario insertar el jumper en la posición (NO).

NC - If, in case of a control signal failure, we need the actuator go to the OPEN position, we should to put the jumper on the (NO) position.

Configuración DPS 2005 NC
NC DPS2005 Set-Up

Si deseamos que el actuador, a fallo de señal de instrumentación cierre, es necesario insertar el jumper en la posición (NC).

NC - If, in case of a control signal failure, we need the actuator go to the CLOSE position, we need to put the jumper on the (NC) position.

Configuración DPS 2005 4-20mA
4/20 mA DPS2005 Set-Up

Insertar el conector de 4 pins de la tapa (señal), en la base conector señalada con 4-20mA .

Connect the 4 pin (control signal) plug into the 4-20mA socked .

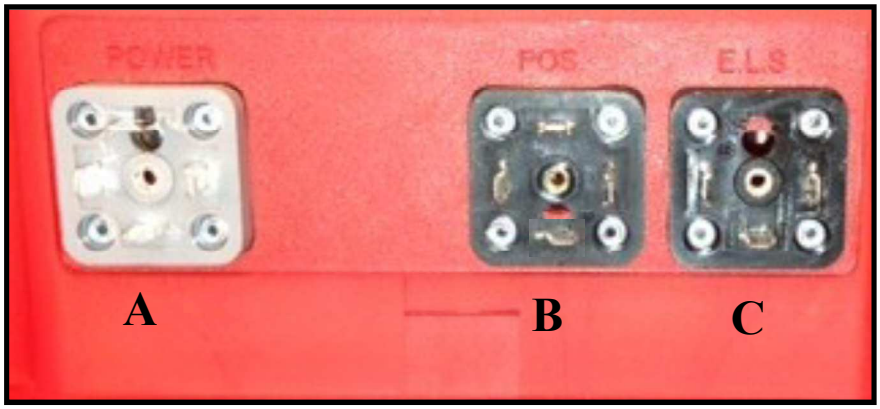
Configuración DPS 2005 0-10V
0-10 V DPS2005 Set-Up

Insertar el conector de 4 pins de la tapa (señal), en la base conector señalada con 0-10V .

Connect the 4 pin (control signal) plug into the 0-10V socked .

KIT DPS J3C 140/300

Autoajuste externo DPS2005/ DPS2005 External Self-adjustment



A- Conector alimentación corriente (Voltaje).
B- Conector alimentación instrumentación (4/20mA o 0-10V).
C- Conector señales confirmación (libres de tensión).

1-En el conector B, hacer un cruce entre el PIN1 (PIN izquierda) y el PIN TIERRA (PIN inferior).
2-En el conector A, conectar el voltaje al actuador de la siguiente manera.
VAC: PIN1 (neutro) y PIN2 (fase).
VDC: PIN1 (negativo) y PIN2 (positivo).
*IMPORTANTE: ANTES DE CONECTAR EL CONECTOR "A" AL ACTUADOR, REVISAR QUE EL VOLTAJE COINCIDA CON EL DE LA ETIQUETA PEGADA AL ACTUADOR (PARTE COLOR GRIS).
3-En el conector B, deshacer el cruce entre el PIN1 (PIN izquierda) y el PIN TIERRA (PIN inferior).

El actuador realizara una maniobra completa y se quedara en la posición de cerrado.
El actuador ya está listo para conectar la señal de instrumentación en el conector B.

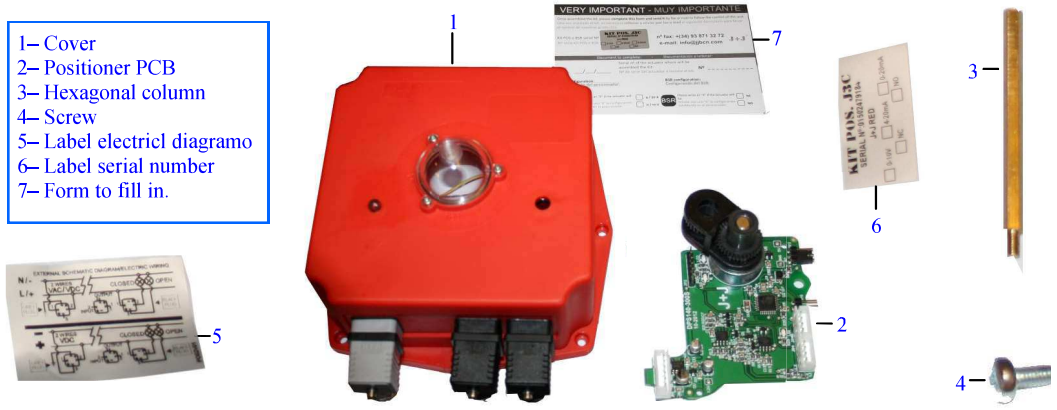
A- Power supply plug.
B- Input / Output signal 4/20mA or 0/10V plug.
C- Volt free contacts plug.

1-B plug, connect a cable between PIN 1 (on the left side) and PIN Earth (on the bottom).
2-A plug, connect:
VAC: PIN1 (neutral) and PIN2 (phase).
VDC: PIN1 (negative) and PIN2 (positive).
*VERY IMPORTANT: BEFORE CONNECTING "A" PLUG TO THE ACTUATOR, CHECK THAT THE VOLTAGE IS THE SAME AS THE ONE SPECIFIED ON THE LABEL (CARTER).
3-B plug, disconnect the cable between PIN 1 (on the left side) and PIN Earth (on the bottom).

The actuator will make a complete maneuver and stay in the close position.
The actuator is ready to connect the (4/20mA or 0/10V) signal to the B plug.

KIT “DPS 2005” POSITIONER ASSEMBLY INSTRUCTIONS J3C-140/300

1– Cover
2– Positioner PCB
3– Hexagonal column
4– Screw
5– Label electricl diagramo
6– Label serial number
7– Form to fill in.



VERY IMPORTANT!!!! PLEASE FOLLOW THE INSTRUCTIONS STEP BY STEP

TO CONVERT A STANDARD (ON-OFF) J3C ELECTRIC ACTUATOR INTO A MODULATING FUNCTION WITH POSITIONER, PROCEED AS FOLLOWS:

The unit must be disconnected from any electrical power or signal before installing.

1: Remove the screw from the top of the hand wheel (Fig.1).
2: Remove the 8 cover screws (Fig.2).
3: Carefully lift the cover (Fig.3).
4: Carefully remove the position indicator (Fig.4).
5: Remove the screw from the base plate (Fig.5).
6: Fix the hexagonal column (3) on the base plate (Fig.6).
7: Mount the DPS2005 positioner PCB (2), matching the flat side of the shaft with the flat side of the gear (Fig. 7). Press the DPS2005 positioner PCB (2) along the shaft until the DPS2005 positioner PCB connector is plugged in the actuator PCB (Fig. 7).
8: Fix the DPS2005 positioner PCB (2) to the hexagonal column (3) with the screw (4) (Fig.8).
9: Connect the 3 pin power supply plug to the socked (1) (Fig.9) on the actuator PCB, then, connect the earth connector (yellow/green) cable into the socked (2) (Fig.9).
10: Connect the 4 pin (control signal) plug into the corresponding socked 4/20mA or 0/10V (3) (Fig.9).
11: Connect the 5 pin (confirmation) plug into the socked (4) (Fig.9).
12: Carefully insert the position indicator, matching its flat sides with the flat sides of the shaft (Fig.10).
13: Carefully mount the cover, minding the cables not to be pressed between the cover and de body of the actuator. (Fig.11).
14: Fix the cover to the body by using the before mentioned 8 screws (Fig.12).
15: Mount the hand wheel on the shaft and fix it by using the screw (Fig.13).
16: Remove the wiring diagram of the actuator and put the one supplied together with the DPS 2005 KIT (5).
17: Stick the label with the serial number, supplied with the DPS 2005 KIT on the body of the actuator.
18: Fill in the blanks of the form and send it back to the manufacturer, either by mail or by fax.
THE ACTUATOR IS READY TO WORK.

HOW TO MAKE AN EXTERNAL SELF-ADJUSTMENT OF THE POSITIONER:

1º Connect a cable between PIN 1 (on the left side) and Earth PIN (on the bottom) in the socket, located in the center of the cover.
2º Connect the grey connector to the power supply.
3º Remove the cable between PIN 1 and the Earth PIN from point 1º

The actuator will make a complete maneuver and a self adjustment of the positioner.

KIT BSR J3C 140/300

OUTSIDE BOX

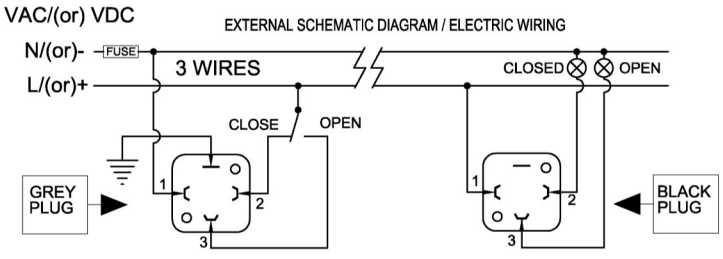
INSIDE BOX

El sistema de seguridad BSR es un automatismo que, incorporado a los actuadores J3C permite, en caso de interrupción de la alimentación eléctrica, situar la válvula en posición preferente predeterminada NC o NA.
En el interior del actuador se encuentra situada la tarjeta del circuito BSR más el bloque de baterías que, se encuentra en carga continua, lo que permite accionar el actuador, en caso necesario, cuando la unidad detecta un fallo de suministro eléctrico.
Hay que tener en cuenta que no se trata de un actuador "simple efecto" , pero que en caso de que la válvula se encuentre en posición no preferente, el sistema BSR, mediante las baterías, accionará la válvula hasta situarla en la posición predeterminada como preferente, actuando como un actuador "simple efecto".

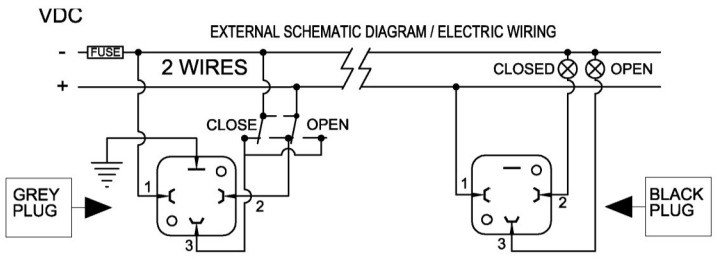
The BSR safety block system is an automatism that, when coupled to the J3C multi voltage electric actuators, lets the valve situate in a preferable position NC or NO, when there is a power supply failure. Inside of the housing there are a BSR print circuit board and a battery pack, which is kept in continuous 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.

OPCIONES CONEXIONES EXTERNAS / EXTERNAL ELECTRIC WIRING OPTIONS

(3 CABLES) / (3 WIRES)



(2 CABLES) / (2 WIRES)



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

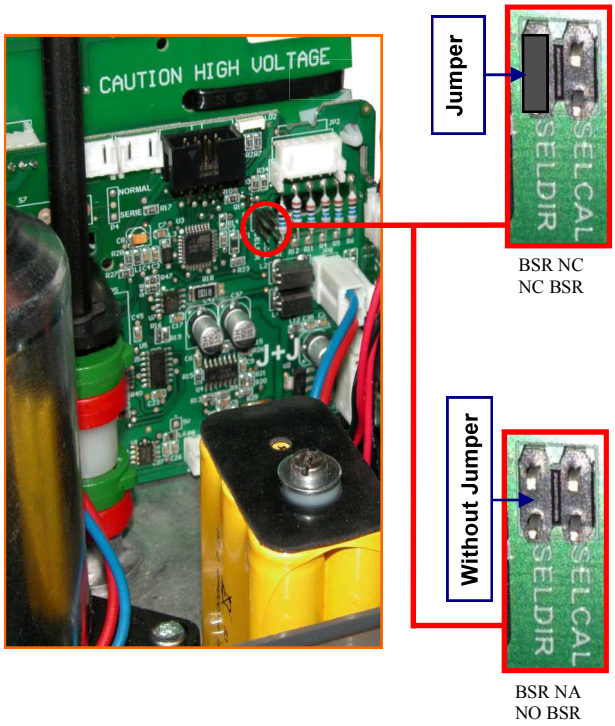
KIT BSR PARA MONTAR EN: BSR KIT MOUNTABLE IN:		
MODELO / MODEL	J3C-140	J3C-300
VOLTAJE / VOLTAGE	H & L	H & L
PESO (Kg) / WEIGHT (Kg)	0,375	0,375

KIT BSR J3C 140/300

KIT BSR PAR MONTAR EN ACTUADOR:
BSR KIT MOUNTABLE IN:

MODELO / MODEL	J3CH140	J3CL140	J3CH300	J3CL300
Nº de Maniobras sin recargar, con batería 100% de carga. Nº Working operarion without recharge, with 100% battery charge .	2	2	1	1
Tiempo de recarga/ maniobra. Recharge time/working operation.	30 min	30 min	50 min	50 min
Consumo de batería por maniobra. Battery consumption/working operation.	23 W	23 W	23 W	23 W
Tiempo de carga completa 100%. Full charge time 100%.	27 h	27 h	27 h	27 h
Capacidad nominal +/- 5%. Nominal capacity +/- 5%.	1000 mA	1000 mA	1000 mA	1000 mA
Configuración BSR NA o NC (*) NO or NC Features.(*)	Jumper	Jumper	Jumper	Jumper
Consumo una maniobra con batería. Current/one working operation with battery.	15,1 mA	15,1 mA	25.7 mA	25,7 mA
Carga batería. Battery charge.	37 mA/h	37 mA/h	37 mA/h	37 mA/h
Peso. Weight.	0,375 Kg	0,375 Kg	0,375 Kg	0,375 Kg

(*) **Configuración BSR NA o NC / NO or NC Set-Up**



Configuración BSR NA / NO Set-Up

Si deseamos que el actuador, a fallo de corriente cierre, es necesario insertar el jumper en la posición SELDIR.

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

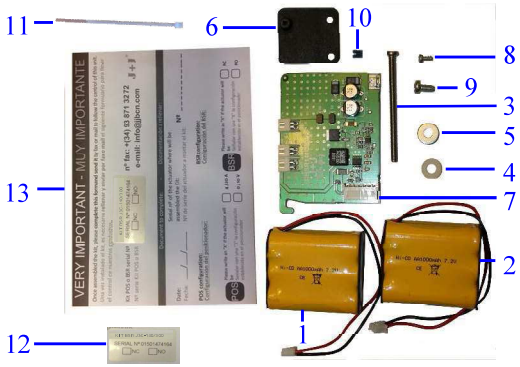
Configuración BSR NC / NC Set-Up

Si deseamos que el actuador, a fallo de corriente abra, comprobar que en la posición SELDIR, no tenga el jumper montado.

NO - If, in case of a power failure, we need the actuator go to the OPEN position, be sure that on the SELDIR position there is no jumper.

J3C-140/300 KIT BSR MOUNTING INSTRUCTIONS J3CCV002

1-Battery
2-Battery
3-Battery fixing screw
4-Washer
5-Casquillo plástico
6-Plastic plate
7-BSR PCB
8-Screw
9-4x8 Screw
10-Jumper
11-Plastic flange
12-Serial number label
13-Form



VERY IMPORTANT!!!!

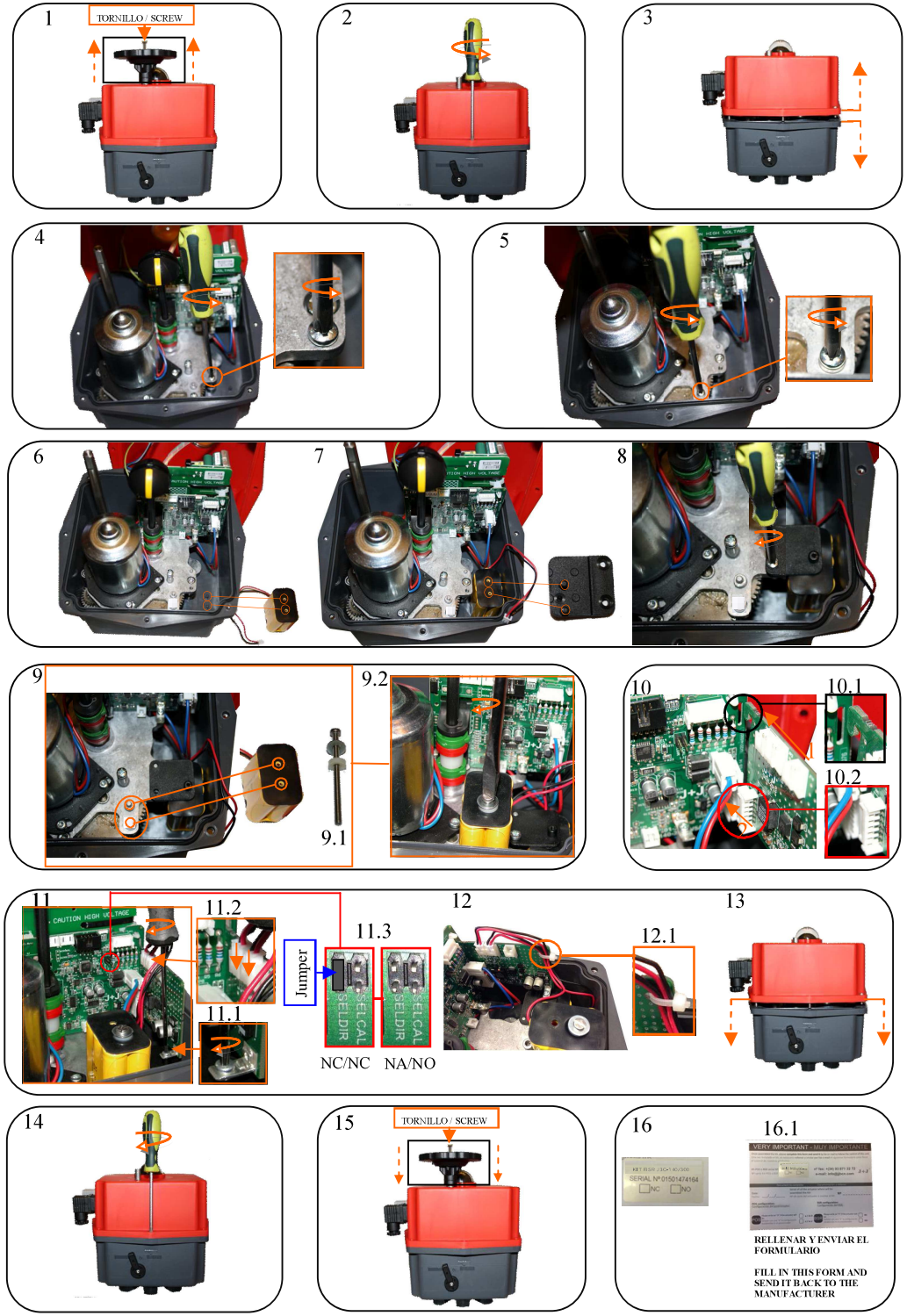
PLEASE FOLLOW THE INSTRUCTIONS STEP BY STEP

TO CONVERT A STANDARD (ON-OFF) J3C ELECTRIC ACTUATOR INTO AN ACTUATOR WITH BSR, PROCEED AS FOLLOWS:

The unit must be disconnected from any electrical power or signal before installing.

1: Remove the screw from the top of the hand wheel and take it off. (Fig.1).
2: Remove the 8 screws, which are fixing the cover to the body. (Fig.2).
3: Carefully lift the cover (Fig.3).
4: Remove the screws, located on the metallic plate.(Fig.4) y (Fig.5).
6: Match the two battery holes (1) with the two bosses in the body of the actuator. (Fig.6).
7: Match the two bosses on the plastic plate (6) with the two holes in the battery (1) (Fig.7).
8: Fix the plastic plate(6) using the 4x8 screw (9) (Fig.8).
9: Match the two battery (2) holes with the two bosses on the plate as per what is shown in the picture (Fig.9).
10: Take the screw (3) and put the washer (4) together with the plastic clip along it. (5) (Fig. 9.1).
11: Put the screw from (Fig 9.1) inside the battery hole (Fig. 9.2) and fix the battery (2).
12: Insert the upper side of BSR PCB (hook shape) (7) in the Control PCB slot (1) and later insert the connector (2) (Fig. 10) .
13: Fix the BSR PCB (7) by using the screw (8) on the plastic base (6) (Fig. 11 y 11.1).
14: Connect both batteries (1 y 2) to the BSR PCB (7) (Fig. 11 y 11.2).
15: BSR NO or NC configuration:
NC - If ,in case of a power failure, we need the actutator go to the CLOSE position, we need to put the jumper (10) on the SELDIR position (Fig.11.3 NC/NC).
NO - If ,in case of a power failure, we need the actutator go to the OPEN position, we need to be sure that on the SELDIR position (Fig.11.3 NA/NO) there is no jumper (10) .
16: Put the battery cables together (1 y 2) by using the plastic flange (11) (Fig.12, y 12.1).
17: Carefully mount the cover, minding the cables not to be pressed between the cover and de body of the actuator. (Fig.13).
18: Fix the cover to the body by using the before mentioned 8 screws. (Fig.14).
19: Mount the hand wheel on the shaft and fix it by using the screw. (Fig.15).
20: Stick the label with the serial number (12), supplied with the BSR KIT on the body of the actuator.(Fig.16).
21: Fill in the blanks of the form (13) and send it back to the manufacturer, either by mail or by fax.(Fig.16.1).

THE ACTUATOR IS READY TO WORK.



Ajuste de las Levas/ Adjustment of the cams

LSFV001

¡PELIGRO! TENSION ELECTRICA EN EL INTERIOR DEL ACTUADOR. MANIPULAR SOLO POR PERSONAL AUTORIZADO.

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

En condiciones normales el actuador tiene que trabajar con la tapa cerrada.
Si el trabajo a efectuar en el actuador requiere la tapa abierta, el voltaje, tanto de alimentación como de control debe desconectarse primero. Los ajustes a realizar con corriente deberán llevarse a cabo con herramientas correctamente aisladas.
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.

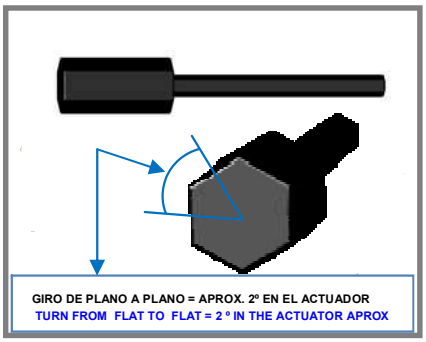
Nota:-Las levas están fijadas al eje mediante dos planos.

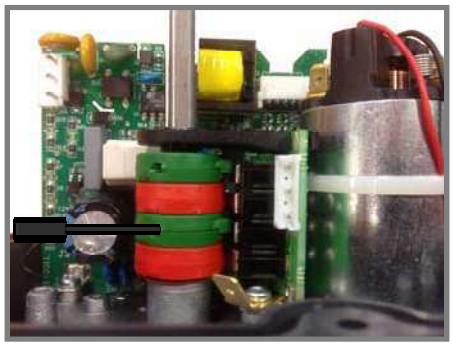
Remark:-The cams are fixed to the main shaft by two flats.

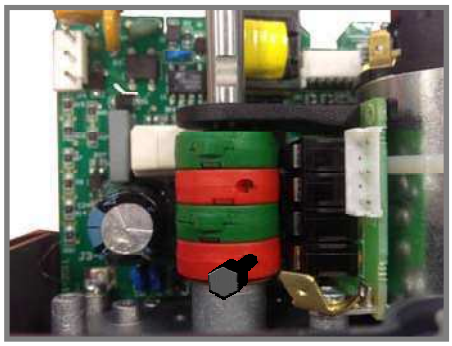
¿Cómo mover las levas?
Necesitamos una llave de plástico.
Para mover las levas solo tenemos que introducir la llave de plástico en el agujero de la leva y girarla en el sentido deseado (ver las dos opciones indicadas en las fotografías adjuntas).

How to do it:

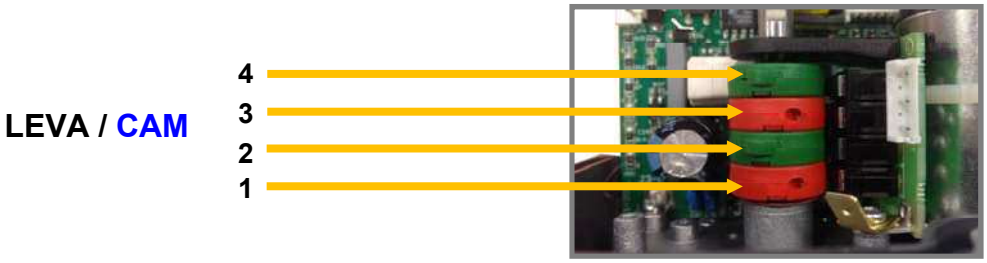
Tolling: One special plastic wrench.
To move the cams, introduce the special plastic wrench in the hole of the cam and turn it round (see both options on the enclosed pictures).







POSICIÓN DE LAS LEVAS / POSITION OF THE CAMS



1) La leva **1** es para el ajuste de la posición de cerrado. / *Cam **1** is to adjust the close position.*

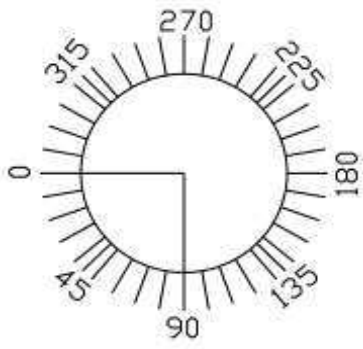
2) La leva **2** es para el ajuste de la posición de abierto. / *Cam **2** is to adjust the open position.*

3) La leva **3** es para el ajuste de la confirmación de cerrado. / *Cam **3** is to adjust the close position confirmation.*

4) La leva **4** es para el ajuste de la confirmación de abierto. / *Cam **4** is to adjust the open position confirmation.*

Para asegurar que las confirmaciones de posición funcionan, ajustar las levas de confirmación (3 Y 4) 3º antes (+/- 1º) del paro de motor.

To ensure that the position confirmation works, adjust the confirmation cams (3 & 4) 3° (+/-1º) before the motor stop.



- Ajustar siempre la leva 3 aproximadamente 3º antes de la posición de cerrado.

Cam 3 should always be placed aprox. 3º before the close position.

- Ajustar siempre la leva 4 aproximadamente 3º antes de la posición de abierto.

Cam 4 should always be placed aprox. 3º before the open position.

Los actuadores estándar están ajustados a 0º (cerrado) y 90º (abierto).

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

1.- Ajustar la posición de cerrado a menos de 0º / *To adjust the close position at less than 0º.*

En este caso tendremos que girar la llave en sentido horario - levas 1 y 3.

La leva 3 tiene que pisar un poco antes de la leva 1.

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

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

2.- Ajustar la posición de cerrado a más de 0º / *To adjust the close position at more than 0º.*

En este caso tendremos que girar la llave en sentido anti horario - levas 1 y 3.

La leva 3 tiene que pisar un poco antes de la leva 1.

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

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

3.- Ajustar la posición de abierto a más de 90º / *To adjust the open position to more than 90º.*

En este caso tendremos que girar la llave en sentido anti horario - levas 2 y 4.

La leva 4 tiene que pisar un poco antes que la leva 2.

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

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

4.- Ajustar la posición de abierto a menos de 90º / *To adjust the open position to less than 90º*

En este caso tendremos que girar la llave en sentido horario, - levas 2 y 4.

La leva 4 tiene que pisar un poco antes que la leva 2.

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

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

J3/J3C INSTALLATION INSTRUCTIONS

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

J3 and **J3C** 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. Always ensure that the power supply is disconnected prior to removing the top cover by disconnecting the DIN power input plug. It is strongly recommended that each actuator has its own independent fuse system to protect it from the electrical influence of other electrical devices (EG: pumps).

1.- 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.

ON-OFF ACTUATOR

J3/J3C 20/85 J3C 140/300

DPS2005 ACTUATOR

J3/J3C 20/85 J3C-140/300

FIGURE 1

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

FIGURA 2

CONNECTOR	SMALL BLACK		BIG GREY		BIG BLACK	
	DIN-43650 ISO 4400 & C192		DIN-43650 ISO 4400 & C183		DIN-43650 ISO 4400 & C183	
MODEL	min Ø	máx. Ø	min Ø	máx. Ø	min Ø	máx. Ø
J3 20 to J3 85 / J3C 20 to J3C 85	5mm	6mm	8mm	10.5mm		
J3C 140 to J3C 300			8mm	10.5mm	8mm	10.5mm

Electrical connection: All models.

ELECTRICAL CONNECTIONS ON/OFF ACTUATOR

The power supply is connected to the grey DIN plug. (See Fig.3)
NEUTRAL PIN 1 + PHASE PIN 2 = CLOSE ACTUATOR
NEUTRAL PIN 1 + PHASE PIN 3 = OPEN ACTUATOR
EARTH/GROUND CONNECTION—FLAT PIN ON TOP

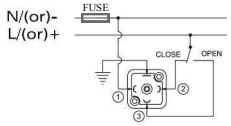


FIGURE 3

The volt free connection is made to the black DIN plug. (See fig.4)
COMMON PIN 1 + PIN 2 = CLOSED POSITION CONFIRMATION
COMMON PIN 1 + PIN 3 = OPEN POSITION CONFIRMATIÓN

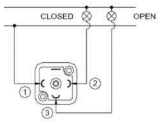


FIGURE 4

* For other connection options please contact the vendor.

Warning: Ensure that the square rubber seal is in place when fixing each DIN plug to the actuator. Failure to do so could allow water ingress and damage caused by this installation error will invalidate any warranty. The DIN plugs are fixed to their respective bases on the actuator housing with a screw. Do not overtight the screw when assembling.

ELECTRICAL CONNECTIONS DPS 2005 ACTUATOR

The power supply is connected to the grey DIN plug. (See Fig.3.1)
NEUTRAL PIN 1 + PHASE PIN 2 = POWER SUPPLY
EARTH/GROUND CONNECTION—FLAT PIN ON TOP

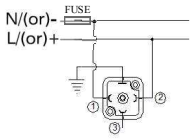


FIGURE 3.1

Connect input and output signal of the DPS 2005.
Connector in the centre .(See Fig.3.2)
NEGATIVE PIN 1 + POSITIVE PIN 2 = 4/20mA or 0/10V INPUT
NEGATIVE PIN 1 + POSITIVE PIN 3 = 4/20mA or 0/10V OUTPUT

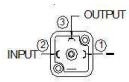


FIGURE 3.2

Connect the confirmation of position to the black connector on the right. (See Fig.4.1)
COMMON PIN 1 + PIN 2 = CLOSED POSITION CONFIRMATION
COMMON PIN 1 + PIN 3 = OPEN POSITION CONFIRMATIÓN

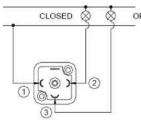


FIGURE 4.1

Anti-condensation protection:
The **J3C** actuator has an integral thermostatically controlled anti-condensation heater that is automatically activated whilst main power is applied. The heater does not require a separate supply.

2.- LOCAL VISUAL POSITION INDICATOR:

All **J3C** actuators are supplied with a local visual position indicator comprises of a black base with a yellow insert that shows both the position and direction of rotation. (see Fig.5). The open and close positions have the following logos moulded into the top cover OPEN 90 and CLOSE 0. Opening = Closing =

J3-20 J3C-20/85 J3C-140/300

FIGURE 5

3.- EMERGENCY MANUAL OVERRIDE FACILITY:

J3-20/J3C-20/85 J3C-140/300

FIGURE 6

The J3C has 2 operating modes, automatic and manual , the required mode is selected by using a lever on the lower half of the actuator housing (see Fig 6).
The 2 positions are marked: AUTO = Automatic operation
MAN = Manual operation

Warning: Do not remove the selector lever securing cross head 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 "MAN" function is selected:
1-The electronic system cuts the power to the motor after a few seconds.
2-The motor to output shaft drive is disconnected.
3-The desired position can be achieved by using the manual override lever or 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 (opened or closed). 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 is then change to operate automatically again.

4-MOUNTING TO COMPONENT BEING ACTUATED (Eg:1/4 turn valve).

It is vital that the mounting kit used to connect the electric actuator to the component (eg: valve) is correctly manufactured and assembled. The mounting bracket's holes must be drilled to ensure that the centerline of the actuator's drive is perfectly in line with the component's drive-centerline, and that the drive coupling/ adaptor rotates around this centerline. The mounting holes of the actuator conform to ISO 5211, and the female output drive conforms to DIN 3337.
We strongly recommend that valves/components to be actuated that have ISO 5211 compliant top works are used wherever possible as it greatly assists in ensuring the concentrity of mounting the actuator to the valve.
The male square end of the drive coupling MUST NOT be longer than the maximum depth of the actuator female output drive when the assembly is bolted together.
Failure to comply with these instructions will cause uneven wear and dramatically reduce the working life of the valve and actuator.

5-EXTERNAL LED LIGHT STATUS:

The LED status light provides visual communication between the actuator and the user.
The current operational status of the actuator is shown by either solidly lit, or different flashing sequences of the LED light:
Time: 200 mSec. X each digit of the configuration.
Configuration: digit 1=LED on, digit 0= LED off
The configuration is a respective sequence of 4 columns of 4 digits.

J3-20/J3C-20/85 J3C-140/300

FIGURE 7

ACTUATOR OPERATIONAL STATUS	TIME	RED LED	COLOUR LED
Actuator without power being supplied	100%	0000 0000 0000 0000	LED OFF
Actuator with power being supplied	100%	1111 1111 1111 1111	OPEN=GREEN LED / CLOSE= RED LED
Actuator , mouving from ….. .to …., (flashing led)	100%	1111 1111 1111 1111	FROM OPEN TO CLOSE=RED, ORANGE/ FROM CLOSE TO OPEN=GREEN, ORANGE
Actuator w torque limit function on, mouving from …. To …..,(flashing led)	200 mSeg.	1010 1010 1010 1010	FROM OPEN TO CLOSE=RED, OFF / FROM CLOSE TO OPEN=GREEN, OFF.
Actuator in MANUAL mode	200 mSeg.	1111 0111 1000 0000	ORANGE, LED OFF
Actuator without power and working with the BSR system. MAX. 3 minutes	200 mSeg.	1000 0000 0000 0000	BSR NC = RED, OFF / BSR NO = GREEN, OFF
Battery protection. Danger - The battery needs recharging. BSR disabled.	200 mSeg.	1010 1000 0000 0000	ORANGE, OFF
Actuator with DPS2005	200 mSeg.	1111 1111 1111 1111	STOP=BLUE/ OPENING=BLUE, GREEN / CLOSING=BLUE, RED

6-OPCION BSR:

If the actuator is fitted with the BSR (Battery Spring Return) plug-in failsafe system upon electrical failure the actuator will go to the predetermined position: NO (normally opened) or NC (normally closed).

7-KITS BSR / KIT DPS2005

To assemble the kits, consult the manuals on www.jjbcn.com

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