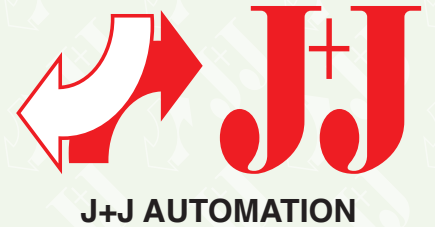




**technische import**

# J+J Handleiding



## Additional instruction for J+J actuators

### J3 S + J3C S –Series with Positionier (DPS)



**⚠ This instruction is additional to your „ Basic instruction J3 S+ J3C S “. For further technical details and advices please mind those.**

#### General:

The DPS electronic positioner converts the actuators into servo-controlled control device for valves. Using the input signal of the DPS, it is possible to adjust to any pivoting range of the actuator. The DPS Module controlled by an integrated internal micro-processor (CPU) the analog input-and output signal (4-20mA, 0-20mA or 0- 10V) and compared with the position of the actuator. For all description, up from now you have to fill up the main safety rules for work at electric plants. For all you have to remove the handwheel / lever and the cover. After you have to close the cover and plug on the power and signal cable. Please take care to the cable route. Don't wedge the cable with the cover. **The Input signal must be switched potential free (buffer amplifier)!**

#### Technical Data:

<b>Accuracy</b>	3% *
<b>Linearity</b>	2% *
<b>Hysteresis</b>	3% *
<b>Teilung</b>	Min. 142 steps 90° 4/20mA Min. 88 steps 90° 0/10V Min. 166 steps 90° 0/20mA Min. 85 steps 90° 1/10V
<b>Min Auflösung /90°</b>	1,30%
<b>Class</b>	B+C nach E DIN EN 15714 Inching + Modulation
<b>Input signal impedance</b>	0-10V = 25KOhm / 4-20mA = 100Ohm
<b>Weight</b>	0,600 kg

#### Alignment of DPS positioner (J3 S + J3C S)

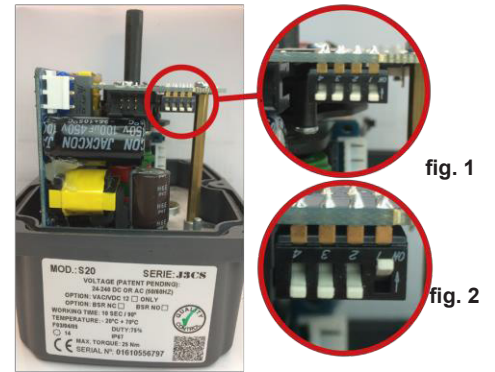
The „alignment of DPS positioner“ means to approach the configured switch cams of the actuator, to set, or adjust the DPS limits. This is necessary, every time when the swivel angle where changed. Please ensure, to only change in the configuration range of the actuator (0°- 90°, 0°- 180°...). If the actuator is twisted out of this range, it will re-configure itself after you put the power supply back on. Because the system works potential-free, it maybe could be out of adjustment.

## Electrical alignment

For the adjustment drive you have to wire and switch on the power supply at plug 1.

*Note: At actuators with DPS and BSR you have to unplug the BSR Accupack from the circuit board before you start the adjustment drive!*

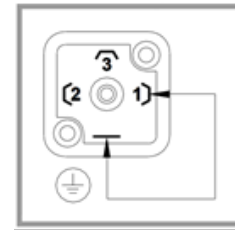
1. switch off power supply and open the cover
2. put DIP-switches in neutral position (see fig. 1)
3. put DIP-switch 1 to position „on “(see fig. 2)
4. switch on the power supply
5. put DIP-switch 1 back to neutral position
6. now the actuator drives in both end positions



After the adjustment drive the actuator drives to the position according to your input signal. The adjustment is finished.

## Manuel alignment (J3 S + J3C S)

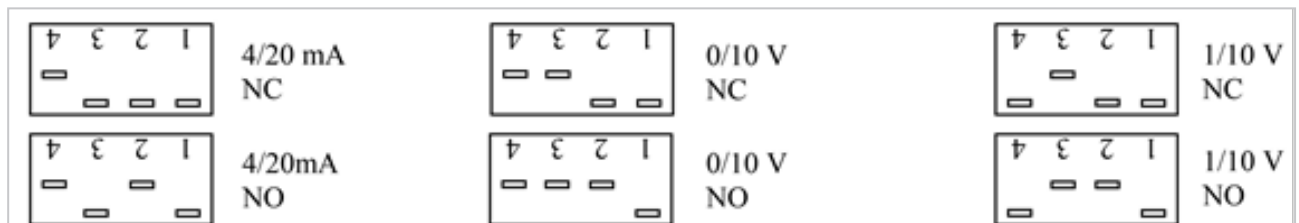
1. switch off power supply and open the cover
2. release plug 3 from terminal 3 (Positioning signal)
3. make a bypass on terminal 3 between Pin 1 and Ground
4. switch on the power supply
5. release the bypass
6. now the actuator drives in both end positions



After the adjustment drive the actuator drives to the position according to your input signal

## Configuration of signal

The signals mode could be configurate by DIP-switches. Plug off the external power and positioner plugs and easily configured those switches as seen in the image below.



## Adjust working angel

For change the working angel of the positioner system you have to adjust first the motor stop cam (position “open” or “close”). Please note if you want to use the position confirmation of the voltfree contacts (plug 4) , you have to adjust the cams for it too, after you adjust the motor stop cams. For adjust the cams you can get more information at our main manual, chapter “adjust the cams”. After the adjustment of the cams you have to adjust the positioner system too.

## Functions of status LEDs

### External status indicator LED

status	time	indicator	LED colour
reached position	100%	1111 1111 1111 1111	blue
power supply on / actuator moving to „open “	100%	1111 1111 1111 1111	blue / green (flashing)
power supply on / actuator moving to “closed “	100%	1111 1111 1111 1111	blue / red (flashing)

For further information about status functions consult our “Basic instruction **J3 S+ J3C S** “.

### Status-LED DPS board (internal) (Abb. 4)

- OPEN control signal “OPEN” – actuator moving to “OPEN”
- CLOSE control signal “CLOSE” – actuator moving to “CLOSE”
- OPEN+CLOSE configuration mode

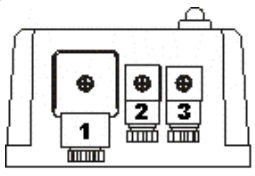


Abb. 4

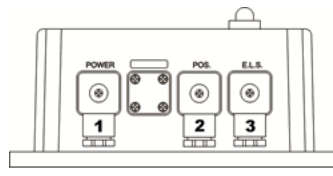
## Connections and wiring diagram

### plugs:

Actuators including DPS, are adjusted and equipped with three plugs. You can see the wiring on the actuators imprint or the wiring diagram.



model S 20/ 35/ 55/ 85



model H/L 140/ 300

- plug 1: power supply (according to label)
- plug 2: driving signal (0 -10 V, 4 - 20 mA or 0 – 20 mA)
- plug 3: limit switch signal open/close (potential free)

## Wiring diagram DPS AC/DC:

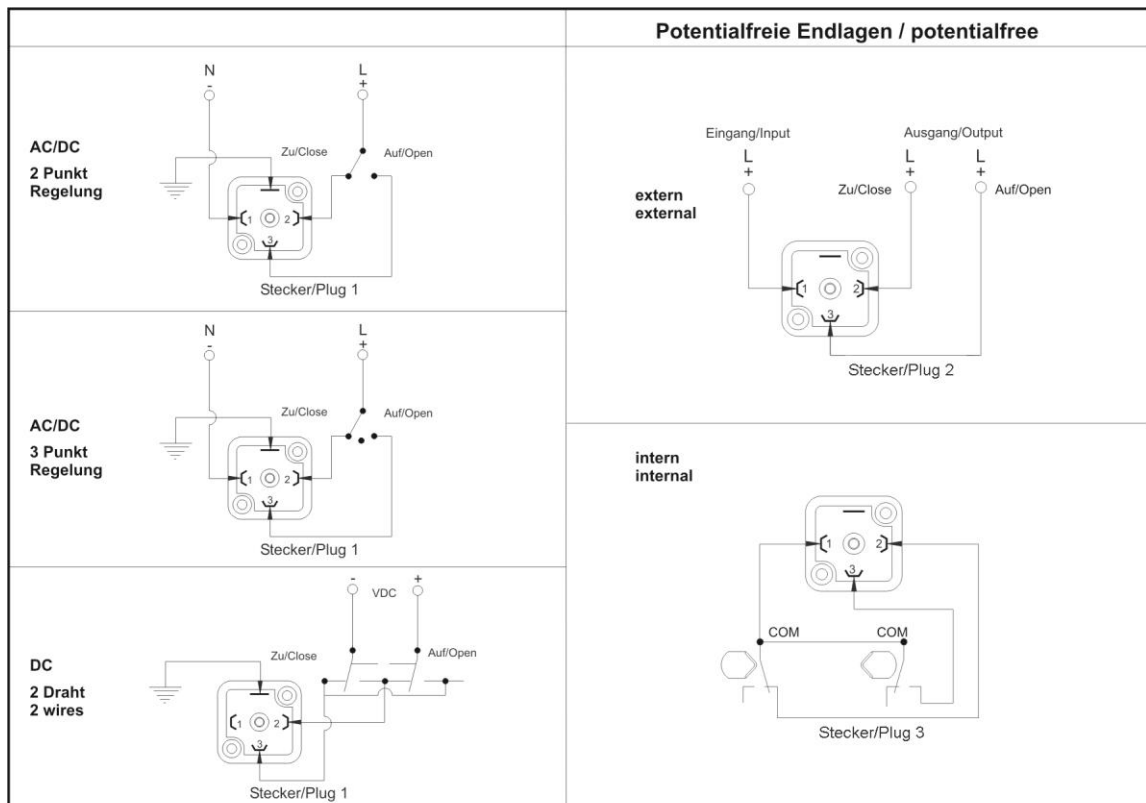


Abb. 4

## Error analysis (FAQ)

### The actuator positions are not acc. to the input signal

*reason: drive over the adjusted angel by hand*

*help: see chapter "adjust the DPS positioner systems"*

### The actuator drives in the wrong direction at positioner signal (e.g. 0 V = valve is opened)

*reason: valve is wrong mounted or the rotating direction is changed*

*help: see chapter "adjust the DPS positioner systems"*

### The motor cams are adjusted by the user but the actuator drives in the same position like before.

*reason: after the adjustment of the cams you have to adjust the DPS system too*

*help: see chapter "adjust the DPS positioner systems"*

### The angel positions are not according to the signal. The actuator stopps earlier

*reason: the motor stop cam is adjusted in the adjustment area of the DPS System*

*help: see chapter "Adjust working angel" after it chapter "adjust the DPS positioner systems"*

### The volt free contacts have no function after arrive to the end position

*reason: the cam doesn't arrive the position or is adjusted*

*help: adjust the cam as its shown in the main manual*



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