Modulating version 'DPS'
Digital Positioning System

Doc: J3/DPS/03/KW
Aug 2010

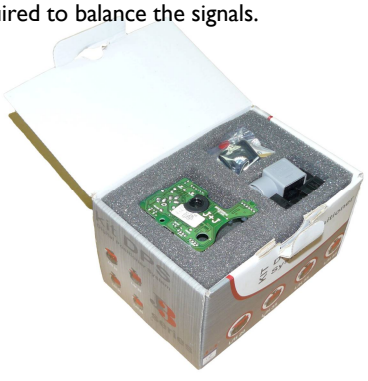
What it does and how it works

J+J's DPS system provides accurate modulating function whereby the movement of the actuator is controlled by either a 4-20mA or a 0-10VDC control signal. Any change in the control input signal results in a corresponding and proportional change in the position of the actuator.

This is achieved with the use of an internal digital positioning system designed and developed by J+J.

The main advantages of J+J's DPS system are that the system is retro-fittable to the standard J3 on-off electric actuator, it is self-calibrating, provides an output signal as standard, and virtually eliminates 'hunting'.

An internal microprocessor on the DPS circuit board continuously monitors digitally the analogue input and output signals and compares them to the physical position via an output shaft feedback system, moving the actuator as required to balance the signals.

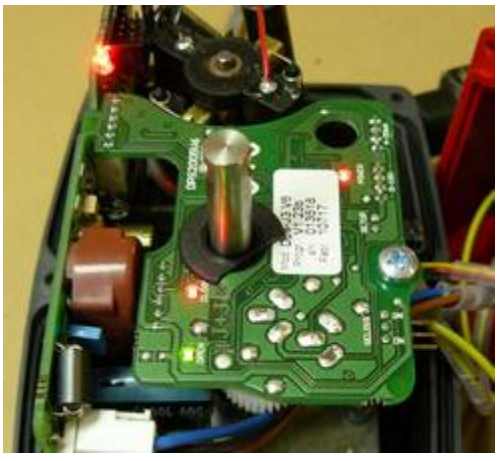


Digital control ensures high sensitivity and repetivity, with all the usual positioner characteristics coming in at under 1% (hysteresis, linearity & precision).

The DPS is self calibrating, and on initial start-up or on restoration following a power cut, will go through a short automatic set-up sequence.

In situations where the actuator is used in manual mode (eg: commissioning) and put back into automatic mode with the actuator out of it's normal operating quadrant, the DPS will auto-adjust itself back into the correct quadrant, re-set itself, and be ready for use.

The DPS can be supplied as a retro-fit kit containing all the parts required to convert a standard on-off electric actuator to a modulating unit, and can be used in conjunction with the J+J BSR kit to produce failsafe modulating functionality.



Quick guide to the J3 electric actuator standard features :

Highly visible LED light gives continuous actuator status indication.

J3 L - 12-24V AC/DC
J3 H - 80-240V AC/DC

Multi-voltage electric actuator with auto-voltage sensing:

Torque output: range:
25~95Nm Break
20~80Nm Reseat

Electronic torque limiter
Protects against valve jams

Anti-condensation heater

Manual override

All connections via external DIN plugs ~ no need to remove cover to connect

Volt free end of travel confirmation switches

IP65 weatherproof housing

CE marked

Traceable sequential serial numbering system

Optional failsafe kit (Battery Back-up) - actuator fails to safe position on power failure

Optional modulating kit with digital positioning system, either 0-10V or 4-20mA