Installation and Operation Instruction

The actuator type **FlowCon FNP** is an electrical actuator and 24V modulating

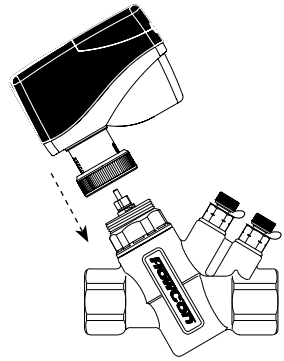


Figure 1

Fitting and Re-fitting

Do not connect power to the actuator unless the actuator is already fitted on the valve and NEVER install the actuator in closed position - this may damage the valve. Actuator is supplied in open position to ensure easy commissioning of the system.

Mount the actuator on the valve and finger tighten the connection union. Do not use additional tools. In case the actuator will have to be removed, it is recommended to electrically open the actuator by activating DIP switch #6 for easier removal. Hereafter finger loosen the connection union. Again, no need for additional tools. Please make sure that the actuator is electrically opened, before re-fitting it on the valve.

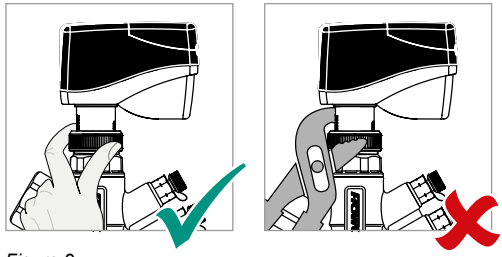


Figure 2

Orientation

Upside-down installation is allowed along with the standard horizontal and vertical installation.

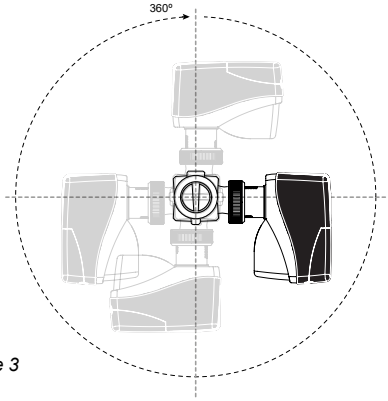
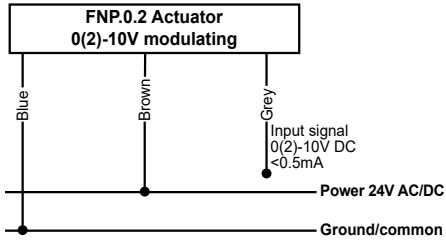


Figure 3

Wiring

FlowCon FNP (analog)



Start-up Sequence

When power to the actuator is turned on, the actuator will automatically calibrate to determine closing point. Hereafter it will proceed to normal operation mode (according to control signal).

Auto Cycle Sequence

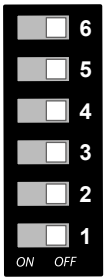
Auto Cycle can be activated during commissioning. It prevents the valve from jamming when the valve is not moved for a longer period of inactivity. By moving DIP switch #1 from OFF to ON, Auto Cycle is activated. Actuator will then perform 50% stroke cycle every 3 weeks if no stroke movement has occurred.

Electrical Override

By moving DIP switch #6 from OFF to ON, electrical override is activated and the actuator will open valve fully. During electrical override the LED indicator will blink red and green. When DIP switch #6 is moved back to OFF, the actuator will re-calibrate and thereafter go into normal operation mode. Electrical override is performed with power supply on.

DIP Switch Settings

The valve functions are set on DIP switches found under the connection cover. PCB mounted electrical components will not be directly exposed when DIP switches are to be set. Factory setting for all switches is OFF.

DIP switch	Function ON		Function OFF
#6	Electrical override ON		Electrical override OFF
#5	No function		No function
#4	Equal percentage		Linear
#3	Normally Open		Normally Closed
#2	Control signal 2-10V		Control signal 0-10V
#1	Auto cycle ON		Auto cycle OFF

LED Status

The LED indicator is visible through the dark colored transparent connection cover. The LED indication will give the following statuses.

	FNP
Normal operation mode	Full on green
Calibration mode (closing point adjustment)	Blinking green
Electrical override mode	Blinking red/green
Perpetual failure mode	Full on red

Re-Calibration

Re-calibration can be achieved in one of 2 ways:

1. Forced individual actuator re-calibration can also be performed by flipping DIP switch #6 from OFF to ON and back to OFF on the relevant actuator.
2. Forced concurrent re-calibration for all actuators is electrically possible. Within 60 sec. provide the following electrical control signal sequence to the grey wire: 10V-2V-10V-2V-10V-2V to achieve re-calibration.

After re-calibration the actuator will go into normal operation mode.