

FlowCon FH Actuators

FlowCon Electrical Actuators



SPECIFICATIONS

FlowCon FH

Supply voltage:	24V AC/DC $\pm 10\%$, 50/60 Hz
Type:	Electrical, bi-directional synchronous motor
Power consumption:	24V AC: 1.5VA standby / 6VA operating / 8.5VA max. 24V DC: 0.6W standby / 2.6W operating / 4.1W max.
Inrush current:	10A (peak)
Control signal:	Analog 0(2)-10V DC, <0.5mA or digital 3-point floating and ON/OFF
Resolution:	1:100 (0-10V analog) and 1:80 (2-10V analog)
Feedback:	Yes, control signal (analog) or 0-10V DC (digital ON/OFF)
Failsafe function:	Fail in place
Manual override:	Yes
Position indicator:	Yes
Operation time:	22 sec/mm
Actuating force:	600N -50N/+100N
Stroke:	7 mm / 0.276 in
Ambient temperature ¹ :	0°C to +50°C / +32°F to +122°F
Media temperature:	0°C to +120°C / +32°F to +248°F
Humidity rating:	0.85% rH, no condensation
Protection:	IP54 incl. upside-down, class III, indoor use only
CE conformity:	EN 60730
Cable:	Fixed, 5 wires x 0.50 mm ² , 1.5 meter Fixed, 5 wires x AWG20, 4.9 ft
Closing point adjustment:	During operation the actuator will self-adjust according to the closing point and stroke length of the valve.

Note 1: Including +5°C self-generated heat based on UL requirements.

SPECIFICATIONS (...continued)

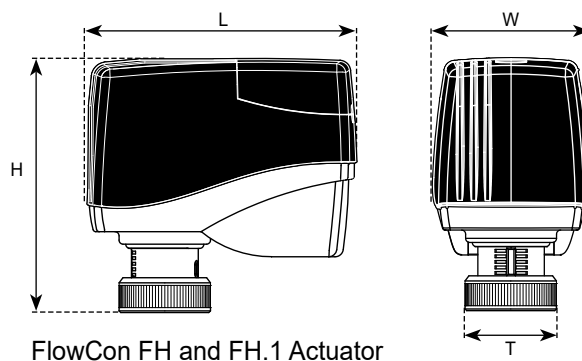
FlowCon FH.1

Supply voltage:	24V AC/DC $\pm 10\%$, 50/60 Hz
Type:	Electrical, bi-directional synchronous motor
Power consumption:	24V AC: 2.6VA standby / 7.9VA operating / 9VA max. 24V DC: 1.2W standby / 3.7W operating / 4.5W max.
Inrush current:	12A (peak)
Control signal:	Analog 0(2)-10V DC or digital 2-position with constant power supply
Resolution:	1:100 (0-10V analog) and 1:80 (2-10V analog)
Feedback:	Yes, control signal (analog) or 0-10V DC (digital)
Failsafe function:	Yes, optional open or close (set on actuator)
Electrical override:	Yes
Position indicator:	Yes
Operation time:	22 sec/mm (failsafe mode: 5 sec/mm)
Actuating force:	600N -50N/+100N
Stroke:	7 mm / 0.276 in
Ambient temperature ² :	0°C to +50°C / +32°F to +122°F
Media temperature:	0°C to +120°C / +32°F to +248°F
Humidity rating:	0.85% rH, no condensation
Protection:	IP54 incl. upside-down, class III, indoor use only
CE conformity:	EN 60730
Cable:	Fixed, 5 wires x 0.50 mm ² , 1.5 meter Fixed, 5 wires x AWG20, 4.9 ft
Closing point adjustment:	During operation the actuator will self-adjust according to the closing point and stroke length of the valve.

Note 2: Including +5°C self-generated heat based on UL requirements.

DIMENSIONS AND WEIGHT (NOMINAL)

Actuator	L	W	H	T	Weight
	mm (in)	mm (in)	mm (in)		kg (lb)
FH	96.0 (3.78)	56 (2.20)	91 (3.58)	M30x1.5	0.30 (0.67)
FH.1	96.0 (3.78)	56 (2.20)	91 (3.58)	M30x1.5	0.34 (0.75)



MODEL NUMBER SELECTION

Actuator type:

Leave blank = no failsafe
1 = failsafe

FH .

Example:

FH.1 = FlowCon FH actuator 24V modulating with failsafe function

VALVE FUNCTION

The valve functions are adjusted with the DIP switches under the connection cover.

FlowCon FH

Switch #1: Auto cycle ON/OFF

If the plant specifications permit it, the auto cycle can be activated during commissioning. Auto cycle prevents the valve from jamming when the valve is not moved for a longer period of inactivity, e.g. for heating systems during the summer. When the auto cycle is activated, the actuator will perform 50% stroke cycle if no stroke movement has occurred during a 3-weeks period.

Factory setting = OFF.

Switch #2: Analog 2-10V DC / 0-10V DC

Setting control range by the continuous actuating signal 0-10V DC or 2-10V DC.

Factory setting = 0-10V DC.

Switch #3: Normally open / Normally close

Setting actuating direction with 10V DC control signal to “valve open” or “valve closed” as well as the position feedback.

Factory setting = Normally closed; 0V DC = valve closed.

Switch #4: Equal % control / Linear control

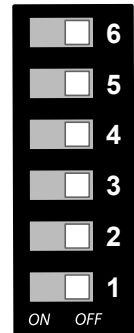
Setting of actuating control curve to either equal percentage or linear control.

Factory setting = Linear control.

Switch #5: has no function.

Switch #6: Re-calibration

Setting is indifferent, but flipping the switch will start re-calibration. After re-calibration the actuator will automatically go into normal operation.



FlowCon FH.1

Switch #1: Auto cycle ON/OFF

If the plant specifications permit it, the auto cycle can be activated during commissioning. Auto cycle prevents the valve from jamming when the valve is not moved for a longer period of inactivity, e.g. for heating systems during the summer. When the auto cycle is activated, the actuator will perform 50% stroke cycle if no stroke movement has occurred during a 3-weeks period.

Factory setting = OFF.

Switch #2: Analog 2-10V DC / 0-10V DC

Setting control range by the continuous actuating signal 0-10V DC or 2-10V DC.

Factory setting = 0-10V DC.

Switch #3: Normally open / Normally close

Setting actuating direction with 10V DC control signal to “valve open” or “valve closed” as well as the position feedback.

Factory setting = Normally closed; 0V DC = valve closed.

Switch #4: Equal % control / Linear control

Setting of actuating control curve to either equal percentage or linear control.

Factory setting = Linear control.

Switch #5: Failsafe open/close

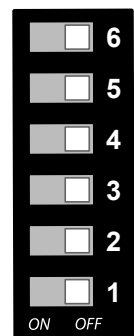
Setting actuator direction at power failure to “valve open” or “valve closed”.

Factory setting = close.

Switch #6: Electrical override

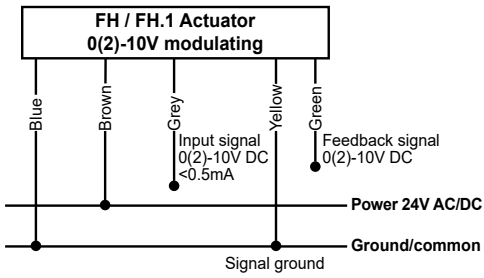
Setting override function to ON and the actuator will open valve fully. When set to OFF again, the actuator will re-calibrate and thereafter go into normal operation mode.

Factory setting = OFF

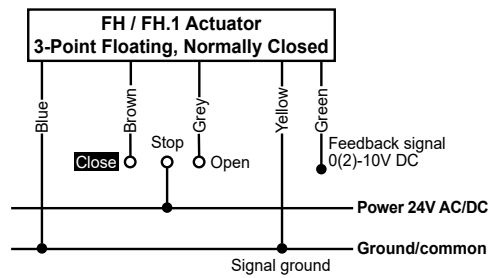
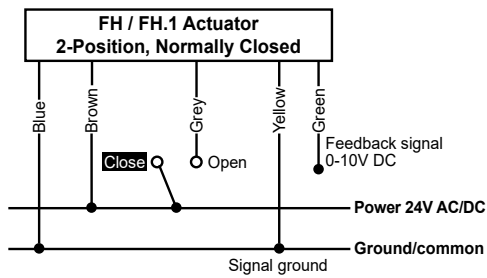


WIRING INSTRUCTION

FlowCon FH (analog)



FlowCon FH (digital)



UPDATES

For latest updates please see www.flowcon.com

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