

M31C150 and M6410C/L Small 3-Position Linear Actuators

M31C150 and M6410C/L actuators are specifically designed to provide floating point control for the OUV5822/5823/5832/5833 series of small linear valves. These actuators are used in small heating and cooling plants, fan coils and induction units.

M31C150 and M6410C/L are typically connected with SyxthSense HRP/LRP/ HLS/EH range of controllers to provide accurate plant control. The actuators do not require limit switches or feedback potentiometer, as these controllers track the position of the actuator.

These actuators are well suited for applications where space is limited and minimum power consumption is required. The actuators are both attractive and robust in design.



M31C150

Model Types	Model	Description
	M31C150	M31C150 24Vac Floating Point Actuator, 300N
	OUM6410C4037	OUM6410C4037 24Vac Floating Point Actuator, 300N, Auxiliary Switches
	OUM6410L2031	OUM6410L2031 230Vac Floating Point Actuator, 300N
Technical Data	Nominal Voltage	24Vac +10%...-30%; 50/60Hz 230Vac +10%...-30%; 50/60Hz (OUM6410L2031)
	Power Consumption	0.7 VA
	Control Signal	3-point raise/lower
	Stroke	6.5 mm
	Running Time	150 s at 50Hz
	Thrust	300N
	Protection Class	IP43 (according to EN 60529)
	Insulation Class	II (according to EN 60730)
	Connection Cable	1.5 m
	Operating Temperature	0...60°C
	Weight	0.4 kg
	Suitable Valves	OUV5822/OUV5823/OUV5832/OUV5833
	Manual Operation	Integrated
	Auxiliary Switches	M6410C4037 only

Associated Products	Model	Description
	OUV5822/32	2-Port Small Plant Valves
	OUV5823/33	3-Port Small Plant Valves

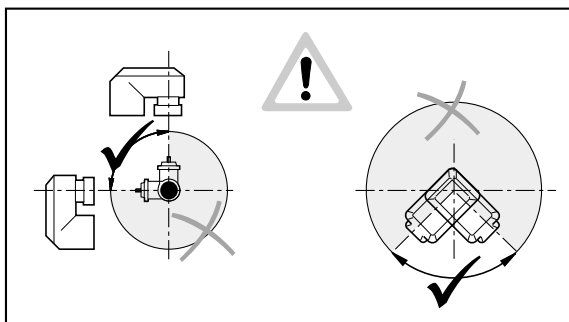
Operation The movement of the electric actuators is produced by a screw spindle which is driven in both directions by a synchronous motor through a set of gears. A magnetic clutch limits the torque of the gear assembly and the driving force of the actuators. The actuators are fixed to the valve body by means of a coupling ring requiring no tools for mounting. The actuators are maintenance-free and supplied completely with a ready-to-wire connecting cable.

Mounting

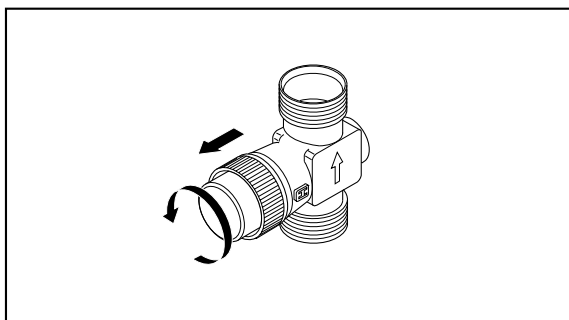


The electrical connection and mounting may only be carried out by qualified professionals!

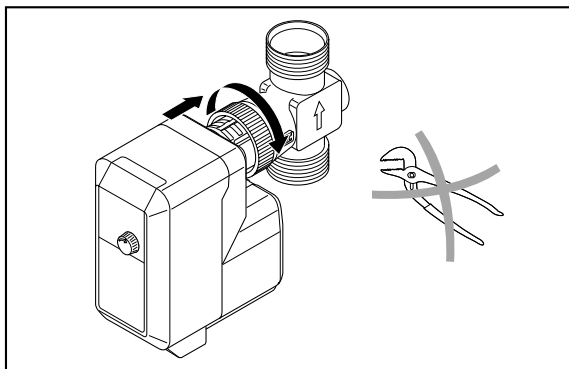
Mounting Position The actuator may be mounted only beside or above the valve. Adjust the valve in the right position before mounting the actuator.



Mounting Before the actuator is fixed to the valve, the adjustment cap must be removed. Make sure that the actuator is in the retract position (factory supplied position) before fixing the actuator to the valve body.

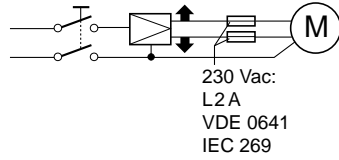


The actuator must be mounted by hand. Don't use tools or additional force because the actuator and the valve may be damaged,



Electrical Wiring Connection

A fuse with a contact gap of at least 3 mm for each pole must be fitted. The fuse rating is max. 2A. The electrical installation must comply with the wiring diagram below.



Cable colours for 24V type (M31C150, OUM6410C)

COM		
WHITE	GREEN	BROWN

Cable colours for 230V type (OUM6410L)

N			
BLUE	BLACK	BROWN	

Working operation port A

DN 15, DN 20		
	opening	closing
DN 25 - DN 40		
	closing	opening
DN 15 - DN 40		
	closing	opening

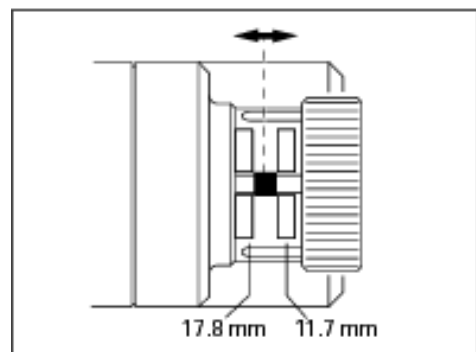
Manual Operation

The M31C150 actuator has got a knob supplied for manual operation. To prevent the valve from damage, the operation must only be done when there is no power applied to the motor

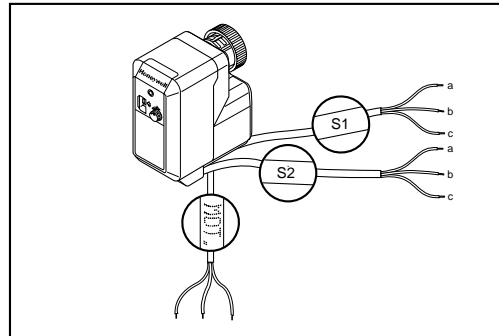


Commissioning

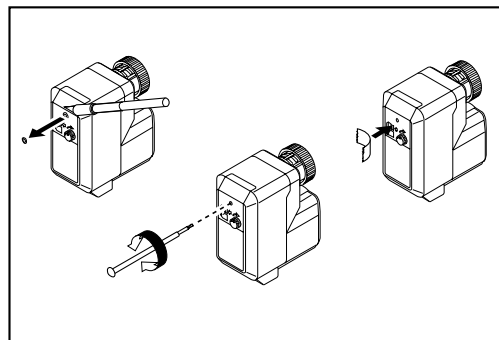
A functional check of the valve actuator can be carried out by changing the controller setpoint by 5 °C or more. The movement of the actuator stem indicates whether the valve is opening or closing.



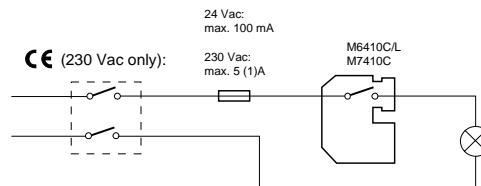
Auxiliary Switches Actuator model OUM6410C4037 is featured with 2 auxiliary switches. Each switch has its own cable. Auxiliary switch S1 with fix switchpoint when the stem position is in. Auxiliary switch S2 with adjustable switchpoint when the stem position is out.



Adjustment of Auxiliary Switch 2 The auxiliary switch 2 should be adjusted by a skilled person only. Move the actuator to the position where the switch is to be operated. Cut the plastic skin with a sharp knife. Below the skin the adjustment screw can be accessed. Turn the screw clockwise until the end stop is reached. Turn the screw counterclockwise until the switch point is achieved. To check the required position has been set, move the actuator. Finally seal the adjustment hole with a piece of tape.



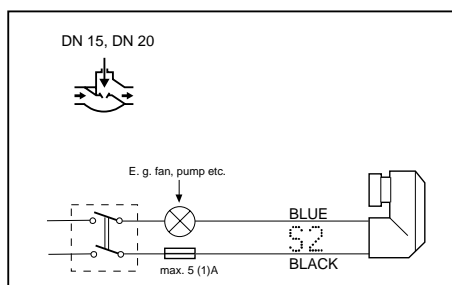
Electrical Wiring of Auxiliary Switches The electrical installation must comply with the wiring diagram on the right. If the auxiliary switch is connected to 230 Vac, a switch with a contact gap of at least 3 mm for each pole must be fitted with the installation.



DN 15, DN 20	open 		close
DN 25 - DN 40	close 		open
DN 15 - DN 40	close 		open
S1	BROWN BLUE BLACK	BROWN BLUE BLACK	BROWN BLUE BLACK
S2	BROWN BLUE BLACK	BROWN BLUE BLACK	BROWN BLUE BLACK

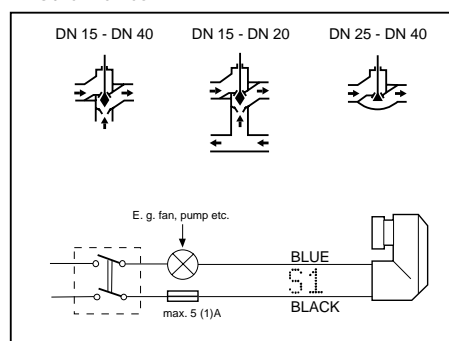
Auxiliary Switch
Application Example
 Switching off electrical
 appliance

2-Port Valve



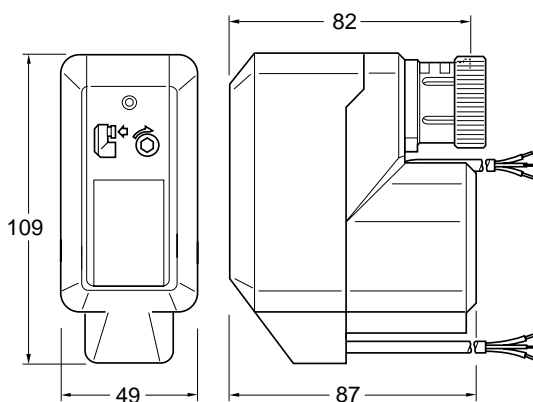
Application example of auxiliary switch; 2-port valve

All Other Valves



Application example of auxiliary switch; other valves

Dimensions



All dimensions are in millimetres (mm).

