

SpaceLogic MP120

Two Position Thermal Actuators for VP228E/
VP229E SmartX PIBCV, DN10-32



Product Description

The MP120 is a small thermoelectric valve actuator in zone applications for time-controlled two-point and pulse-width-modulated (PWM) regulation of the **SpaceLogic** PIBCV valves, from DN10 to DN32.

The MP120 has a silent low power operation with a manual override operation for easy flushing

Features

- No mounting tools required (easily mounted using valve adapter)
- Manual Override for system flushing.
- Water-protected housing design in all mounting positions
- Pluggable cable for easy installation and servicing
- Low power consumption – allowing many actuators to be driven from the same controller
- Compact design allows installation in limited space
- Visual indicator showing valve position.
- Reliable long-term operation

Specifications

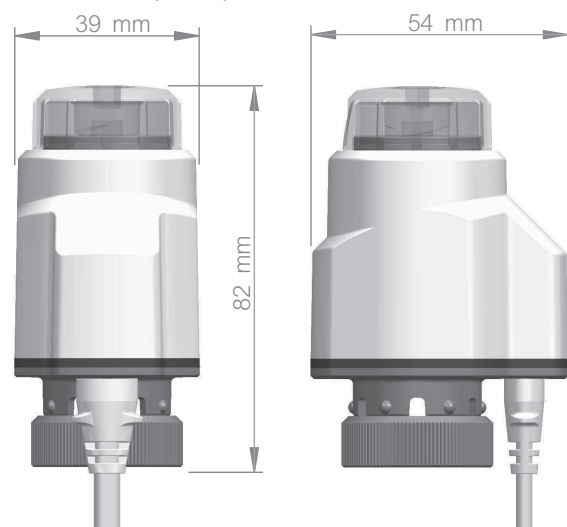
Power supply	
MP120NC-24T:	24 Vac/dc $\pm$ 20%
MP120NC-230T:	230 Vac + 10%...15%
Power consumption	2 W
Max. stroke	8 mm
Stem force	120 N
Ambient temperature	Max. 50 °C
Protection standard	IP44 in all mounting positions
Cable length (standard)	1.5 m
Cable size	2 x 0.5 mm ²
Medium temperature	Max. 120 °C
Valve connection	M30 x 1.5

Part Numbers

Part Number	Action*	Voltage
MP120NC-24T	Normally closed (stem down)	24 Vac/dc
MP120NC-230T	Normally closed (stem down)	230 Vac

*Without power, in combination with standard 2-way PIBCV valve.
"Normally Closed" = Actuator stem extends downward without power closing the valve, retracts when powered to open the valve.

Dimensions (mm)



Power Consumption and Running Times

Part Number	Initial Current*	Permanent Current*	Power Consumption*	Min. Full Stroke Run-time for 2.5 mm Valve Stroke
MP120NC-24T	~0.2 A	< 0.1 A	< 2 W (2 VA)	7.5 min.
MP120NC-230T	~0.4 A**	0.010 A	2 W	5.5 min.

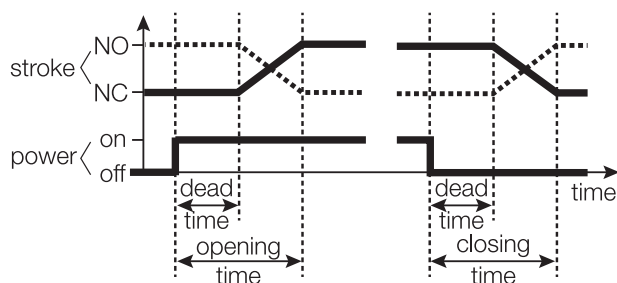
*All values at nominal voltage. **Average during first 500 msec.

Function

When the operating current is applied, a PTC resistor heats up a wax element. After a brief pre-heating delay (dead time), this wax element expands, causing movement in the actuator stroke.

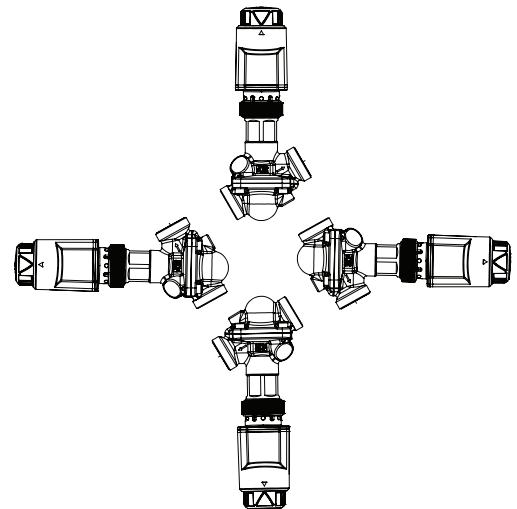
NOTE: Recommendations with Xenta 121 controller, using V1 to V4 TRIAC heating/cooling outputs:

- 3 x 24 V actuators per line output (12 actuators max.)
- 1 x 230 V actuator per line output (4 actuators max.)



Mounting and Installation

The actuator can be put in any position to maintain IP 44.

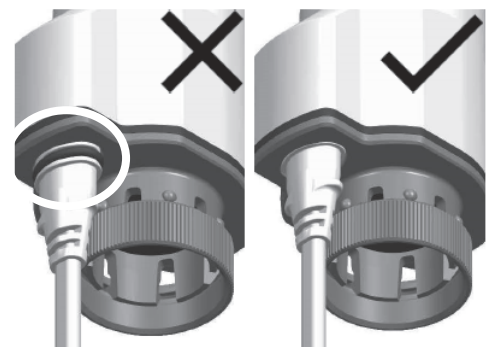


Caution:



Electrical connection cable must not touch hot pipework.

Plug Cable Connection

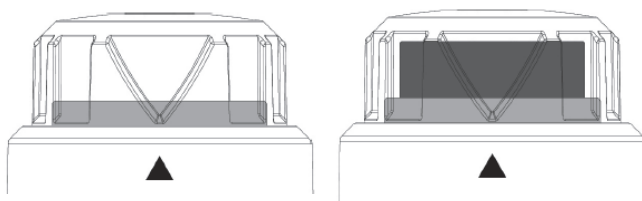


Stem Position Indicator

The MP120 uses a cap on the actuator to indicate actuator / valve position.

Valve Closed

Valve Open



Note the arrows marks on the actuator housing and cap are aligned for correct electrical operation of the valve.

Manual Override for Flushing

Actuators are supplied with the top cap rotated into the manual override position, this allows the system to be primed and flushed prior to electrical operation.

Ensure the molded arrow in the cap aligns with the arrow on the housing when the electrical control is needed.

Wiring and Connections

