

EasyLogic™ MP121

Modulating Non-Spring Return Actuators

The MP121 is a high-accuracy modulating non-spring return actuator designed specifically for the VP225R and VP226R PIBCV (Pressure Independent Balancing and Control Valves), suitable for sizes DN15 to 32.

Regulatory Compliance and Safety Information

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

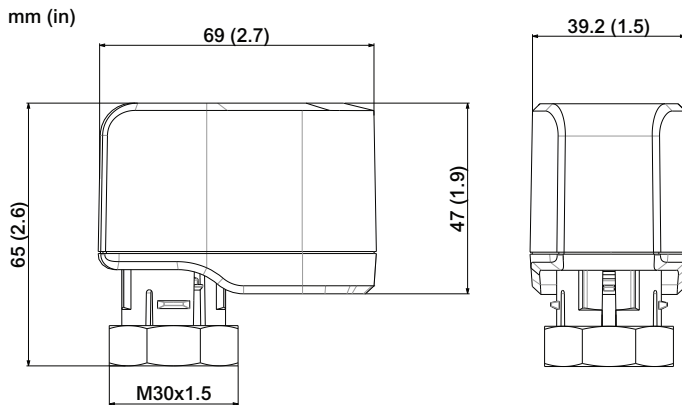
Carefully read these instructions and all information relevant to this product before trying to install it.

The technical literature and declarations of conformity can be accessed by searching for the part number on the Schneider Electric website, www.se.com. Contact your local Schneider Electric sales office for a hard copy of the documentation or for additional information.

Part Numbers

Product	Part Numbers
0-10 V VP225R/VP226R PIBCV Actuator	MP121E24M

Dimensions



Mounting and Installation

NOTICE
<p>RISK OF EQUIPMENT DAMAGE</p> <ul style="list-style-type: none"> Mount the actuator onto the valve before applying electric power. Do not remove the actuator from the valve without disconnecting the power. <p>Failure to follow these instructions can result in equipment damage.</p>

It is best to install the actuator once the flushing and dosing of the hydronic network have been completed.

Before the actuator is mounted upon the valve, the flow must be set to the design flow requirements. Please refer to the valve documentation for information as to the flow rate at each of the valve settings.

Procedure:

- Set the flow rate on the valve.
- Position the actuator over the neck of the valve and screw the mounting ring clockwise to secure.

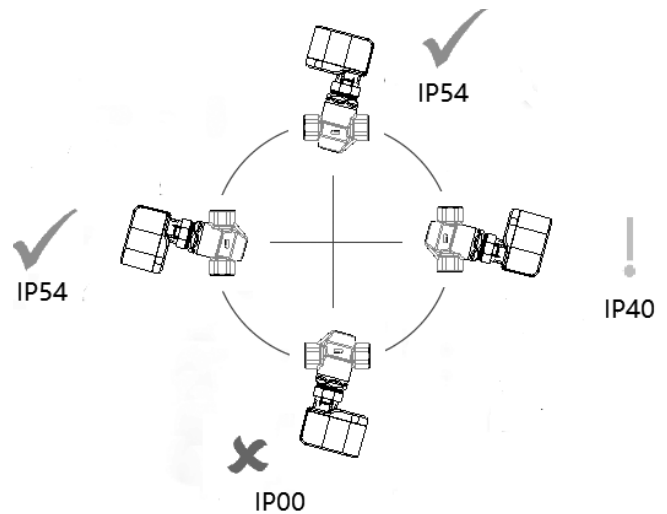
NOTICE
<p>RISK OF EQUIPMENT DAMAGE</p> <p>Tighten by hand only, do not use any tools.</p> <p>Failure to follow these instructions can result in equipment damage.</p>

- Wire the actuator according to the wiring diagram.
- Apply power and observe the stem movement as the actuator will self-calibrate to the valve. Allow 2 minutes, after which time the actuator will be under the operation of the 0-10 Vdc control signal.

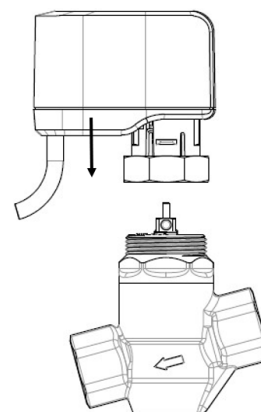
Calibration Process

Initially, the valve pressure plate is fully retracted, whereby the upper end-stop of the drive is determined. The valve plate then extends fully to determine the bottom end stop. The closing point of the valve is also detected. The actuator will calibrate every time it is powered on.

To avoid water ingress, the actuator must be mounted within the range illustrated to meet IP54 protection.



The actuator is factory-supplied in a retracted position to aid mounting. Mount the actuator according to the orientation shown above.



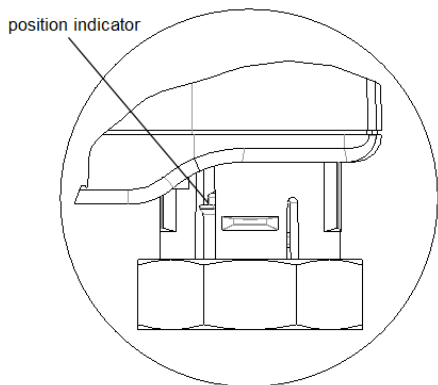
NOTICE

RISK OF EQUIPMENT DAMAGE

- The actuator is intended to be installed indoors and must not be installed upside down.
- Special care must be taken with chilled water systems in installations with a vertical pipe where the flow direction is upwards. It is important to monitor for condensation, as this may drip down onto the actuator, potentially causing issues.

Failure to follow these instructions can result in equipment damage.

The green position indicator is visible through the front and rear side windows. The indicator here shows the lowered position of the actuator.



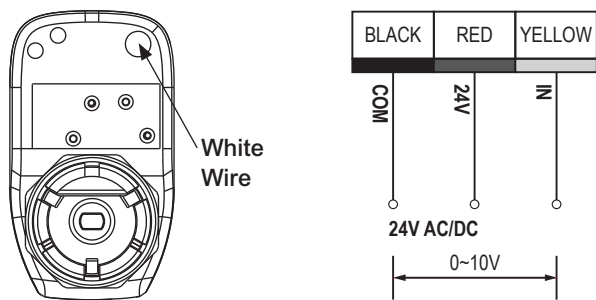
Notes:

- The flow should be set on the valve before the actuator is mounted.
- Do not power the actuator until it is mounted on the valve.
- Hand tighten the M30 mounting nut; tools are not necessary and can cause damage when overtightened.
- Mount or dismount the actuator only when it is retracted according to the position indicator.

Wiring

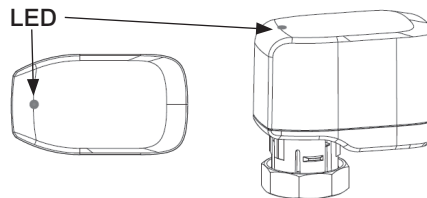
Wire the actuator according to the wiring diagram. Each actuator is supplied with the connecting cable for the controller.

NOTE: It is strongly recommended that the mechanical installation is completed before the electrical installation.



- Black (BLK): COM, Common (power and signal).
- Red: 24 Vac/dc power supply.
- Yellow (YEL): 0-10 Vdc analogue input signal.

LED Behaviors



LED	Definition
Solid Green	Retracting, valve opening
Solid Red	Extending, valve closing
Flashing Green OR Red	Stroke Calibrating
Flashing Green AND Red	On Standby

General Specifications

Power supply	24 Vac/24 Vdc, +/- 10%
Frequency	50/60 Hz
Power consumption running	3.6 VA / 1.2 W
standby	0.5 W
Control signal input	0 to 10 Vdc ¹
Close off force	120 N (minimum)
Stroke	Maximum 6 mm (0.24 in)
Speed	0.1 mm/s
Relative humidity	max. 95 %
Max. medium temperature	120 °C (248 °F)
Ambient temperature	0 to 50 °C (32 to 122 °F)
Storage and transport temp.	-20 to 60 °C (-4 to 140 °F)
Protection class	III safety extra-low voltage
IP rating	IP54
Housing material	PC + ABS
Weight	190 g (0.42 lb)
Cable	3 x 0.5 mm ² (20 AWG)
Noise level	Max. 40 dB(A) (under normal operation)
EMC Directives	2014/30/EU
LVD Directives	2014/35/EU EN 60730-1 & EN 60730-2-14
RoHS Directives	2011/65/EU
REACH & CE Directives	1907/2006

1. 0 Vdc will command a closed valve.

	UK Representative	Manufacturer
UK CA	Schneider Electric Limited Stafford Park 5 Telford, TF3 3BL United Kingdom	Schneider Electric CS30323 F-92506 Rueil Malmaison Cedex France



部件名称 Part Name	有害物质 - Hazardous substances					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 Metal parts	o	o	o	o	o	o
塑料部件 Plastic parts	o	o	o	o	o	o
电子件 Electronic	o	o	o	o	o	o
触点 Electrical contacts	o	o	o	o	o	o
线缆和线缆附件 Cables & cabling accessories	o	o	o	o	o	o

本表格依据SJ/T11364的规定编制。
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572规定的限量要求以下。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。