

EasyLogic™ MP150E

Multi-Signal (Universal Control Signal) Non-Spring Return Actuator

The MP150E is a high-accuracy multi-signal (universal control signal) (0(2)-10 V or 0(4)-20 mA modulating, 3-point floating, and 2-position) non-spring return actuator designed specifically for the VP225R and VP226R PIBCVC (Pressure Independent Balancing and Control Valves), suitable for sizes DN15 to DN32.

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.

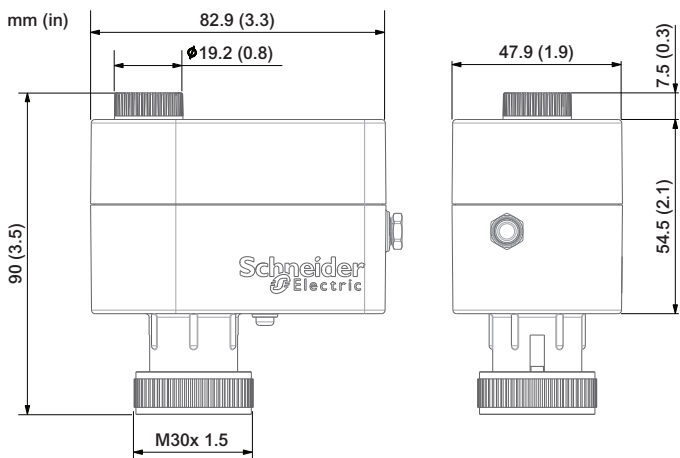
Carefully read these instructions and all information relevant to this product before trying to install it.

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
VP225R/VP226R PIBCVC Actuator	MP150E24MP

Dimensions



Mounting and Installation

NOTICE

RISK OF EQUIPMENT DAMAGE

- Mount the actuator onto the valve before applying electric power.
- Do not remove the actuator from the valve without disconnecting the power.

Failure to follow these instructions can result in equipment damage.

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:

- Check the valve neck. The actuator should be in stem up (retracted) position (factory setting).
- Set the flow rate on the valve.
- Position the actuator over the neck of the valve and hand screw the mounting ring clockwise to secure.

NOTICE

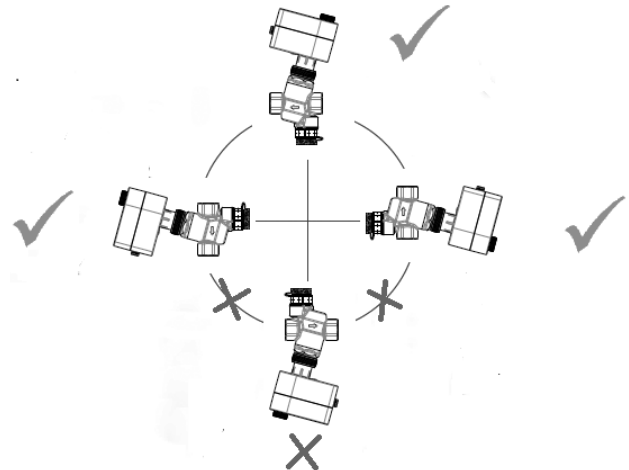
RISK OF EQUIPMENT DAMAGE

Tighten by hand only, do not use any tools.

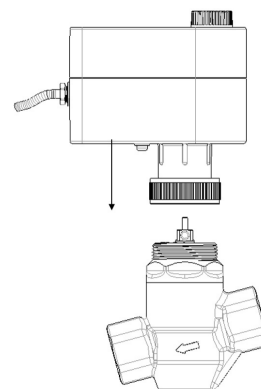
Failure to follow these instructions can result in equipment damage.

- Wire the actuator according to the wiring diagram.
- Apply power and select the desired configuration.

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.



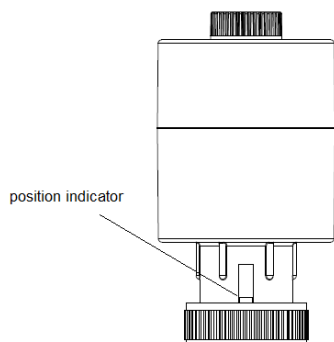
NOTICE

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.

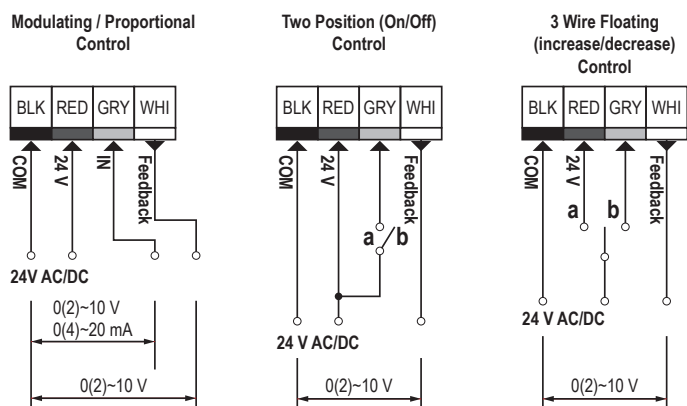
Calibration Process

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.

Wiring

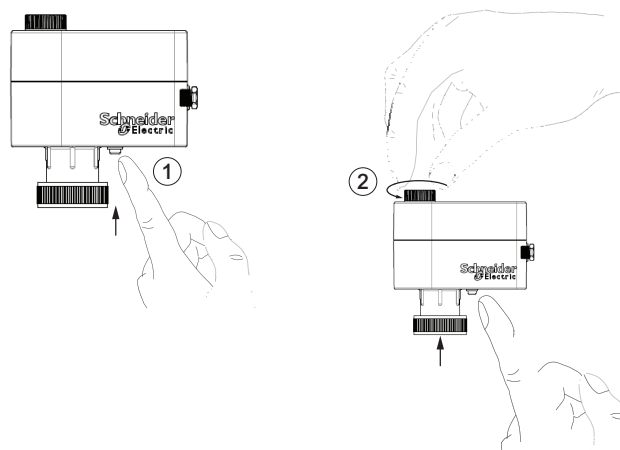
Wire the actuator according to the wiring diagram. Each actuator is supplied with the connecting cable for the controller.

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



- Black (BLK): COM (Common/Ground).
- Red (RED): 24 V, power input, 24 V AC/DC can be used.
- Gray (GRY): IN, analog input signal, optional: 0(2)~10 V, 0(4)~20 mA (input impedance = 500 Ω).
- White (WHI): FB, analog feedback signal: 0(2)~10 V (load impedance > 50K Ω).

Manual Override

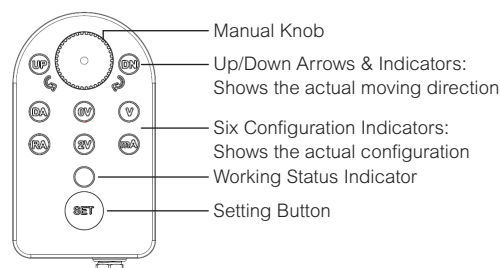


Press and hold the button (on the bottom side of the actuator) (1) during manual override (2).

Note: Manual override is recommended when the power is off.

LED Indicators

The operational status, configuration, and alarm indications on MP150E are provided by several LEDs.



Factory Setting

The factory default is set to direct acting, 0-10 V DC input.

Standby Mode

- All the LEDs are off except for the “Working” LED.
- The UP/DN LED light blinks (duty cycle: 0.3s on / 0.7s off) according to actual movement.

Check Current Configuration

- Shortly press the “SET” button.
- The corresponding configuration LEDs will light up for 5 seconds, then return to Standby mode automatically.

Change Configuration

1. Hold the “SET” button for 3-8 seconds to enter the configuration mode, then release.
2. Only the active LEDs will blink (duty cycle: 0.5s on / 0.5s off).
3. Long press (≥ 3s) to change the value between the 2 options, and short-press to go to the next setting.

Settings

- Setting 1: DA/RA
 - If set to DA, the actuator is directly acting (stem retracts as voltage increases) – default.
 - If set to RA, the actuator is reverse-acting (stem extends as voltage increases).
- Setting 2: 0-10 V / 2-10 V
 - If set to 0-10 V, the input signal is in the range of 0-10 V (voltage input) or 0-20 mA (current input) – default.
 - If set to 2-10V, the input signal is in the range of 2-10 V (voltage input) or 4-20 mA (current input).

- Setting 3: Vdc/mA
 - Vdc: Voltage input is selected – default.
 - mA: Current input is selected.

After all settings are finished

- Short press to return to Standby mode, and new data will be saved.
- If no operation occurs for more than 5 minutes during the process, the actuator returns to Standby mode, and new data will not be saved.

Calibration Method

Calibration can be achieved in one of 2 ways:

- Hold the “SET” button for more than 8 seconds until the 6 configuration LEDs keep blinking (duty cycle: 0.2s on / 0.2s off). They will continue blinking during commissioning.
The actuator will return to Standby mode automatically after completion.
- Forced concurrent recalibration for all actuators is electrically possible. Within 60s. provide the following electrical control signal sequence to the grey wire: 10 V - 2 V - 10 V - 2 V - 10 V - 2 V to achieve recalibration.

Notes:

- Calibration should be performed when the actuator is mounted on a new valve.
- The UP/DN LED light blinks (duty cycle: 0.3s on / 0.7s off) according to actual movement.


Working Status Indicator

Indicator	Definition	Action
Green constant	Standby / operation	No need, normal operation
Green blinking, 0.5s on/0.5s off	Manual override green button is pressed	No need, normal operation
Yellow constant	Low power supply voltage (<17 V)	Check the power supply
Yellow blinking, 0.5s on/0.5s off	Incorrect stroke calibration	Re-do the stroke commissioning
Red constant	Motor over current	Check and adjust the control signal; Fractionally adjust the manual override knob; If not resolved, remove the actuator and test for valve stem function.
Red blinking, 0.5s on/0.5s off	Motor time out	Check and adjust the control signal; Fractionally adjust the manual override knob; If not resolved, remove the actuator and test for valve stem function.
Red quick blinking, 0.2s on/0.2s off	Travel sensor error	Power cycle; if not resolved, contact Schneider Electric.

General Specifications

Power supply	24 V AC/DC
Frequency	50/60 Hz
Power consumption running	3.6 VA / 1.2 W
standby	0.5 W
Control input Y	0 (2) ~10 V, 0 (4) ~ 20 mA (Input Impedance = 500 Ω), 3-point floating or two position
Feedback signal	0 (2) ~10 V
Force	120 N (minimum)
Max stroke	7 mm (0.3 in)
Speed	0.18 mm/s
Relative humidity	max. 95 % (no condensation)
Max. medium temperature	120 °C (248 °F)
Ambient temperature	0 to 50 °C (32 to 122 °F)
Storage and transport temperature	-30 to 60 °C (-22 to 140 °F)
Protection class	III safety extra-low voltage
IP rating	IP54
Cover material	PC + ABS
Housing material	PC + GF10
Weight	0.25 kg (0.55 lb)
Cable	4 x 0.205 mm ² (24 AWG)
Noise level	Max. 35 dB(A)
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

Disposal Instruction

	This product should be dismantled and its components sorted if possible, in various groups before recycling or disposal. Always follow the local disposal regulations.
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	UK Representative	Manufacturer
	Schneider Electric Limited Stafford Park 5 Telford, TF3 3BL United Kingdom	Schneider Electric CS30323 F-92506 Rueil Malmaison Cedex France



产品型号	范围	产品描述	China RoHS logo
	商标		
MP150E24MP	Pressure Independent Valves and Actuators Schneider Electric	Multi-Signal Mod. Act. With Feedback	

Hazardous Substance Table	有害物质 - Hazardous substances						
	部件名称 Part Name	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	X	O	O	O	O	O
	塑料部件 Plastic parts	O	O	O	O	O	O
	电子件 Electronic	X	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
<p>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。</p> <p>This table is made according to SJ/T 11364. O: indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572. X: indicates that concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572.</p>							