

The PB00401 Valve Actuator is designed to open and close a heating circuit on the Polypipe underfloor heating smart plus manifold based on whether the circuit is calling for heat

The valve actuator helps improve the energy-efficiency of the system by allowing individual room temperature control.



### Features & Benefits

- Modern design
- Stroke 4.0mm
- Normally closed (NC)
- Power consumption: 1 watt
- Complete compatibility to valve-adapter-system
- Simple snap-on installation
- 360° Installation position
- Patented 100% protection against leaky valves
- First-open function (NC type only)
- Adaptation check on valve
- Alignment aid on the valve
- Compact design
- All around function indicator
- Minimal operational noise & maintenance free
- High functional safety
- Surge protection
- Certified by TUV

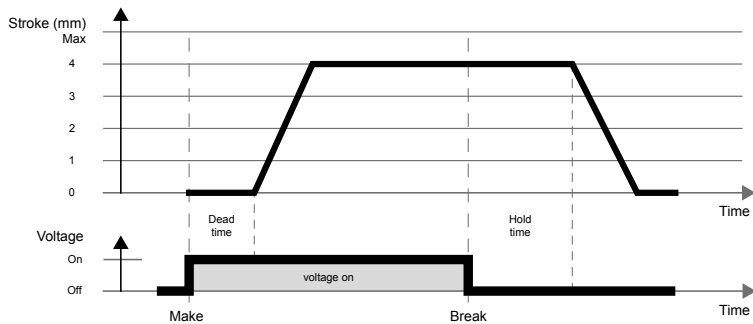
### Versions

| Version | Stroke | Actuating Force | De-energised state | Closing and opening time | First-open function | Scope of supply                                                                                                                                                        |
|---------|--------|-----------------|--------------------|--------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PB00401 | 4.0mm  | 100 N           | NC                 | ~3.5 min                 | yes                 | <ul style="list-style-type: none"> <li>• Actuator</li> <li>• 1 meter connecting cable, grey PVC H03VV 2 x 0.75mm<sup>2</sup></li> <li>• Installation manual</li> </ul> |

Functions

The UFCH Valve Actuator mechanism uses a PTC resistor-heated wax element and compression spring. The wax element is heated by apply the operating voltage which in turn, moves the integrated ram. The force generated by the movement is transferred to the valve motor which opens and closes the valve.

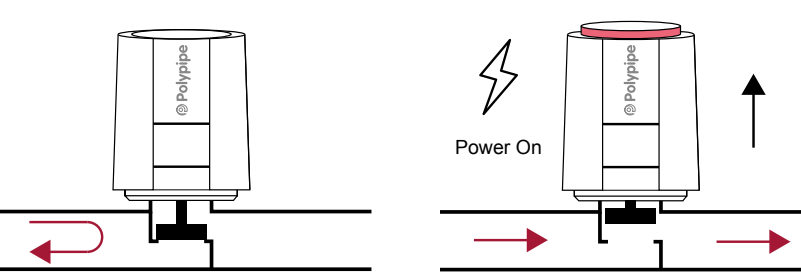
Normally Closed (valve closed)



In case of the normally closed version, the valve is opened/closed by the ram at a steady rate when the device receives its operating voltage. When the devices operating voltage is cut, the device will enter a 'hold' period. Once the hold period has finished, the valve will then close evenly by the compression spring.

Function Display

The PB00401 has a built in indicator which identify whether or not the unit is powered on or off and whether the valve is opened or closed.



- In case of the NC version, an extended function display shows the valve is open. (red indicator)

First-Open Function

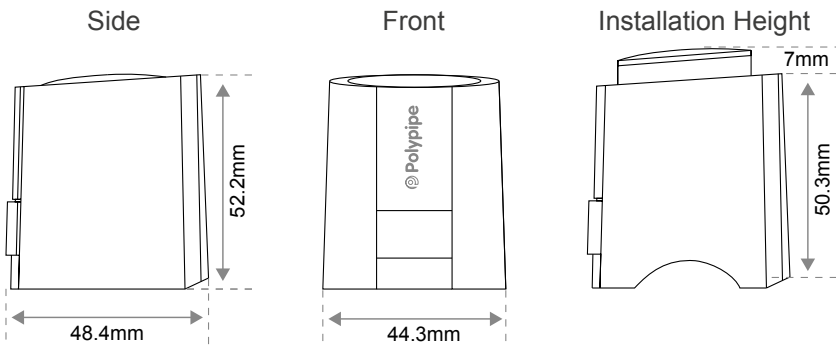
Upon delivery, the PB00401 valve will be open (de-energised) due to the first-open function. This allows for heating operation during the construction phase even when there is no live electricity feed available. The first-open function will be unlocked once the unit receives a live electricity feed for more than 6 minutes. The unit will now be fully operable.

Technical Information

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| Operating voltage                        | 230 V AC   +/-10%   50/60 Hz            |
| Maximum inrush current                   | < 550 mA during 100 ms max              |
| Operating power                          | 1 W <sup>1)</sup>                       |
| Stroke (actuator travel)                 | 4.0mm                                   |
| Actuating force                          | 100 N +10%                              |
| Fluid temperature                        | 0 to +100°C <sup>2)</sup>               |
| Storage temperature                      | -25°C to +60°C                          |
| Ambient temperature                      | 0°C to +60°C                            |
| Degree of protection                     | II                                      |
| Type of protection                       | IP 54 <sup>3)</sup>                     |
| CE conformity according to               | EN 60730                                |
| Housing material/housing colour          | Polyamide   Light grey (RAL 7035)       |
| Connecting cable/colour                  | 2 x 0.75mm² PVC   Light grey (RAL 7035) |
| Cable length                             | 1 Meter                                 |
| Weight with connecting cable (1 meter)   | 100 g                                   |
| Surge protection according to EN 60730-1 | 2.5 kV                                  |

1. Measured with precision reference instrument LMG95
2. Independent of the adapter
3. In all installation positions

Dimensions



Certificates

The actuator is certified by TÜV Süd.



### Installation with Valve Adapter

The valve adaptor allows the actuator to connect to Polypipe Underfloor Heatings Smart plus manifold. The actuator is simply 'snapped' onto the adaptor which is screwed onto the manifold.



First, the valve adaptor is screwed onto the manifold valve

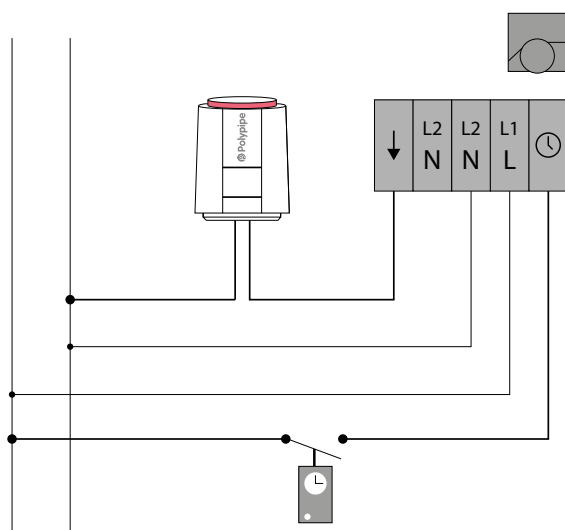


The actuator is placed vertically on the valve adaptor



The actuator snaps onto the valve adaptor. You will hear a "click" when the adaptor is pressed down

### Electrical Installation



We recommend usage of the following cables during installation of our PB00401 Valve Actuator.

|                              |                         |
|------------------------------|-------------------------|
| Light Plastic-Sheathed Cable | NYM 1.5mm <sup>2</sup>  |
| Flat Webbed Building Wire    | NYIF 1.5mm <sup>2</sup> |