230V Standard Actuator (On/Off Type 230V AC)
For KIDS PICVs DN15 – DN25

The 230V Standard is a thermoelectric valve drive for opening and closing valves on heating circuit distributors of concealed floor heating and cooling systems. The main field of application is the energy-efficient individual room temperature control in the range of building management systems and home automation.
The 230V Actuator is controlled by a 230 V room thermostat with two point output or pulse-width modulation.

1.1 Features

- Power consumption 1 watt
- Complete compatibility to Valve-Adapter-System
- Simple snap-on installation
- 360° installation position
- Patented 100% protection against leaky valves
- Adaptation check on valve
- Alignment aid on the valve
- Compact size, small dimensions
- All around function indicator
- Noiseless and maintenance-free
- High functional safety and long expected service life
- Surge protection guarantee

1.2 Details

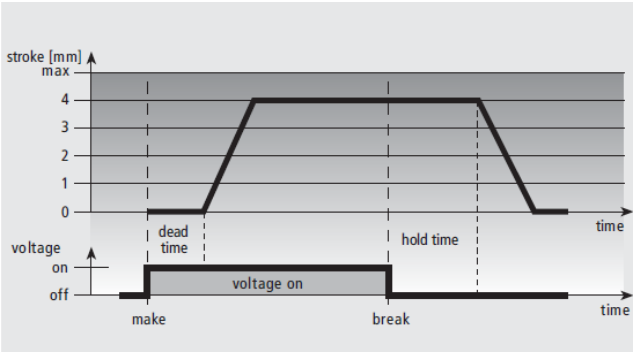
The 230V Actuator is delivered as a neutral version without logo, with fixed connecting cable, function indicator blue / gray, without valve adapter and laser marking.

Stroke	Actuating force	de-energised state	Closing and opening time	"First-Open" function	Scope of supply
5.0 mm	100 N	NC	~ 4 min	yes	• Actuator in single package • 1 meter connecting cable, grey PVC H03VV 2 x 0.75 mm² • installation manual in 12 languages

2 Functions

The actuator mechanism of the Actuator uses a PTC resistor-heated wax element and a compression spring. The wax element is heated by applying the operating voltage and moves the integrated ram. The force generated by the movement is transferred on the valve lifter and thus opens and closes the valve.

2.1 **Normally Closed** (valve closed)



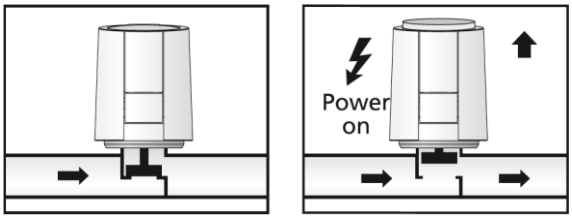
In case of the normally closed version, the valve is opened steadily by the ram motion upon switching on the operating voltage and after expiry of the dead time.

After the operating voltage is cut and after expiry of the hold time, the valve is closed evenly by the closing force of the compression spring.
The closing force of the compression spring is matched to the closing force of commercially available valves and keeps the valve normally closed.

Fig.: Example for 4 mm stroke. Characteristic line for stroke 5 mm results analogous.

2.2 Function Display

The function display of the Actuator (all-around display) allows identifying the operating condition (valve open or closed) at a glance.



- In case of the **NC version**, an extended function display shows opening of the valve.

2.3 First-Open Function (for NC only)

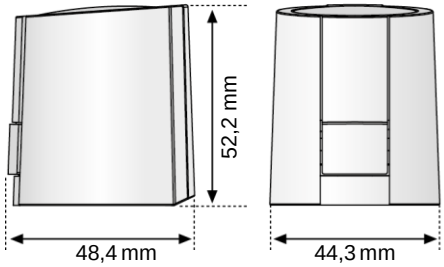
In its delivery condition, the Actuator is kept open when de-energised due to the First-Open function. This enables heating operation during the carcass construction phase even when the electric wiring is not yet complete. During the later electrical start-up, the First-Open function is unlocked by applying the operating voltage for more than 6 minutes. The Actuator will then be completely operable.

3 Technical Informations

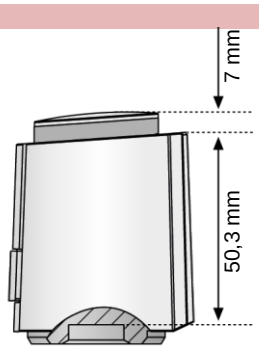
Operating voltage	230 V AC, +10%...–10%, 50/60 Hz
Max. inrush current	< 550 mA during 100 ms max.
Operating power	1 W [1)]
Stroke (actuator travel)	5.0 mm
Actuating force	100 N +5 %
Fluid temperature	0 to +100°C [2)]
Storage temperature	-25°C to +60°C
Ambient temperature	0 to +60°C
Degree of protection	II
Type of protection	IP 54 [3)]
CE conformity according to	EN 60730
Housing material/housing colour	Polyamide / light grey (RAL 7035)
Connecting cable/colour	2 x 0.75 mm² PVC / light grey (RAL 7035)
Cable length	1 m
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) in dependence of the adapter even higher
3) in all installation positions

3.1 Dimensions



Dimensions

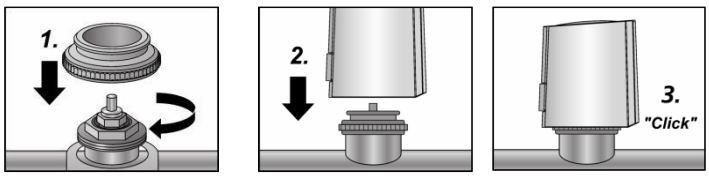


Installation height

4 Installation Notes

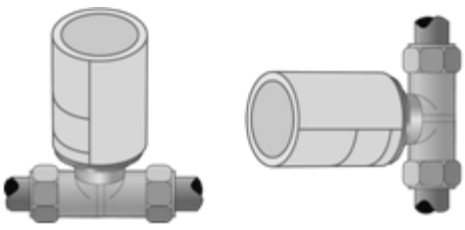
4.1 Installation with Valve Adapter

The wide selection of valve adapters guarantees a perfect match of the Actuator to almost any valve bottom or manifold available on the market. Simply snap-on the Actuator to the manually pre-installed valve adapter.



- First the valve adapter is screwed on the valve manually
- The Actuator is placed vertically on the valve adapter.
- The Actuator snaps onto the valve adapter with a “click” when pressed down vertically by hand.

4.2 Installation Positions



Vertical **Horizontal**

Note: Do not install the actuator in upside down position.

We recommend usage of the following lines for installing a 230 V system: Light plastic-sheathed cable NYM 1.5 mm²
Flat webbed building wire NYIF 1.5 mm²

4.3 Electrical Installation