

# Wavin Comfia Actuator: 230 V with Plug-in Cable

## Product Information

The **Wavin Comfia Actuator: 230 V with plug-in cable** 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 Wavin Comfia Actuator 230 V with plug-in cable is controlled by a 230 V room thermostat with two point output or pulse-width modulation.

The Wavin Comfia Actuator of the fifth generation has been developed especially for customer specific usage in the Wavin Comfia. The modular design offers several possibilities for differentiations for tailor-made versions.



### 1.1 Features

- Modern design
- Stroke 4.0mm / 5.0mm
- Normally closed (NC)
- Power consumption 1 watt
- Plug-in cable
- Complete compatibility to Valve-Adapter-System
- Simple snap-on installation
- 360° installation position
- Patented 100% protection against leaky valves
- First-Open function
- 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
- Certified by TÜV Süd

### 1.2 Variants

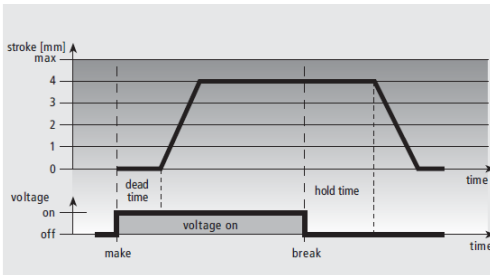
The Wavin Comfia Actuator 230 V is delivered as a neutral version without logo, with 1m plug-in cable, function indicator blue / gray, without valve adapter and laser marking.

Versions 230 V:	Stroke	Actuating force	de-energised state	Closing and Opening Time	“First Open” function	Scope of supply
AST 20405-00N	4.0mm	100 N	NC	approx. 3.5min	yes	<ul style="list-style-type: none"> <li>• Wavin Comfia Actuator 230 V in single package</li> <li>• 1 meter connecting cable, grey PVC H03VV 2 x 0.75 mm<sup>2</sup>, plug-in</li> <li>• Installation manual in 12 languages</li> </ul>

## 2 Function

The actuator mechanism of the Wavin Comfia 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.

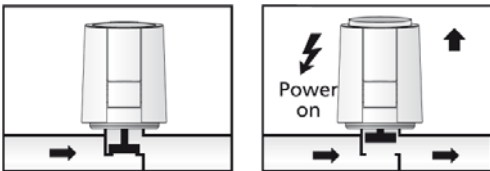
After the operating voltage is cut and after expiry of the hold time, the valve is closed evenly by the closing force of the compression spring.

The closing force of the compression spring is matched to the closing force of commercially available valves and keeps the valve normally closed.

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

### 2.2 Function display

The function display of the Wavin Comfia 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.

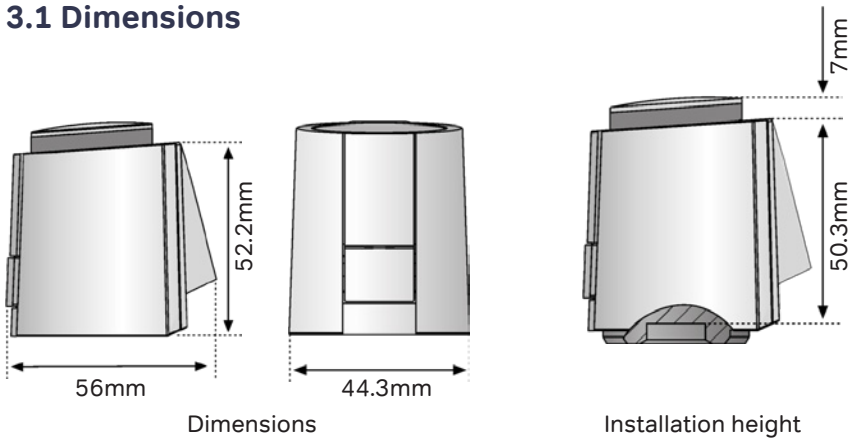
### 2.3 “First Open” function (for NC variants only)

In its delivery condition, the Wavin Comfia 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 Wavin Comfia Actuator will then be completely operable.

3 Technical data		
Operating voltage	230 V AC, +10%...-10%, 50/60 Hz	
Max. inrush current	< 550 mA during 100 ms max.	
Operating power	1W <sup>1)</sup>	
Stroke (actuator travel)	4.0 / 5.0mm	
Actuating force	100 N +5 %	
Fluid temperature	0 to +100 °C <sup>2)</sup>	
Storage temperature	-25 °C to +60 °C	
Ambient temperature	0 to +60 °C	
Protection class	II	
Degree of protection	IP 54 <sup>3)</sup>	
CE conformity according to	EN 60730	
Casing	Material	Polyamide
	Colour	Light grey (RAL 7035)
Connection line	Type	2 x 0.75 mm <sup>2</sup> PVC
	Colour	Light grey (RAL 7035)
	Length	1m
Weight with connection cable (1 m)	100 g (±5 g)	
Surge strength according to EN 60730-1	min. 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



### 3.2 Certificates

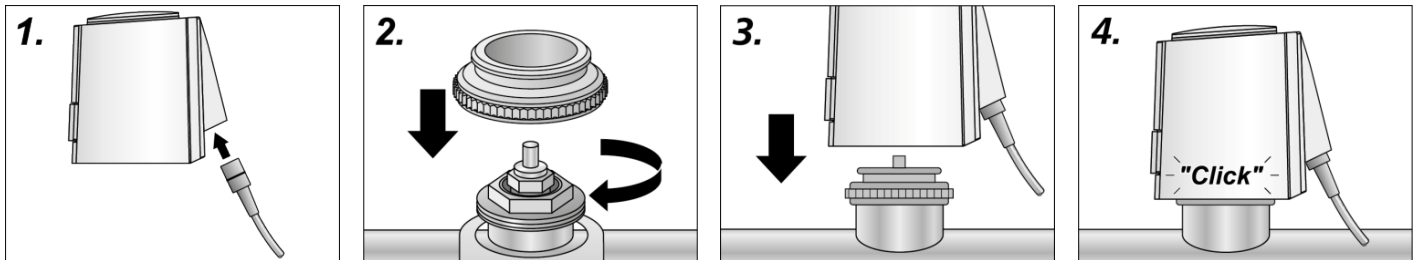


The Wavin Comfia Actuator is certified by TÜV Süd

### 4 Installation notes

#### 4.1 Installation with valve adapter

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



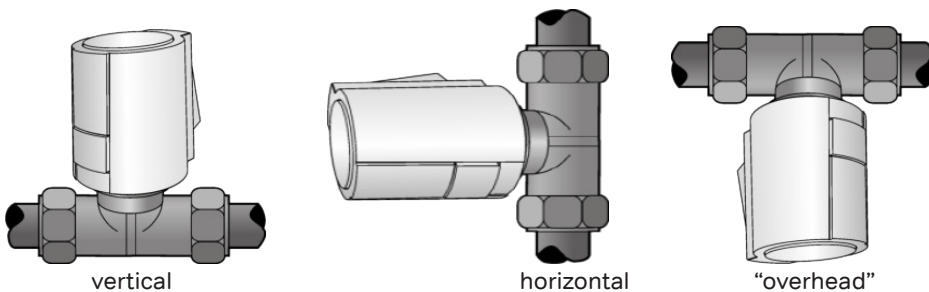
1. Connect cable and actuator.

2. Screw the valve adapter manually on the valve.

3. Place the Wavin Comfia Actuator vertically on the valve adapter.

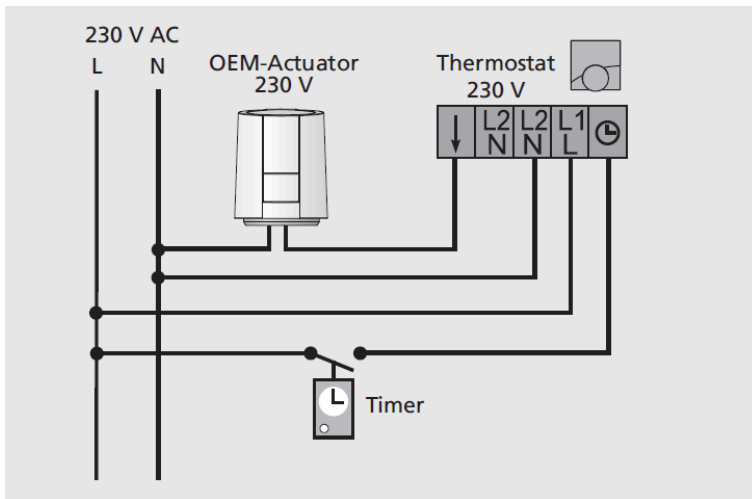
4. The Wavin Comfia Actuator snaps onto the valve adapter with a "click" when pressed down vertically by hand.

#### 4.2 Installation position



The Wavin Comfia Actuator must be installed preferably in vertical or horizontal installation position. In case of "overhead" installation, special circumstances (e.g. drainwater) can reduce the lifetime of the actuator.

## 4.3 Electric connection



### Cable

We recommend usage of the following lines for installing a 230 V system:

Cable	Type	Diameter
Light plastic-sheathed cable	NYM	1.5 mm <sup>2</sup>
Flat webbed building wire	NYIF	1.5 mm <sup>2</sup>