



TECHNICAL CATALOGUE

ELECTROTHERMAL ACTUATOR





TEC

THE COMPANY



ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of valves, fittings and distribution manifolds for plumbing and heating systems. Thanks to fully automated production processes, with 63 tooling machines and 25 assembly lines, we are able to produce 150,000 pieces per day. Our innate pursuit for innovation and observance of technical regulations in force is supported by the company certification ISO 9001: 2008. The company has always considered its focus on quality as the main tool to obtaining significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.





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ELECTROTHERMAL ACTUATOR

Actuator Art.891M 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. Actuator Art.891M is controlled by a 230 V room thermostat with two point output.

ACTUATOR

891M

ELECTROTHERMAL ACTUATOR



SIZE	CODE	PACKING
230V-2wire	891M2302NC	1/64
230V-4wire	891M2304NC	1/34

FEATURES

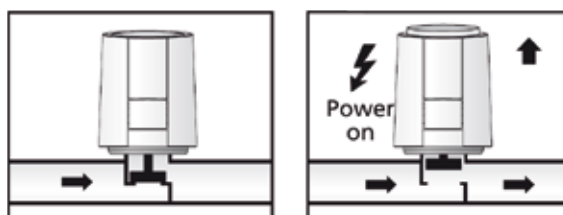
Suitable for convertible valves and pre-assembled manifolds.
Normally closed, on-off operation.
Power supply voltage: 230V.
Power consumption: 1W.
Minimum and maximum working ambient temperatures: 0°C, 60°C.
Maximum differential pressure: 1,5bar.
Length of the power supply cable: m.1.
Class of protection IP54.
Available with 2 cables or 4 cables with an auxiliary microswitch.
Capacity of the auxiliary connection: 300mA.
CE marked.
Opening and closing time ~ 3,5 min.

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.

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.



FIRST-OPEN FUNCTION

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.

CERTIFICATIONS

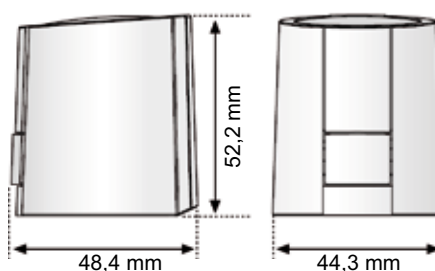


TECHNICAL INFORMATIONS

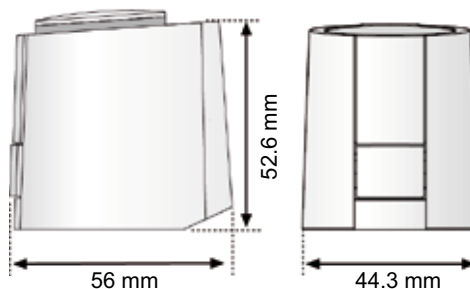
Operating voltage	230 V AC, +10%...-10%, 50/60 Hz
Max. inrush current	< 550 mA during 100 ms max.
Operating power	1 W ¹⁾
Stroke (actuator travel)	4.0 mm
Actuating force	100 N \pm 5%
Fluid temperature	0 to +100°C ²⁾
Ambient temperature	0 to +60°C
Type of protection	IP 54 ³⁾ / II
CE conformity according to	EN 60730
Housing material/housing colour	Polyamide / light grey (RAL 7035)
Cable length	1 m
Surge protection 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

DIMENSIONS 2-WIRE ACTUATOR

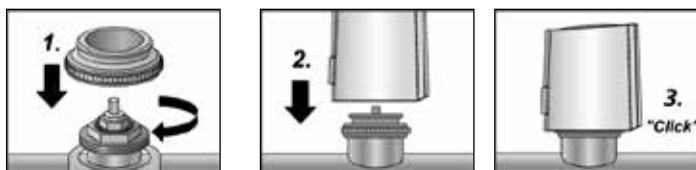


DIMENSIONS 4-WIRE ACTUATOR (with micro-switch)



INSTALLATION WITH VALVE ADAPTER

Simply snap-on the actuator to the manually pre-installed valve adapter.



- First the valve adapter is screwed on the valve manually (Thread: M30x1,5)
- 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.

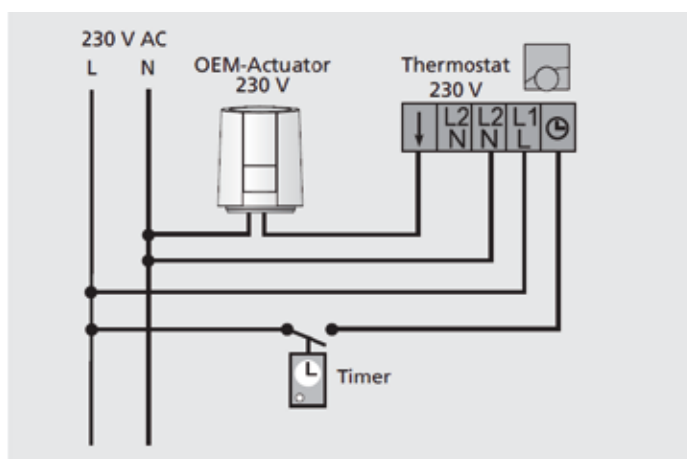
INSTALLATION POSITIONS



Preferred installation position of the actuator is vertical or horizontal. An upside down position may reduce product life through special circumstances

(e.g. contaminated water, condensate ...).

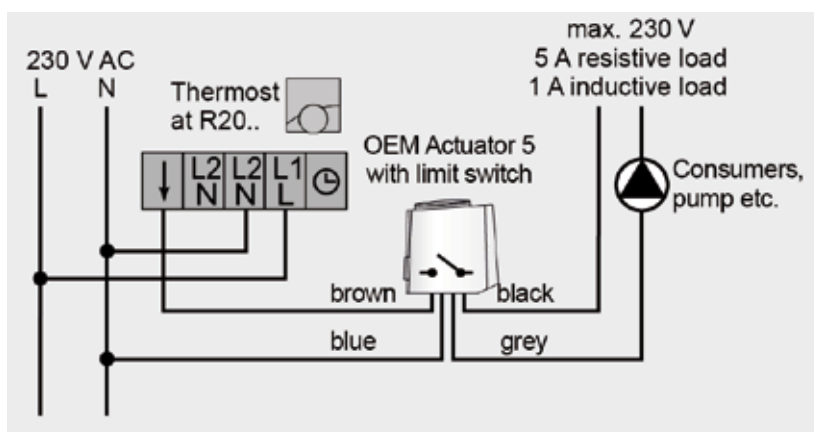
ELECTRICAL INSTALLATION 2-WIRE ACTUATOR



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

ELECTRICAL INSTALLATION 4-WIRE ACTUATOR (with micro-switch)



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Light plastic-sheathed cable: NYM 1.5 mm²
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NOTES

Handwriting practice lines consisting of 28 horizontal dashed lines.

We reserve the right to make improvements and changes to the products described herein and to the relative technical data, at any time and without forewarning.



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