te-sa
heating passion

ISO 9001 Cert. n. 2325

116T-EN00

Electrical actuator Series 116T

Function

In order to combine energy efficiency and high comfort, te-sa propose the new electrical actuator series 116T.

Mounted on the manifolds for underfloor heating, or on the radiator system and also on the Thermostatizable valves, it has the function to atomize the intercepting for the hydraulic system using an ambient thermostat or a normal switch.

Conformed to European directive CE

Mark CE as European directive:
2004/108/EG *Directive Electromagnetic Compatibility*
2006/95/EG *Low Voltage Directive*

Operating principle

The Te-sa electrical actuators Art. 116T, are mainly used on the underfloor heating to control and manage each loop of the system.
Are actuators with linear movement of the piston. In presence of voltage the thermostatically wax element will be warmed by a PTC resistance, the expanding of the wax will permit the piston to move vertically and so to open the valve.
Stopping the power supply, will happen a consequently reducing of volume in the wax and so the valve will back to a normal position which is closed. NC.
The independent regulation of each loop managed by a combination between electrical actuator and thermostat, permit to have a precise control of the temperature which coupled with a low consume for the electrical actuator, max 2W, it combine perfectly the energy efficiency and the high comfort.

Structural features

Construction with double isolation:	class II EN 60335
External case:	polymer PA6GF30, anti collision, extinguishable
Color:	White
Dynamic position indicator:	Yes
Ambient temperature:	-5 / 60°C
Opening time:	max 5 minutes with ambient T of -5°C
Closing time:	around 5 min depending to the ambient temperature

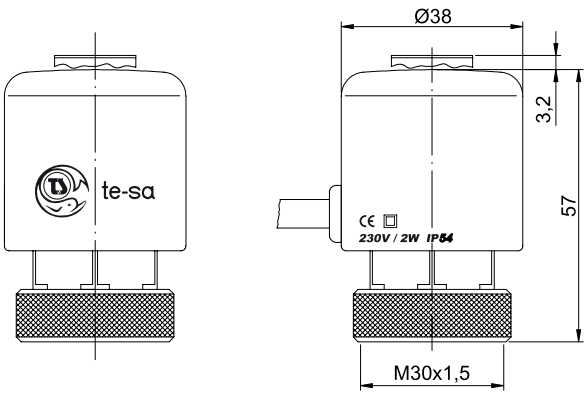
PRODUCT RANGE:

Art. 116T-01	Electrical actuator (2 wires)	Alimentation 230V
Art. 116T-02	Electrical actuator (2 wires)	Alimentation 24V(ac)/(dc)
Art. 116T-03	Electrical actuator with micro auxiliary (4 wires)	Alimentation 230V
Art. 116T-04	Electrical actuator with micro auxiliary (4 wires)	Alimentation 24V(ac)/(dc)

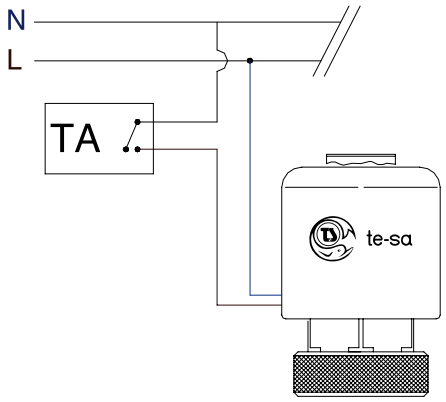
Art. 116T-01 e 116T-02 (2 wires)

Electrical actuator without micro auxiliary (2 wires). Normally closed.
The actuator in the top surface has a a position indicator that show the status of the valve (open/close).
The connection with the valves is made by a nickel ring nut M30x1,5.

Dimensions



Electrical connection



Technical features

Alimentation:	230Vac 24Vac/dc
Absorbed power:	Max. 2W
Power at starting point:	140 mA (230V) 240 mA (24 V)
Power during process:	0,07 A (230V) 0,11 A (24V)
Protection grade:	IP54 (in every position)
Cable length:	1m
Force:	80N +15/-10

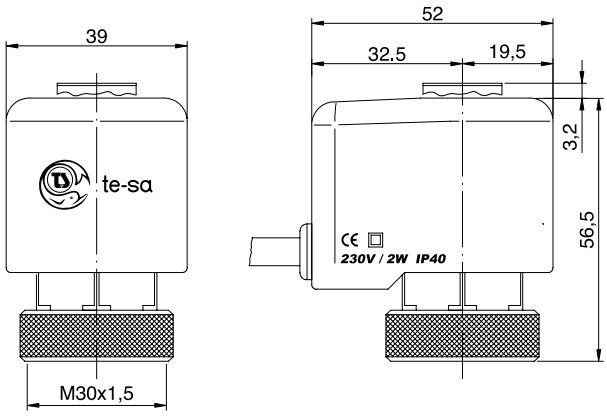
PRODUCT RANGE

Art. 116T-01	Electrical actuator (2 wires)	Alimentation 230V
Art. 116T-02	Electrical actuator (2 wires)	Alimentation 24V(ac)/(dc)

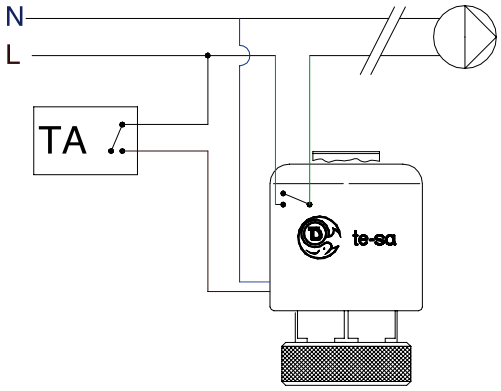
Art. 116T-03 e 116T-04 (4 wires)

Electro-thermal actuator with micro auxiliary (4 wires). Normally closed.
The actuator in the top surface has a position indicator that show the status of the valve (open/close).
The connection with the valves is made by a nickel ring nut M30x1,5.

Dimensions



Electrical connection



Technical features

Alimentation:	230Vac 24Vac/dc	Auxiliary capacity:	230Vac 6A 230Vdc 0.1A 24Vac 6A 24Vdc 2A
Absorbed power:	Max. 2W		
Power at starting point:	140 mA (230V) 240 mA (24 V)	Protection grade:	IP40 (in every position)
Power during process:	0,07 A (230V) 0,11 A (24V)	Cable length: Force:	1m 80N +15/-10

PRODUCT RANGE

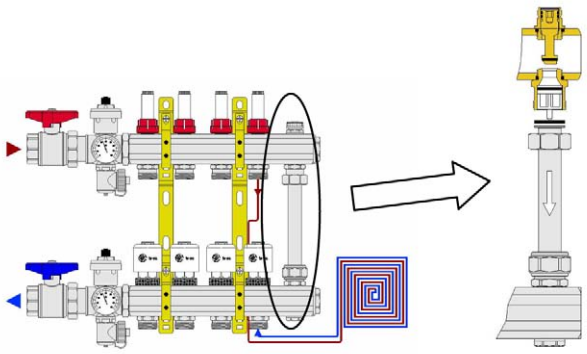
Art. 116T-03	Electrical actuator with micro auxiliary (4 wires)	Alimentation 230V
Art. 116T-04	Electrical actuator with micro auxiliary (4 wires)	Alimentation 24V(ac)/(dc)

How to install and suggestions

- The actuator must be mounted by hand without using any tool.
- Cannot be dismantled for any works of repairing because if tampered can make permanent damages.
- To reach the best operation we suggest to mount the actuator in vertical or in horizontal position.
- The electrical system must be measured according to the starting point of power and made by a professional staff.
- In case are connected more actuators to the same thermostat must check the technical and electrical features of the thermostat. Consider the possibility to insert an intermediary relè in case of electrical overcharge.
- When the actuators are installed on the manifolds for the automatic intercepting of the flow in underfloor heating system is suggested to use a differential by-pass as a protection of the complete system from possible overcharge of pressure due to a partial or complete closer of loops.

By-Pass

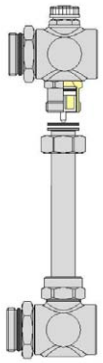
The te-sa manifolds for the radiant panel system, series 220TT2IB-..., are supplied with differential by-pass pre assembled and settled 0,25bar.



Art. 253-06-..By-Pass differenziale

Differential by-pass, with by-pass valves settled at 0,10 bar and 0,25bar, which can be installed in any te-sa pre-assembled manifold.

Art. 253-06-10 Δp=0,10 bar
Art. 253-06-25 Δp=0,25 bar



Art. 116T-01 Electric-thermal actuator 230V

Electric-thermal actuator normally close, with position indicator; alimentation 230V. Max load 80N, nickel ring nut M30x1,5. Protection grade IP54.

Art. 116T-02 Electric-thermal actuator 24V

Electric-thermal actuator normally close, with position indicator; alimentation 24Vac/dc. Max load 80N, nickel ring nut M30x1,5. Protection grade IP54.

Art. 116T-03 Electric-thermal 230V with micro auxiliary

Electric-thermal actuator normally close, with position indicator; alimentation 230V. Max load 80N with micro auxiliary with max charge of contact 6 A,(0,1 A230Vcc) nickel ring nut M30x1,5, protection grade IP54.

Art. 116T-04 Electric-thermal 24V with micro auxiliary

Electric-thermal actuator normally close, with position indicator; alimentation 24Vdc/cc. Max load 80N with micro auxiliary with max charge of contact 6 A,(0,1 A230Vcc) nickel ring nut M30x1,5, protection grade IP54.

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