

Electrothermic actuator normally closed with micro switch - 979-982

/ Description

NORMALLY CLOSED electrothermic actuators are ON-OFF electrical devices that can be installed on ICMA products with thermostatic option: distribution manifolds, zone valves and fan coil valves.

The electrothermic actuators automatically intercept the heat transfer fluid in the heating/cooling systems and can be controlled by a simple room thermostat.


The electrothermal actuators of this range are equipped with a valve opening /closing indicator as well as a quick-coupling system that facilitates installation and maintenance.

Articles also have a clean contact that can be used to start a boiler, pump or other devices.

Power supply 230 V or 240 V in alternating current



European directives conformity:

 CE marking according to:
2006/95/CE e 2004/108/CE

/ Product range

Article	Description	Connection	Voltage	Code
979	Electrothermic actuator ON-OFF potential free contact	M30x1.5	24 V	82979NC54
979	Electrothermic actuator ON-OFF potential free contact	M30x1.5	230 V	82979NC53
982	Electrothermic actuator ON-OFF potential free contact	M28x1.5	24 V	82982NC54
982	Electrothermic actuator ON-OFF potential free contact	M28x1.5	230 V	82982NC53

/ Technical characteristics

Electric supply:	24V / 230V
Frequency:	50÷60 Hz
Starting current:	0.2 A (230V) / 0.3 A (24V)
Working current:	8 mA (230V) / 70 mA (24V)
Running power consumption:	2W
Type of movement:	Linear
Actuator stroke:	5 mm
ICMA valves stroke:	3,5 mm
Operation time:	approx 90 sec
Complete opening time:	approx 3 min
Complete closing time:	approx 4 min
Dynamic force:	100 N
Operating temperature:	0°C ÷ 50°C
Storage temperature:	-25°C ÷ +60°C
Valve connection:	M28x1,5 / M30x1,5
Connecting cable:	Flameproof - Bipolar
Connecting cable length:	4x0,35 mm ² L= 1 m
International protection rating:	IP 53
Electrical insulation class:	Class II

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Once a NC actuator is installed on an ICMA thermostatic valve, the shutter slides down and closes the heat transfer fluid flow in the circuit.

- WHEN VOLTAGE IS APPLIED TO THE ACTUATOR, THE CONTROLLED VALVE OPENS

When voltage is applied to the actuator, the internal thermostatic element heats up, expands and with a linear movement of the shutter determines the opening of the controlled valve and the flow of the heat transfer fluid to the circuit.

- WHEN VOLTAGE IS SHUT OFF THE ACTUATOR, THE CONTROLLED VALVE CLOSES

When voltage is shut off the actuator, an inner spring brings it back to closing position, thus closing the controlled valve and the flow of the transfer fluid in the circuit.

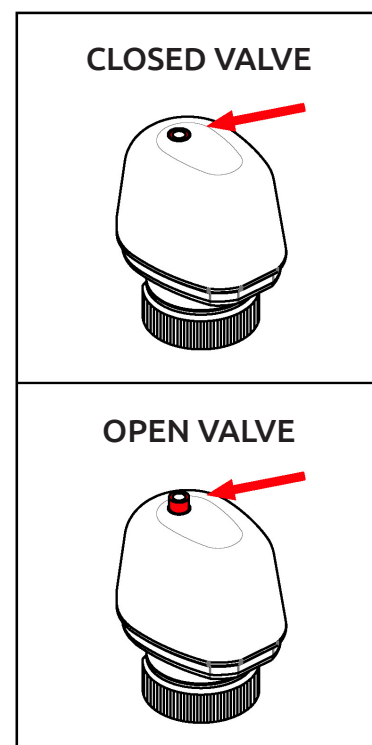
OPEN/CLOSE INDICATOR

The actuator is provided with a RED INDICATOR on the top of the knob (see picture aside) which moves with the valve opening/closing:

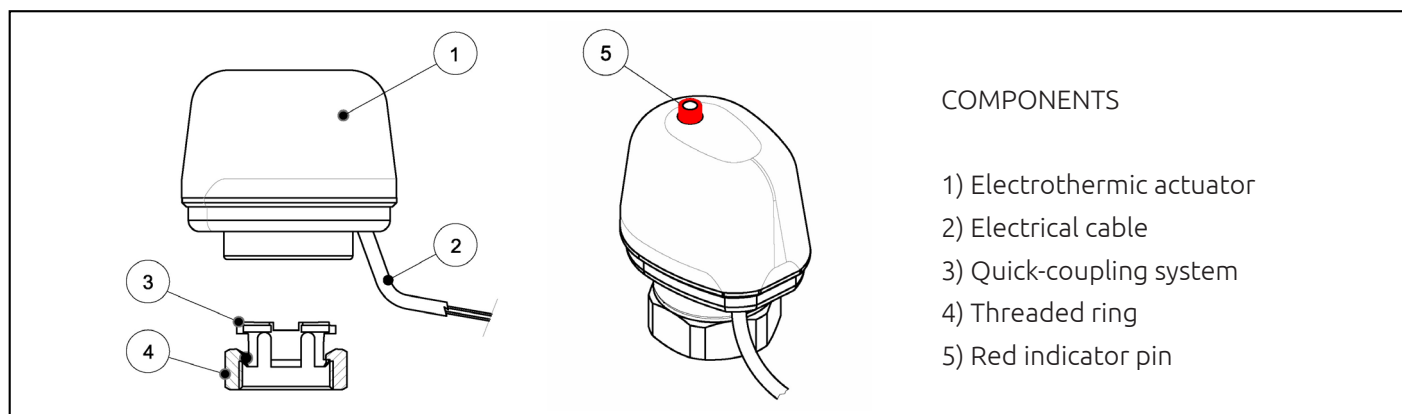
- RED INDICATOR fully plugged in the actuator > CLOSED VALVE
- RED INDICATOR out of the actuator for about 3,5 mm > OPEN VALVE

POTENTIAL FREE CONTACT

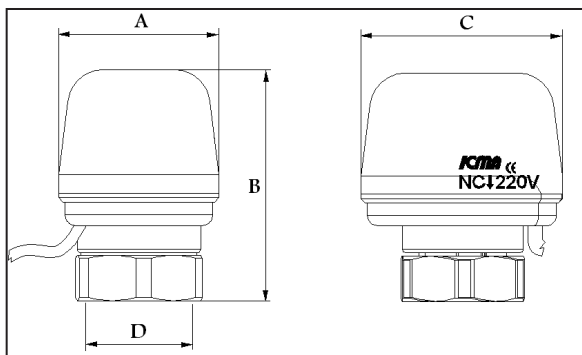
The actuators are equipped with a "normally open "potential-free contact" which closes only when the actuator is powered. When the power supply is on, the valve opens and the microswitch included in the actuator closes the potential-free contact; this can be useful to start a recirculation pump, a relay or another device and can withstand a maximum load of 1A.



/ Components and dimensions



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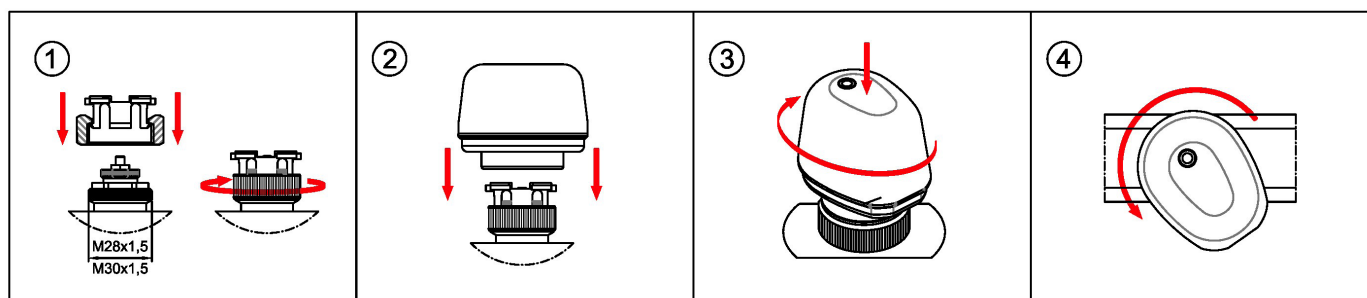
Code	A	B	C	D
980	44	63	57	M30x1.5
983	44	63	57	M28x1.5

Installation

NC electrothermal actuators can be installed on the entire range of ICMA products with thermostatic option: distribution manifolds, zone valves and fan coil valves.

A special threaded ring makes it easy to install the base of the quick-coupling system to the valve without having to remove it any longer, even during maintenance or replacement of the actuator.

To install / remove the thermostatic head from the quick-coupling system just press/rotate it (see instructions below). This type of coupling can also direct the head to a desired position for a proper power supply layout.

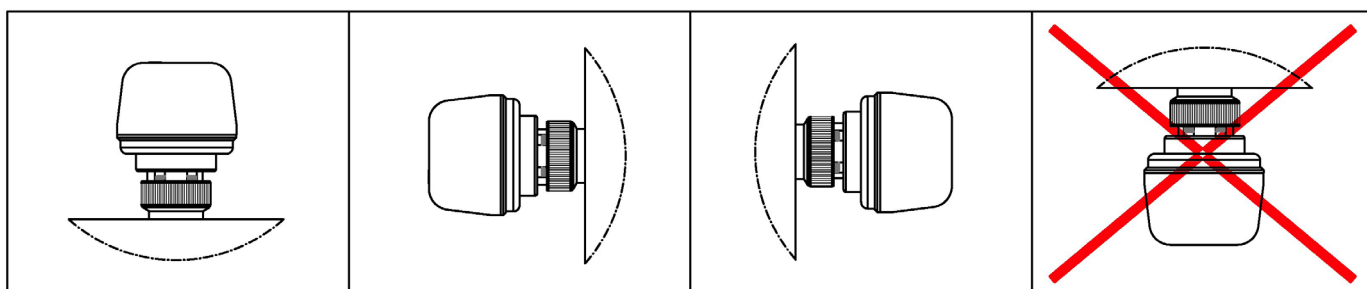


1. Remove the white cap on the valve or on the insert of the manifold bar. Install the quickcoupling system on the insert and screw the ring to its end.

2. Tighten the actuator on the locking nut with the aid of the dowels.

3. While holding down the actuator towards the quickcoupling system, turn it clockwise until it stops.

4. To remove the electrothermic actuator from the quickcoupling system, simply turn it counter clockwise.

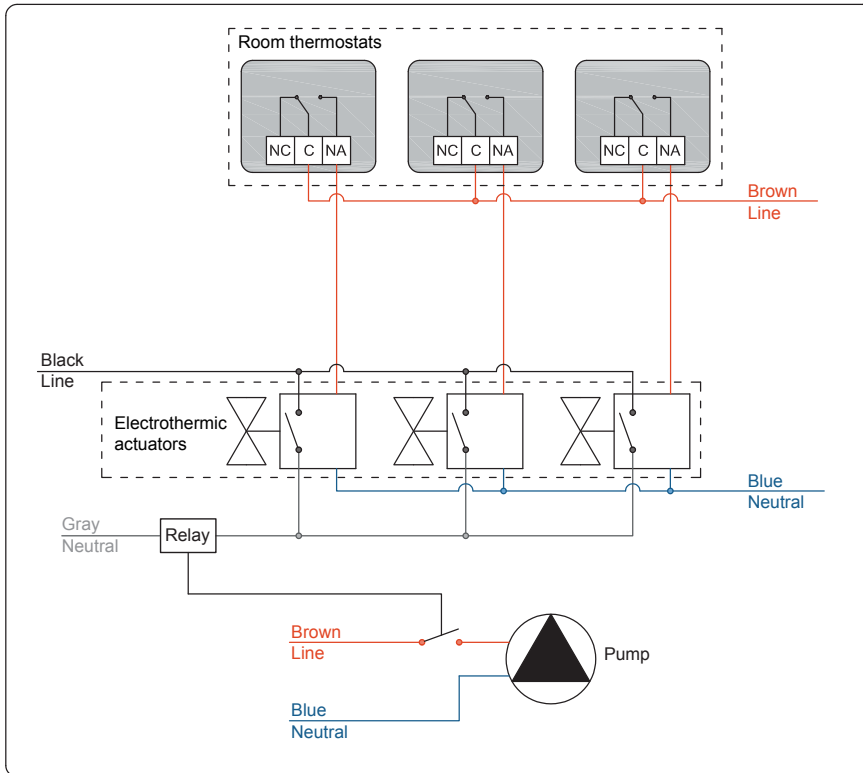


We recommend installing the electrothermic actuators in a horizontal or vertical position, never overturned! Possible condensation on valves and manifolds could reach and damage the actuator.

For the same reason, it is always advisable to install the electrothermic actuators in dry places and away from any possible contact with water or any other liquid.

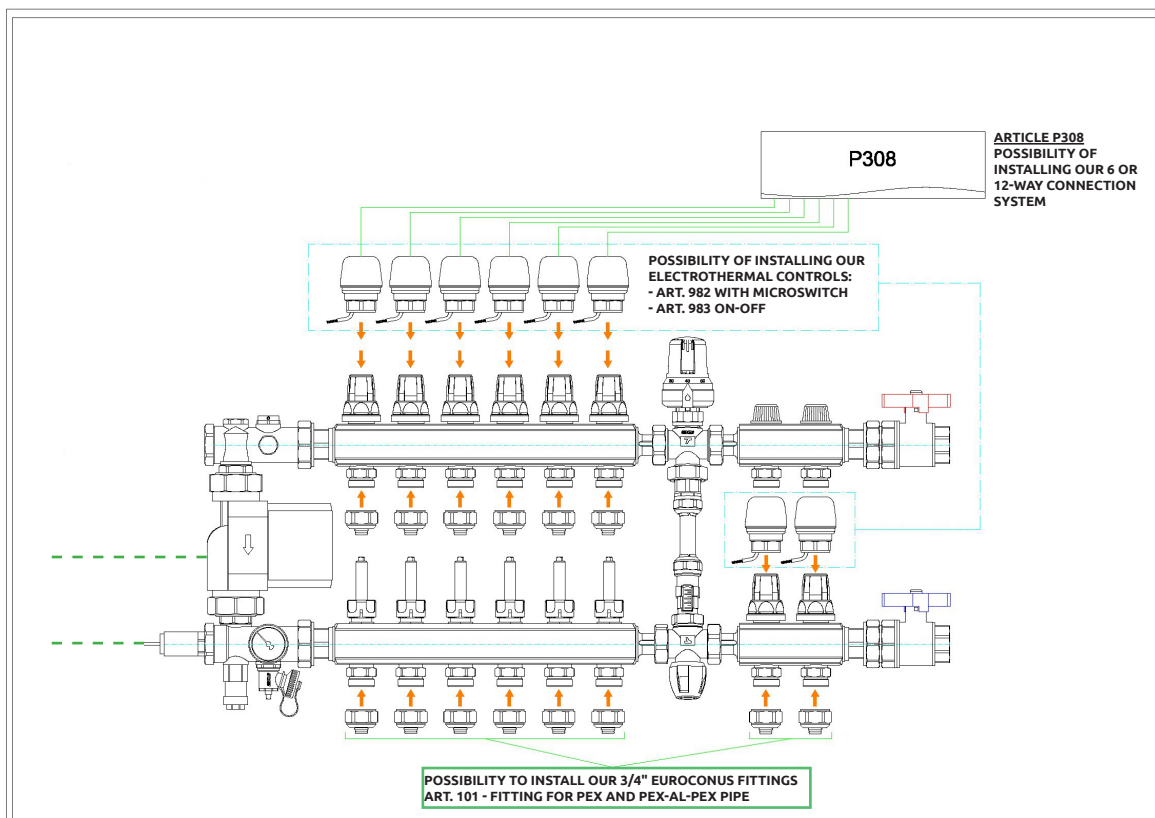
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Electrical connection



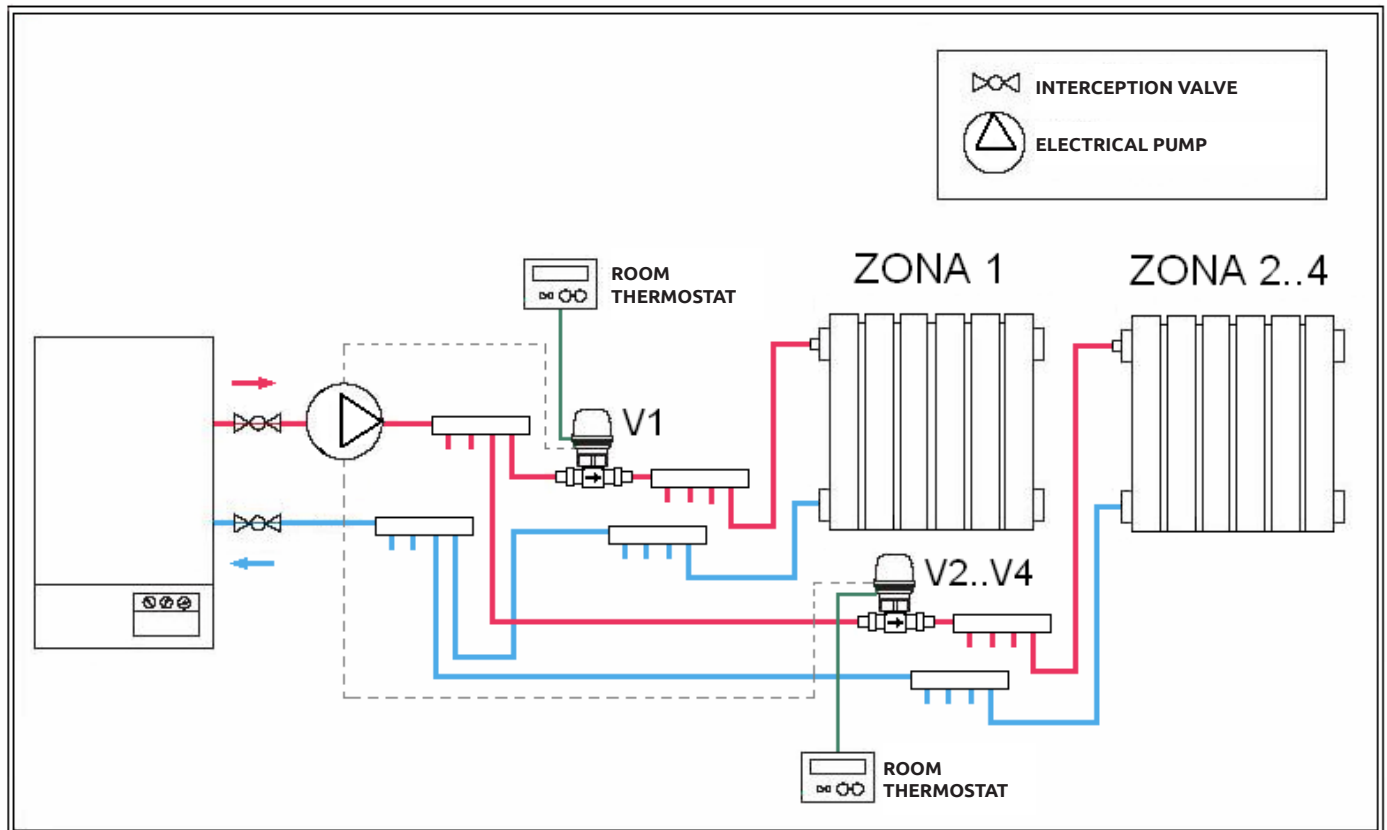
Installation scheme

Installation example on manifold for radiant panel system.



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Installation example on zone valve for radiator system



/ Safety specifications for installation and maintenance



Never open an electrothermic actuator, even in case of failure as this will cause irreparable damage to the device. The electrothermic actuator contains compressed elements, opening it can cause serious injury to persons. The electrothermic actuator supply cable cannot be replaced or repaired; if the cable is damaged, the actuator must be replaced.

Installation and inspection of electrothermic actuators must be carried by authorized and qualified personnel who are familiar with the instructions of this data sheet.

Before any intervention, make sure all equipment is not currently in use.