

## APPLICATION

NORMALLY OPEN electrothermic actuators are ON-OFF electrical devices specially designed to 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 electrothermic actuators of this range are equipped with a BLACK and RED position indicator to show the open or closed position of the valve.

### European directives conformity:

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



## PRODUCT RANGE

Article	Description	Connection	Voltage	Code
980	Electrothermic actuator ON-OFF	M30x1.5	24 V	82980NA54
980	Electrothermic actuator ON-OFF	M30x1.5	230 V	82980NA53
983	Electrothermic actuator ON-OFF	M28x1.5	24 V	82983NA54
983	Electrothermic actuator ON-OFF	M28x1.5	230 V	82983NA53

## MATERIALS

Protective shield:	Self-extinguishing VO
Threaded ring:	Brass CW614N - EN 12164

## TECNICAL CHARACTERISTICS

Articles:	980 - 983	980 - 983
Electric supply:	230 V	24 V
Frequency:	50÷60 Hz	50÷60 Hz
Starting current:	0.2 A	0.25 A
Running power consumption:	2,5 W	2,5 W
Type of movement:	Linear	Linear
Actuator stroke:	3,6 mm (+0,4)	3,6 mm (+0,4)
ICMA valves stroke:	3,5 mm	3,5 mm
Operation time:	80 sec	3 min
Complete opening time:	3 min	5 min
Dynamic closing force:	110 N	110 N
Dynamic opening force:	90 N	90 N
Operating temperature:	-5°C ÷ 50°C	-5°C ÷ 50°C
Storage temperature:	-20°C ÷ +65°C	-20°C ÷ +65°C
Heat transfer fluid temperature:	-5°C ÷ +100°C	-5°C ÷ +100°C
Valve connection:	M28x1,5 (983) - M30x1,5 (980)	M28x1,5 (983) - M30x1,5 (980)
Connecting cable:	Type H05V2V2-F	Type H05V2V2-F
Connecting cable lenght:	1 m	1 m
Degree pollution:	II	II
International protection rating:	IP 54	IP 54
Electrical insulation class:	Class II	Class II

## FUNCTION

When installing a normally open actuator on an ICMA valve with thermostatic option, the shutter position remains unchanged and the heat transfer fluid flow in the circuit remains open.

### - WHEN VOLTAGE IS APPLIED TO THE ACTUATOR, THE CONTROLLED VALVE CLOSSES

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

### - WHEN VOLTAGE IS SHUT OFF THE ACTUATOR, THE CONTROLLED VALVE OPENS

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

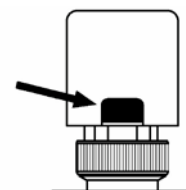
### OPEN / CLOSED INDICATOR

The actuator is equipped with a transparent section with a BLACK / RED position indicator to check the opening / closing status of the controlled valve (see picture).

- **BLACK INDICATOR** ==> **OPEN VALVE**

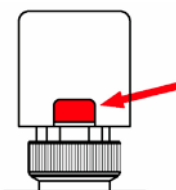
- **RED INDICATOR** ==> **CLOSED VALVE**

#### OPEN VALVE



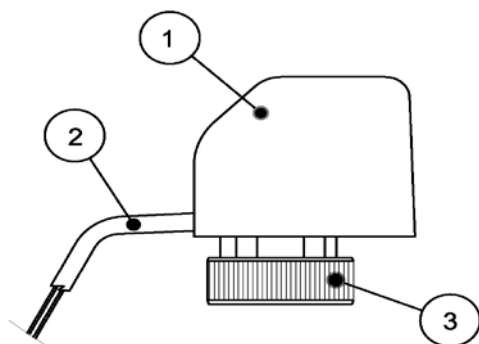
BLACK INDICATOR

#### CLOSED VALVE



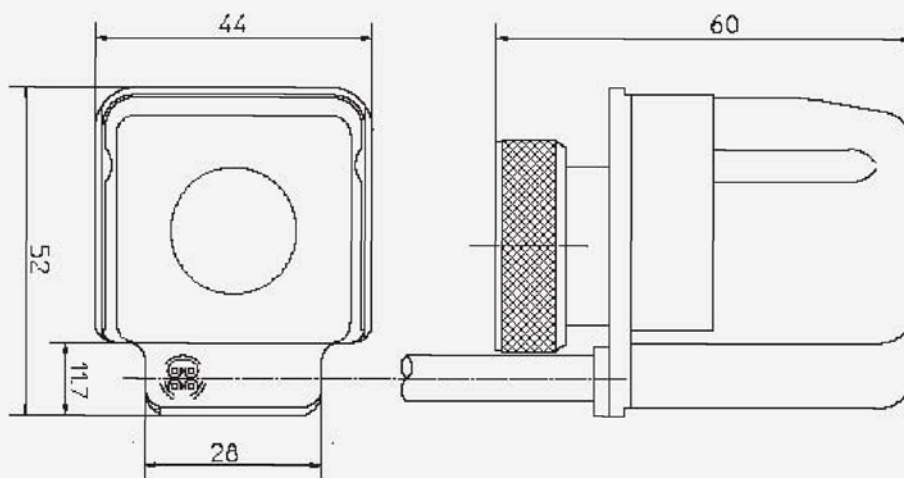
RED INDICATOR

## COMPONENTS AND DIMENSIONS



### COMPONENTS

- 1) Electrothermic actuator
- 2) Power supply cable
- 3) Threaded ring

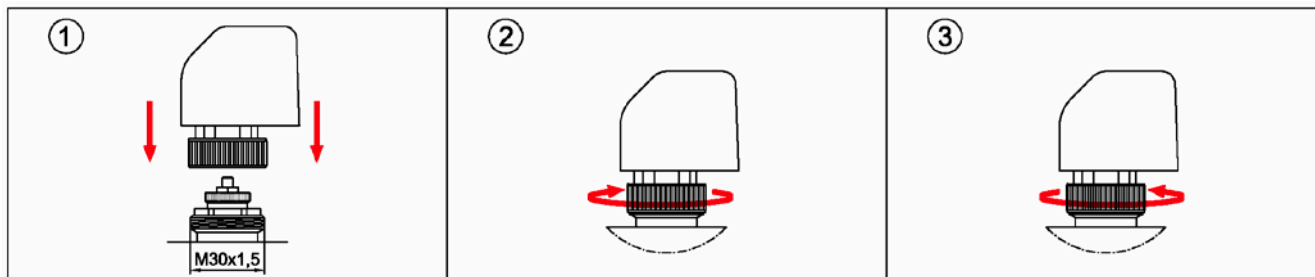


## INSTALLATION

Normally open electrothermic 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 actuator on the valve.

It is also possible to direct the head to a desired position for a proper power supply layout.



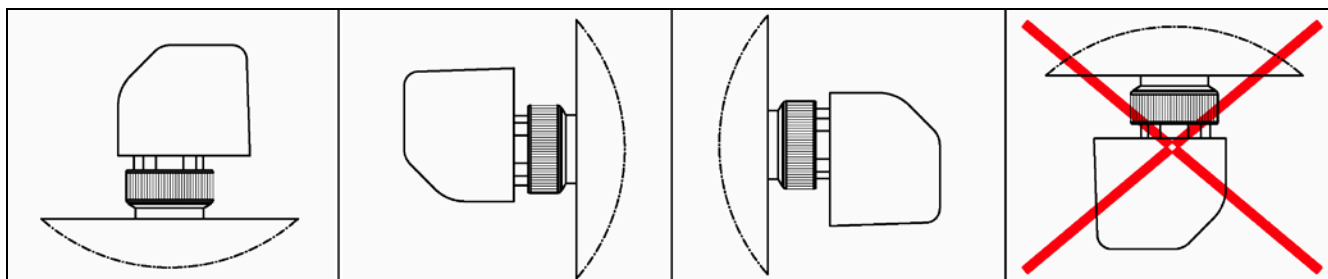
Remove the white cap on the valve or on the insert of the manifold bar where you wish to install the actuator. Insert the actuator as indicated above.

Holding the actuator to the insert, screw the threaded ring clockwise until it stops, blocking the actuator.

To remove the electrothermic actuator from the valve or manifold, simply unscrew the threaded ring counterclockwise and remove it.

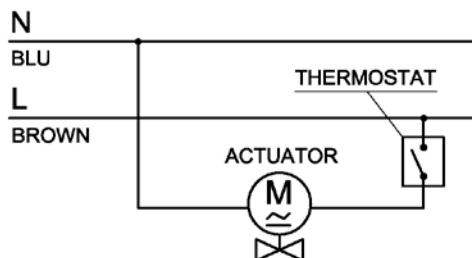
We recommend installing the electrothermic actuators in a horizontal or vertical position, never overturned! Possible condensation on valves and manifolds could reach and damage the actuator.

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.

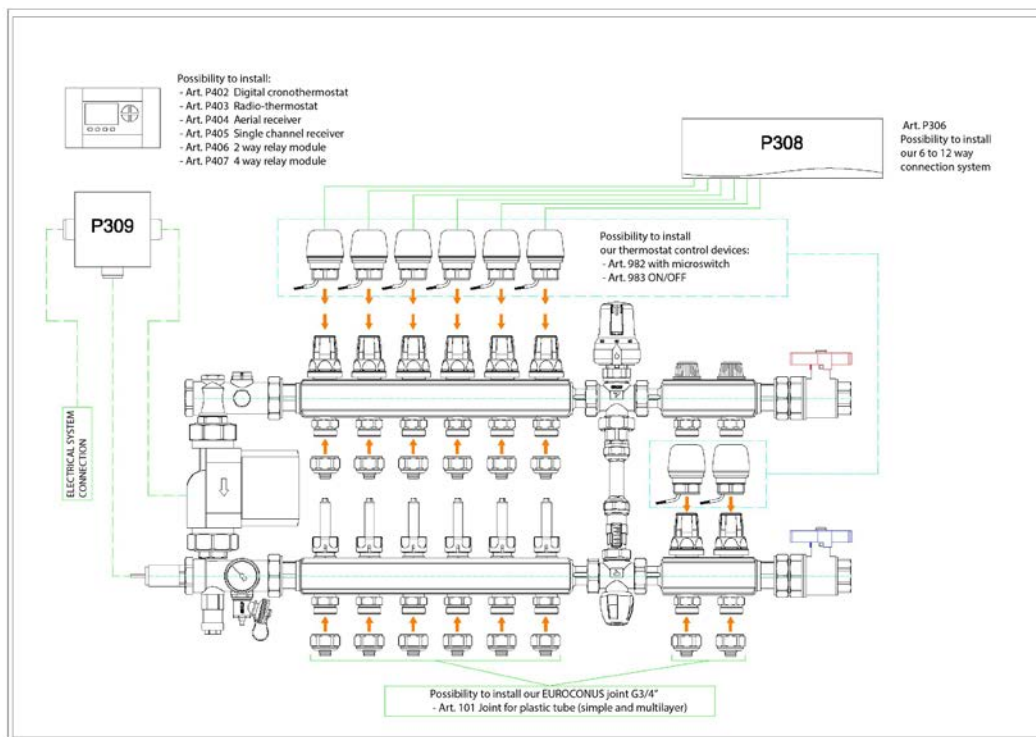


## ELECTRIC CONNECTION

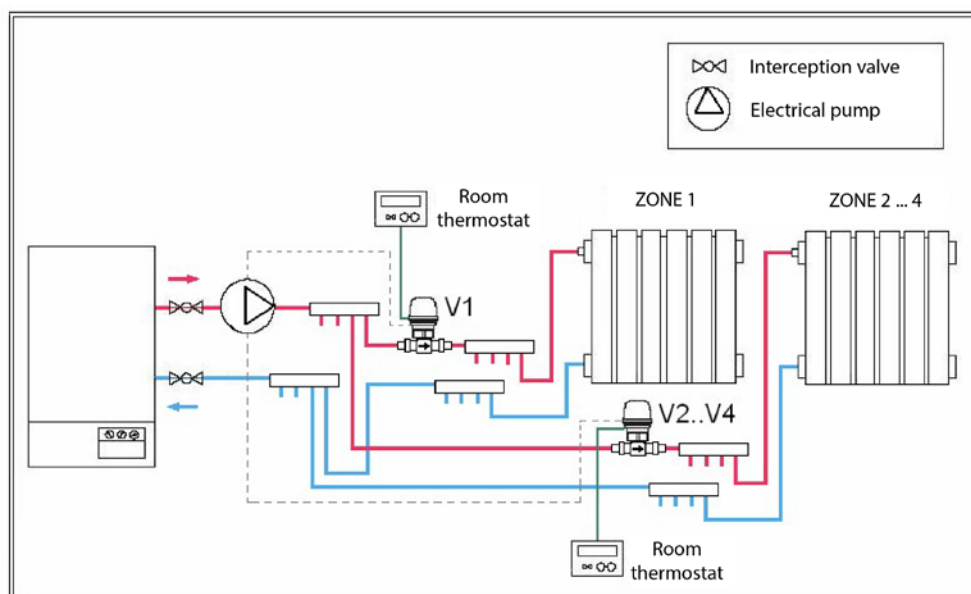
### ELECTRIC CONNECTION FOR TWO WIRE ACTUATORS WITH NO MICROSWITCH - ART.980-983



## INSTALLATION SCHEME



INSTALLATION EXAMPLE ON MANIFOLD FOR RADIANT PANEL SYSTEM



INSTALLATION EXAMPLE ON ZONE VALVE FOR RADIATOR SYSTEM

## SAFETY SPECIFICATIONS FOR INSTALLATION AND MAINTENANCE



ATTENTION

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.