



Main characteristics

- **R473** thermo-electric actuators are equipped with a 2-conductors wire to connect them to ambient thermostats or control units.
- **R473M** thermo-electric actuators are equipped with a 4-conductors wire for a stroke-end micro switch to control circulators or zone valves (brown: phase- blue: neutral- black and grey: micro switch).

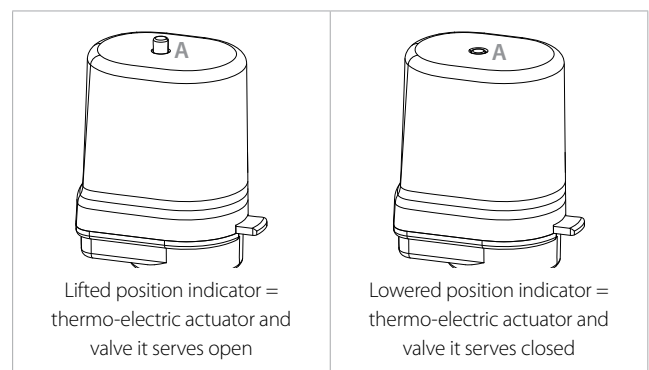
Position mechanical indicator

R473 and R473M thermo-electric actuators include a position mechanical indicator (A) on the top which enables to visually identify the current position of the actuator and the valve it serves.

The actuator opens the valve when electrically powered.

The position indicator (A) is lifted up when the valve is open.

The position indicator is particularly useful during testing to perform operation verifications without activating the system or disassembling the actuator.



Description

Thermo-electric actuators installed on distribution manifolds, radiator thermostatable valves or fan coil units enable to adequately control the ambient temperature by combining energy saving to high levels of comfort. The R473 and R473M thermo-electric actuators feature absolute operational quietness, a long life as they have no mechanical parts subject to wear and tear and a proper slowed-down closing system to prevent water hammer effects. The activation mechanism includes wax bulbs controlled by low-consumption electrical PTCs.

Versions and product codes

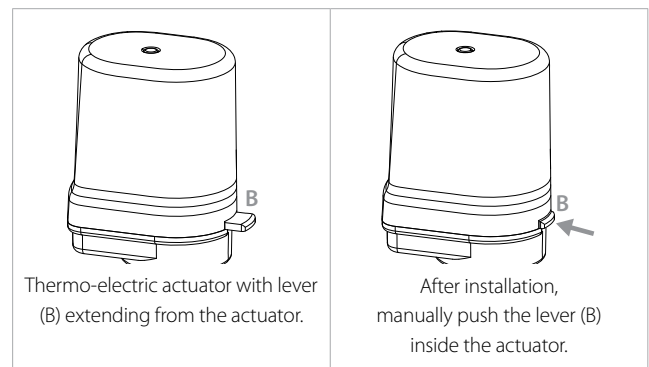
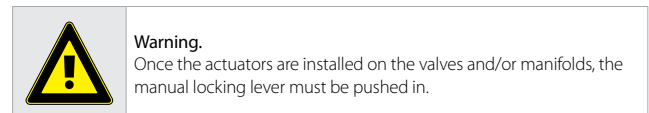
Series	Product code	Voltage	Characteristics
R473	R473X221	230 V	2-conductors wire
	R473X222	24 V	
R473M	R473MX221	230 V	4-conductors wire, with stroke-end micro switch
	R473MX222	24 V	

Technical data

- Complies with EMC and B.T. directive provisions.
- Status without voltage: normally closed (N.C.)
- Rapid connection for Giacomini standard valves and/or manifolds
- Position mechanic indicator
- Linear movement
- Actuator useful stroke: 2,4 mm
- Pollution class: II
- Nominal pulse voltage: 4 kV
- Protection class: IP40
- Protection against direct contacts through double insulation (Class II)
- Power wire: H03 VV-F; useful length 1 m
- Opening and closing time at 20 °C: ~ 6 mins.
- Room temperature of use: -5÷50 °C
- Storage room temperature: -20÷65 °C
- Max. temperature for device installation surface: 90 °C
- PBT self-extinguishing case material V0-UL94
- Normally open micro switch with closed valve (only for versions with stroke-end micro switch)

Manual locking lever

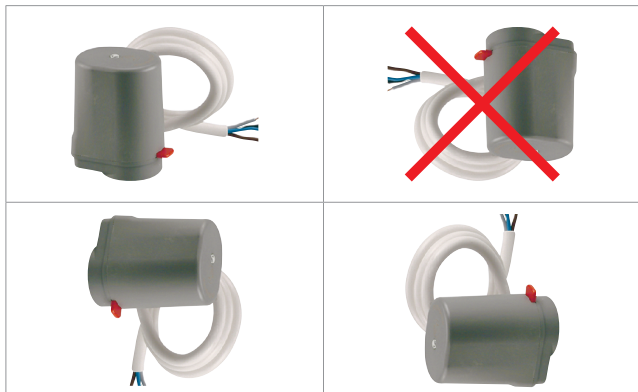
For an easier installation on valves and/or manifolds, R473 and R473M thermo-electric actuators feature a red manual locking lever.



Installation

R473 and R473M thermo-electric actuators may be installed on thermostatable valves and/or manifolds with Giacomini standard connections, using the special toothed ring provided with the actuators.

They can be installed horizontally or vertically, but not upside down with the indicator pointing downwards.



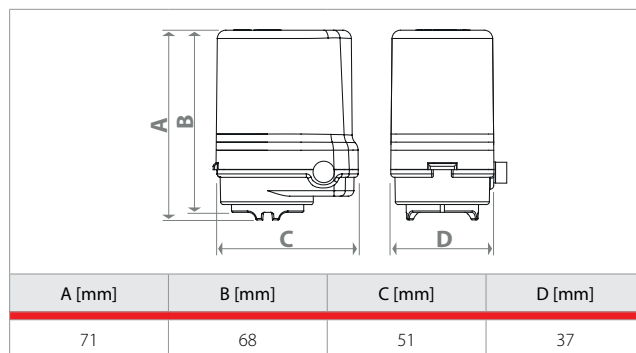
To install the actuators on valves and/or manifolds, follow the steps below:

	<p>① Install the toothed ring (C) on the Giacomini standard connection valve and/or manifold pushing down. Connect the thermo-electric actuator to the ring.</p>
	<p>② Turn the thermo-electric actuator by 15° clockwise till you hear a locking click (to remove the actuator, turn by 15° in anticlockwise direction).</p>
	<p>③ Push the red manual locking lever in.</p> <p>Important!</p>
	<p>④ Electrically connect the actuator according to the electrical diagrams.</p>

Warning.

- The actuator case cannot be disassembled and should never be opened.
- Tampering immediately voids the warranty.
- The power wire is not replaceable; if the cable is damaged, replace the actuator.
- The warranty is valid for one year after installation of the actuator and does not provide for replacement of products damaged for the Client's inexperience or negligence.
- Electrical connections must be carried out by qualified personnel and voltage-free after carefully verifying the voltage which must comply with the one specified.
- Connection of power wires to the fix distribution network must be performed in a safe manner as provided for by the Technical Rules in force in the Country of use.
- Giacomini S.p.A. will not be held responsible for damages suffered by individuals or objects for misuse of the product.

Dimensions



Electrical data

Product code	Absorbed power	Voltage	Max. peak current (*)	Current absorbed after 12 mins. (*)	Resistance (*)	Power wire section	Micro switch
R473X221	2,5 W	230 V 50Hz	≤ 0,25 A	≤ 0,015 A	6300 Ω ± 1800 Ω	2 x 0,50 mm ²	-
R473X222	2,5 W	24 V 50 Hz	≤ 0,35 A	≤ 0,125 A	115 Ω ± 28,75 Ω	2 x 0,50 mm ²	-
R473MX221	2,5 W	230 V 50Hz	≤ 0,25 A	≤ 0,015 A	6300 Ω ± 1800 Ω	4 x 0,50 mm ²	5 A 125 Vac 3 A 250 Vac
R473MX222	2,5 W	24 V 50 Hz	≤ 0,35 A	≤ 0,125 A	115 Ω ± 28,75 Ω	4 x 0,50 mm ²	5 A 125 Vac 3 A 250 Vac

(*) Values read at room temperature

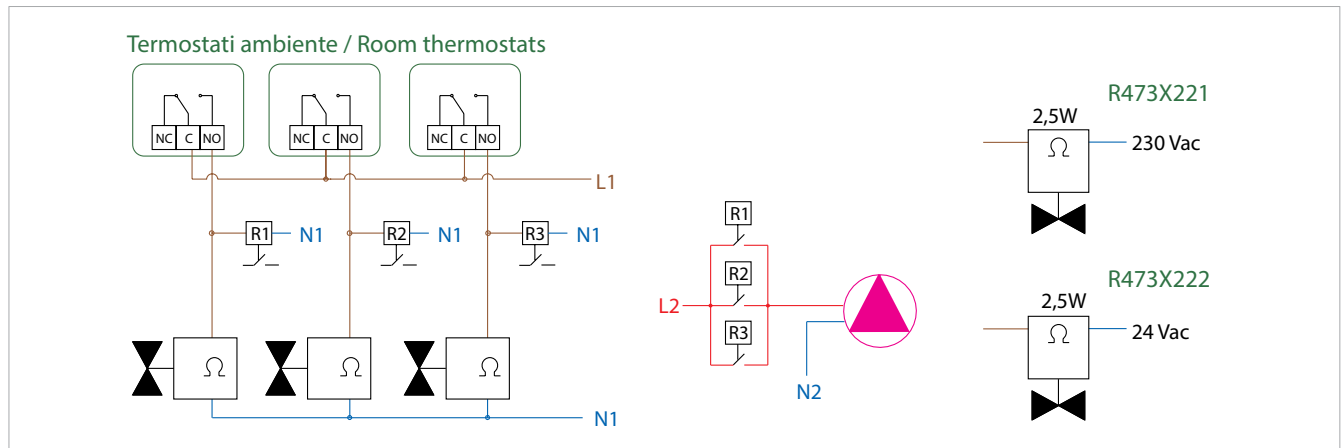
Electrical connections



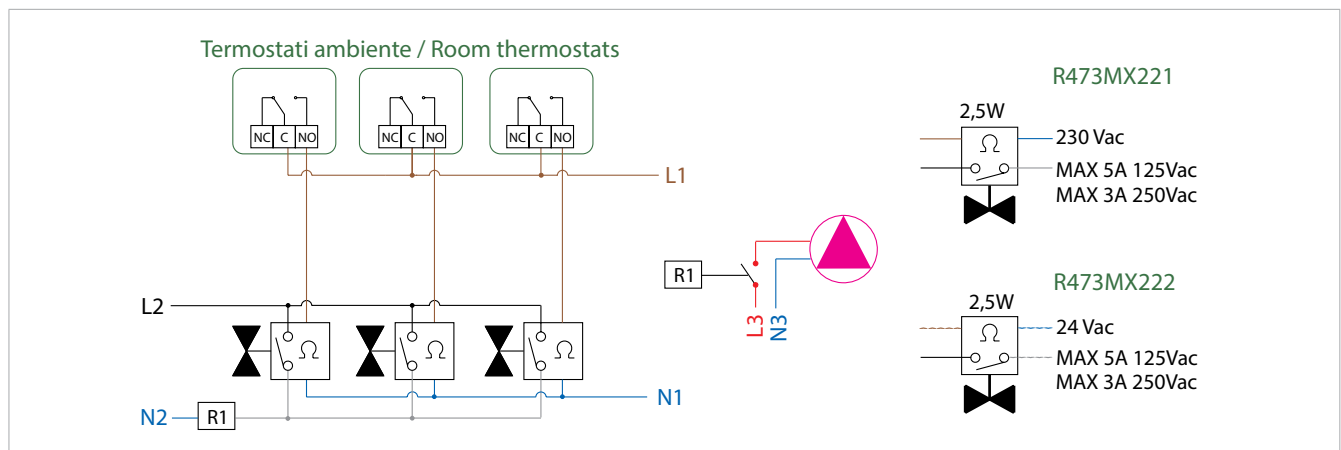
Avvertenza.

On the supply circuit, a fuse or a protection device external to the device, has to be installed to intervene in case of fault/short circuit conditions.

R473 thermo-electric actuators provide for various connection options able to satisfy a wide range of installation needs. The most frequent cases require simple direct connections to ambient thermostats or interposition of relays to control the circulators or zone valves.



R473M thermo-electric actuators equipped with a stroke-end micro switch enable to easily activate circulators or zone valves. They are generally connected to ambient thermostats taking into consideration that the R473M is closed when there is no voltage (while the micro switch is electrically open in such status). To control significant power loads, we recommend installing a relay to prevent overloading of the actuator micro switches.



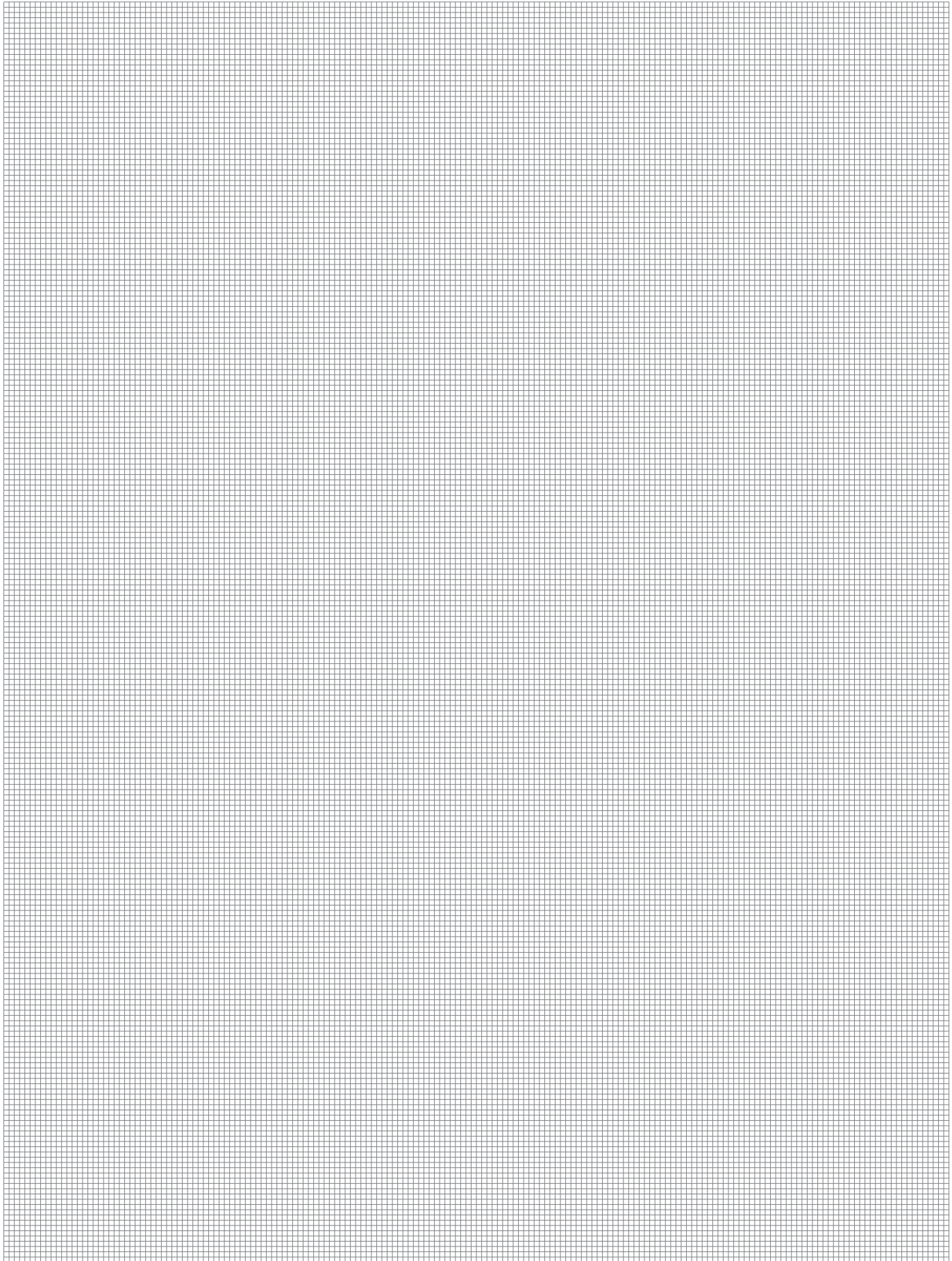
Product specifications

R473

Thermo-electric actuator normally closed for thermostatable valves and/or manifolds. 2-conductors wire, length 1 m. Protection class IP40. Rapid connection. Position mechanic indicator. Room temperature range -5÷50 °C. Available with 230 V or 24 V power. Complies with Directives EMC and B.T.

R473M

Thermo-electric actuator normally closed for thermostatable valves and/or manifolds. 4-conductors wire, length 1 m. Protection class IP40. Rapid connection. Position mechanic indicator. Room temperature range -5÷50 °C. Available with 230 V or 24 V power. Complies with Directives EMC and B.T.



Additional information

For additional information please check the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy