

# TA-TRI



## Actuators

Motorized 3-point actuator – 200 N

# TA-TRI

The motorized 3-point actuator TA-TRI is a highly reliable and easy to mount for valves for heating and cooling systems. The actuator is equipped with an LED for function displays as well as with a manual override facilitating maintenance and installation.

## Key features

- > **Easy to install**  
Very easy to install with valve adapter system, mount in all position.
- > **High enclosure class IP54**  
For secure operations at any installation positions.
- > **Reliable, fast and energy efficient**  
Very short response time and complete motor control to save energy, low noise and maintenance free.



## Technical description

### Functions:

3-point control  
On-off control (requires three wires)  
Manual override  
LED indication  
Antitheft function by removable locking latch

### Supply voltage:

24 VAC, -10%/+20%, 50-60 Hz  
24 VDC, ±20%  
230 VAC, ±10%, 50 Hz

### Power consumption:

24 VAC/VDC:  
Operation: < 110 mA  
Standby: < 10 mA  
230 VAC:  
Operation: < 15 mA  
Standby: < 5 mA

### Input signal:

3-point or on/off control

### Characteristics:

Linear

### Control speed:

30 s/mm

### Adjusting force:

200 N

### Temperature:

Media temperature: max. 100°C  
Operating environment: 0°C – +50°C  
(5-95%RH, non-condensing)  
Storage environment: -20°C – +70°C  
(5-95%RH, non-condensing)

### Ingress protection:

IP54 all directions  
(according to EN 60529)

### Protection class:

24 VAC/VDC: III (SELV)  
230 VAC: II

### Cable:

1 m, 3x0,75 mm<sup>2</sup>, PVC

### Stroke:

8,5 mm

### Noise level:

Max. 30 dBA

### Weight:

0.20 kg

### Connection to valve:

Adapter nut M30x1,5

### Material:

Cover: Polycarbonate  
Housing: Polyamide

### Colour:

Cover: Transparent  
Housing: White RAL 9003

### Marking:

IMI TA  
Label: CE, UKCA, product name, article No. and technical specification.

### Certification CE:

LV-D. 2014/35/EU: EN 60730-1, -2-14.  
EMC-D. 2014/30/EU: EN 60730-1, -2-14.  
ROHS-D. 2011/65/EU: EN IEC 63000.

### Product standard:

EN 60730.

## Function

The motorized actuator TA-TRI is designed to be mounted on valve bodies and are installed in heating, ventilation, and air conditioning systems in conjunction with corresponding controllers.

The motor of the 3-point actuator is moved in both directions of rotation via an electrical open or close instruction. As soon as the output voltage of the controller has been interrupted, the actuator stops and retains its travel position at that moment.

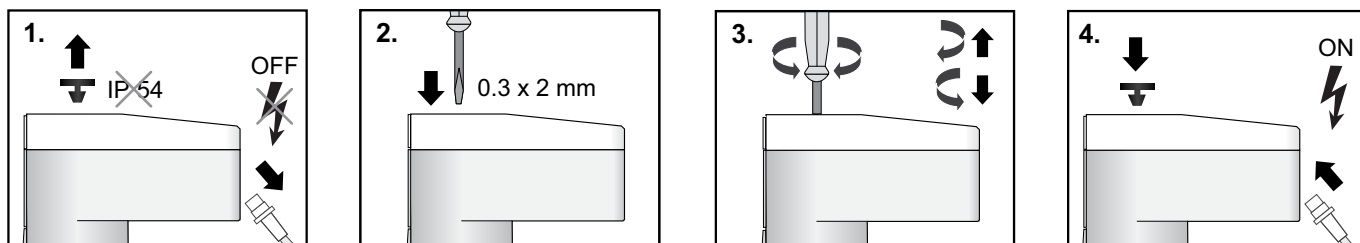
In the area of room temperature control, motorized actuators are used, for example, on radiators and convectors, heating manifolds for floor heating systems, ceil cooling systems and radiant heating systems as well as on fan-coil units and induction devices in two and four-wire networks.

The actuator TA-TRI/230 works ideally in supply pipe temperature control in heating systems. Its standard input signal "3-point 230 V" is compatible with most boiler control systems.

### Manual override

The manual override allows to bring the actuator stem to the desired position in de-energised status. This facilitates e. g. maintenance and installation.

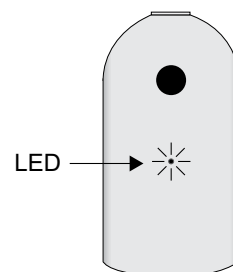
1. Switch off the supply voltage and remove the protective plug.
2. Insert a screwdriver (0.3x2 mm) into the manual override device.
3. Turn **clockwise** for **retracting the actuator stem** (open the valve) or **anti-clockwise** for **extending the actuator stem** (closing the valve) to reach the desired position.
4. Install the protective plug and switch on the supply voltage.



## LED indication

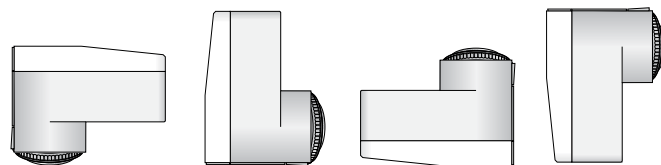
Errors are only displayed if the actuator is supplied with operating voltage.

Status	
Errors	Steady RED
Moving in (retract)	Short pulses GREEN
Moving out (extend)	Short pulses ORANGE
Manual mode or no power supply	Off



## Installation

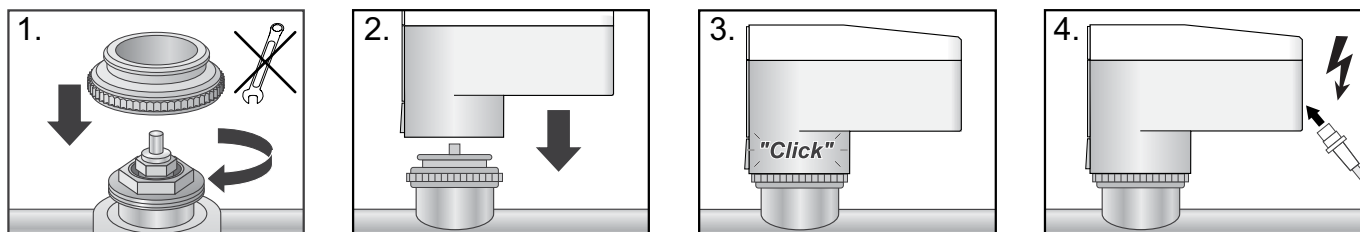
The TA-TRI can be operated in every installation position. (IP 54 according to EN 60529)



### ATTENTION!

Installation with extended actuator stem leads to actuator damage.

- Only install the actuator with completely retracted stem.
- Retract an extended actuator stem with the manual override, or electrically.



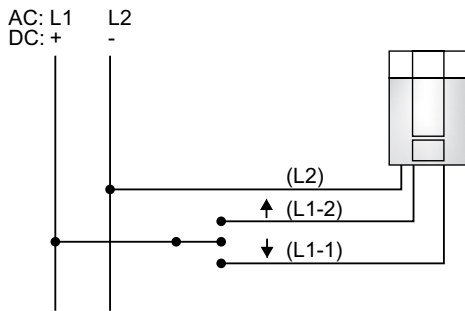
## Connection diagram

The TA-TRI is controlled via control device with 3-point control output or on/off (e. g. room thermostat) or a building management system. Please ensure the controller you are using is compatible with a stepper motor actuator.

### 24 VAC/VDC

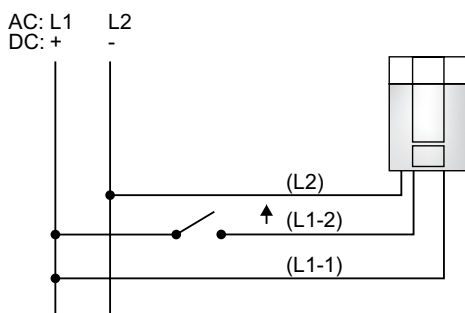
24 VAC/VDC operating only with safety transformer according to EN 61558-2-6. EN 61558-2-6 (for AC supply) or switching power supply according to EN 61558-2-16 (for DC supply).

#### 3-point



Function	Description
Blue (L2)	Neutral
Voltage to red (L1-2)	The actuator stem retracts until the end position
Voltage to black (L1-1)	The actuator stem extends until the end position
No voltage to red/black	The actuator stem remains in its current position

#### On/off

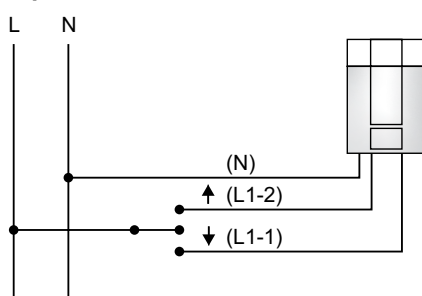


Function	Description
Blue (L2)	Neutral
Voltage to red (L1-2)	The actuator stem retracts until the end position
No voltage to red (L1-2)	The actuator stem extends until the end position
Black (L1-1)	Permanent 24 V supply

### 230 VAC

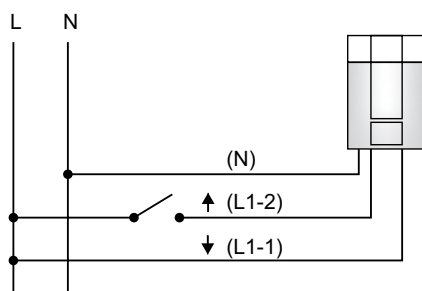
We recommend the following cables for installing a 230 V system: Light plastic-sheathed cable: NYM 1,5 mm<sup>2</sup>.

#### 3-point



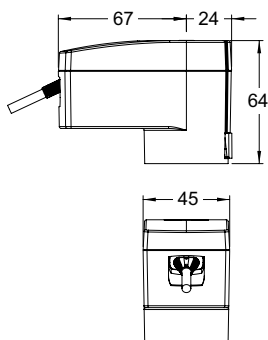
Function	Description
Grey (N)	Neutral
Voltage to brown (L1-1)	The actuator stem extends until the end position
Voltage to black (L1-2)	The actuator stem retracts until the end position
No voltage to black/brown	The actuator stem remains in its current position

#### On/off



Function	Description
Grey (N)	Neutral
Voltage to black (L1-2)	The actuator stem retracts until the end position
No voltage to black (L1-2)	The actuator stem extends until the end position
Brown (L1-1)	Permanent 230 V supply

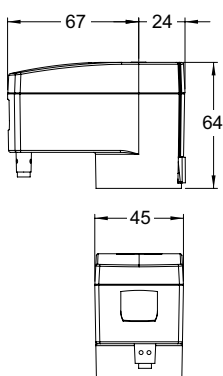
## Articles



### TA-TRI – 24 VAC/VDC

Input signal: 3-point or on/off control

Cable length [m]	Supply voltage	EAN	Article No
1	24 VAC/VDC	4031602009821	322041-60005



### TA-TRI – 230 VAC

Input signal: 3-point or on/off control

Cable length [m]	Supply voltage	EAN	Article No
1	230 VAC	4031602010841	322041-60006

