

MZ95 Thermal Zone Valve Actuator

Product Description

The MZ95 is a small thermoelectric linear zone valve actuator used in room and zone applications for time-controlled two-point and pulse-width-modulated (PWM) regulation of heating and cooling systems such as fan coil units, radiators, floor heating systems, chilled ceilings, and convectors.

The MZ95 has a discreet design that blends into living space applications.



Specifications

Max. stroke	8 mm
Power supply	MZ95xx-24T: 24 Vac/dc \pm 20% MZ95xx-230T: 230 Vac + 10%-15%
Stem force	95 N
Ambient temperature	Max. 50 °C
Power consumption	2 W
Protection standard	IP44 in all mounting positions
Cable length (standard)	2.5 m
Cable size	2 x 0.5 mm ²
Medium temperature	Max. 120 °C
Valve connection	M30 x 1.5

*All values at nominal voltage.

**Average during first 500 msec.

Note: Recommendations with Xenta 121 controller, using V1 to V4 TRIAC heating/cooling outputs:

3 x 24 V actuators per line output (12 actuators max.)

1 x 230 V actuator per line output (4 actuators max.)

Accessories

Part Number	Description
911 4205 000	Additional cable set 5 m, 10 pcs
911 4210 000	Additional cable set 10 m, 10 pcs

Features

- No mounting tools required (easily mounted using valve adapter)
- Water-protected housing design in all mounting positions
- Pluggable cable for easy installation and servicing
- Low power consumption – allowing many actuators to be driven from the same controller
- Normally-open (NO) and normally-closed (NC) models
- Compact design allows installation in limited space
- Visual indicator showing valve position and type of action (NO or NC)
- Noiseless operation
- Reliable long-term operation
- Overvoltage protection (4 kV) for 230 V models

Available Products

Part Number	Type Designation	Action*	Voltage
MZ95NC-24T	MZ95-NCD-24T 2.5M54 00	Normally closed (stem down)	24 Vac/dc
MZ95NO-24T	MZ95-NOU-24T 2.5M54 00	Normally open (stem up)	
MZ95NC-230T	MZ95-NCD-230T 2.5M54 00	Normally closed (stem down)	230 Vac
MZ95NO-230T	MZ95-NOU-230T 2.5M54 00	Normally open (stem up)	

*Without power, in combination with standard 2-way valve.

"Normally Closed" = Actuator stem extends downward without power closing the valve, retracts when powered to open the valve.

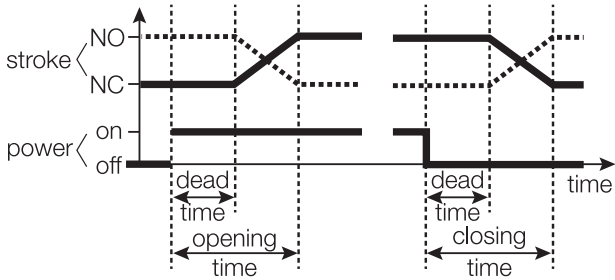
"Normally Open" = Actuator stem retracts upward without power opening the valve, extending when powered to close the valve.

Function

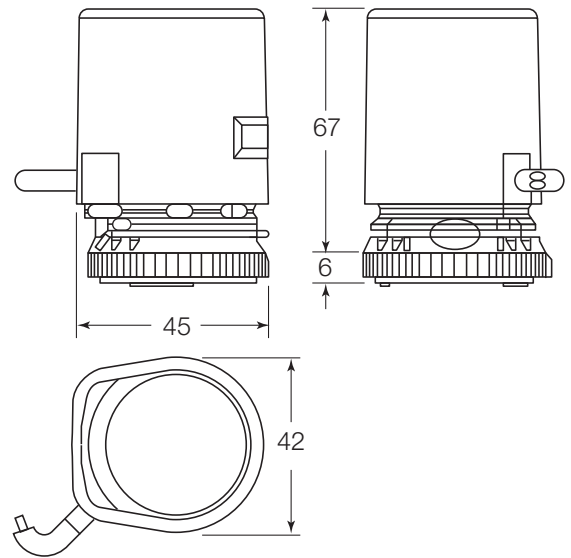
When the operating current is applied, a PTC resistor heats up a wax element. After a brief pre-heating delay (dead time), this wax element expands, causing movement in the actuator stroke.

Opening and Closing Times

Note: Opening and closing times depend upon ambient temperature and model.



Dimensions (mm)



Power Consumption and Running Times

Part Number	Initial Current*	Permanent Current*	Power Consumption*	Min. Full Stroke Runtime for 6.5 mm Valve Stroke
MZ95xx-24T	~0.2 A	< 0.1 A	< 2 W (2 VA)	7.5 min.
MZ95xx-230T	~0.4 A**	0.010 A	2 W	5.5 min.

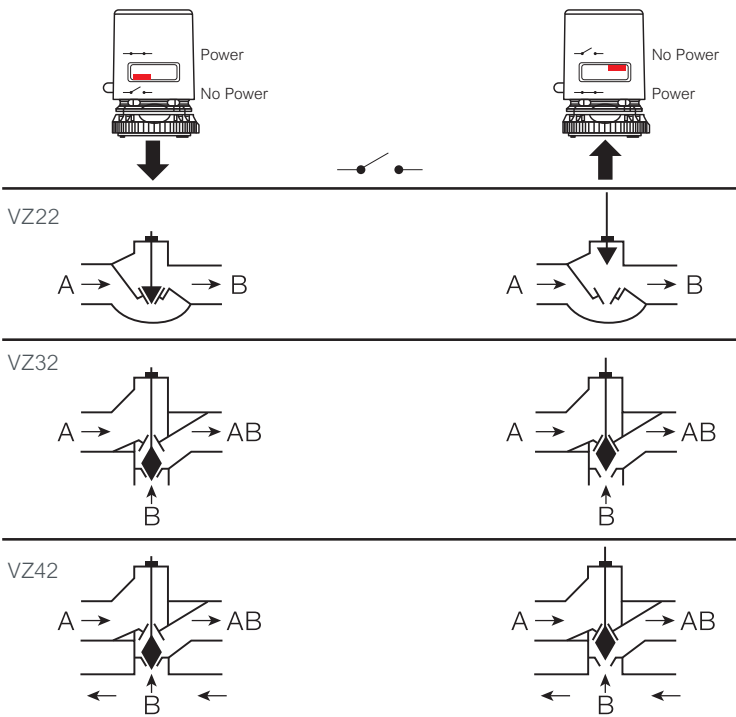
Valve Action

NC (NC.D) Normally Closed/Stem Down

NO (NO.U) Normally Open/Stem Up

VZ22/VZ32/VZ42 valve action without actuator

Normally Closed (NC) or Normally Open (NO) terminology applicable on the predominant pattern of 2-way valves.



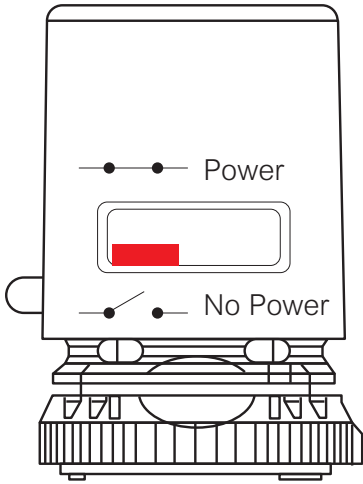
2-way valve. A-B open without actuator and when fitted with an unpowered NO (VZ22) actuator.

3-way valve (VZ32) and 3-way valve with bypass (VZ42). A-AB closed (B-AB open) without actuator and when fitted with an unpowered NO actuator.

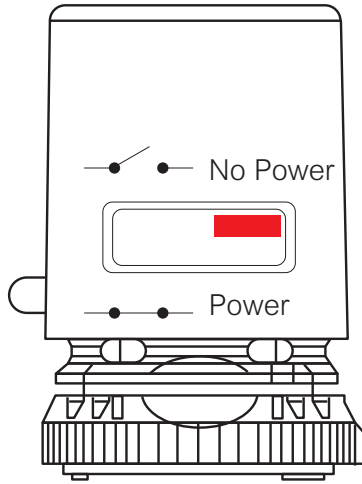
Stem Position Indicator

The position indicator (the red indicator behind the window on the face of the actuator) shows the actuator position against the powered or no power function.

NC (Normally Closed)



NO (Normally Open)

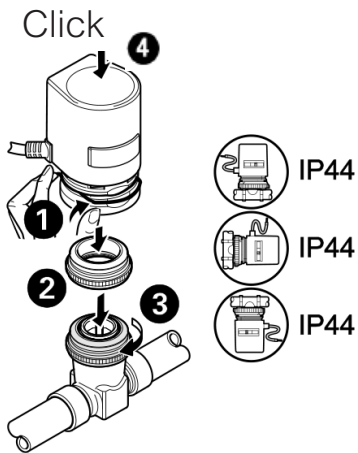


Mounting and Dismounting

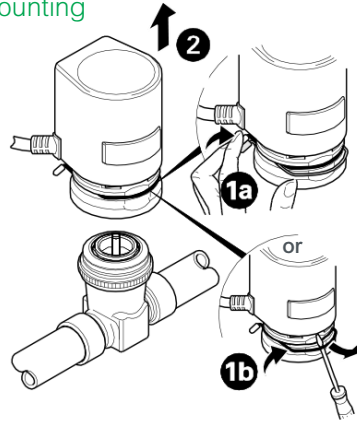
Caution:



Electrical connection cable must not touch hot pipework.



Dismounting



Wiring

