

MR95

Radiator Valve Actuator



Product Description

The MR95 is a small thermoelectric linear radiator valve actuator used in room applications for time-controlled two-point (On/Off) and pulse-width-modulated (PWM) regulation radiators or underfloor heating manifolds.

The MR95 is a discreet design actuator suitable for living space installations.

Specification

Max. stroke	4 mm
Supply voltage	MR95xx-24T: 24 Vac/Vdc \pm 20% MR95xx-230T: 230 Vac +10%...15%
Stem force	95 N
Ambient temperature	Max. 50°C
Power consumption	2 W

Features

- No mounting tools required
- Water-protected housing design in all mounting positions
- Pluggable cable for easy installation and servicing
- Low power consumption – allows 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, reliable long-term operation
- Overload protection (4 kV) for 230 Vac models

Protection standard	IP44 in all mounting positions
Cable length (standard)	1.0 m
Cable size	2 x 0.5 mm ²
Medium temperature	Max. 120 °C
Radiator connection	M30 x 1.5

Available Products

Part Number	Type Designation	Action ¹	Voltage
MR95NC-24T	MR95-NCD-24T 1.0M54 00	Normally closed (stem down)	24 Vac/Vdc
MR95NO-24T	MR95-NOU-24T 1.0M54 00	Normally open (stem up)	24 Vac/Vdc
MR95NC-230T	MR95-NCD-230T 1.0M54 00	Normally closed (stem down)	230 Vac
MR95NO-230T	MR95-NOU-230T 1.0M54 00	Normally open (stem up)	230 Vac

¹ Without power, in combination with standard radiator 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.

Compatible Radiator Valves

Manufacturer	Type
Drayton	TRV 4
Honeywell	M30x1.5, all
Empur	M30x1.5
Heimeier	M30x1.5
Junkers	M30x1.5
Oventrop	M30x1.5

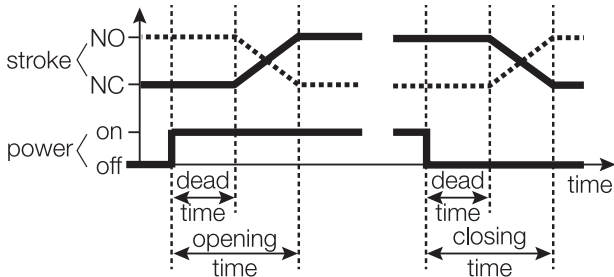
Manufacturer	Type
Siemens	Duogyr, M30x1.5
TA	M30x1.5 ²

² Some older TA valves are M28 and not suitable for the MR95.

Accessories

Part Number	Description
911 4202 500	Additional cable set 2.5M, 10 pcs
911 4205 000	Additional cable set 5M, 10 pcs
911 4210 000	Additional cable set 10M, 10 pcs

Opening and Closing Times

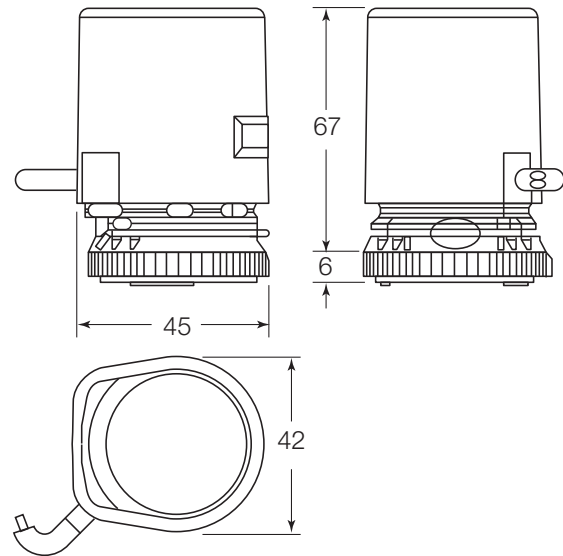


NOTE: Opening and closing times depend upon ambient temperature and model.

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.

Dimensions (mm)



Power Consumption and Running Times

Part Number	Initial Current ^c	Permanent Current ³	Power Consumption ³	Min. Full Stroke Runtime for 4 mm Valve Stroke
MR95xxxx -24T	~0.2 A	< 0.1 A	< 2 W (2 VA)	6.0 min
MR95xxxx -230T	~0.4 A ⁴	0.010 A	2 W	3.5 min

³All values at nominal voltage. ⁴ Average during first 500 msec.

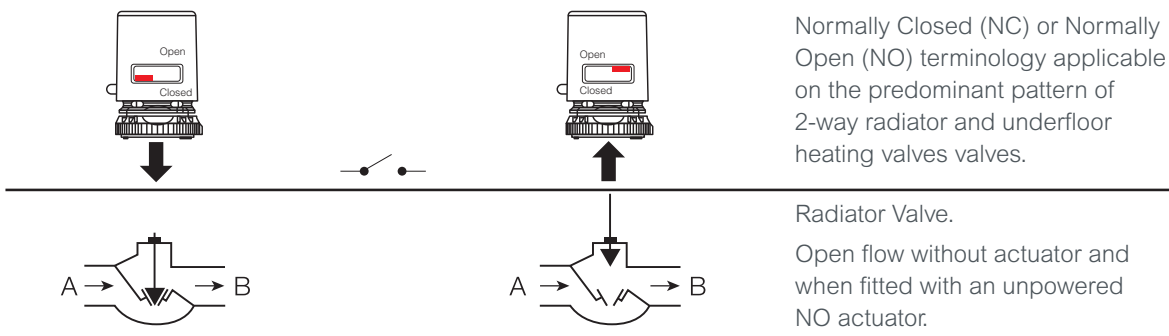
NOTE: Recommendations with Xenta 121 controller, using V1 to V4 TRIAC heating/cooling outputs:
 3 x 24 Vac actuators per line output (12 actuators max.)
 1 x 230 Vac actuator per line output (4 actuators max.)

Valve Action

NC (NC.D) Normally Closed/Stem Down

NO (NO.U) Normally Open/Stem Up

Radiator valve action without actuator



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

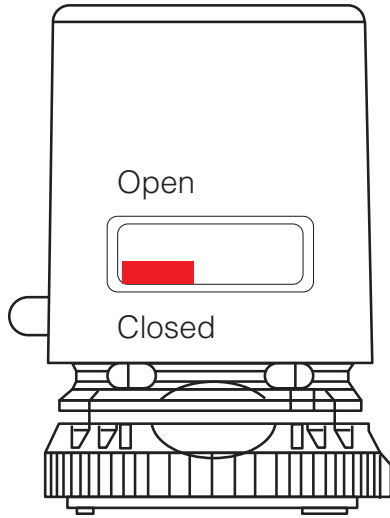
Radiator Valve.

Open flow without actuator and when fitted with an unpowered NO actuator.

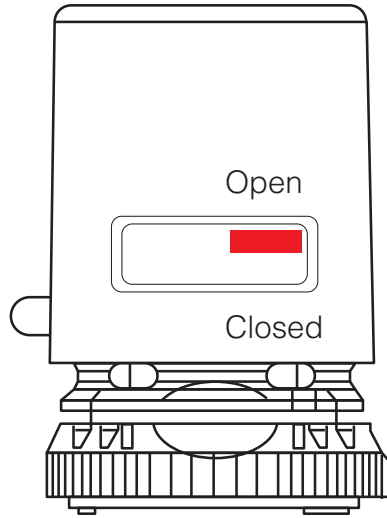
Stem Position Indicator

The position indicator (the red indicator behind the window on the face of the actuator) shows actuator position against the valve.

NC (Normally Closed)



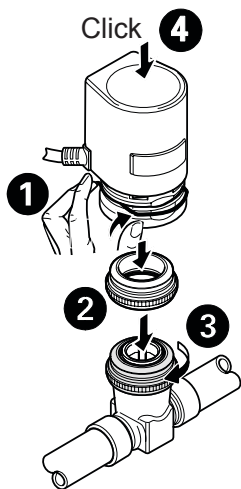
NO (Normally Open)



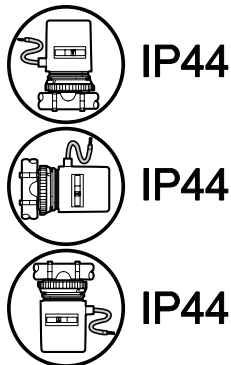
Mounting

Caution: Electrical connection cable must not touch hot pipework.

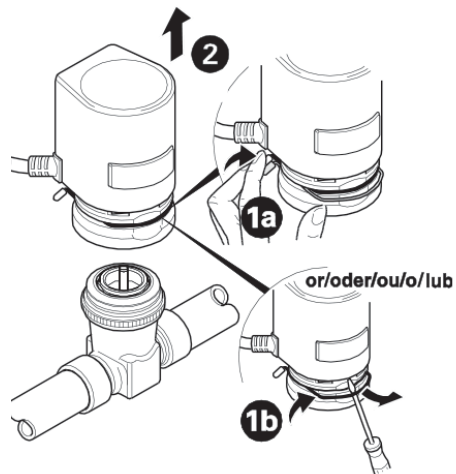
Mounting



Wiring



Dismounting



Wiring

