

## M31C150 3-position linear valve actuator

### PRODUCT DATA



### APPLICATION

M31C150 actuator is specifically designed for slow control processes; e.g. for regulating heating circuits. The actuator does not need endswitches or a feedback potentiometer. The absence of these mechanical components ensures longtime reliability.

These actuators are well suited for applications where space is limited and minimum power consumption is required.

### USE

- For heating regulation in district heating exchangers and boiler plants
- For cooling circuit regulation

### FEATURES

- Small size allows installation where space is limited
- Low power consumption
- Reliable longtime operation because mechanical feedback potentiometers and mechanical endswitches are not required
- Magnetic coupling for stem force limitation and self-adjustment of the close-off-point
- Reversible synchronous AC motor
- Suitable for three-position modulating control without proportional feedback
- Supplied with prewired connection cable
- Simple, standardized valve/actuator coupling; no tools required for mounting
- Visual valve position indicator furnished with actuators
- Manual operation provided

### SPECIFICATIONS

<b>Order number</b>	<b>M31C150</b>
<b>Supply voltage</b>	24 VAC +10% ... -30%; 50/60 Hz
<b>Power consumption</b>	0,7 VA
<b>Control type</b>	three-position
<b>Stroke</b>	6,5 mm
<b>Run time</b>	150 s at 50 Hz
<b>Stem force</b>	300 N
<b>Protection standard</b>	IP 43 (in acc with EN 60529)
<b>Protection class</b>	II (in acc with EN 60730)
<b>Connection cable</b>	1,5 m
<b>Ambient operating temperature limits</b>	0... 60°C
<b>Weight</b>	0,4 kg
<b>Suitable valves</b>	VD215-VD232; OUV5872B/D; V5832B 2083-2117; V5833A 2084-2118
<b>Manual operation</b>	Yes
<b>Warranty</b>	2 years



## OPERATION

The movement of the electric actuators is produced by a screw spindle, which is driven in both directions by a synchronous motor through a set of gears. A magnetic clutch limits the torque of the gear assembly and the driving force of the actuators. The actuators are fixed to the valve body by means of a coupling ring requiring no tools for mounting. The actuators are maintenance-free and supplied completely with a ready-to-wire connecting cable.

## DIMENSIONS (mm):

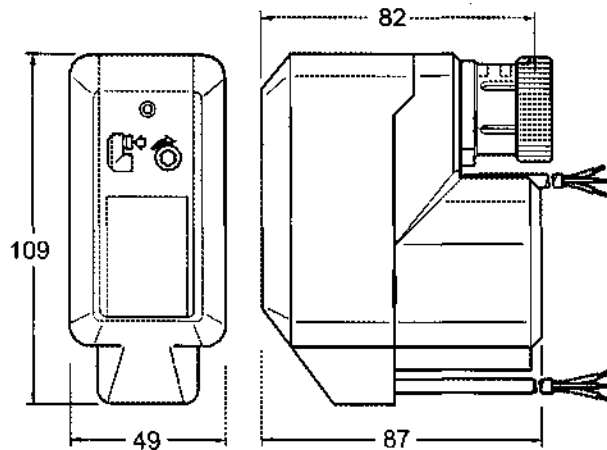


Fig 1: Housing type C

## MANUAL OPERATION

The actuator has a knob for the manual adjustment. To prevent the valve from damage, the operation must Only be done when there is no power to the motor.



Fig 2. Manual operation

## COMMISSIONING ADVICE

A functional check of the valve actuator can be carried out by changing the controller setpoint by 5 °C or more. The movement of the actuator stem (Fig 3) indicates whether the valve is opening or closing.

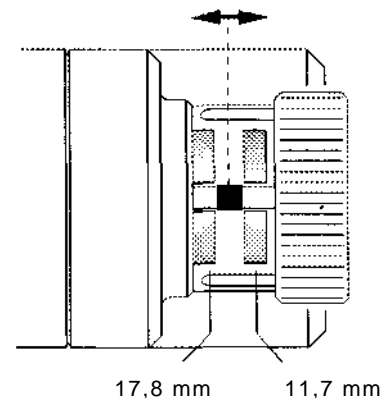


Fig 3. Movement of the actuator stem

## MOUNTING POSITION

The actuator may only be mounted beside or above the valve. Adjust the valve in the right position before mounting the actuator.

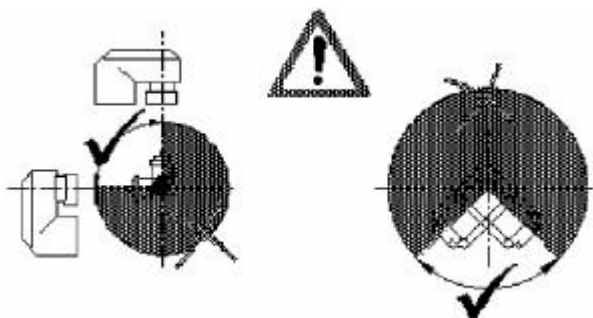


Fig 4. Mounting positions

## MOUNTING

Before the actuator is fixed to the valve, the adjustment cap must be removed (Fig 5). Make sure that the actuator is in the retract position (factory supplied position) before fixing the actuator to the valve body.



Fig 5. Remove protection cap

The actuator must be mounted by hand. Don't use tools or additional force because actuator and valve may be damaged.

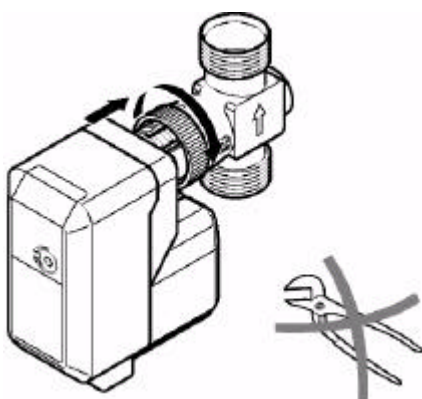


Fig 6. Mounting the actuator

## ELECTRIC WIRING OF M31C150

COM		
Valge Vit White Balts	Roheline Grön Green Sals	Pruun Brun Brown Bruns
VD 215 - 232 V5832B 2083 - 2117		
V5833A 2084 - 2118		