



## TECHNICAL DATA

<b>Valve motor</b>	
- Power supply	24 V AC +10/-15%, 50/60 Hz
- Consumption approx.	24 VA
- Casing	IP66
- Cable union	2xM20 1xM16
- Closing speed	15....30 sec.
- Ambient temp.	-10 to +55 °C
- Closing force	1100 N
- Stroke	0 – 40 mm
- Weight	5.6 kg
<b>Control box</b>	
- Transformer	230/24 V AC, 10 VA, 50/60 Hz
- Timer	10 sec.
- External alarm	Potential free switch
- Fuse	T 0.5 A / 250 V
<b>Dual thermostat</b>	
- Adjustable	35 – 95 °C
- Overheat protection	95 – 110 °C, Sealed at 105 °C, Manual reset
- Thread	½ RG
- Immersion-tube	110 mm

Subject to change without notice.

## APPLICATIONS

Safety Set SM6 is developed for all Clorius valves up to 150 mm, but may be used for some other valve brands of corresponding size and function, too. It is consequently well suited for modernisation of existing systems.

## FUNCTION

Safety Set SM6 is used for heating, cooling, ventilation and industrial systems, no matter whether the medium is water, steam or oil.

## DESIGN

Safety Set SM6 consists of a valve motor, a control box and a dual thermostat. The valve motor is driven by a gear motor. Stepping motor with SUT (Superior Universal Technology) electronic control unit and electronic load-dependant cut-off.

The valve motor is delivered for 24 V AC/DC. The build-in spring return ensures a closing time of max. 4 sec. By temperatures higher than 130°C, a cooling unit (1-0152285) is to be mounted between valve and motor.

All gear wheels and bearings are life-time lubricated. Maintenance-free gear unit made of sintered steel; gearbox base-plate made of steel. The spring return is released when the power disappears from the holding coil, closing the valve completely. A timer in the control box ensures that the motor is not turned on again before 10 sec. after a spring return release. This function protects against starting the motor before the spring return function has terminated.

## FEATURES

- IP66 (EN60529)
- Valve actuator with safety function (as per DIN EN 14597) and pushing force of 1100 N
- Easy to fit and self adjustable
- Spring return
- Simple assembly with valve; spindle is automatically connected after control voltage is applied (patented system)
- Lifetime lubricated gearbox
- 2-4 safety functions
- Direction of operation can be selected via screw terminals when making the electrical connection

## THE CONTROL BOX CONTAINS:

- a 230/24 V AC transformer for the valve motor
- the 10 sec. timer for the spring return
- a potential free alarm switch
- terminal blocks for connections to the valve motor, the dual thermostat, other safety equipment, an alarm, and power
- a build-in fuse protecting against over-load and short-circuiting

The dual thermostat is set to the normal close-down temperature, e.g., 90°C, where the valve is to be closed. It further includes an overheating thermostat for spring return emergency close-down at 105°C. This ensures correct function, even if, e.g., the normal thermostat should fail. For additional safety, the overheating thermostat has to be reset manually after a break.

## BUILD-IN SAFETY FUNCTIONS

### Power failure

The build-in spring return closes the valve. When the power returns, the motor starts again after 10 sec. and moves the valve back to its original position.

### Overheating protection

The spring return of the motor closes the valve on a signal from the 105°C overheating thermostat or other safety devices. The overheating thermostat has manual reset.

Other protections possibilities:

### Against circulation failure

The motor closes the valve when a flow switch placed in the secondary circuit releases the spring return, e.g. by a pump failure. When circulation returns, the valve reopens automatically after 10 sec.

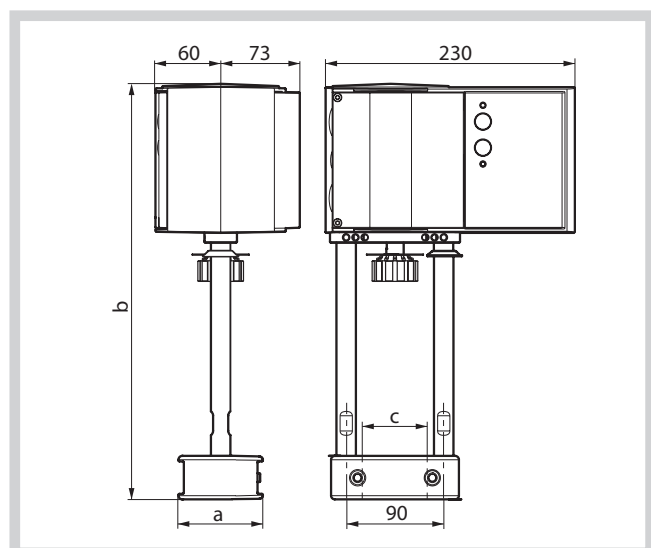
### Against pressure failure

By means of a pressure switch the motor will release the spring return if the water pressure in the secondary circuit is reduced (static pressure).

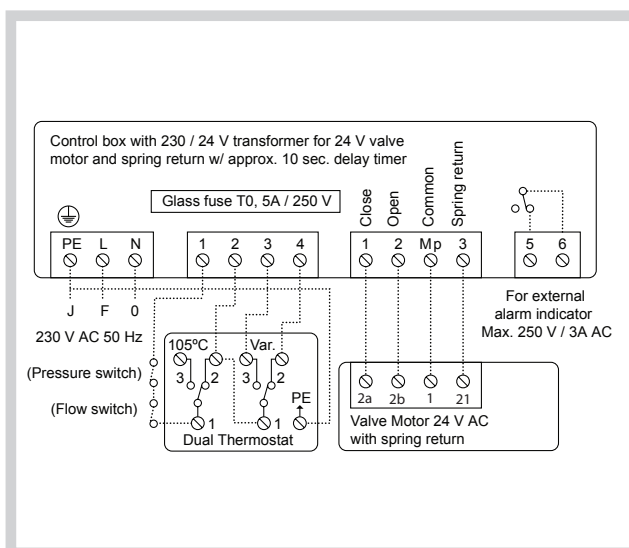
## ALARM FUNCTION

The build-in potential free alarm relay is activated at emergency close down (spring return).

## DIMENSION SKETCH



## WIRING DIAGRAM, SAFETY SET SM6



## EQUIPMENT DIAGRAM

