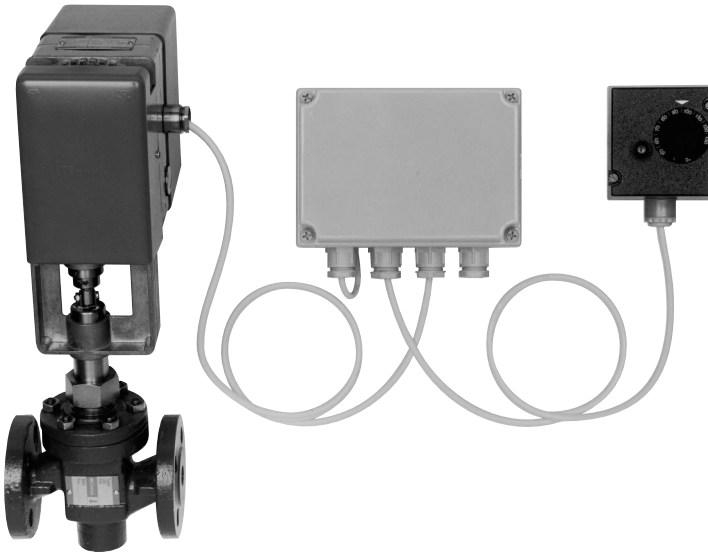


Safety Set SM6

Instructions



Description and use

Description and use

Safety Set SM6 consists of:

- Valve motor
- Control box
- Dual thermostat.

The valve motor's gear-motor has a crank mechanism to move the valve spindle up and down. The valve position can be seen on the curved rack.

The valve motor is equipped with a replaceable gasket box with a Teflon washer. An overload protection spring is inserted between the crank mechanism and the gasket box.

The control box contains:

- a 220/24 V AC transformer for the valve motor
- the 10 sec. timer for the spring return.
- an potentialfree alarm switch. Prefixed normally open.
- terminal blocks for connections to the valve motor, the dual thermostat, other safety equipment, alarm, and power.
- a build-in fuse protecting against overload and short-circuiting.

Set the outside scale of the **dual thermostat** to the maximum accepted system temperature. At this temperature the motor will close the valve. At lower system temperatures the motor will open the valve again.

The overheating thermostat behind the cover releases the spring return at e.g. 105°C (adjustable). This ensures correct function, even if e.g. the normal thermostat should fail.

The overheating thermostat has to be reset manually after a break.

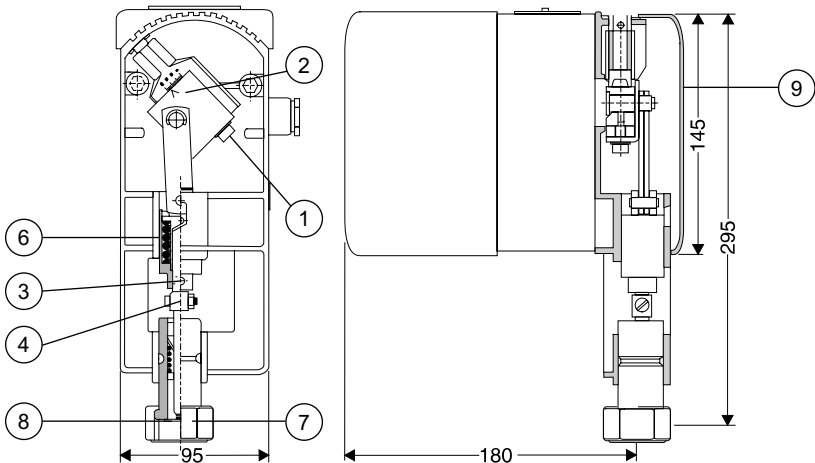
Push the red button on the thermostat.

Safety functions

The valve motors springreturn releases at:

- **overheating**
- **power failure**
- **flow/pressure failure** (if mounted).

The springreturn is released when the power disappears from the holding coil, closing (opening: see page 4) the valve completely. When the power returns, the motor moves the valve back to its normal position. A timer in the control box ensures that the motor is not switched on again before 10 sec. after a springreturn release. This function protects against starting the motor before the springreturn function has terminated.



Mounting

Mounting

If possible, mount the safety motor vertically (above or below the valve).

The safety motor is delivered in position closed valve, and the valve stroke is set to 20 mm.

A. Fasten the motor firmly to the valve, using the union nut (7) and its gasket (8).

B. Remove the cover (9).

C. Adjust the valve stroke according to the Valve stroke table below: Loosen skrew (1) and adjust the stroke on the scale to the desired value. Fasten screw (1).

D. Loosen the pointed screw (3), and turn the spindle (4) until the valve is closed. Turn the spindle further ½ turn to activate the safety spring (6) approx. 0.5 mm. The safety spring has a max. stroke of 1.5 mm. Finally lock the spindle with the pointed screw (3).

E. Make the electrical connections according to the diagram on page 4. Set the thermostat.

Note: SM6 must never be used for temperature control. Under normal conditions, the valve must be fully open (closed: see page 4).

F. Apply power and control, that the motor works as desired.

On 3-way valves, check that the valve is closed in both extreme positions, port 2 and 3 respectively. If not, adjust (2) to a longer stroke than shown in the table by repeating point C, and D.

G. When OK remount the cover (9).

Setting the overheating thermostat

The overheating thermostat is preset to 105°C and sealed. **This setting must normally not be changed!** However, it is possible to adjust the overheat thermostat to temperatures between 95 and 130°C:

A. Open the thermostat housing (2 screws on top of the cover).

B. Adjust the overheat thermostat (with the red reset button) on the scale 95-130°C.

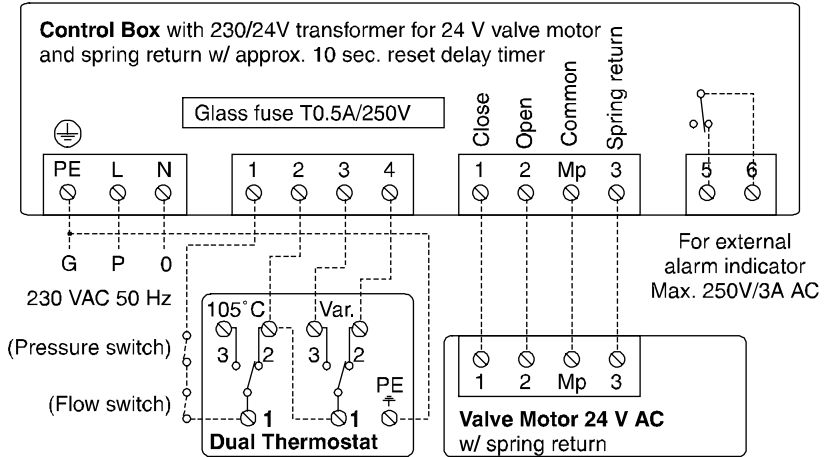
C. Close the thermostat housing.

Valve stroke (mm)

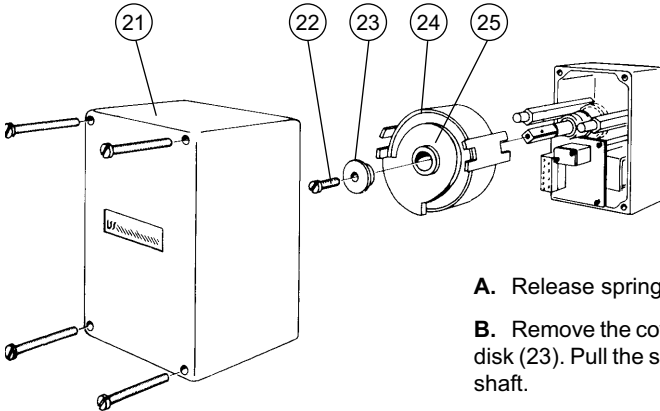
Type \ Dimension DN mm	15/4	15/6	15/9	15/12	15	20	25	32	40	50	65	80	100	125	150
L1S		6	6		6	7	9								
L2S								6	8	9					
L3S					3	4	4	6	8						
L3F											10.5	11	13	18	21
M1F, H1F	6	6	6	6	6	6.5	7	8	9	10					
M1FB, H1HB							7	8	9	10	13	16	20		
M2F, H2F						6.5	7	8	9	10	11	13	15	18	18
H3F							7	8	9	10					

Installation

Electrical Diagram



Changing the springreturn to open function



On delivery, springreturn will close the valve. This function can be reversed, so that springreturn will open the valve:

- Release springreturn: Switch power off.
- Remove the cover (21), the screw (22) and the disk (23). Pull the springcover (24) off the squared shaft.
- Connect valve terminal 2 to 3 and apply power. The valve moves to stop in open position. Disconnect power.
- Turn around the springcover, mount it on the shaft with the stop disk (25) inmost. Fasten it with the screw (22) and the disk (23).
- Remount the cover (21).

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