

LK Single Zone Manifold Control 0-10 V (for large areas)

DESIGN

The LK Single Zone Manifold Control 0-10 V is used in larger temperature zones that have their own heating circuit manifold and to be regulated by a 0-10 V signal.

REQUIREMENTS

The heating system must be equipped with a control system with outdoor reset controlled heat regulation where pre-shunting of the secondary flow occurs via the LK Shunt or similar.

The LK Single Zone Manifold Control 0-10 V must not be connected directly to the hot water circuit.

DIAGRAM

These instructions give two diagrams for two standard solutions

1. Continuous flow in the supply line intended for boiler facilities, heating pump operation and similar.
2. Variable flow in the supply line intended for district heating.

HEATING SYSTEM FLUSHING

Before assembly, the heating system must be fully flushed and should not contain any impurities or additives that may damage the LK Single Zone Manifold Control 0-10 V.



Symbolic image.

CONTROL VALVES

The control valves (trim and adjustment valve) are not supplied by LK, but are a requirement to maintain problem-free operation. The control valves are assembled according to the manufacturer's instructions and according to the design requirements for the specific installation.

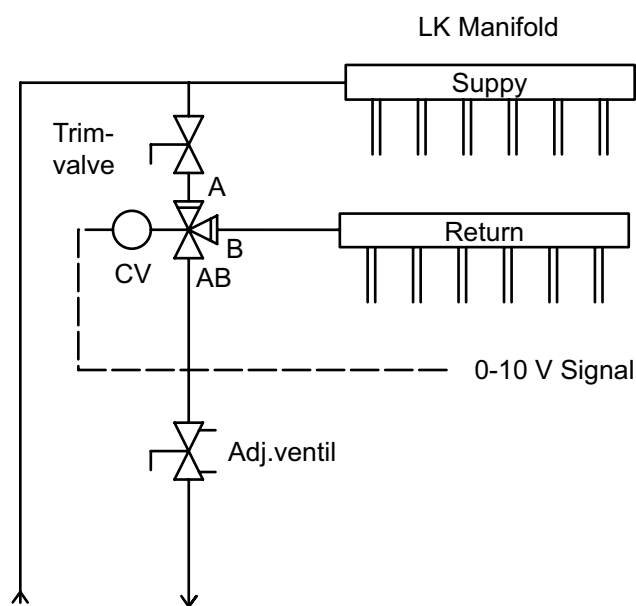


Diagram 1. Continuous flow in supply circuit.

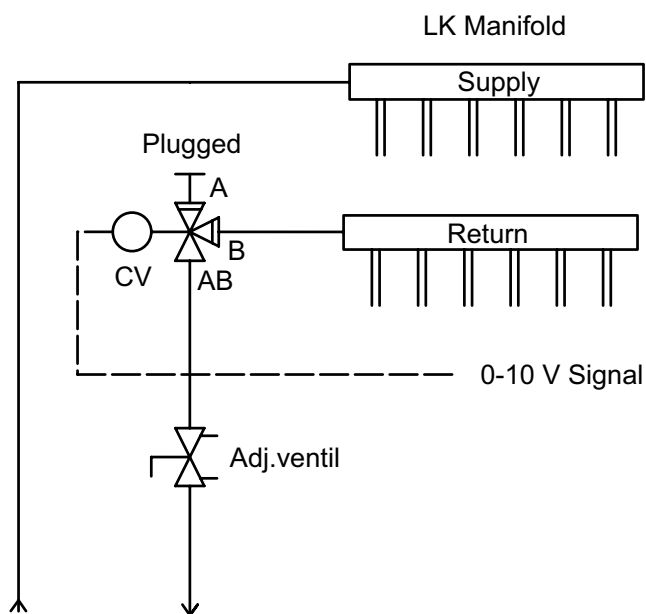
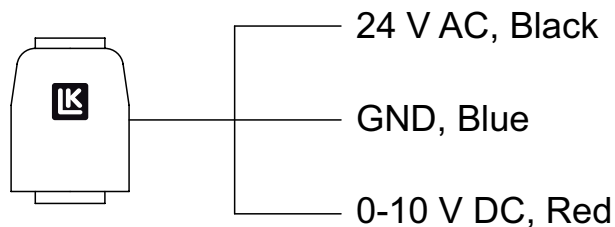


Diagram 2. Variable flow in supply circuit.

LK ACTUATOR 0-10 V

LK Actuator 0-10 V is connected according to the illustration below.



LK Actuator

CHARGING, VENTING AND PRESSURE TESTING

There is advice and instructions for this process in the installation instructions for the LK Heating Circuit Manifold.

PRESETTING VALUE

Begin by setting the presetting values for the under floor heating circuits according to the information in the design data calculation. See the description in the instructions for the under floor heating manifold.

ADJUSTING WATER FLOW RATES

Adjust flow rates as follows:

- The control valve (CV) must be fully open to the manifold (port B). This is done by setting the room temperature thermostat to maximum or alternatively switching off the current to the actuator. The change-over time from closed to open valve is approximately 3 - 5 minutes.
- The trim valve (on a system with continuous flow) must be closed.
- Adjust the necessary flow over the adjustment valve. Lock the adjustment valve.
- The adjustment for district heating installation is ready. For continuous flow installation, the by-pass circuit must also be adjusted.
- The control valve (CV) is opened in the by-pass position by closing port B, which is done by setting the room thermostat to minimum. (NOTE: The change-over time.)
- The flow in the by-pass circuit must be the same as over the heating circuit manifold. Measure the flow over the adjustment valve and make the adjustment over the trim valve.
- Record the adjustment/setting values.

TECHNICAL DATA

Article no.	241 96 19
Supply voltage	24 V AC , 0-10 DC
Output	2 W
Control valve	Kvs 4,0 with electrothermal actuator 24 V AC, 3 W
Connection	1"

- Recommended maximum flow 1500 l/hour, which provides a pressure drop of approx. 15 kPa over the valve.

TIP FOR CONNECTION

Pipes can be connected using the LK Half Coupler.

Article no. 241 81 64	1" x Cu22
Article no. 241 81 65	1" x Cu28
Article no. 241 81 66	1" x PEX 25 x 2,3