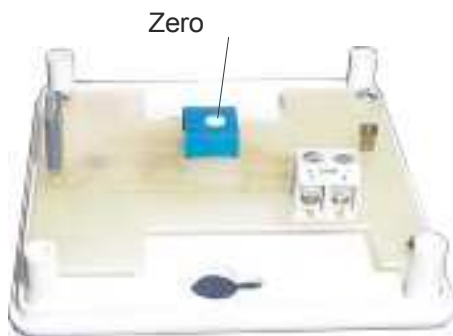


LKM443/444 INSTRUCTIONS FOR USE

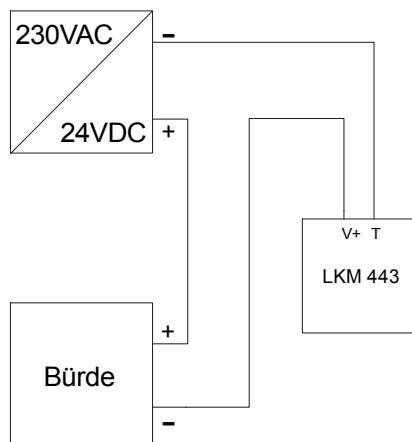
The LKM 443 and LKM 444 are room temperature sensing devices with integrated measurement transducers with a 4..20mA output signal (LKM443) or a 0..10V output signal (LKM444). They are suitable for the measurement of temperatures in enclosed spaces in the temperature range from -30°C to 85°C. As a result of their open structure the temperature sensors should only be installed in spaces in which there is no risk of condensation.

ADJUSTERS



In the casing of the measurement transducer is located an adjustable potentiometer with which a correction to the output signal can be made. This is necessary, for example, if a temperature difference exists between the point of measurement and the point that is to be controlled. The potentiometer is protected against inadvertent adjustments.

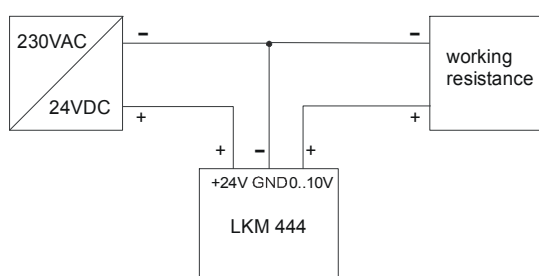
EXTERNAL CIRCUITRY FOR THE TYPE 443



The temperature signal of the Type 443 measurement transducer is generated by a semiconductor sensor and then amplified. The zero point potentiometer can be adjusted for corrections to measurement errors.

The output current follows the temperature signal present at input linearly.

EXTERNAL CIRCUITRY FOR THE TYPE 444



The temperature signal of the Type 444 measurement transducer is generated by a semiconductor sensor and then amplified. The zero point potentiometer can be adjusted for corrections to measurement errors. The output voltage follows the temperature signal present at input linearly. The output current is limited to 4mA.

INSTALLATION INSTRUCTIONS

The room temperature sensing devices are supplied with options for connection either underneath or on the rear face. Attention must be paid to the correct installation orientation without fail. The inlet and outlet openings must remain free to guarantee a correct temperature read-out. In the event of incorrect installation a temperature rise of up to several degrees can occur as a result of self-heating. Any installation in which there is a possibility of condensation must be avoided without fail.

POSSIBLE DEFECTS FOR THE LKM443

| <i>Fault observed</i> | <i>Cause of the fault</i> |
|--|--|
| No current is flowing | No supply voltage Read-out unit defective Lead fracture in the current loop Polarity in the current loop reversed |
| Output signal < 4 mA | Sensor short circuit |
| Output signal > 20 mA | Sensor breakage |
| Temperature read-out too high | Self-heating as a result of incorrect installation |
| Read-out obviously too high or too low | Condensation in the sensor or the sensor input lead |

POSSIBLE DEFECTS FOR THE LKM444

| <i>Fault observed</i> | <i>Cause of the fault</i> |
|--|---|
| No voltage at output | No supply voltage Read-out unit defective Lead fracture in the input lead |
| Output signal 0V | Sensor short circuit |
| Output signal > 10V | Sensor breakage |
| Temperature read-out too high | Self-heating as a result of incorrect installation |
| Read-out obviously too high or too low | Condensation in the sensor or the sensor input lead |

