![LKM electronic GmbH logo]

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Temperature and humidity sensor LKM446 with output 0..10V

Functional Description

The LKM 446 device is a low-cost room temperature/moisture sensor with integrated measuring transducer and two voltage outputs of 0..10V. This device allows the measurement of temperature and moisture values in buildings, plants, and switch cabinets. It can be connected directly to an evaluation unit with voltage input such as PC-cards or PLCs. The LKM 446 device has a typical accuracy of ±0.5°C and relative humidity of 3%. The sensor is delivered fully calibrated. Two controllers are provided for carrying out minor on-site corrections. Due to its design, this room sensor is only suitable for being used in enclosed spaces. During mounting, attention has to be paid to the correct position of the sensor. The cable outlet is located at the back, a lateral cable outlet can be provided optionally. The protection class is IP20. The measuring range amounts to 0..50°C for the temperature, and 0..100% for relative humidity. The user can also switch over to a temperature range of –20..80°C.

Technical Data

Input:	semi-conductor sensor integrated
Measuring range for temperature:	0..50°C switchable to -20..80°C
Measuring range for humidty:	0..100% rel.humidity guaranteed values 5..95%
Supply voltage:	15..35VDC, 15..26VAC
Output:	2x0..10V
Max. output current:	1mA 0.25mA without distortion of displayed values
Measurement error temperature:	typ.+/- 0.5°C at 25°C
Measuring error humidity:	<3%
Operating temp. range:	-20...80°C
Humidity:	<95%
Type of terminals:	screw clamps
Clamping range:	0.13...1.5mm²
Material:	PVC white
Dimensions:	70x70x25mm (HxWxD)
Weight:	approx.50g

EMC
Emission and
Noise immunity: EN 61326-1:2006
                         EN 61326-2-3:2006

Schematic Diagram