Kentix MultiSensors have integrated temperature sensors. Depending on the MultiSensor type, the temperature measurement is influenced by the intrinsic heat of the device. This mainly concerns the MultiSensors with network connection, i.e. MultiSensor-LAN or MultiSensor-TI. For the MultiSensors with radio and battery operation, the effect of intrinsic heat is negligible. In order to keep the influence of the intrinsic heat as low as possible, the measurement is corrected by the software on the one hand and minimized by the possibility of calibration on the other hand. For the best possible measurement, we recommend calibrating the sensor at the final mounting and installation location.

For a good measurement, the sensor must be mounted correctly or operated in the correct position. A sensor lying on the table with insufficient convection through the sensor housing always leads to poor measurement results. The X-opening of the sensor must always point downward and should be at least 10 cm away from surrounding objects or surfaces.

Calibration of the room temperature measurement

Kentix MultiSensors record all important environmental values of a room, including the room temperature. In order to achieve the most accurate temperature possible and to trigger an alarm if the room temperature exceeds the limit value, we recommend calibrating the temperature measurement at the final installation location. This is especially necessary for sensors with Ethernet (PoE) connection, since a certain intrinsic heat falsifies the measurement. For MultiSensors with radio and battery supply, the influence of the intrinsic heat is not present.

Kentix MultiSensors are not calibrated measuring devices, but alarm devices whose measuring accuracy is completely sufficient for reliable reporting and documentation of limit value violations. The accuracy of the sensors is ±1% for temperature measurement and ±5% for humidity.

However, in order to obtain a good measurement result with reproducible measured values in the event of an alarm, the MultiSensor should be calibrated to the respective installation location after installation. To do this, the temperature in the immediate vicinity (approx. 5-10 cm away) of the MultiSensor must be measured comparatively with a room thermometer that is as accurate as possible. If there is a deviation in temperature between the MultiSensor and the thermometer, the temperature value can be corrected. This is done by entering the determined temperature difference between the MultiSensor and the room thermometer as a correction offset in the KentixONE software. The correction also has a direct influence on the measurement of the relative humidity and on the dew point calculation of the MultiSensor.

Step	Note
Install MultiSensor at the destination.	The position and orientation of the sensor should not be changed afterwards. Keep the following in mind: – Mounting with X air opening downwards – Do not mount in air stream – Ventilation vent openings of the sensor must be free

Step	Note
Perform configuration of the MultiSensor with Kentix ONE.	
Earliest 30 minutes after startup match the temperature of the MultiSensor with the room temperature.	To do this, measure the temperature with an external reference thermometer in the immediate vicinity, approx. 5-10 cm from the MultiSensor. It should be noted that this thermometer also acclimatizes to the room and displays the correct room temperature only after a few minutes.
If a difference between the MultiSensor and the thermometer is detected, this can be entered in the “Offset” field in the KentixONE configuration of the MultiSensor. After saving, the sensor then provides the corrected measured value.	The offset can only be specified by whole degrees, i.e. without decimal places. This results in an accuracy for the temperature of +/- 0.5 degrees.