

PC TEMPERATURE MEASURING SYSTEM

DESCRIPTION OF CALIBRATION



Calibration

The sensors are factory calibrated. The accuracy at 23°C is approx. $\pm 0.5^\circ$ K, which is sufficient for most of the applications.

For special requirements of high measurement accuracy, further calibration is possible at one or two reference points by the end user.

Before starting calibration, first all sensor must be connected and searched.

For the first equalisation point, initially all connected sensors must be simultaneously heated to 23.00°C. This must be done in a temperature bath, because the accuracy and stability of reference value considerably influences the result. For accepting the reference value, proceed as follows:

- After pressing the configuration key on the board once for a short while (approx. 1 second) from the initial condition, the program goes into calibration mode for the reference temperature of 23.00°C. The LED cyclically blinks once for a short while.
- If the service key is operated in the calibration mode for at least 5 seconds, the measured temperatures of the sensors are set to 23.00°C (Offset correction). The individual correction value for all sensors are stored in the micro controller.

- To leave calibration, the operating voltage must be switched off and on after a short while. The software is again in the measurement mode.

If calibration is also to be done at a second reference point, then all the sensors must be simultaneously heated to 60.00°C.

- After pressing the configuration key on the board twice for a short while (approx. 1 second) from the initial condition, the program goes into calibration mode for the second reference temperature of 60.00°C. The LED cyclically blinks twice.
- If the service key is pressed in the second calibration mode for at least 5 seconds, the measured temperatures of the sensors are set to 60.00°C (change of gain). The individual correction value for each sensor is stored automatically in the micro controller.
- To leave calibration, the operating voltage must be switched off and on after a short while. The software is again in the measurement mode.