

Calibration of Intensity Microphones

The best results of intensity measurements are reached with two microphones with 0° phase difference. But it is likely that there is some kind of phase difference between two microphones. It is this phase difference that is found, when a pair of intensity microphones is calibrated.

The calibration procedure of a pair of intensity microphones consists of two steps. The following setup is used in the calibration procedure.

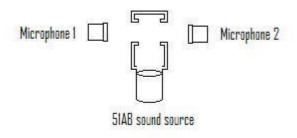


Figure 1: 51AB calibration - step 1

Step 1: The two microphones (Microphone 1 and Microphone 2, Fig. 1) are mounted in the Intensity Calibrator Type 51AB. The sound source is switched on and the microphones measure the sound pressure inside the calibrator.

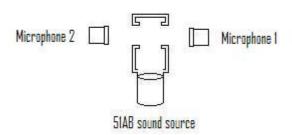


Figure 2: 51AB calibration - step 2 (Microphones have switched side compared to Fig. 1)

Step 2: The two microphones have now switched side and the measurement from step 1 is repeated. When the two measurements are completed, it is possible to calculate the phase difference between the two intensity microphones.

The intensity microphones Type 40AI/40AK comply with the IEC standard 61043 Class 1.

The intensity microphone Type 40BI complies with the IEC standard 61043 Class 2.