

The MK1 analyzer is an innovative development in the field of impedance measurement technology for 100 V loudspeaker networks.

Impedance measuring devices in 100 V loudspeaker systems usually operate at a frequency of 1 kHz.

The measured impedance values of the loudspeakers or loudspeaker lines are used for testing, monitoring, and documentation purposes to prevent overloading of the connected amplifiers.

Current standards for voice alarm systems require permanent monitoring of the loudspeaker lines. To ensure this, the so-called pilot tone method is used, which operates at an inaudible frequency. Speaker manufacturers specify the impedance or wattage of the speakers at 1 kHz. At 20 kHz, speakers have a higher impedance because the measured value depends on the measurement frequency and is not linear.

Therefore, before commissioning a voice alarm system with its amplifiers, it is particularly important to measure the loudspeaker cables to be connected at both 1 kHz and the pilot tone frequency used. This prevents overloading of the connected amplifiers and ensures the necessary monitoring of the loudspeaker cables using the pilot tone.



Note: In addition to the measurements described above, it is essential to check the speaker lines for possible ground faults.

The MK1 analyzer from GRÄF & MEYER measures impedance and phase from 25Hz to 25kHz.

In order to safely install and maintain 100V speaker networks in accordance with current standards, an impedance measuring device such as the MK1 analyzer should be part of every professional planner's and technician's basic equipment.

The scope of delivery includes batteries, laboratory measuring cables with clamp tips, and a transport box with pressure equalization valve (please observe the safety instructions).

Technische Daten:

Modell	Analysier MK1
Impedance measurement range	10Ohm – 20kOhm
Measurement frequency	25Hz 250Hz in 5Hz steps 250Hz 2,5kHz in 50Hz steps 2,5kHz 25kHz in 500Hz steps
Phase	+/-179 Degree
Accuracy in the entire measuring range	+/-2% für impedanz +/-5% für Phase
Calibration	Automatic calibration process
Measuring voltage	0,5-2V eff.
Display	2-line illuminated LCD display with 16 characters/lines
Power supply	4 AA batteries (AA type)
Case	Plastic with red rubber gasket as an impact protection function; graphite grey, smudge-proof membrane keypad
Dimension (WxHxD)	98x204x53 mm
Weight	0,385 kg
Accessories	Batteries, laboratory test leads with clamping tips, transport case with pressure equalization valve