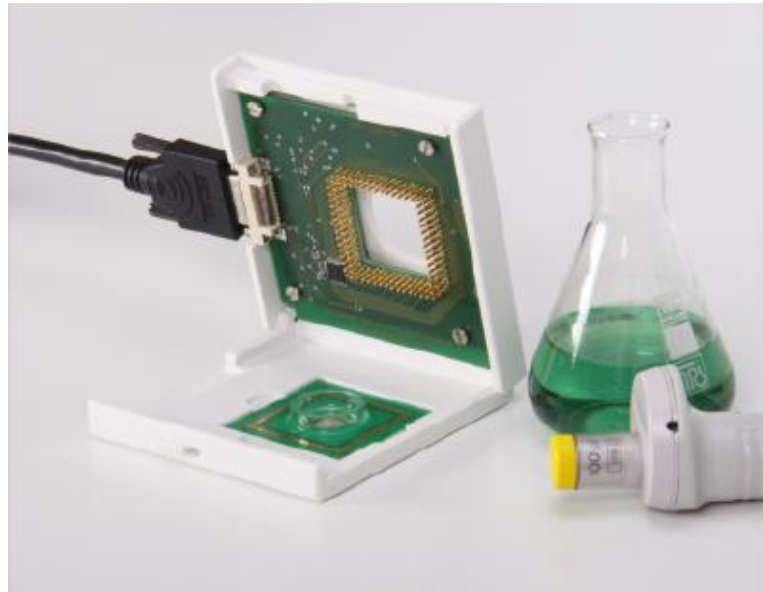


Specifications:

Sciospec MEArack

Extensionmodul for
Sciospec- ISX-Impedance analyzers



Measurement Instruments	Sciospec ISX-3, Sciospec ISX-5
Connection	Sciospec ExtensionPort
Frequency range	100 mHz – 10 MHz
Signal amplitude	$\pm 2,5$ V
Dimensions	approx. 100(W)mm x 100(L)mm x 16(H)mm
Measurement channels	60 Gold-spring loaded contacts for contacting the chip (divided into two groups), additional connector for reference electrode
Channel transition time	<10ms
Calibration	Integrated impedance calibration
Compatible MEA Chips	49mm x 49mm multielectrode arrays (see compatible chip layout) Standard MEA60 Biochips
Control	Fully integrated in standard Sciospec-Software with graphical user interface
Miscellaneous	Top and bottom window for easy use with microscopes and other optical measurementsolutions

Compatible Chip layout

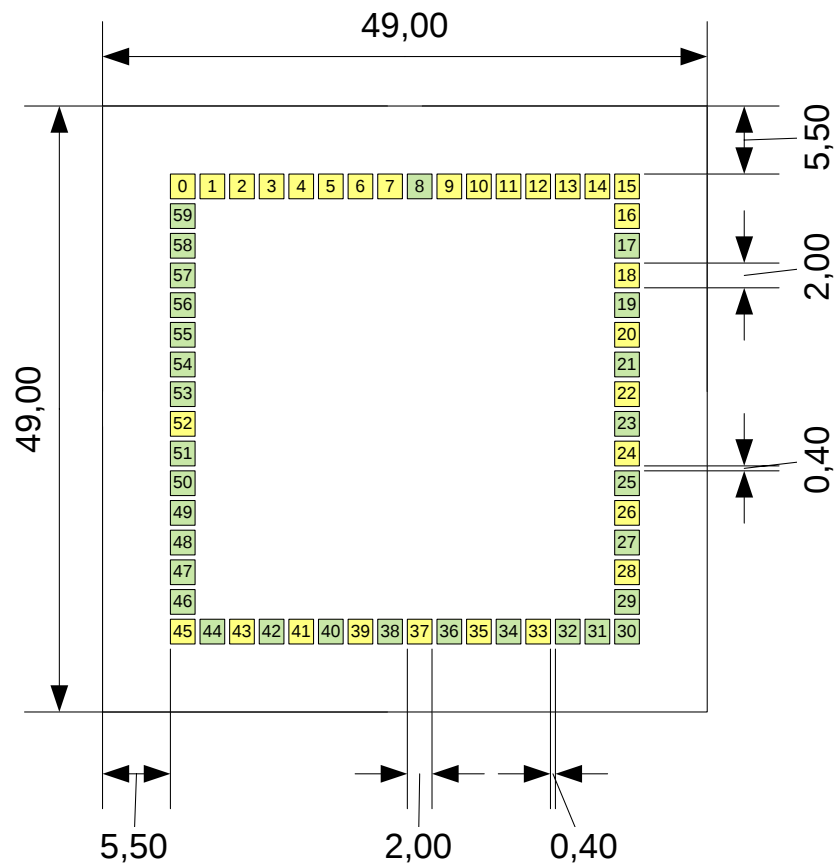


Fig 1: Chip layout

Examples of compatible MEA chips

- Qwane Bioscience MEA60 (formally Ayanda Biosciences)
- Multichannel Systems MEA1060

Channel selection

- 60 separately controllable channels
- Additional reference electrode
- Channels divided into two groups (see different colours in Fig 1: Chip layout)
- An impedance measurement is possible between to electrodes of a different group or between the reference electrode and any other electrode

Software control

- Fully integrated in standard Sciospec-Software
- Graphical user interface for channel selection
- Optional channel list for sequential measurements

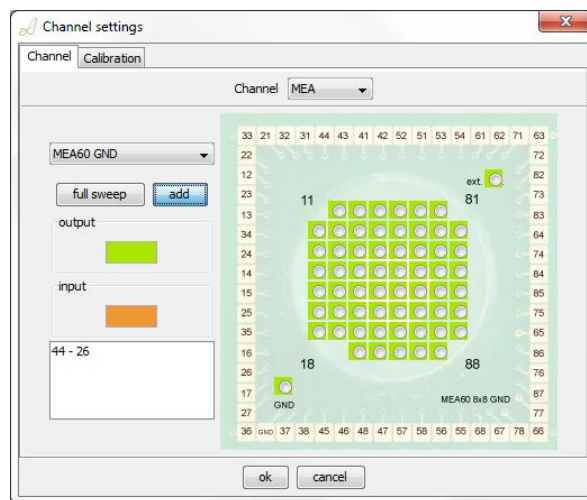
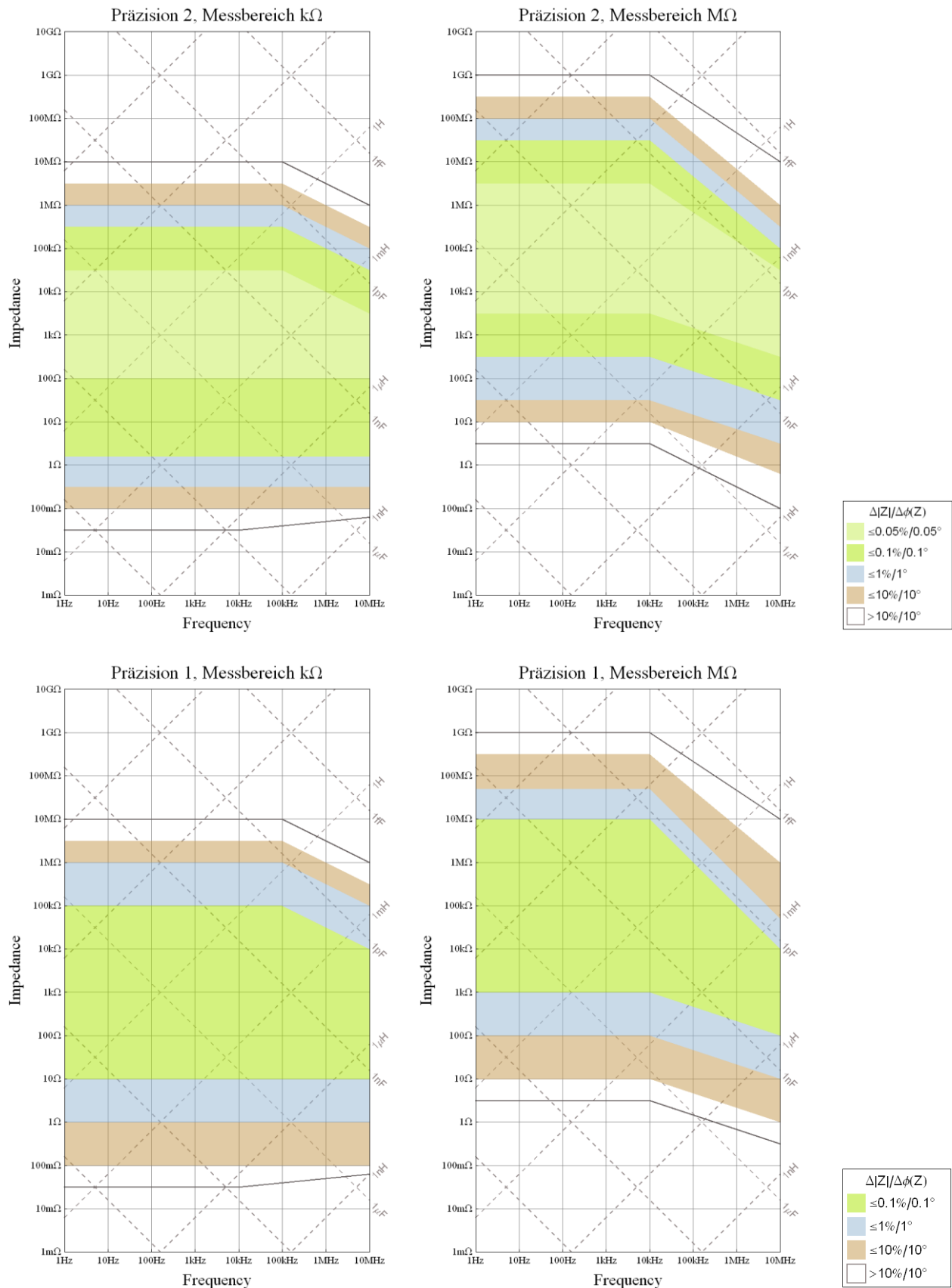
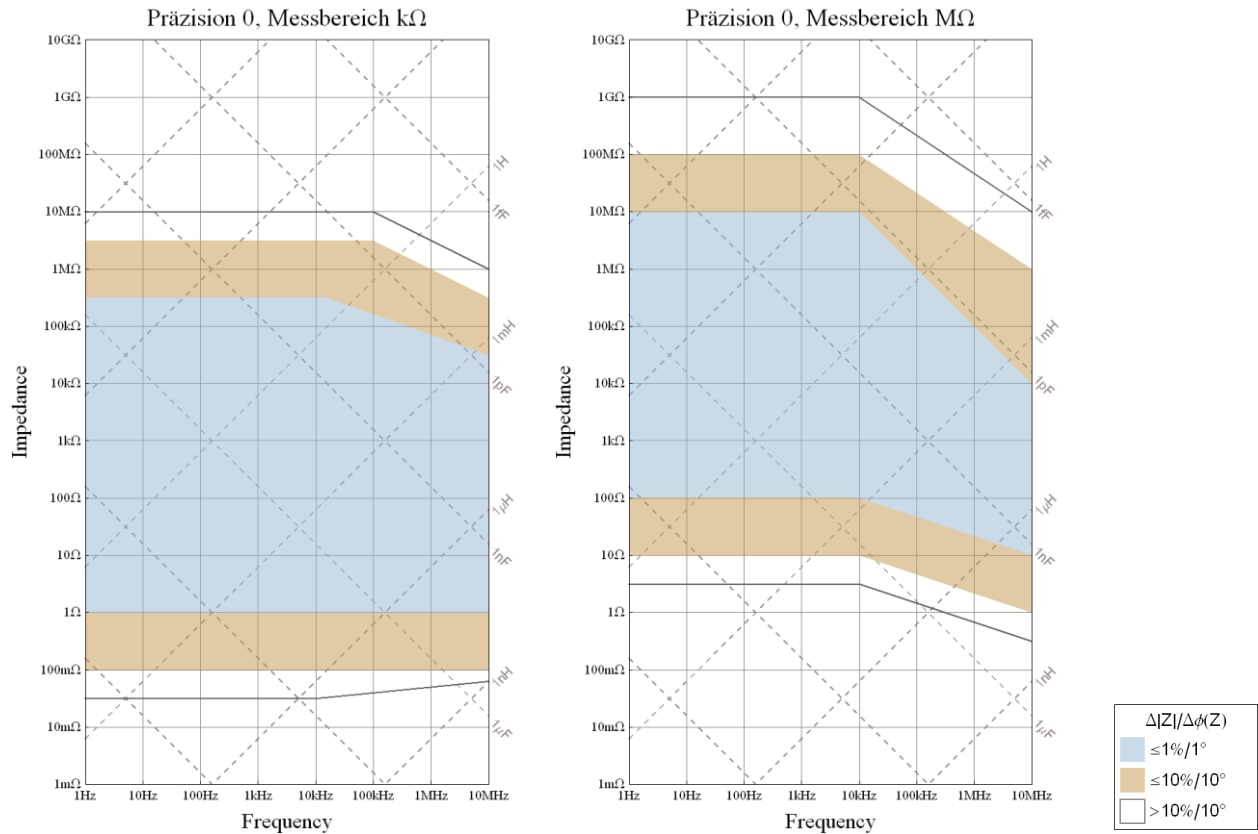


Fig 2: MEA Selection Panel

Accuracy of impedance measurements in combination with Sciospec ISX-3





All specifications refer to measurements done with a Sciospec ISX-3 in combination with the Sciospec MEArack. The signal amplitude is set to 100mV and the frequency range to „<10MHz“. For further information regarding the accuracy of the measurements refer to the Sciospec ISX-3 manual.

Example measurement:

Frequency sweep: 100Hz – 1MHz, 80 logarithmic Frequency steps,
precision 1, amplitude 100mV, measurement range MΩ

Measurement instrument:

Sciospec ISX-3 with connected Sciospec MEArack

Device under test: Multielektrode array, 40μm electrodes, 200μm apart, platinum
PBS buffersolution

