# Multiwell-MEA-System

## Technical Specifications

### General Characteristics
- **Operating temperature**: 10 °C to 50 °C
- **Storage temperature**: 0 °C to 50 °C
- **Relative humidity**: 10 % to 85 %, non-condensing

### Headstage
- **Dimensions (W x D x H)**: 302 mm x 166 mm x 90 mm
- **Weight**: 4000 g
- **Well plate contacting unit**: Motorized contacting mechanism

### Integrated Amplifier
- **Number of recording channels**: 288
- **Data resolution**: 24 bit
- **Bandwidth**: 0.1 Hz to 10 kHz, modifiable via software; default 1 Hz to 3.5 kHz
- **Sampling frequency per channel**: 50 kHz or lower, software controlled
- **Input voltage range**: ± 2500 mV

### Intergrated Stimulus Generator
- **Current stimulation**: max. ± 1 mA
- **Voltage stimulation**: max. ± 10 V
- **Stimulation pattern**: Pulse or burst
  - Stimulation sites freely selectable

### Integrated Heating Element
- **Temperature sensor type**: Pt 100 with four wire connection
- **Accuracy of regulation**: ± 0.1 °C

### Interface Board „IFB-C Multiboot“ and Connectors
- **Dimensions (W x D x H)**: 250 mm x 83 mm x 25 mm
- **Weight**: 300 g

### Front Panel
- **2 Sync OUT and Sync IN**: Connectors for IFB-C connection in a chain
  - Lemo connector, EPL 00250 NTN
- **1 8-Channel Analog In**: 10-pin connector DIL10Header-100mil
- **2 Analog Inputs**: Lemo connector, EPL 00250 NTN
- **2 LEDs**: LEDs for link status 1 and 2
Multiwell-MEA-System

Technical Specifications

4 Digital outputs
4 Digital inputs
Ground
Signal input range for analog channels
Gain for analog channels

Rear Panel
On / Off
Power supply
Ground
1 16 Bit Digital In / Out
2 Auxiliary channels
2 Audio output
1 Digital signal processor DSP port
Not in use in Multiwell-MEA-Systems!
2 Interface board to headstage connectors

Please connect the Multiwell-MEA headstage to port 1 while port 2 must be open!
2 USB-C ports

Power Supply Unit
Input voltage range
Output voltage
Max. power
Mark of conformity
European standard

Software
Operating system
Data acquisition: Multiwell-Screen
Analysis software: Multiwell-Analyzer
Data export: Multi Channel DataManager

Lemo connector, EPL 00250 NTN
Lemo connector, EPL 00250 NTN
Common jack 4 mm, banana plug
± 2500 mV
2

I/O switch
MPU 30, PWR DC 0.85 x 2.75 mm
Common jack 4 mm, banana plug
68-pin Honda-PCS-XE68LFD
Lemo connector, EPL 00250 NTN
Standard stereo jack 3.5 mm
14-pin connector DIL14Header-100mil-angeled
External power over iX industrial cable, Type B
USB-C A and USB-C B

110 - 240 V
24 V
65 W
CE, TÜV, cUL
EN60601

Microsoft Windows 10, 64 bit,
English and German version supported
Version 1.17.3 and higher + Windows 10
Version 1.8.6 and higher
Version 4.6.2 and higher