

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
DC- Input voltage range	± 500 mV

Integrated 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
 2 USB-C ports

Power Supply Unit

Input voltage range
 Output voltage
 Frequency
 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-angled
 External power over iX industrial cable, Type B
 Please connect the Multiwell-MEA headstage to port 1 while port 2 must be open!
 USB-C A and USB-C B

100 - 240 VAC
 24 VDC
 50 - 60 Hz
 60 W
 CE
 EN61010-1

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