

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

Intergated Stimulus Generator

Current stimulation	max. ± 500 µA
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 „MCS-IFB 3.0 Multiboot“ and Connectors

Dimensions (W x D x H)	250 mm x 83 mm x 25 mm
Weight	300 g

Front Panel

4 Digital inputs	Lemo connector, EPL 00250 NTN
4 Digital outputs	Lemo connector, EPL 00250 NTN
2 Auxiliary channels (not in use)	Lemo connector, EPL 00250 NTN

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Rear Panel

1 16 Bit Digital In / Out
1 8-Channel Analog In

2 Analog Inputs
Signal input range for analog channels
Gain for analog channels
1 Digital signal processor DSP port
2 USB 3.0 ports
Power supply
Ground
1 Audio output

Side Panel

2 Interface board to headstage connectors

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

68-pin MCS standard connector
10-pin connector (2.54 mm grid), dual row standard IDC
Lemo connector, EPL 00250 NTN
 ± 1250 mV
2
20-pin JTAG connector (1.27 / 2.54 mm grid)
USB 3.0 super speed cable (type A - micro B)
MPU 30, PWR DC 0.85 x 2.75 mm
Common jack 4 mm, banana plug
Stereo jack 3.5 mm

External power over serial ATA (eSATAp)

100 - 240 V

11 - 13 V

30 W

CE, TÜV, cUL

EN60601

Microsoft Windows 10 and 8.1, 7 (64 bit),
English and German version supported
Version 1.6.4 and higher + Windows 10 or 8.1
Version 1.2.9 and higher
Version 1.8.6 and higher