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

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 „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
Multiwell-MEA-System

Technical Specifications

Rear Panel
1 16 Bit Digital In / Out
1 8-Channel Analog In
2 Analog Inputs
Signal input range for analog channels ± 2500 mV
Gain for analog channels 2
1 Digital signal processor DSP port
Not in use in Multiwell-MEA-Systems!
2 USB 3.0 ports
Power supply
Ground
1 Audio output

68-pin MCS standard connector
10-pin connector (2.54 mm grid), dual row standard IDC
Lemo connector, EPL 00250 NTN
± 2500 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

Side Panel
2 Interface board to headstage connectors
External power over serial ATA (eSATAp)
Please connect the Multiwell headstage to port 1 while port 2 must be open!

Power Supply Unit
Input voltage range 100 - 240 V
Output voltage 11 - 13 V
Max. power 30 W
Mark of conformity CE, TÜV, cUL
European standard EN60601

Software
Operating system Microsoft Windows 10 and 8.1, 7 (64 bit), English and German version supported
Data acquisition: Multiwell-Screen Version 1.6.4 and higher + Windows 10 or 8.1
Analysis software: Multiwell-Analyzer Version 1.2.9 and higher
Data export: Multi Channel DataManager Version 1.8.6 and higher