MEA2100-Mini-System

Technical Specifications

**General Characteristics**

- Operating temperature: 10 °C to 50 °C
- Storage temperature: 0 °C to 50 °C
- Suitable for Incubator: Humidity: 10 % to 95 %, non-condensing
- **Headstage**
  - Dimensions (W x D x H): 186 mm x 80 mm x 12 mm
  - Weight with cable: 485 g
  - Cable length: 3 m
  - Type of headstage: MEA2100-Mini-HS60 for 60-electrode MEAs
  - MEA2100-Mini-HS120 for 120-electrode MEAs
  - Power consumption: 1.5 W

**Integrated Amplifier**

- Number of analog recording channels: 60 or 120
- Data resolution: 24 bit
- Signal input voltage range: ± 70 mV
- Bandwidth: DC to 10 kHz, software controlled
- Sampling frequency per channel: up to 50 kHz, software controlled
- Input impedance: 450 MΩ || 10 pF

**Integrated Stimulus Generator**

- Output current: ± 1.5 mA @ ± 16 V compliance voltage
- Output voltage: ± 10 V @ ± 20 mA max. compliance current
- Number of stimulation patterns: 2 independent stimulation patterns
- Stimulation pattern: Almost arbitrary pattern
- Resolution: 16 bit
- Time resolution: 20 µs

**Signal Collector Unit SCU**

- Up to 2 Signal Collector Units can be connected
- Dimensions (W x D x H): 250 mm x 83 mm x 25 mm
- Weight: 300 g
- 4 Inputs for headstages (HS1 to HS 4): Lemo connector, EPG.0B.307.HLN
- 1 Connector with 4 analog outputs for LED driver: Lemo connector, EPG.0B.304.HLN
- Voltage output of each analog output: 0 - 5 V
- 1 64-Channel Analog Out connector: 68-pin Honda-PCS-XE68LFD
- Signal Collector Unit to Interface Board connector: External power over iX industrial cable, Type B
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Interface Board IFB-C Multiboot
Dimensions (W x D x H) 250 mm x 83 mm x 25 mm
Weight 300 mg

Front Panel
2 Sync OUT and Sync IN
1 8-Channel Analog In
2 Analog Inputs
Signal input range for analog channels
Gain for analog channels
2 LEDs
4 Digital Inputs
4 Digital Outputs
1 Ground

Rear Panel
On / Off
Power supply MPU 30, PWR DC 0.85 x 2.75 mm
Ground Common jack 4 mm, banana plug
1 16 Bit Digital In / Out
2 Auxiliary channels (Not in use!)
2 Audio output
1 Digital signal processor DSP port (Not in use!)
2 Connectors for signal collector units SCU
2 USB ports

Power Supply Unit (MPU 30)
Input voltage 110 - 240 V
Output voltage 24 V
Max. power 65 W
Mark of conformity CE, TÜV, cUL
European standard EN60601

Software
Operating system Windows 10, 8.1 (32 or 64 bit), English and German version supported
Microsoft Windows ® Multi Channel Suite software package:
Multi Channel Experimenter
Version 2.17.6 and higher
Multi Channel Analyzer
Version 2.17.6 and higher
Multi Channel DataManager
Version 1.13.3 and higher

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