

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) | MEA2100-Mini, up to 8 headstages can be connected 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 |
| Input noise | Typical 0.7 μV _{RMS} (1 Hz to 3.5 kHz, inputs connected to ground) |

Intergated Stimulus Generator

| | |
|--------------------------------|--|
| Output current | ± 1 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

| | |
|--|---|
| Dimension (W x D x H) | up to 2 Signal Collector Units can be connected 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 |
| 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)

Weight

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

Ground

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)

Voltage range

Output voltage

Frequency

Max. power

Mark of conformity

European standard

Software

Operating system

Microsoft Windows ®

Multi Channel Experimenter

Multi Channel Analyzer

Multi Channel DataManager

250 mm x 83 mm x 25 mm

300 mg

Connectors for IFB-C connection in a chain
Lemo connector, EPL 00250 NTN

10-pin connector DIL10Header-100mil

Lemo connector, EPL 00250 NTN

± 10 V voltage input range @ 24 bit ADC

2

LEDs for link status 1 and 2

Lemo connector, EPL 00250 NTN

Lemo connector, EPL 00250 NTN

Common jack 4 mm, banana plug

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-anged

External power over iX industrial standard cable, type B

USB-C A and USB-C B

100 - 240 VAC

24 VDC

50 - 60 Hz

60 W

CE

EN61010-1

Windows 10, 8.1 (32 or 64 bit),

English and German version supported

Version 2.17.6 and higher

Version 2.17.6 and higher

Version 1.13.3 and higher

August 2021