

## 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<br>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<br>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                   |

#### Intergated 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

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

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)

Input voltage

Output voltage

Max. power

Mark of conformity

European standard

#### Software

Operating system

Microsoft Windows ®

Multi Channel Suite software package:

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

110 - 240 V

24 V

65 W

CE, TÜV, cUL

EN60601

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

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