



Roboocyte2

Roboocyte2

Technical Specifications

Operating temperature	10 °C to 50 °C
Storage temperature	0 °C to 70 °C
Weight	23.2 kg
Dimensions (W x D x H)	320 mm x 320 mm x 310 mm

ClampAmpC

Newly designed integrated digital TEVC amplifier

Headstage included

Operates fully automatically and computer controlled

Active bath clamp with two independent reference electrodes

Sampling rate	1 Hz to 20 kHz
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Data resolution	16 Bit
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Recommended electrode resistance range	100 k Ω to 1 M Ω
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Current electrode output

Output range	-107 μ A to +107 μ A
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Compliance voltage range	-100 V to +100 V
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Effective current resolution	1 nA
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Voltage electrode input

Input range	-500 mV to +500 mV
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Voltage resolution	0.125 mV
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Clamp voltage setpoint range	-500 mV to +500 mV
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Clamp voltage setpoint resolution	1 mV
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Amplifier Gain Settings

Proportional gain	0 to 6700 nA/mV
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Integrated gain	0 to 8000 1/s
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Typical rise time in voltage clamp mode	< 1 ms
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Performance and Accuracy

Operates with disposable standard 96 well plates

Positioning accuracy	20 μm in x / y and z-dimension
Movement time from well to well	2 s

Test model cell

Electrode resistance	470 k Ω
Leak resistance	100 k Ω
Membrane capacitance	100 nF

Power supply

Voltage range	100 to 240 VAC
Frequency	47 to 63 Hz

Air pressure

Supply pressure @ pressure regulator input	4 to 8 bar
Supply pressure @ Roboocyte2 input	3.2 bar

Software

Full automation and control of all devices and features including perfusion via scripting

Operating system: Microsoft Windows $\text{\textcircled{R}}$ 10, Windows 8.1 and Windows 7 (32 and 64 bit) or Windows XP (with Service Pack 3) English version

Connection Roboocyte2 to computer	USB 2.0 high speed
Linkage to Microsoft Access 2010 database	Microsoft Accesses (not included)
Data export	ASCII file format

Perfusion System

12- channel pinch valve Roboflow-System with two peristaltic pumps, adjustable flow rate 0.1 to 10 ml/min via RS232 serial port

Full integration of external liquid handler Gilson GX-271 via RS232 serial port

Either system is fully controlled and automated by the Roboocyte2 software

Warning: The Roboocyte2 device may only be used together with software from Multi Channel Systems MCS GmbH, and only for the specified purpose. Damage of the device and even fatal injuries can result from improper use. Do not change hardware and / or software configuration as it could lead to improper behavior of the system.