Technical Specifications

EPC 7 PLUS Main Unit:

Dimensions Main Unit (D x W x H):
(31.1 x 48.3 x 14.5) cm,
(12.3 x 19.0 x 5.7) inch
Weight:
7.6 kg / 16.5 lbs
Mounts in a 19" rack.
Operates on standard 115 V / 230 V.

EPC 7 PLUS Headstage:

Dimensions (D x W x H):
(70 x 40 x 19) mm
(2.75 x 1.57 x 0.75) inch

Current measuring resistors:
50 G (high range)
500 M (medium range)
Largest measurable currents:
200 pA (high range)
20 nA (medium range)
Noise measured with open input:
(8-pole Bessel filter, high range)
up to 1 KHz: < 30 fA RMS
up to 3 KHz: < 85 fA RMS
up to 10 KHz: < 350 fA RMS

Current Monitor Signal:

Gain: 0.5 to 1000 mV/pA, switch-selected
Maximum bandwidth:
100 KHz (medium range)
60 KHz (high range)

Filters:

The Current Monitor signal of the EPC 7 PLUS is filtered by a 7-pole Bessel filter from 0.1 to 30 kHz in 11 steps. In the additional 'FULL' setting, a 3-pole Bessel filter is used and the current signal is provided at full bandwidth of the EPC 7 PLUS.

Capacitance Compensation:

Manual adjustment of the fast and slow capacitance cancellation.
C-fast: 0 to 10 pF, 0.5 to 5 µs tau
C-slow: 0.2 to 10 pF, calibrated
2 to 100 pF, calibrated
10 to 1000 pF
Series conductance adjustment:
0.01 to 1 µS

Series Resistance Compensation:

Automatically determined from transient cancellation controls.
Fractional compensation: 0 – 90 %

Pipette Offset:

Manual adjustment within a ± 200 mV range.

Holding Potential:

Hardware controlled holding potential with a ± 500 mV range.

Current Clamp CC Command Resolution:

1 pA/mV input; up to ±1 nA

Noise Monitor Facility:

LCD displays RMS current at gain setting of 100 mV/pA in units of fA for checking background noise. The bandwidth is set by the filter frequency.

Related Products

LIH 1600

16-bit multi-channel data acquisition system.

PATCHMASTER

Multi-channel patch clamp data acquisition and analysis software for Windows and Mac OS.

FITMASTER

Data analysis software supporting PATCHMASTER data structure for Windows and Mac OS.

PULSE/PULSEFIT

Patch clamp data acquisition and analysis software for Windows and Mac OS.

EPC 8

Manually and remote controllable patch clamp amplifier.

EPC 10

The fully computer controlled patch clamp amplifier with built-in LIH 1600 interface.

PIP 5

Temperature controlled micro pipette puller.

MIM 4

Motorized 3-axis micromanipulator with video option.

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