



IEPE-B1 1 Channel Rechargeable IEPE Signal conditioner

- Compact & Lightweight
- Front panel BNC Input/Output connectors
- 24VDC IEPE supply
- User selectable IEPE current, 2mA to 14mA
- On/Off switch
- Power on indication
- Micro USB type B charge connector
- ± 10 VAC output
- 2000mAH battery
- Charging indicator



The IEPE-B1 is a completely new generation of battery powered IEPE signal conditioner. Featuring a high capacity Lithium Ion Polymer 2000mAH battery for long life and a simple mini USB charging port, the IEPE-B1 can be recharged from almost any USB connection, providing ultimate flexibility and ease of use.

Battery charging is managed by the internal power management board and features Red LED for charging indication and Blue for fully charged.

Internal jumpers allow the user to select an IEPE supply current from 2mA to a maximum of 14mA, ensuring the IEPE-B1 can be used to overcome the issues on long cable runs.

With a full 24VDC IEPE supply this ensures the IEPE-B1 has the voltage to eliminate any possible drop in your IEPE sensors range caused by bias voltage drift often seen at increased temperatures.

The perfect solution for field based measurements or wherever you have limited power options.

Frequency Range

Standard frequency range is from 1.2Hz to 500kHz, low frequency is limited by the AC coupling capacitor.

Low frequency option available for 0.8Hz range.

Due to continued product development Kemo Limited reserve the right to change specification without notice.

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IEPE-B1 Technical Specifications

Parameter	Value
Channels	1
Maximum Ratings	
AC input voltage (peak to peak)	40V
DC blocking	40V
Performance	
Frequency response	
Low Frequency	-3dB at 1.2Hz -1dB at 2.7Hz -0.5dB at 4Hz
High Frequency	Flat within 0.1dB to 500KHz
Voltage Gain	1:1
Maximum excitation voltage to sensor	24VDC
Constant current supply to sensor	2,4,8,10,12 or 14mA User Configurable
Coupling	AC, 1.5uF standard 3uF to special order
Spectral Noise (1Hz)	1.5 $\mu\text{V}/\sqrt{\text{Hz}}$
Spectral Noise (10Hz)	150 $\text{nV}/\sqrt{\text{Hz}}$
Spectral Noise (100Hz)	80 $\text{nV}/\sqrt{\text{Hz}}$
Spectral Noise (1KHz)	40 $\text{nV}/\sqrt{\text{Hz}}$
Spectral Noise (10KHz)	30 $\text{nV}/\sqrt{\text{Hz}}$
Broadband Electrical Noise (1 to 10,000 Hz)	52 μV RMS
Environmental	
Operating Temperature Range	0 to 45 °C
Storage Temperature Range	-20 to +45 °C
Power	
Power Supply	Internal 3.7V Lithium Ion Polymer Battery
Battery Capacity	2000 mAh
Battery Life (typical)	4 days at 4ma sensor current
Charging Supply	5V USB at 1A
Charging Time	3 hours from flat battery
Battery Protection	Over Charge, Over Discharge, Short Circuit
Physical	
Charging Connector	Micro-USB type B
Input and Output Connectors	BNC 50 Ω
Dimensions	80 x 105 x 33 mm
Weight	195 g

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