

IEPE signal conditioner Model 4416C



Key features

- Low noise operation
- Portable compact size
- Selectable gain of 1, 10 or 100
- Status indicator LED
- 2nd order Sallen Key low pass filter

Description

Model 4416C IEPE signal conditioner is a small, battery-operated, low noise signal conditioner for use with IEPE transducers. It supplies power to the transducer from a constant current source, and provides a selectable gain of 1, 10 or 100. The conditioner is powered by a rechargeable Li-Ion battery. An LED status indicator informs the user of a short, open, or normal operating conditions. Additionally the unit features a second order Sallen Key low pass filter.

ENDEVCO www.endevco.com Tel: +1 (866) ENDEVCO [+1 (866) 363-3826]

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Specifications		
Input characteristics Type Input impedance Excitation current Maximum input voltage Compliance voltage Transducer status LED	Single-ended, constant current two-wire system >20 k Ω 4.7 mA (±5%) 7.07 Vpk (5 vrms) 24V (±1%) Green = OK, Red = fault (open or short circuit)	
Output characteristics Type Output impedance Linear output voltage (Min) Linear output current (Max)	Single-ended, one side connected to circuit ground <10 Ω, in series with at least 47 μF 10Vpk (7.07 V rms) 2mA	
Transfer characteristics Frequency range Filter out	Gain = 1: -5% 0.3 Hz to 30 kHz; -3dB 0.1 Hz to 100 kHz Gain = 10: -5% 0.5 Hz to 30 kHz; -3dB 0.15 Hz to 100 kHz Gain = 100: -5% 0.5 Hz to 20 kHz; -3dB 0.15 Hz to 50 kHz	
Filter In Gain Gain Accuracy Harmonic distortion Noise (filter out)	LP filter (as supplied); 2nd order Sallen Key Gain = 1 & 10: >-5% @ 10 kHz; > -3dB @ 30 kHz Gain = 100: >5% @ 10 kHz; > -3dB @ 18 kHz x1, x10 and x100, user selectable ±1% <1.0%, 20Hz to 30kHz, 100mV – 10V pk. Gain = 1: <20µV rms Gain = 10: <200µV rms Gain = 100: <2mV rms	
Power Batteries Typical battery life External power supply Recharge cycle time Charger LED indication	Internal Lithium Ion 8 hours minimum continuous use 12 VDC (1.5A minimum) Unit off, approximately 3 hours Red = battery Iow, Yellow = battery charging	
Physical Charger connector Dimensions Weight Connections Case	2.5mm male jack plug 3.3" W x 1.4" H x 7.1" D (82 mm x 35 mm x 179 mm) 13 oz (370 gm) ±5% BNC for both Input and Output Aluminum, black painted	
Environmental Temperature Operating (battery being discharged) Operating (battery being charged) Storage (Li-Ion battery) Humidity Compliance	-10°C to +60°C (+14°F to +140°F) -10°C to +45°C (+14°F to +113°F) -5°C to +35°C (23°F to +95°F) De-rated for long-term storage for lithium batteries -40°F to +122°F (-40°C to +50°C) 95% R.H. ROHS to 2011/65/EU CE to EN61326-1:2013; CFR47 Pt 15 B Class A.	



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Accessories

Product	Description	4416
IM4416C	Instruction Manual	Download from website
EHM2107	Universal power supply 12 VDC, 2 AMP with adaptors for USA, Europe, Japan and Australia	Included
EJ21	10-32 to BNC adapter	Included
EHM2106	Replacement Battery	As required
EHM2107	Universal power adapter	As required
CS500	Calibration certificate	Included

Ordering information

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.



Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability. 092619