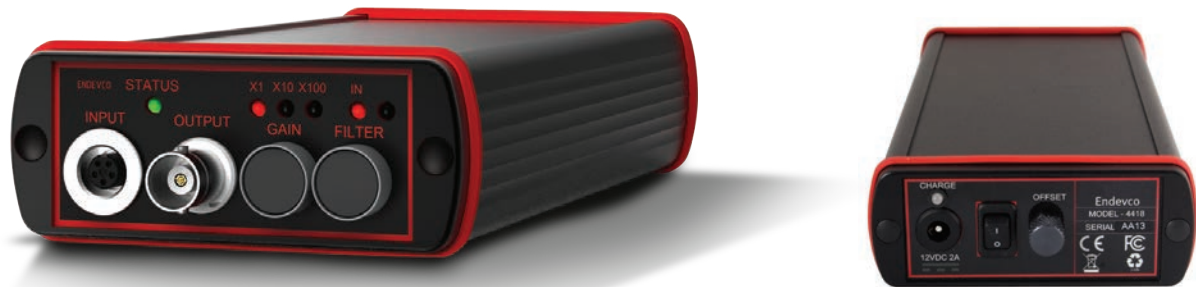


# Single channel bridge signal conditioner

## Model 4418



### Key features

- Portable compact size
- Selectable gain of 1, 10 or 100
- ZMO adjustment
- Battery operated with rechargeable Lithium Ion battery
- Compatible with Endevco piezoresistive (PR) and variable capacitance (VC) accelerometers

### Description

Model 4418 is a small, battery-operated, signal conditioner for use with piezoresistive bridge sensors and differential voltage sensors, including Endevco's line of piezoresistive accelerometers, piezoresistive pressure sensors, variable capacitance accelerometers and angular rate sensors. The unit provides the excitation supply to the sensor and includes switchable gain, optional filter and zero output tuning. 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.

# Single channel bridge signal conditioner | Model 4418

## Specifications

### Input characteristics

Type	Bridge
Input impedance	>1M Ohms
Input range, differential	0 to $\pm 10$ VDC
Input range, common-mode	>10 VDC
Input balance range adjustment	$\pm 100$ mV dc RTI
Transducer status LED	Green = OK, Red = fault (open or short circuit)

### Output characteristics

Type	Single-ended, one side connected to circuit ground
Output impedance	<10 Ohms
Output voltage	20V pk-pk
DC offset	$\pm 2.0$ mV +200 $\mu$ v RTI

### Excitation Voltage

Voltage	10.0 VDC
Accuracy	$\pm 1\%$
Current	20mA (min)
Protection	Short circuit

### Transfer characteristics

Frequency range	Gain = 1: -5% DC to 50 kHz Gain = 10: -5% DC to 50 kHz Gain = 100: -5% DC to 25 kHz
Filter	Low Pass, 2 <sup>nd</sup> order Butterworth Corner frequency 10kHz (-3dB) Magnitude error at corner frequency: +/-15%
Gain	Gain x1, x10 and x100, user selectable
Gain accuracy	$\pm 1\%$
Harmonic distortion	<1.0%, 20Hz to 30kHz, 100mV – 10V pk.
Noise	< 20 $\mu$ V RMS RTI (20 Hz to 30 kHz) <sup>[1]</sup>

### Power

Batteries	Internal Lithium Ion
Typical battery life	8 hours minimum continuous use
External power supply	12 VDC (1.5 A minimum)
Recharge cycle time	Unit off, approximately 3 hours
Charger LED indication	Green = battery charging, Red = battery low

### Physical

Charger connector	2.5 mm male jack plug
Dimensions	3.35" W x 1.4" H x 7.28" D (85 mm x 35 mm x 185 mm)
Weight	13.6 oz (385 gm) $\pm 5\%$
Connections	Input: Binder 09-0416-00-05 Output: BNC
Case	Aluminum, black painted

### Environmental

Temperature	
Operating (battery being discharged)	-10°C to +60°C (+14°F to +140°F)
Operating (battery being charged)	-10°C to +45°C (+14°F to +113°F)
Storage (Li-Ion battery)	-5°C to +35°C (+23°F to +95°F)
Humidity	95% R.H.
Compliance	RoHS to 2015/863/EU CE to EN61326-1:2013; CFR47 Pt 15 B Class A

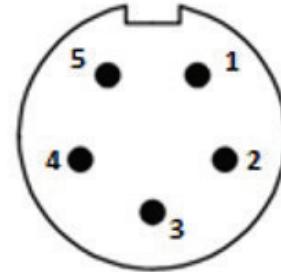
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Accessories		
Product	Description	4418
IM4418	Instruction Manual	Download from website
EHM2107	Universal power supply 12 VDC, 2 A with adaptors for USA, Europe, Japan and Australia	Included
EHM2106	Replacement Battery	Optional
EJ1224	Binder Connector (P/N 99-0413-10-05)	2 Included / Optional

## Notes

1. Filter Out. Inputs Shorted together and connected to GND with 50 Ohm resistor
2. 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.

Wiring Diagram		
Pin number	Description	Typical cable color
1	Excitation -	Black
2	Signal -	White
3	Cable shield*	
4	Signal +	Green
5	Excitation +	Red



\*Pin 3 is connected to output signal ground



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