

IEPE Signal Conditioner

MODEL 5100

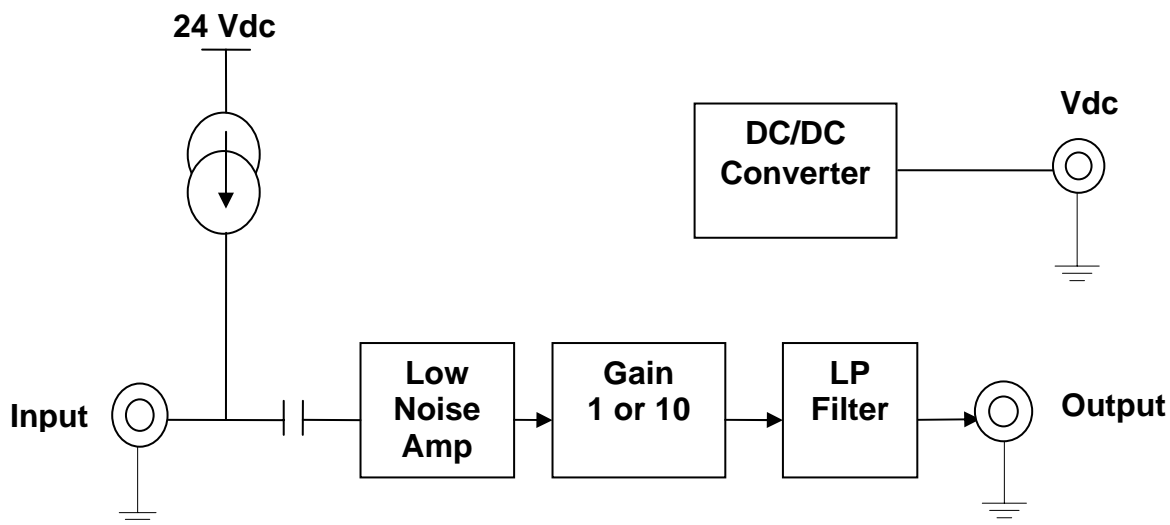
- Constant Current Sensor Interface (IEPE)
- Battery Powered
- Small Size, Lightweight
- Wide Frequency Range
- Operational Status LEDs
- Selectable Gain 1 or 10
- 10 Hours of Continuous Operation
- Low Battery Warning



Description

VIP Sensors Model 5100 conditions piezoelectric transducers with integral electronics (IEPE). It provides constant current excitation, decouples the input bias voltage, and amplifies and filters the transducer signals. Its gain is switch selectable to be 1 or 10.

The IEPE Signal Conditioner Model 5100 is powered by either an external power source or internal batteries. LEDs on its front panel indicate if it is operating, if the transducer is faulty (open or short), or if the batteries are low.



VIP Sensors Model 5100 Functional Diagram

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SPECIFICATIONS

The following performance specifications are at +75°F (+24°C), unless otherwise noted.

	UNITS	
INPUT		
Input Channel		One, Single-ended
Constant Current Supply to Transducer	mA	2
Constant Current Compliance Voltage	Vdc	+24
OUTPUT		
Output Type		Single-ended
Output Voltage	Vp	± 5 maximum
Accuracy	%	± 1 maximum
Noise	mV rms	≤ 1
TRANSFER CHARACTERISTICS		
Transducer Output Voltage	Vp	± 5 maximum
Coupling Capacitance	μF	10
Gain		1 or 10 switch selectable
FREQUENCY CHARACTERISTICS		
Maximum Frequency	Hz	100,000 (-5%)
Minimum Frequency	Hz	0.05 (-5%)
ENVIRONMENTAL CHARACTERISTICS		
Temperature	°F (°C)	Operating: +32 to +104 (0 to +40) Storage: -67 to +185 (-55 to 85)
Humidity	%	80 maximum relative humidity
POWER SUPPLY		
Power Source		Internal: One 9 Vdc battery External: 5 to 20 Vdc
Battery operation time	hours	≥ 10
PHYSICAL CHARACTERISTICS		
Dimensions	in (mm)	1.0H × 2.4W × 4.0D (25 × 60 × 100)
Weight	oz (g)	10.6 (300)
Connectors		Input: BNC Output: BNC
ACCESSORIES		
		Output Cable, BNC/BNC Power Supply, Input 110-240 Vac 50-60 Hz, Output 5-20 Vdc