Model 130 Inline Charge Converter

Low Noise Charge Converter
Optional Gain Settings
Small Rugged Package
Male or Female BNC Options

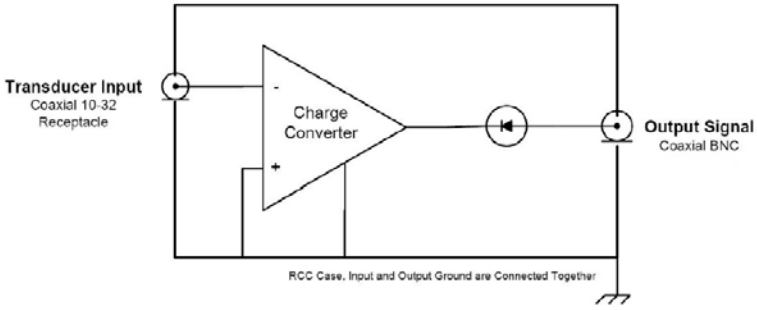
The Model 130 series are remote in-line charge converters designed to be used with piezoelectric accelerometers. The low noise charge converters feature three fixed gain options that convert the high impedance charge output from the accelerometer to a low impedance voltage output. The model 130 series features broad bandwidth to 30kHz and 10Vpeak linear output. The units are powered by a constant current of 4 to 20mA.

FEATURES

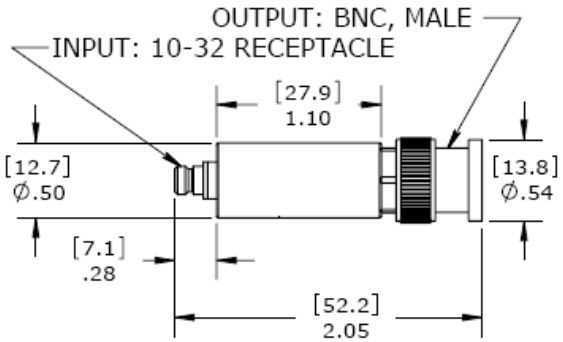
- Interface with Charge Transducers
- BNC Male & Female Options
- 0.1, 1.0 & 10mV/pC Gain Options
- Wide Bandwidth
- Low and High Pass Filters

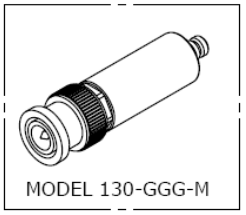
APPLICATIONS

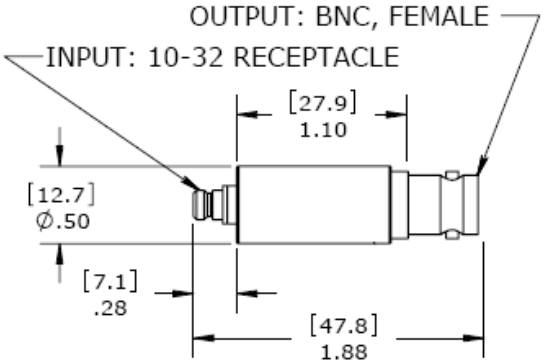
- Instrumentation Labs
- PE Accelerometer Testing
- High Temperature Testing
- Vibration Monitoring

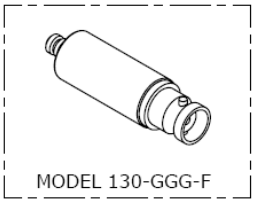


Layout









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All values are typical at ±24°C and 4mA excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters

DYNAMIC				**Notes**
Dash Number	-0.1	-001	-010	
Gain (mV/pC)	0.1	1	10	
Frequency Response (Hz)	0.5-20,000	0.5-20,000	0.5-20,000	±5%
Upper Cutoff Frequency (Hz)	30,000	30,000	30,000	-3dB
Broadband Noise (µV rms)	19	25	32	1Hz to 10kHz
Broadband Noise (µV rms)	25	32	40	1Hz to 30kHz

ELECTRICAL	
Source Resistance (Ω)	>1000,000
Source Capacitance (nF)	<5
Resistive Load (Ω)	<50
Capacitance Load (pF)	<100
Bias Voltage (Vdc)	8 to 12
Output Voltage (Vpp)	10
Compliance Voltage (Vdc)	18 to 30
Excitation Current (mA)	4 to 20
Gain Accuracy (%)	±2.5 at 1nF source capacitance and 100Hz ref frequency
Gain Stability (%)	±1.0 referred to +25°C at 100Hz from -40°C to +100°C

ENVIRONMENTAL	
Operating Temperature (°C)	-40 to +100
Storage Temperature (°C)	-54 to +125
Humidity	Environmentally Sealed
Vibration (g)	20 pk from 50Hz to 2000Hz
Shock (g)	100 pk with 3.6ms Haversine pulse

PHYSICAL	
Case Material	Stainless Steel with clear FEP sleeve for electrical isolation
Electrical Connector, Input	10-32 Coaxial Receptacle
Electrical Connector, Output	BNC Male for M Option, BNC Female for F Option
Weight (grams)	20.1 for M Option, 24.7 for F Option

ordering info

PART NUMBERING Model Number+Gain+Ouput Connector Option

130-GGG-X
- GGG: Gain (0.1 Gain = 0.1mV/pC, 001 Gain = 1mV/pC, 010 Gain =10mV/pC)
- X: Output Connector Option (M for BNC Male, F for BNC Female)

Example: 130-010-M
Model 130, 10mV/pC Gain, BNC Male Connector