

Charge converter CC701HT

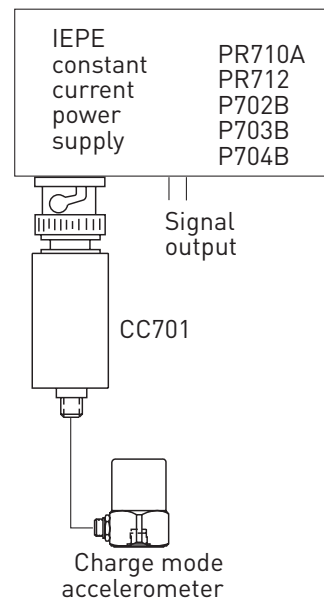
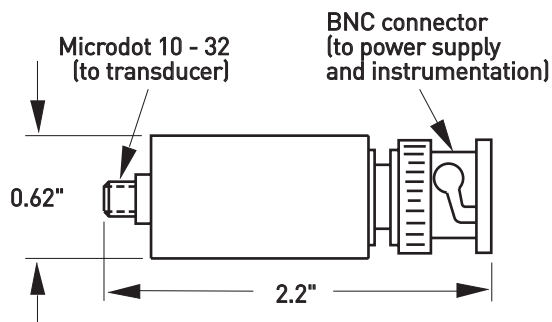


The CC701HT charge converter is specifically designed for use with high temperature, charge mode accelerometers. It is a solid state, in-line device which converts the charge output of a high impedance piezoelectric vibration sensor to a low impedance voltage signal. It incorporates an overload-protection circuit and the low noise Piezofet® amplifier. The CC701HT yields a strong signal, immune to cable motion noise, and is compatible with standard signal readout and equipment such as monitors, voltmeters, analyzers, etc. Long cables can be driven without signal loss. The CC701HT charge converter is powered by the constant current source of a Wilcoxon power unit/amplifier (models P702, P703B, P704B, PR710 or PR712) or it can be supplied from an external constant current supply of 18-30 VDC, capable of delivering from 2-10 mA (a 4 mA constant current diode minimum is recommended).

Key features

- Overload protection
- Strong voltage signal
- Immune to cable motion noise
- Compatible with standard signal readout equipment

Powering diagram



Note: Due to continuous process improvement, specifications are subject to change without notice.
This document is cleared for public release.

Wilcoxon Sensing Technologies
20511 Seneca Meadows Parkway
Germantown, MD 20876
info@wilcoxon.com

Tel: (301) 330 8811
Fax: (301) 330 8873
www.wilcoxon.com

Wilcoxon Sensing Technologies
An Amphenol Company

Charge converter CC701HT

SPECIFICATIONS

TRANSFER CHARACTERISTICS

Sensitivity, $\pm 5\%$		4 mV/pC
Frequency response¹	± 1 dB	2.0 - 10,000 Hz
	-3 dB	1.0 - 20,000 Hz
Nonlinearity		<1%
Harmonic distortion		<1%

INPUT CHARACTERISTICS

Allowable source capacitance, max²	500 pF
--	--------

OUTPUT CHARACTERISTICS

Output voltage, max	5 Vrms
Electrical noise, nominal:	
Source capacitance (transducer + cable)	1,000 pF
Broadband 2.5 Hz to 25 kHz	100 μ V
Spectral 10 Hz	1.41 μ V/ $\sqrt{\text{Hz}}$
100 Hz	0.71 μ V/ $\sqrt{\text{Hz}}$
1,000 Hz	0.63 μ V/ $\sqrt{\text{Hz}}$
10,000 Hz	0.51 μ V/ $\sqrt{\text{Hz}}$
Output impedance (depending on source capacitance)	25 - 150 Ω
Bias output voltage	12, ± 2 VDC

POWER REQUIREMENTS

Voltage source	18 - 30 VDC
Constant current³	2 - 10 mA

ENVIRONMENTAL

Temperature range	-40 to $+100^\circ$ C
--------------------------	-------------------------

PHYSICAL CHARACTERISTICS

Weight	40 grams	
Case material	stainless steel	
Connectors	Signal input	Microdot 10-32
	Signal output	BNC

Contact

Wilcoxon Sensing
Technologies

20511 Seneca Meadows Parkway
Germantown, MD 20876, USA

Tel: +1 301 330 8811
Fax: +1 301 330 8873

info@wilcoxon.com

www.wilcoxon.com

Notes: ¹ Measured with 500 pF input capacitance.

² For -3 dB point greater than 10 kHz.

³ To minimize the possibility of signal distortion when driving long cables with high vibration signals, 24 to 30 VDC powering is recommended. The higher level constant current source should be used when driving long cables (please consult customer service).

Note: Due to continuous process improvement, specifications are subject to change without notice.
This document is cleared for public release.

Wilcoxon Sensing Technologies
20511 Seneca Meadows Parkway
Germantown, MD 20876
info@wilcoxon.com

Tel: (301) 330 8811
Fax: (301) 330 8873
www.wilcoxon.com

Wilcoxon Sensing Technologies
An Amphenol Company