

Charge converter

CC701A

SPECIFICATIONS

TRANSFER CHARACTERISTICS¹

| | | |
|------------------------|-----------|----------------|
| Sensitivity, $\pm 5\%$ | | 10 mV/pC |
| Frequency response: | $\pm 5\%$ | 10 - 25,000 Hz |
| | -3 dB | 2.0 Hz |
| Nonlinearity | | <1% |
| Harmonic distortion | | <1% |

INPUT CHARACTERISTICS

| | | |
|-----------------------------------|--|----------|
| Allowable source capacitance, max | | 6,000 pF |
|-----------------------------------|--|----------|

OUTPUT CHARACTERISTICS

| | | |
|---|------------------|----------------------------------|
| Output voltage, max | | 5 V rms |
| Electrical noise, nominal: | | |
| Source capacitance (transducer + cable) | 1,000 pF | |
| Broadband | 2.5 Hz to 25 kHz | 30 μ V |
| Spectral | 10 Hz | 4.0 μ V/ $\sqrt{\text{Hz}}$ |
| | 100 Hz | 0.6 μ V/ $\sqrt{\text{Hz}}$ |
| | 1,000 Hz | 0.2 μ V/ $\sqrt{\text{Hz}}$ |
| | 10,000 Hz | 0.06 μ V/ $\sqrt{\text{Hz}}$ |

| | | |
|--|--|-------------------|
| Output impedance (depending on source capacitance) | | 25 - 150 Ω |
| Bias output voltage, nominal | | 10 VDC |

POWER REQUIREMENTS

| | | |
|-------------------------------|--|-------------|
| Voltage source | | 18 - 30 VDC |
| Constant current ² | | 2 - 10 mA |

ENVIRONMENTAL

| | | |
|-------------------|--|----------------|
| Temperature range | | -40° to +100°C |
|-------------------|--|----------------|

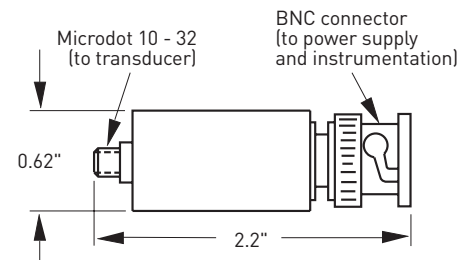
PHYSICAL

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

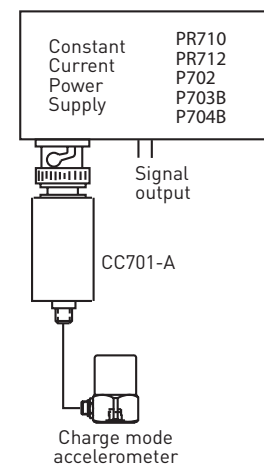
Notes: ¹ Measured with 1,000 pF source capacitance, 21V supply, 4 mA.
² To minimize the possibility of signal distortion when driving long cables with high vibration signals, 24 to 30 VDC powering is recommended. The higher level constant current source should be used when driving long cables.

Key features

- Strong voltage signal
- Immune to cable motion noise
- Manufactured in ISO 9001 facility



Powering diagram



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